ODESSA COLLEGE

Tracy Grove

File 2 of 2

Success starts here ... the rest is academic!

ODESSA COLLEGE BULLETIN

2003 • CATALOG OF COURSES • 2004

Culinary Arts

Faculty: Peter Lewis, chair; Terry Gouley.

Odessa College offers the student two associate in applied science degree options in culinary arts. Option one, Culinary Arts, focuses on basic and advanced food preparation and baking skills; option two, Food Service Management, focuses on basic food preparation and food service management skills. Both options prepare individuals for entry-level employment positions and afford those individuals with sufficient thinking, reasoning and application skills to pursue and obtain advancement in their chosen profession.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Culinary Arts

	Semester Hrs
General Education Requirements	**23**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1332 Structures of College Mathematics I	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
PHIL 1301 Philosophy I	
PHTC 1341 Color Photography I	
SPAN 1300 Conversational Spanish I	
Major Requirements	**31**
CHEF 1205 Sanitation and Safety	2
CHEF 1214 A La Carte Cooking	2
CHEF 1301 Basic Food Preparation	3
CHEF 1310 Garde Manger	3
CHEF 1341 American Regional Cuisine	3
CHEF 1345 International Cuisine	3
CHEF 1391 Special Topics – Nutrition	3
CHEF 2201 Intermediate Food Preparation	2
CHEF 2232 Buffet Theory and Production	2
CHEF 2236 Charcuterie	2
CHEF 2302 Saucier	3
CHEF 2380 Cooperative Education – Culinary Arts/Chef Training	3
Related Requirements	**18**
PSTR 1301 Fundamentals of Baking	3
PSTR 2331 Advanced Pastry Shop	3
RSTO 1201 Beverage Management	2
RSTO 1204 Dining Room Services	2
RSTO 1221 Menu Management	2
RSTO 1313 Hospitality Supervision	3
RSTO 1325 Purchasing for Hospitality Operations	3
Total Semester Hours	**72**

Course of Study for Associate in Applied Science Degree Food Service Management

	Semester Hrs
General Education Requirements	**23**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1332 Structures of College Mathematics I	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
PHIL 1301 Philosophy I	
PHTC 1341 Color Photography I	
SPAN 1300 Conversational Spanish I	
Major Requirements	**49**
ACCT 1370 Introduction to College Accounting	3
BMGT 1301 Supervision	3
BMGT 1305 Communication in Management	3
BMGT 2309 Leadership	3
BUSI 2301 Business Law I	3
CHEF 1205 Sanitation and Safety	2
CHEF 1301 Basic Food Preparation	3
CHEF 1391 Special Topics – Nutrition	3
CHEF 2201 Intermediate Food Preparation	2
CHEF 2302 Saucier	3
CHEF 2380 Cooperative Education – Culinary Arts/Chef Training	3
HRPO 1311 Human Relations	3
MRKT 1311 Principles of Marketing	3
RSTO 1201 Beverage Management	2
RSTO 1204 Dining Room Service	2
RSTO 1221 Menu Management	2
RSTO 1313 Hospitality Supervision	3
RSTO 1325 Purchasing for Hospitality Operations	3
Total Semester Hours	**72**

Culinary Arts Certificate Program

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

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I – Food Production Cook

	Semester Hrs
CHEF 1205 Sanitation and Safety	2
CHEF 1214 A La Carte Cooking	2
CHEF 1301 Basic Food Preparation	3
CHEF 1341 American Regional Cuisine	3
CHEF 1345 International Cuisine	3
CHEF 1391 Special Topics – Nutrition	3
CHEF 2201 Intermediate Food Preparation	2
CHEF 2302 Saucier	3
RSTO 1201 Beverage Management	2
RSTO 1204 Dining Room Management	2
RSTO 1325 Purchasing for Hospitality Operations	3
Total Semester Hours	**28**

Student Equipment Requirements for Major Courses

CHEF 1301, CHEF 2201, and CHEF 2302:

- Two chef's uniforms consisting of long-sleeved jackets, checkered pants and aprons.
- Basic chef's tool kit consisting of the following:
  - A. French knife 8" or 10" blade
  - B. Paring knife 3 1/2" blade
  - C. Vegetable peeler
  - D. Cook's fork
  - E. Boning knife – 5 1/2" rigid blade
  - F. Metal measuring spoons
  - G. French whip

PSTR 1301 and PSTR 2331:

- Two chef's uniforms consisting of long-sleeved jackets, checkered pants and aprons.
- Basic tool kit consisting of the following:
  - A. French knife 8" or 10" blade
  - B. Paring knife 3 1/2" blade
  - C. Vegetable peeler
  - D. French whip
  - E. Two icing spatulas 8" or 10"
  - F. One Wilton decorating kit
  - G. One serrated meat slicer

CHEF 1214, CHEF 1341, and CHEF 1345:

- Uniforms and tool kit as identified in CHEF 1301, 2201, and 2302.

CHEF 1310, CHEF 2232, and CHEF 2236:

- Uniforms and tool kit as identified in CHEF 1301, 2201, and 2302 plus:
  - A. 1 set of 1/2" aspic cutters
  - B. 1 Exacto knife
  - C. 1 set of butter sculpture tools

CULINARY ARTS COURSES

CHEF 1205 Sanitation and Safety

(12.0503) (2-0) 3 hours

A study of personal cleanliness; sanitary practices in food preparations; causes, investigation, control of illness caused by food contamination (Hazard Analysis Critical Control Points); and work place safety standards. (SCANS 1, 2, 4, 5, 7, 8, 9, 10) Prerequisite: None.

CHEF 1214 A La Carte Cooking

(12.0503) (1-3) 2 hours

A course in a la carte or "cooking to order" concepts. Topics include menu and recipe interpretation and conversion, organization of workstation, employment of appropriate cooking methods, plating and saucing principles. Lab fee required. (SCANS 1, 3, 4, 5, 7, 8) Prerequisites: CHEF 1301, CHEF 2201 and CHEF 2302.

CHEF 1301 Basic Food Preparation

(12.0503) (2-2) 3 hours

A study of the fundamental principles of food preparation and cookery to include Brigade System, cooking techniques, material handling, heat transfer, sanitation, safety, nutrition, and professionalism. Lab fee required. (SCANS 1, 3, 7, 8) Prerequisite: None.

CHEF 1310 Garde Manger

(12.0503) (3-2) 4 hours

A study of specialty foods and garnishes. Emphasis on design, techniques, and display of fine foods. Lab fee required. (SCANS 1, 2, 3, 5, 8, 9) Prerequisite: CHEF 1301.

CHEF 1341 American Regional Cuisine

(12.0503) (2-2) 3 hours

A study of the development of regional cuisine's in the United States with emphasis on the similarities in production and service systems. Application of skills to develop, organize, and build a portfolio of recipe strategies and production systems. Lab fee required.

(SCANS 1, 2, 3, 4, 6, 8, 9) Prerequisite: CHEF 1214 and CHEF 1345.

CHEF 1345 International Cuisine
(12.0503) (2-2) 3 hours
The study of classical cooking skills associated with the preparation and service of international and ethnic cuisines. Topics include similarities between food production systems used in the United States and other regions of the world. Lab fee required. (SCANS 4, 6, 8, 9) Prerequisite: CHEF 1214.

CHEF 1391 Special Topics in Culinary Arts/Chef Training – Nutrition
(12.0503) (3-0) 3 hours
Introduces the concepts and principles of normal nutrition with emphasis on the importance of nutrients and their roles and functions within the body and throughout one's life. The student will be able to understand and interpret nutritional concepts and issues, and estimate the nutritional value of specific food groups within one's diet. (SCANS 1, 2, 3, 4, 6, 9) Prerequisite: None.

CHEF 2201 Intermediate Food Preparation
(12.0503) (1-3) 2 hours
Continuation of previous food preparation course (CHEF 1301). Topics include the concept of pre-cooked food items, as well as scratch preparation. Covers full range of food preparation techniques. Topics also include menu items such as soups, sauces and protein foods. Also includes concentration on the identification of a variety of sandwiches, salads, fruits and vegetables. Lab fee required. (SCANS 1, 3, 4, 5, 7, 8) Prerequisite: CHEF 1301.

CHEF 2232 Buffet Theory and Production
(12.0503) (1-3) 2 hours
Advanced concepts in the construction of inedible display items. Emphasis on buffet production, presentation, and service. Lab fee required. (SCANS 1, 2, 3, 5, 7, 8) Prerequisite: CHEF 2236.

CHEF 2236 Charcuterie
(12.0503) (1-3) 2 hours
Advanced concepts in the construction of sausages, pates, and related forced meat preparations. Lab fee required. (SCANS 1, 2, 3, 5, 7, 8, 9) Prerequisite: CHEF 1310.

CHEF 2302 Saucier
(12.0503) (2-2) 3 hours
Instruction in the preparation of stocks, soups, classical sauces, contemporary sauces, accompaniments, and the pairing of sauces with a variety of foods. Lab fee required. (SCANS 1, 3, 4, 5, 7, 8) Prerequisite: CHEF 1301.

CHEF 2380 Cooperative Education – Culinary Arts/Chef Training
(12.0503) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

PSTR 1301 Fundamentals of Baking
(12.0501) (2-4) 3 hours
Fundamentals of baking including dough, quick breads, pies, cakes, cookies, tarts, and doughnuts. Instruction in flours, fillings, and ingredients. Topics include baking terminology, tool and equipment use, formula conversions, functions of ingredients, and the use of proper flours. Lab fee required. (SCANS 1, 3, 4, 7, 8, 9) Prerequisite: None.

PSTR 2331 Advanced Pastry Shop
(12.0501) (2-4) 3 hours
A study of classical desserts, French and international pastries, hot and cold desserts, ice creams and ices, chocolate work, and decorations. Emphasis on advanced techniques. Lab fee required. (SCANS 1, 2, 3, 4, 7, 8) Prerequisite: PSTR 1301.

RSTO 1201 Beverage Management
(12.0504) (2-0) 2 hours
A study of the beverage service of the hospitality industry including spirits, wines, beers and non-alcoholic beverages. Topics include purchasing, resource control, legislation, marketing, physical plant requirements, staffing, service, and the selection of wines to enhance foods. (SCANS 1, 2, 3, 5) Prerequisite: None.

RSTO 1204 Dining Room Service
(12.0504) (2-0) 2 hours
Introduces the principles, concepts and systems of professional table service. Topics include dining room organization, scheduling, and management of food service personnel. (SCANS 8, 9, 10) Prerequisite: None.

RSTO 1221 Menu Management
(12.0504) (2-0) 2 hours
A study of the food service principles involved in menu planning, layout, and evaluation for a variety of types of facilities and service methods. Emphasis on analysis of menu profitability, modification, commodity use, and other activities generated by the menu. (SCANS 1, 2, 3, 5, 6, 8, 9) Prerequisite: None.

RSTO 1313 Hospitality Supervision
(12.0504) (3-0) 3 hours
Fundamentals of recruiting, selection, and training of food service and hospitality personnel. Topics include job descriptions, schedules, work improvement, motivation, and applicable personnel laws and regulations. Emphasis on leadership development. (SCANS 1, 2, 3, 4, 5, 6, 7, 9) Prerequisite: None.

RSTO 1325 Purchasing for Hospitality Operations
(12.0504) (3-0) 3 hours
Study of purchasing and inventory management of foods and other supplies to include development of purchase specifications, determination of order quantities, formal and informal price comparisons, proper receiving procedures, storage management, and issue procedures. Emphasis on product cost analysis, yields, pricing formulas, controls, and record keeping at each stage of the purchasing cycle. (SCANS 2, 3, 5, 10) Prerequisite: None.

Developmental Education

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

These courses are designed to help students achieve fundamental skills that they may not have gained before entering Odessa College and to prepare students for college-level course work. The recommendation to enroll in one, some or all of the developmental courses is made on the basis of diagnostic testing, which may be administered prior to enrollment. For attendance policy, please see requirements stated under "Class Attendance" (refer to index).

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

Odessa College offers free tutoring to Odessa College students in the Tutoring Center, located in the Learning Resources Center, Room 301.

COURSES AND SERVICES AVAILABLE IN DEVELOPMENTAL STUDIES

ENGLISH COURSES

ENGL 0370, Basic English, and the four one-hour lab courses – ENGL 0171, ENGL 0172, ENGL 0173 and ENGL 0174 – are designed to help students become more successful in using grammar and writing skills. The Basic English course covers a wide variety of English fundamentals and is specifically designed to prepare students for ENGL 1301, Composition and Rhetoric. Students may enroll in self-paced or classroom instruction for institutional credit, but none of the English courses listed below satisfy requirements for any degree plan at Odessa College.

ENGL 0370 Basic English
(32.0108.5312) (3-0) 3 hours
A compensatory course designed to improve basic thinking and writing skills. Emphasizes essay development and use of conventional English. Requires essays composed in response to various prompts. Prepares student for TASP and ENGL 1301. The student

must attain a "C" or better in this course or pass the English portion of the TASP before enrolling in ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. Lab fee required for ENGL 0370 WP (Word Processing). (SCANS 2, 9) Prerequisite: None. Corequisite: Students who have not taken and passed the reading section of TASP must enroll in a reading class.

The lab courses, ENGL 0171 through 0174, provide practical help in selected areas of English. They focus specifically on principles of the simple sentence, focus and unity, organization and usage. Students are guided into these courses according to their performance on the TASP test and on placement tests administered in the Testing Center, located on the second floor of the Student Union Building.

ENGL 0171 Sentence Structure

(32.0108.5312) (0-1) 1 hour

A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes techniques for creating concise and effective sentence structures. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

ENGL 0172 Focus and Unity

(32.0108.5312) (0-1) 1 hour

A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition of purpose and audience and techniques of maintaining unity in a piece of writing. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

ENGL 0173 Organization and Development

(32.0108.5312) (0-1) 1 hour

A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes paragraph organization, cohesion and sequencing of ideas as well as composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

ENGL 0174 Usage

(32.0108.5312) (0-1) 1 hour

A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition and incorporation of standard usage in sentence composition, focusing on verb and pronoun usage, punctuation, modifier usage, plural and possessive conventions, and precise and appropriate word choice as well as other composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

The Tutoring Center, located in the Learning Resources Center, Room 301, offers supplemental, individualized assistance in grammar, spelling, composition and techniques of research to any student who needs improvement in writing ability or skill in literary analysis. Assistance is provided to both walk-in students and students referred by an instructor or by a counselor. Assistance is free of charge for Odessa College students.

MATH COURSES AND THE MATH ACADEMIC RESOURCE CENTER

MATH 0370 Arithmetic presents basic arithmetic operations and is a prerequisite for MATH 0371. MATH 0371 Pre-algebra addresses the four fundamental operations of mathematics and additional topics. The course is designed to prepare students for MATH 0372 Introductory Algebra and should be taken as a preparatory course only. MATH 0372 Introductory Algebra continues the review of the basic functions in mathematics and introduces elementary algebra concepts. MATH 0375 Intermediate Algebra completes the review of elementary algebra concepts and prepares the student for entry into College Algebra. Five one-hour lab courses – MATH 0170, MATH 0171, MATH 0172, MATH 0173 and MATH 0174 – provide review of mathematics study skills, mathematics fundamentals, graphing and equations, algebraic operations and quadratics, and geometry and reasoning. None of these courses satisfies the requirements for any degree plan at Odessa College, and they may not be accepted in transfer to other colleges and universities. Students may be guided into the courses on the basis of optional diagnostic pre-tests that are available in the Testing Center on the second floor of the Student Union Building.

MATH 0370 Arithmetic

(32.0104.5119) (3-0) 3 hours

A developmental course for students with weak preparation in fundamental mathematics and who are deficient in math, English and/or reading. Presents basic arithmetic operations (whole numbers, fractions, decimals, and signed numbers), percents and proportions, metric and American systems of units, geometric measurements, and statistical graphs. MATH 0370 must be passed with a "C" or better in order to progress to next appropriate course. Credit is not transferable. This course does not satisfy requirements

for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: Consent of instructor. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0371 Pre-Algebra

(32.0104.5119) (3-0) 3 hours

A developmental course using whole numbers, decimals, fractions, integers, linear equations, problem solving, geometry formulas, real number properties, polynomials, exponents, radicals, equations, and graphs of lines. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: MATH 0370 passed with a "C" or better or satisfactory placement score. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0372 Introductory Algebra

(32.0104.5119) (3-0) 3 hours

A developmental course that introduces elementary algebra with some arithmetic review. Includes signed numbers and rational numbers with operations through exponentiation; algebraic expressions and their operations; linear equations and inequalities including applications, graphs and systems; and function notation. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: MATH 0371 passed with a "C" or better or satisfactory placement score. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0375 Intermediate Algebra

(32.0104.5219) (3-0) 3 hours

A developmental course that provides a study of real number operations, linear and quadratic inequalities, exponents and radicals, polynomial and radical equations, and their graphs. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: MATH 0372 passed with a "C" or better or satisfactory placement score. Corequisite: 14 hours in the Math Academic Resource Lab.

The Tutoring Center, located in Room 301 of the Learning Resources Center, offers free tutoring to Odessa College students and has extensive supplemental materials that parallel the developmental mathematics courses. Audio-tutorial and computer programs demonstrate the relationships between mathematics and everyday situations involving mathematics, in addition to presenting materials on the four basic mathematical operations. Materials and assistance also are available free to students wishing to review mathematical concepts related to vocational course work.

The five one-hour lab courses follow. Students may be guided into these courses according to their performance on the TASP test or on optional placement tests administered in the Testing Center, located on the second floor of the Student Union Building.

MATH 0170 Math Study Skills

(32.0101.5212 (0-1) 1 hour

A math study skills course designed to enable students to receive assistance in specific mathematics courses taken with a "B or better" contract. Tutorial help, computer-assisted instruction, videotapes and TASP study materials are available to support this course. This course is a corequisite with a college level course taken with a""B or better" contract. MATH 0170 will satisfy TASP liability only if concurrently enrolled in college level mathematics course. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0171 Fundamental Math

(32.0104.5119) (0-1) 1 hour

Provides a review of fundamental mathematics. Presents the use of number concepts and computation skills. Includes solving word problems using integers, fractions and decimals as well as percents, ratios and proportions. Includes how to interpret information from a graph, table or chart and use measure of central tendency and variability. The student will learn to prioritize time and develop self discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0172 Algebra – Graphing and Equations

(32.0104.5119) (0-1) 1 hour

Provides a review of algebra – graphing and equations. Presents graphs of numbers and number relationships.

Introduces how to solve one- and two-variable equations including word problems. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0173 Algebra – Operations and Quadratics

(32.0104.5119) (0-1) 1 hour

Provides a review of algebra – operations and quadratics. Presents operations with algebraic expressions. Investigates problems involving quadratic equations, inequalities and their graphs. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0174 Geometry and Problem Solving

(32.0104.5119) (0-1) 1 hour

Provides a review of geometry and reasoning. Presents problems involving geometric figures and investigates how to apply reasoning skills, apply combinations of mathematical skills to solve problems. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

READING COURSES AND THE READING LAB

An effective citizen must read well, and reading courses help to develop efficient tools to use in today's society. These courses implement the philosophy that the ultimate in reading ability is never reached and that good study skills are predominantly good reading skills. Time spent in the reading program is an investment in self. No matter what a person's reading ability, reading skills can be improved.

Courses listed below do not satisfy requirements for any degree at Odessa College. Students who intend to transfer to another community college, senior college or university should check with that institution to determine whether hours earned in reading will transfer for degree credit. Students who enroll for Basic English (0370) and have not taken and passed the reading section of the TASP must enroll in a reading class.

READ 0371 Basic Reading

(32.0108.5212) (3-0) 3 hours

Initiates instruction in developmental reading with emphasis on building vocabulary, increasing reading rate, and improving comprehension. Aims to empower students with independent learning techniques and effective study skills to enhance self-esteem and reaffirm the belief in self as a successful learner. Includes individual diagnosis of reading strengths and weaknesses for placement in multi-leveled materials. Lab fee required. (SCANS 1, 9, 10) Prerequisite: None or placement by counselors.

READ 0372 College Reading

(32.0108.5212) (3-0) 3 hours

Stresses efficient learning techniques and application of reading and study skills. Students are encouraged to establish habits that result in increased success in learning in both the classroom and workplace environments. Includes diagnosis of individual reading strengths and weaknesses for placement in multilevel course that includes computer exercises, timed reading practices and vocabulary study. Lab fee required. (SCANS 1, 9, 10) Prerequisite: None or placement by counselor.

READ 0373 Advanced College Reading

(32.0108.5212) (3-0) 3 hours

Continues independent work to maintain improved critical reasoning skills designed to meet specific needs in comprehension, vocabulary, reading rate, and study skills. The student monitors and corrects ineffective behavior as he assesses himself accurately, sets personal goals, and monitors progress. Lab fee required. (SCANS 1, 7, 9, 10) Prerequisite: Read 0372 passed with a "C" or better, satisfactory placement score or reading faculty approval.

COLLEGE READING TECHNIQUES

The college reading techniques course provides an alternative reading program with structured, individualized, self-paced instruction in a multimedia and multilevel environment that includes computer instruction. Regardless of present reading ability, students can expect to increase vocabulary and reading rate and improve comprehension. Effective study techniques offer opportunities to improve performance in both academic and vocational-technical courses.

Diagnostic tests are administered to determine placement levels and specific areas of need. Post-tests evaluate progress during the semester. Through student-teacher conferences, a self-paced plan of action is developed to set immediate and long-range goals.

Students should consult with the instructor in person immediately upon registration to arrange meeting times for this one-hour self-paced course.

READ 0171 Improving Reading Skills
(32.0108.5212) (0-2) 1 hour
Introduces self-paced, individualized instruction in a multimedia environment which is designed to teach the student efficient reading techniques. Students establish habits that result in increased success in learning in both the classroom and workplace environments, which ultimately can result in higher self-esteem. Through independent learning activities, the student learns to validate his understanding of reading materials, increase vocabulary with various written activities and gain in individual reading rates. Lab fee required. (SCANS 1, 4, 7, 10) Prerequisite: None.

Diesel Technology

Faculty: James McCutcheon, chair.

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

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Diesel Technology

	Semester Hrs
General Education Requirements.	**20**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or higher level math	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 2301 History of Texas	
MUSI 1306 Music Appreciation	
SPAN 1300 Conversational Spanish I	
Major Requirements	**43**
DEMR 1266 Practicum – Diesel Engine Mechanic and Repairer	2
DEMR 1413 Fuel Systems	4
DEMR 1505 Basic Electrical Systems	5
DEMR 1506 Diesel Engine I	5
DEMR 1549 Diesel Engine II	5
DEMR 2380 Cooperative Education – Diesel Engine Mechanic and Repairer	3
DEMR 2434 Advanced Diesel Tune-up and Troubleshooting	4
DEMR 2532 Electronic Controls	5

DEMR 2538 Advanced Power Applications I or DEMR 2542 Automatic Power Shift and Hydrostatic Transmissions I 5
DEMR 2540 Advanced Power Applications II or DEMR 1516 Basic Hydraulics 5

Related Requirements 5
HRPO 1191 Special Topics in Human Resources Management 1
WLDG 1421 Introduction to Welding Fundamentals 4

Total Semester Hours 68

Certificates of Technology in Diesel Mechanics

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

Level I certificate is TASP-waived.

Level I – Diesel Technician

Semester Hrs

COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
DEMR 1266 Practicum – Diesel Engine Mechanic and Repairer 2
DEMR 1413 Fuel Systems 4
DEMR 1505 Basic Electrical Systems 5
DEMR 1506 Diesel Engine I 5
DEMR 1549 Diesel Engine II 5
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3
HRPO 1191 Special Topics in Human Resources Management 1
WLDG 1421 Introduction to Welding Fundamentals 4

Total Semester Hours 32

Level II – Option I – Heavy Equipment Specialist

The 32 hours specified in level I certificate plus the following courses:

Semester Hrs

DEMR 1516 Basic Hydraulics 5
DEMR 2380 Cooperative Education – Diesel Engine Mechanic and Repairer 3
DEMR 2434 Advanced Diesel Tune-up and Troubleshooting 4
DEMR 2532 Electronics Controls 5
DEMR 2542 Automatic Power Shift and Hydrostatic Transmissions I 5

Total Semester Hours 54

Level II – Option II – Diesel Truck Specialist

The 32 hours specified in level I certificate plus the following courses:

Semester Hrs

DEMR 2380 Cooperative Education – Diesel Engine Mechanic and Repairer 3
DEMR 2434 Advanced Diesel Tune-up and Troubleshooting 4
DEMR 2532 Electronic Controls 5
DEMR 2538 Advanced Power Applications I 5
DEMR 2540 Advanced Power Applications II 5

Total Semester Hours 54

Level III – Service Manager Certificate

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

Semester Hrs

General Education Requirements 9
ACCT 1370 Introduction to College Accounting ... 3
BMGT 1301 Supervision 3
HRPO 1311 Human Relations 3

Total Semester Hours 9

DIESEL COURSES

DEMR 1266 Practicum – Diesel Engine Mechanic and Repairer

(47.0605) (0-15) 2 hours

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair. Corequisite: HRPO 1191.

DEMR 1413 Fuel Systems

(47.0605) (2-6) 4 hours

In-depth coverage of the fuel injector pumps and injection systems with emphasis on rebuilding and calibration. Emphasis on fuels and emissions as related to tune-up procedures. The student will use computerized test equipment to evaluate emissions from exhaust systems. The student will recognize problems and devise plans for correction. Students will allocate time while working and communicating with each member in their lab team on the exercise and using technical manuals. The students will acquire new knowledge, skills and improve self-esteem. The reading and discussion of technical material is required. Lab fee required. (SCANS 1, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

DEMR 1505 Basic Electrical Systems
(47.0605) (4-4) 5 hours
An introduction to the basic principles of the electrical systems of diesel powered equipment with emphasis on starters, alternators, batteries and regulators. Students will learn the basic principles of electricity, reading and interpretation of schematic diagrams and multi meters. Current technology will be applied in the diagnosis and repair of these various components. Lab fee required. (SCANS 1, 3, 5, 6, 8, 9, 11) Prerequisite: None.

DEMR 1506 Diesel Engine I
(47.0605) (4-4) 5 hours
An introduction to the basic principles of diesel engines and systems. Students will learn principles and nomenclatures of diesel engines. Reading and interpreting service manuals and decisions regarding service and repair will be required. Student will use current technologies to diagnose and repair various diesel engines. Lab fee required. (SCANS 1, 6, 8, 9, 11) Prerequisite: None.

DEMR 1516 Basic Hydraulics
(47.0605) (4-4) 5 hours
Fundamentals of hydraulics including components and related systems. After verifying customer complaints, student teams will conduct component testing and circuit design, operation, system diagnostics, preventive and predictive maintenance. Basic hardware, tools, safety and practices normally associated with maintenance and service trades is also presented along with failure analysis and rebuilding of hydraulic components. Lab fee required. (SCANS 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Level I certificate or consent of department chair.

DEMR 1549 Diesel Engine II
(47.0605) (4-4) 5 hours
An in-depth coverage of disassembly, repair, identification, evaluation and reassembly of diesel engines. The students will learn the theory of operation, terminology and proper repair procedures through extensive lab and classroom instruction. Reading and interpretation of service material will be necessary to facilitate understanding, diagnosis and repair of the Caterpillar engine. Lab fee required. (SCANS 1, 3, 5, 6, 8, 9, 11) Prerequisite: None.

DEMR 2380 Cooperative Education – Diesel Engine Mechanic and Repairer
(47.0605) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

DEMR 2434 Advanced Diesel Tune-up and Troubleshooting
(47.0605) (2-6) 4 hours
Advanced concepts and skills required for tune-up and troubleshooting procedures of diesel engines. Emphasis on the science of diagnostics with a common sense approach. After verifying customer complaints, student teams will use diagnostic equipment to test, troubleshoot and repair electronic and auxiliary systems to include electronic controlled engines and other computer controlled systems. Preventive maintenance and tune-up techniques are also presented while stressing problem solving strategies. Service manuals and other research tools and resources are emphasized along with the development of diesel vocabulary and specialized electronics math skills. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Level I certificate or consent of department chair.

DEMR 2446 Advanced Heating, Ventilation, and Air Conditioning (HVAC)
(47.0605) (2-6) 4 hours
Advanced concepts in heating, ventilation, and air conditioning. Emphasis on systematic troubleshooting. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Level II certificate or consent of department chair.

DEMR 2532 Electronic Controls
(47.0605) (4-4) 5 hours
Advanced skills in diagnostic and programming techniques of electronic control systems. After verifying customer complaints, student teams will perform preventative and predictive maintenance, system analysis and correct repair procedures. Theory and application of basic hardware, tools, safety, practices and repair of wiring circuits on all types of electrical components will be emphasized. Lab fee required. (SCANS 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Level I certificate or consent of department chair.

DEMR 2538 Advanced Power Applications I
(47.0605) (4-4) 5 hours
Advanced power train applications with emphasis on testing and evaluation of components. The students will learn the purpose, theory and terminology of the modern heavy truck power train components. Reading and interpretation of service manuals and bulletins will be necessary to facilitate the understanding, diagnosis and repair of transmissions, power trains and accessories. Lab fee required. (SCANS 1, 3, 6, 7, 8, 9, 11) Prerequisite: Level I certificate or consent of department chair.

DEMR 2540 Advanced Power Applications II
(47.0605) (4-4) 5 hours
Extended applications of power train with emphasis on testing and evaluation of components. The students will learn the theory and terminology of the modern heavy truck chassis. Reading and interpretation of service material will be necessary to facilitate the understanding and repair of the chassis and its various components. Lab fee required. (SCANS 1, 2, 6, 7, 8, 9, 11) Prerequisite: Level I certificate or consent of department chair.

DEMR 2542 Automatic Power Shift and Hydrostatic Transmissions I
(47.0605) (4-4) 5 hours
A study of the operation, maintenance, and repair of automatic power shift hydrostatic transmissions. After verifying customer complaints, student teams will learn operating principles of power shift transmissions, conventional oval track machines and elevator sprocket machine final drives. Emphasis on hydraulic principles and power flow, diagnostic procedures, disassembly, inspection, repair and reassembly. Lab fee required. (SCANS 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Level I certificate or consent of department chair.

HRPO 1191 Special Topics in Human Resources Management
(52.1001) (1-0) 1 hour
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. (SCANS 2, 5, 6, 11) Prerequisite: None. Corequisite: DEMR 1266.

Drafting Technology —

Faculty: James Mosman, chair; James McPherson.

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

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Drafting Technology

	Semester Hrs
General Education Requirements.	**20**
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or higher level math	3
MATH 1316 Plane Trigonometry	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	
Major Requirements	**35**
DFTG 1405 Technical Drafting	4
DFTG 1409 Basic Computer-Aided Drafting	4
DFTG 1417 Architectural Drafting – Residential	4
DFTG 1433 Mechanical Drafting	4
DFTG 2381 Cooperative Education – Drafting	3
DFTG 2410 Structural Drafting	4
DFTG 2412 Technical Illustration	4
DFTG 2419 Intermediate Computer-Aided Drafting	4
DFTG 2423 Pipe Drafting	4
Related Requirements	**15**
MCHN 1438 Basic Machine Shop I	4
OSHT 2401 OSHA Regulations – General Industry	4
PTRT 1301 Overview of Petroleum Industry	3
WLDG 1421 Introduction to Welding Fundamentals	4
Total Semester Hours	**70**

Certificates of Technology in Drafting

Level I certificates are TASP-waived.

Level I – Architectural Detailer

	Semester Hrs
Technical Core	
DFTG 1405 Technical Drafting	4
DFTG 1409 Basic Computer-Aided Drafting	4
DFTG 1417 Architectural Drafting – Residential	4
DFTG 2410 Structural Drafting	4
DFTG 2419 Intermediate Computer-Aided Drafting	4
OSHT 2401 OSHA Regulations – General Industry	4
Total Semester Hours	**24**

Level I – Machine Drafting Detailer

	Semester Hrs
Technical Core	
DFTG 1405 Technical Drafting	4
DFTG 1409 Basic Computer-Aided Drafting	4
DFTG 1433 Mechanical Drafting	4
DFTG 2412 Technical Illustration	4
DFTG 2419 Intermediate Computer-Aided Drafting	4
MCHN 1438 Basic Machine Shop I	4
Total Semester Hours	**24**

Level I – Structural Drafting Detailer

	Semester Hrs
Technical Core	
DFTG 1405 Technical Drafting	4
DFTG 1409 Basic Computer-Aided Drafting	4
DFTG 2410 Structural Drafting	4
DFTG 2419 Intermediate Computer-Aided Drafting	4
OSHT 2401 OSHA Regulations – General Industry	4
WLDG 1421 Introduction to Welding Fundamentals	4
Total Semester Hours	**24**

Level I – Pipe Drafting Detailer

	Semester Hrs
Technical Core	
DFTG 1405 Technical Drafting	4
DFTG 1409 Basic Computer-Aided Drafting	4
DFTG 2419 Intermediate Computer-Aided Drafting	4
DFTG 2423 Pipe Drafting	4
OSHT 2401 OSHA Regulations – General Industry	4
Total Semester Hours	**20**

Certificate of Technology in Advanced Skills

Level III – Technical Illustrator

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

	Semester Hrs
Technical Core	
DFTG 2402 Machine Drafting	4
DFTG 2428 Architectural Drafting – Commercial	4
DFTG 2459 Technical Presentations	4
Total Semester Hours	**12**

DRAFTING TECHNOLOGY COURSES

DFTG 1405 Technical Drafting

(48.0101) (2-4) 4 hours

Introduction to the principles of drafting to include terminology and fundamentals, including size and shape descriptions, projection methods, geometric construction, sections, auxiliary views, and reproduction processes. (SCANS 1, 2, 3, 4, 7, 8) Prerequisite: None.

DFTG 1409 Basic Computer-Aided Drafting

(48.0101) (2-4) 4 hours

An introduction to computer-aided drafting. Emphasis is placed on setup; creating and modifying geometry; storing and retrieving predefined shapes; placing, rotating, and scaling objects, adding text and dimensions, using layers, coordinate systems, and plot/print to scale. Lab fee required. (SCANS 1, 3, 5, 8, 9, 10) Prerequisite/corequisite: DFTG 1405 or consent of department chair.

DFTG 1417 Architectural Drafting – Residential

(48.0102) (2-4) 4 hours

Architectural drafting procedures, practices, and symbols, including preparation of detailed working drawings for residential structure with emphasis on light frame construction methods. This course is the capstone course for the Architectural Detailer Certificate. Lab fee required. (SCANS 1, 2, 3, 8) Prerequisites: DFTG 1405 and DFTG 1409.

DFTG 1433 Mechanical Drafting

(48.0105) (2-4) 4 hours

Detail drawings with proper dimensioning and tolerances, use of sectioning techniques, common

fasteners, pictorial drawings, including bill of material. This course is the capstone course for the Machine Drafting Detailer Certificate. Lab fee required. (SCANS 1, 3, 5, 8, 9) Prerequisites: DFTG 1405 and DFTG 1409.

DFTG 2381 Cooperative Education – Drafting

(48.0101) (1-20) 3 hours

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

DFTG 2402 Machine Drafting

(48.0105) (2-4) 4 hours

Production of detail and assembly drawings of machines, threads, gears, cams, tolerances and limit dimensioning, surface finishes, and precision drawings. Lab fee required. (SCANS 2, 3, 5, 6, 8, 9) Prerequisite: DFTG 1433.

DFTG 2410 Structural Drafting

(48.0101) (2-4) 4 hours

Discussion of detail drawing of structural shapes for fabrication with emphasis on framed and seated connectors and beam and column detailing. Designed to meet the standards of American Institute of Steel Construction, including units on concrete detailing conforming to American Concrete Institute standards. Offered spring semester odd numbered years. This course is the capstone course for the Structural Drafting Detailer Certificate. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisites: DFTG 1405 and DFTG 1409.

DFTG 2412 Technical Illustration

(48.0101) (2-4) 4 hours

Topics include pictorial drawing including isometrics, obliques, perspectives, charts, and graphs; shading and transfer lettering; and use of different media. Lab fee required. SCANS (1, 8, 9) Prerequisites: DFTG 1405 and DFTG 1409.

DFTG 2419 Intermediate Computer-Aided Drafting

(48.0101) (2-4) 4 hours

A continuation of practices and techniques used in basic computer-aided drafting emphasizing advanced dimensioning techniques, the development and use of prototype drawings, construction of pictorial drawings, construction of 3 dimensional drawings, interfacing 2d and 3d environments and extracting data. Lab fee required. (SCANS 2, 6, 8, 9) Prerequisite: DFTG 1409.

DFTG 2423 Pipe Drafting

(48.0101) (2-4) 4 hours

A study of pipe fittings, symbols, specifications and their applications to a piping process system. Creation of symbols and their usage in flow diagrams, plans, elevations, and isometrics. Offered spring semester even numbered years. This course is the capstone course for the Pipe Drafting Detailer Certificate. Lab fee required. (SCANS 1, 3, 6, 8, 9) Prerequisites: DFTG 1405 and DFTG 1409.

DFTG 2428 Architectural Drafting – Commercial

(48.0102) (2-4) 4 hours

Architectural drafting procedures, practices, and symbols including the preparation of detailed working drawings for a commercial building, with emphasis on commercial construction methods. Fall only. Lab fee required. (SCANS 3, 6, 9, 11) Prerequisite: DFTG 1417.

DFTG 2459 Technical Presentations

(48.0101) (2-4) 4 hours

Presentation techniques and methods used in the drafting field. Lab fee required. (SCANS 8, 9, 10) Prerequisite: DFTG 2412.

Economics (see Social Sciences)

Education

Advisor: Ned Pilcher, dean.

Course of Study for Associate in Arts Degree Education Majors

	Semester Hrs
General Education Requirements	**48-49**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (Sophomore level)	6
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH 1314 College Algebra or higher level math	3
PHED (any two one-hour activity courses)	2
PSYC 2308 Child Psychology	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
*An additional college level math or laboratory science	3-4
Any four-hour laboratory science	4
Any three-hour fine arts course	3

ELEMENTARY EDUCATION

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

SECONDARY EDUCATION

Electives (Should be selected from freshman and sophomore courses which will count toward a specialized teaching field. This teaching field must be in a discipline which is taught in the secondary schools. Before elective courses are selected, education students are strongly encouraged to consult with the catalog of senior institution to which they intend to transfer) **14-15**

Total Semester Hours **63**

*These will meet the six to eight hours required in either math or science for an associate of arts degree.

Electrical/Electronics Technology

Faculty: Danny Bailey, chair.

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

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Electrical Technology

	Semester Hrs
General Education Requirements	**23**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
ENGL 1302 Composition and Literature	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or higher level math	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**40**
CETT 1403 DC Circuits	4
CETT 1441 Solid State Circuits	4
CETT 1457 Linear Integrated Circuits	4
CETT 2381 Cooperative Education - Computer Engineering Technology/Technician	3
EEIR 1409 National Electrical Code	4
ELMT 1301 Basic Programmable Controllers	3
ELMT 1491 Special Topics: Electrical Test Preparation - Journeyman	4

ELMT 2339 Advanced Programmable Logic Controllers 3
ELPT 2451 Master Electrician Exam Review I 4
IEIR 1312 Distribution Systems 3
IEIR 1410 Motor Controls 4

Related Requirements 4
DFTG 1409 Basic Computer-Aided Drafting 4

Total Semester Hours 67

Credit for electrical/electronics courses may be awarded by passing an advanced standing examination. Students with prior training or experience who wish to apply for advanced standing should contact the department chair.

Course of Study for Associate in Applied Science Degree Electronics Technology

Semester Hrs

General Education Requirements 23
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3
ENGL 1302 Composition and Literature 3
GOVT 2305 Federal Government or GOVT 2306 Texas Government 3
MATH 1314 College Algebra or higher level math .. 3
PHED (any two one-hour activity courses) 2
PSYC 2302 Applied Psychology 3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

Major Requirements 42
CETT 1403 DC Circuits 4
CETT 1405 AC Circuits 4
CETT 1415 Digital Applications 4
CETT 1441 Solid State Circuits 4
CETT 1445 Microprocessors 4
CETT 1457 Linear Integrated Circuits 4
CETT 1491 Special Topics: Circuit Analysis 4
CETT 2381 Cooperative Education – Computer Engineering Technology/Technician 3
CETT 2435 Advanced Microprocessors 4
IEIR 1312 Distribution System 3
IEIR 1410 Motor Controls 4

Related Requirement 4
DFTG 1409 Basic Computer-Aided Drafting 4

Total Semester Hours 69

Credit for electrical/electronics courses may be awarded by passing an advanced standing examination. Students with prior training or experience who wish to apply for advanced standing should contact the department chair.

Certificates in Electrical Technology

Level I certificates are TASP-waived.

Level I – Electrical Technician

Semester Hrs

Technical Core
CETT 1403 DC Circuits 4
EEIR 1409 National Electrical Code 4
ELMT 1301 Basic Programmable Logic Controllers .. 3
IEIR 1410 Motor Controls 4

Total Semester Hours 15

Level II – Advanced Electrical Technician

Semester Hrs

General Education Core
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
MATH 1314 College Algebra or higher level math 3
PSYC 2302 Applied Psychology 3

Technical Core
CETT 1403 DC Circuits 4
CETT 1441 Solid State Circuits 4
CETT 1457 Linear Integrated Circuits 4
EEIR 1409 National Electrical Code 4
ELMT 1301 Basic Programmable Controllers 3
ELMT 1491 Special Topics: Electrical Test Preparation – Journeyman 4
ELMT 2339 Advanced Programmable Logic Controllers 3
ELPT 2451 Master Electrician Exam Review I 4
IEIR 1312 Distribution Systems 3
IEIR 1410 Motor Controls 4

Total Semester Hours 46

Certificates in Electronics Technology

Level I certificates are TASP-waived.

Level I – Electronics Technician

Semester Hrs

Technical Core
CETT 1403 DC Circuits 4
CETT 1405 AC Circuits 4
CETT 1415 Digital Applications 4
CETT 1441 Solid State Circuits 4
CETT 1445 Microprocessors 4

Total Semester Hours 20

Level II – Advanced Electronics Technician

Semester Hrs

General Education Core

COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
ENGL 1312 Report Writing 3
MATH 1314 College Algebra or higher level math .. 3

Technical Core

CETT 1403 DC Circuits 4
CETT 1405 AC Circuits 4
CETT 1415 Digital Applications 4
CETT 1441 Solid State Circuits 4
CETT 1445 Microprocessors 4
CETT 1457 Linear Integrated Circuits 4
CETT 1491 Special Topics: Circuit Analysis 4
CETT 2435 Advanced Microprocessors 4
IEIR 1410 Motor Controls 4

Total Semester Hours 45

ELECTRICAL/ELECTRONICS TECHNOLOGY COURSES

CETT 1403 DC Circuits

(15.0301) (3-3) 4 hours
A study of the fundamentals of direct current including Ohm's law, Kirchoff's laws and circuit analysis techniques. Emphasis on circuit analysis of resistive networks and DC measurements. Lab fee required. (SCANS 3, 5, 8, 9) Prerequisite: None.

CETT 1405 AC Circuits

(15.0301) (3-3) 4 hours
A study of the fundamentals of alternating current including series and parallel AC circuits, phasors, capacitive and inductive networks, transformers, and resonance. Lab fee required. (SCANS 3, 5, 8, 9) Prerequisite: CETT 1403.

CETT 1415 Digital Applications

(15.0301) (3-3) 4 hours
An investigation of combinational and sequential logic elements and circuits with emphasis on design and troubleshooting of combinational and sequential circuits. Lab fee required. (SCANS 5, 6, 7, 8, 9, 10) Prerequisite: None.

CETT 1441 Solid State Circuits

(15.0301) (3-3) 4 hours
A study of various semiconductor devices incorporated in circuits and their applications. Emphasis on circuit construction, measurements, and analysis. Lab fee required. (SCANS 1, 5, 7, 8, 9) Prerequisite: CETT 1403.

CETT 1445 Microprocessor

(15.0301) (3-3) 4 hours
An introductory course in microprocessor software and hardware; its architecture, timing sequence, operation, and programming; and discussion of appropriate software diagnostic language and tools. Lab fee required. (SCANS 2, 3, 7, 8, 9) Prerequisite: CETT 1415.

CETT 1457 Linear Integrated Circuits

(15.0301) (3-3) 4 hours
A study of the characteristics, operations, stabilization, testing, and feedback techniques of linear integrated circuits. Application in computation, measurements, instrumentation, and active filtering. Lab fee required. (SCANS 5, 7, 8, 9) Prerequisite: CETT 1441.

CETT 1491 Special Topics in Electronics: Circuit Analysis

(15.0301) (4-0) 4 hours
Introduces students to computer analysis of electronic circuits. PSPICE, GENESIS and other computer software will be used. Emphasis is placed on designing and evaluating analog circuitry with the computer. Students will write programs for diagnosis and design and analyze resistive, reactive, transistor and other circuits. (SCANS 2, 6, 7, 8, 9) Prerequisite: CETT 1441.

CETT 2381 Cooperative Education – Computer Engineering Technology/Technician

(15.0301) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

CETT 2435 Advanced Microprocessors

(15.0301) (3-3) 4 hours
An advanced course utilizing the microprocessor in control systems and interfacing. Emphasis on microprocessor hardware and implementation of peripheral interfacing. Lab fee required. (SCANS 5, 8, 9) Prerequisite: CETT 1445.

EEIR 1409 National Electrical Code

(47.0101) (3-3) 4 hours
Applications of the National Electrical Code for residential, commercial and industrial wiring. Emphasis on designing, constructing, and troubleshooting electrical systems. The electrical lab will enable the student to choose the material, tools, equipment and procedures necessary to identify, construct and troubleshoot electrical circuitry. Lab fee required. (SCANS 5, 8, 9) Prerequisite: None.

ELMT 1301 Basic Programmable Logic Controllers
(15.0403) (2-2) 3 hours
An introduction to programmable logic controllers as used in industrial environments including basic concepts, programming, applications, troubleshooting of ladder logic, and interfacing of equipment. Lab fee required. (SCANS 5, 8, 9) Prerequisite: IEIR 1410.

ELMT 1491 Special Topics in Electrical: Electrical Test Preparation – Journeyman
(15.0403) (4-0) 4 hours
Presents applications of the National Electrical Code for students preparing for local or state journeyman electrical tests. Includes concepts in residential, commercial and industrial wiring. Emphasis is placed on the interpretation of the language, notes, tables and other information presented in the National Electrical Code. (SCANS 5, 8, 9) Prerequisite: None.

ELMT 2339 Advanced Programmable Logic Controllers
(15.0403) (2-2) 3 hours
Advanced concepts in programmable logic controllers including advanced processors, programming and interfacing techniques, and specialized applications. Lab fee required. (SCANS 5, 8, 9) Prerequisite: ELMT 1301.

ELPT 1345 Commercial Wiring
(46.0301) (2-3) 3 hours
Instruction in commercial wiring methods. Interpret electrical blueprints/drawings; compute the circuit sizes and over-current protection needed for installation of branch circuits, feeders, and service entrance conductors; explain the proper installation of wiring devices according to electrical codes; demonstrate grounding methods; and identify commercial wiring methods including conduit bending. This course covers an overview of the National Electrical Code, wiring methods and materials, conductors and OCPD's, branch circuits and feeders, grounding, transformers, services, special locations, and calculations. Lab fee required. (SCANS 5, 8, 9) Prerequisite: None.

ELPT 1411 Basic Electrical Theory
(46.0301) (3-3) 4 hours
An overview of the theory and practice of electrical circuits including calculations as applied to alternating and direct current. Provides a comprehensive, content-filled introduction to basic electrical theory, circuit fundamentals, and practical wiring techniques. The course is based on typical residential, commercial, and industrial systems and represents the broad uses for electricity found in different industries. Lab fee required. (SCANS 5, 8, 9) Prerequisite: None.

ELPT 1429 Residential Wiring
(46.0301) (3-3) 4 hours
Instruction in wiring methods used for single family, two family, and multi-family dwellings. The student will compute the circuit sizes needed for the installation of branch circuits, feeders, and service entrance conductors; explain the proper installation of wiring devices according to electrical codes; demonstrate grounding methods; install ground fault circuits; and identify residential wiring methods. Provides a basic overview of wiring used in residential construction. Includes various connections, switches and receptacles, metallic and sheathed cable, light fixtures, wiring with conduit, low-voltage systems, and remodeling. Lab fee required. (SCANS 5, 8, 9) Prerequisite: None.

ELPT 2451 Master Electrician Exam Review I
(46.0301) (4-0) 4 hours
An introductory study of electrical theory, code calculations, and interpretations applicable to becoming a master electrician. Emphasis on residential, commercial, and industrial installations using the current edition of the National Electric Code (NEC) and local ordinances. (SCANS 5, 8, 9) Prerequisite: None.

IEIR 1312 Distribution Systems
(47.0105) (3-0) 3 hours
Fundamentals of distribution systems including single phase and three phase systems, grounding, ground fault protection, and the national electrical code. (SCANS 6, 10, 11) Prerequisite: None.

IEIR 1410 Motor Controls
(47.0105) (3-3) 4 hours
General principles and fundamentals of electrical controls and control components including starters, troubleshooting techniques, various protective devices, schematics, and diagrams. Lab fee required. (SCANS 5, 8, 9) Prerequisite: None.

Emergency Medical Services Professional —

Faculty: LeeDon Martin, chair; Brandon Tate, Dr. Weldon Butler, medical director.

Odessa College offers a cooperative program with a local hospital and an ambulance service designed to provide understanding, proficiency and skill in emergency medical care and transportation of the sick and injured. The curriculum is primarily designed for ambulance personnel, safety engineers, rescue squad workers, policemen, firemen, employees of public or private health agencies, and civil defense workers. Completion of the courses will qualify the individual to write the examination for registry with the Texas Department of Health, Emergency Medical Services Division.

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

Students considering enrolling in EMSP 1160 and EMSP 1501 must have approval from the department chair before enrolling.

Enrollment in advanced EMSP courses is limited, and students are urged to contact the department chair early to ensure acceptance to the program. Applicants or those seeking additional information should contact the emergency medical technology director or the Student Development Center.

Note: A student enrolled in any EMSP course is required to have liability insurance and health and accident insurance each semester.

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

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Emergency Medical Services Professional

	Semester Hrs
Prerequisite Courses	
EMSP 1160 Clinical – Emergency Medical Technology/Technician – Basic	1
EMSP 1355 Trauma Management	3
EMSP 1356 Patient Assessment and Airway Management	3
EMSP 1501 Emergency Medical Technician – Basic	5
EMSP 2348 Emergency Pharmacology	3
HPRS 1106 Medical Terminology	1
FIRST YEAR	
Fall Semester	
EMSP 1263 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical I	2
EMSP 1438 Introduction to Advanced Practice	4
EMSP 2243 Assessment Based Management	2
EMSP 2430 Special Populations	4
EMSP 2434 Medical Emergencies	4
Mid-Winter Semester	
EMSP 2438 EMS Operations	4
Spring Semester	
BIOL 2404 Human Anatomy & Physiology	4
EMSP 2160 Clinical – Emergency Medical Technology/Technician – Cardiology Clinical	1
EMSP 2260 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical II	2
EMSP 2261 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical III	2
EMSP 2444 Cardiology	4
PHED (any one-hour activity course)	1
SECOND YEAR	
Fall Semester	
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1302 Composition and Literature	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
PHED (any one-hour activity course)	1
PSYC 2301 Introduction to Psychology	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
SPAN 1300 Conversational Spanish I	
SPAN 2313 Spanish for Native Speakers of Spanish I	
Total Hours	**66**

Course of Study for Certificate of Completion

Level I certificates are TASP waived.

Level I – Basic Emergency Medical Technician

Semester Hrs

Major Requirements

EMSP 1160 Clinical – Emergency Medical Technology/Technician – Basic 1
EMSP 1355 Trauma Management 3
EMSP 1356 Patient Assessment and Airway Management 3
EMSP 1501 Emergency Medical Technician – Basic .. 5
EMSP 2348 Emergency Pharmacology 3

Total Semester Hours 15

Level I – Intermediate Emergency Medical Technician

Semester Hrs

Prerequisites

EMSP 1160 Clinical – Emergency Medical Technology/Technician – Basic 1
EMSP 1355 Trauma Management 3
EMSP 1356 Patient Assessment and Airway Management 3
EMSP 1501 Emergency Medical Technician – Basic .. 5
EMSP 2348 Emergency Pharmacology 3

Fall Semester

EMSP 1263 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical I 2
EMSP 1438 Introduction to Advanced Practice 4
EMSP 2243 Assessment Based Management 2
EMSP 2430 Special Populations 4
EMSP 2434 Medical Emergencies 4

Total Hours 31

Level I – Emergency Medical Services Professional – Paramedic

Semester Hrs

Prerequisite Courses

EMSP 1160 Clinical – Emergency Medical Technology/Technician – Basic 1
EMSP 1355 Trauma Management 3
EMSP 1356 Patient Assessment and Airway Management 3
EMSP 1501 Emergency Medical Technician – Basic .. 5
EMSP 2348 Emergency Pharmacology 3

FIRST YEAR

Fall Semester

EMSP 1263 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical I .. 2
EMSP 1438 Introduction to Advanced Practice 4
EMSP 2243 Assessment Based Management 2
EMSP 2430 Special Populations 4
EMSP 2434 Medical Emergencies 4

Mid-Winter Semester

EMSP 2438 EMS Operations 4

Spring Semester

EMSP 2160 Clinical – Emergency Medical Technology/Technician – Cardiology Clinical 1
EMSP 2260 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical II 2
EMSP 2261 Clinical – Emergency Medical Technology/Technician – Paramedic Clinical III .. 2
EMSP 2444 Cardiology 4

Total Hours 44

EMERGENCY MEDICAL SERVICES PROFESSIONAL COURSES

EMSP 1160 Clinical – Emergency Medical Services – Basic Clinical

(51.0904) (0-6) 1 hour

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 4, 5, 7, 8, 9, 10) Prerequisites: 18 years of age and consent of department chair. Corequisites: EMSP 1355, EMSP 1356, EMSP 1501, and EMSP 2348.

EMSP 1263 Clinical – Emergency Medical Services – Paramedic Clinical I

(51.0904) (0-8) 2 hours

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 5, 8, 9, 10, 11) Prerequisites: EMSP 1160, EMSP 1355, EMSP 1501, and EMSP 2348. Corequisites: EMSP 1438, EMSP 2243, EMSP 2430, and EMSP 2434.

EMSP 1355 Trauma Management

(51.0904) (2-2) 3 hours

A detailed study of the knowledge and skills in the assessment and management of patients with traumatic injuries. Lab fee required. (SCANS 1, 2, 5, 8, 9, 10, 11) Corequisites: EMSP 1160, EMSP 1356, EMSP 1501, and EMSP 2348.

EMSP 1356 Patient Assessment and Airway Management
(51.0904) (2-2) 3 hours
A detailed study of the knowledge and skills required to perform patient assessment and airway management. Lab fee required. (SCANS 1, 2, 5, 8, 9, 10, 11) Corequisites: EMSP 1160, EMSP 1355, EMSP 1501, and EMSP 2348.

EMSP 1438 Introduction to Advanced Practice
(51.0904) (3-2) 4 hours
An exploration of the foundations necessary for mastery of the advanced topics of clinical practice out of the hospital. Lab fee required. (SCANS 1, 2, 5, 8, 9, 10, 11) Corequisites: EMSP 1263, EMSP 2243, EMSP 2430, and EMSP 2434.

EMSP 1501 Emergency Medical Technician – Basic
(51.0904) (4-4) 5 hours
Introduction to the level of Emergency Medical Technician (EMT) – Basic. Includes all the skills necessary to provide emergency medical care at a basic life support level with an ambulance service or other specialized services. Lab fee required. (SCANS 1, 2, 4, 5, 7, 8, 9, 10) Prerequisites: 18 years of age and consent of department chair. Corequisites: EMSP 1160, EMSP 1355, EMSP 1356, and EMSP 2348.

EMSP 2160 Clinical – Emergency Medical Services – Cardiology Clinical
(51.0904) (0-3) 1 hour
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 4, 5, 7, 8, 9, 10) Corequisites: EMSP 2260, EMSP 2261, and EMSP 2444.

EMSP 2243 Assessment Based Management
(51.0904) (2-0) 2 hours
The capstone course of the EMSP program. Designed to provide for teaching and evaluating comprehensive, assessment-based patient care management. (SCANS 1, 2, 4, 5, 7, 8, 9, 10) Corequisites: EMSP 1263, EMSP 1438, EMSP 2430 and EMSP 2434.

EMSP 2260 Clinical – Emergency Medical Services – Paramedic Clinical II
(51.0904) (0-9) 2 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 5, 6, 9, 10, 11) Corequisites: EMSP 2160, EMSP 2261, and EMSP 2444.

EMSP 2261 Clinical – Emergency Medical Services – Paramedic Clinical III
(51.0904) (0-9) 2 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 5, 8, 9, 10, 11) Corequisites: EMSP 2160, EMSP 2260, and EMSP 2444.

EMSP 2348 Emergency Pharmacology
(51.0904) (3-0) 3 hours
A comprehensive course covering all aspects of the utilization of medications in treating emergency situations. Course is designed to compliment Cardiology, Special Populations, and Medical Emergency courses. (SCANS 1, 3, 6, 9) Prerequisite: None.

EMSP 2430 Special Populations
(51.0904) (4-0) 4 hours
A detailed study of the knowledge and skills necessary to reach competence in the assessment and management of ill or injured patients in nontraditional populations. (SCANS 1, 2, 5, 8, 9, 10, 11) Corequisites: EMSP 1263, EMSP 1438, EMSP 2243, and EMSP 2434.

EMSP 2434 Medical Emergencies
(51.0904) (3-3) 4 hours
A detailed study of the knowledge and skills in the assessment and management of patients with medical emergencies. Lab fee required. (SCANS 1, 2, 5, 8, 9, 10, 11) Corequisites: EMSP 1263, EMSP 1438, EMSP 2243, and EMSP 2430.

EMSP 2438 EMS Operations
(51.0904) (3-2) 4 hours
A detailed study of the knowledge and skills to safely manage the scene of an emergency. Lab fee required. (SCANS 1, 2, 5, 8, 9, 10, 11) Prerequisite: None.

EMSP 2444 Cardiology
(51.0904) (3-2) 4 hours
A detailed study of the knowledge and skills in the assessment and management of patients with cardiac emergencies. Lab fee required. (SCANS 1, 2, 5, 8, 9, 10, 11) Corequisites: EMSP 2160, EMSP 2260, and EMSP 2261.

Engineering

Faculty: Dr. Charles Sweatt, chair.

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

Course of Study for Pre-Engineering

	Semester Hrs
General Education Requirements	**35**
ENGL 1301 Composition and Rhetoric	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH 1348 Analytic Geometry	3
MATH 2413 Calculus I	4
PHED (any two one-hour activity courses)	2
PHYS 2425 Engineering Physics I	4
PHYS 2426 Engineering Physics II	4
SPCH 1321 Business and Professional Speech	3
Major Requirements	**20**
ENGR 1304 Engineering Drawing	3
ENGR 2301 Mechanics I	3
ENGR 2302 Mechanics II	3
MATH 2320 Differential Equations	3
MATH 2414 Calculus II	4
MATH 2415 Calculus III	4
Related Requirements.	**12**
CHEM 1111 Fundamentals of Chemistry Lab I	1
CHEM 1112 Fundamentals of Chemistry Lab II.	1
CHEM 1311 General Inorganic Chemistry I	3
CHEM 1312 General Inorganic Chemistry II	3
COSC 1401 Microcomputer Applications	4
Total Semester Hours	**67**

Chemical engineering majors should take Chemistry 2323, 2123, 2125 and 2325.
It is recommended that all engineering majors take MATH 2318 (Linear Algebra) if time permits.

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

ENGINEERING COURSES

ENGR 1304 Engineering Drawing
(48.0101.5102) (2-4) 3 hours
Presents care and use of drawing instruments, freehand lettering, geometric construction, general drafting principles, multiview projection, revolutions and sections. Includes isometric and cabinet projection, threads, bolts, rivets, helices, dimensioning, principles of working drawings, oblique drawing and fundamentals of computer graphics. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3, 6, 9)
Prerequisite: None.

ENGR 2301 Mechanics I
(14.1101.5210) (3-0) 3 hours
A basic mechanics course utilizing vectors. Introduces statics, including concepts of free-body diagrams, friction forces and virtual-work as well as motion of particles, including momenta, energy and work concepts. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3, 6, 9) Prerequisite or corequisite: MATH 2414.

ENGR 2302 Mechanics II
(14.1101.5310) (3-0) 3 hours
Dynamics of particles, including harmonic motion, motion of a particle in a central force field, momentum and work methods, theory of rigid body motion, work and energy methods, and relative motion in rigid bodies. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing and planning actions necessary to solve problems. Students will further develop and/or discover mathematical relationships and acquire skills in gathering, organizing and evaluating information. (SCANS 3, 6, 9)
Prerequisite: ENGR 2301.

English and Foreign Languages

Faculty: Dr. Judith Cornes, chair; Dr. Beverly Forsyth, Wayne Johnson, Dr. Mark Jordan, Kathryn Keen, Dr. Daryl Lane, Dr. David Mulry, Ivan Reyez, Ann Rusnak, Dr. Donna Smith, Dr. Michael White, Lynn Whitson.

English

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

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

Tutoring Labs

Tutoring is available free of charge to OC students. The Tutoring Lab is located in the Learning Resources Center (LRC), Room 301. The Student Learning Center also offers an open access computer lab in LRC 302 and the Basic Skills Lab in LRC 303.

All labs provide supplemental, individual instruction in grammar, spelling, composition and techniques of research to any student who needs improvement in writing ability or skill in literary analysis. Assistance is provided to both walk-in students and students referred by any instructor.

Course of Study for Associate in Arts Degree English Major

	Semester Hrs
General Education Requirements	**48**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
Foreign Language (FREN, GERM or SPAN 1411 and 1412)	8
Foreign Language (sophomore level)	6
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
*MATH (college level)	6
PHED (any two one-hour activity courses)	2
Science (two sequential laboratory courses)	8
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**12**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL 2322 Survey of British Literature I	3
ENGL 2323 Survey of British Literature II	3
Approved Electives (see department chair for options)	**3**
Total Semester Hours	**63**

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

* Students should check math requirement of designated senior institution.

ENGLISH COURSES

ENGL 0171 Sentence Structure
(32.0108.5312) (0-1) 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes techniques for creating concise and effective sentence structures. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9)
Prerequisite: None.

ENGL 0172 Focus and Unity
(32.0108.5312) (0-1) 1 hour
A compensatory self-paced lab course designed to

improve basic thinking and writing skills. Emphasizes recognition of purpose and audience and techniques of maintaining unity in a piece of writing. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

ENGL 0173 Organization and Development
(32.0108.5312) (0-1) 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes paragraph organization, cohesion and sequencing of ideas as well as other composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

ENGL 0174 Usage
(32.0108.5312) (0-1) 1 hour
A compensatory self-paced lab course designed to improve basic thinking and writing skills. Emphasizes recognition and incorporation of standard usage in sentence composition, focusing on verb and pronoun usage, punctuation, modifier usage, plural and possessive conventions, and precise and appropriate word choice as well as other composition techniques. Prepares student for the TASP examination and for ENGL 0370 and ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. (SCANS 2, 9) Prerequisite: None.

ENGL 0370 Basic English
(32.0108.5312) (3-0) 3 hours
A compensatory course designed to improve basic thinking and writing skills. Emphasizes essay development and use of conventional English. Requires essays composed in response to various prompts. Prepares student for TASP and ENGL 1301. The student must attain a "C" or better in this course or pass the English portion of the TASP before enrolling in ENGL 1301. Credit probably not transferable. Does not satisfy requirements for any degree plan at Odessa College. Lab fee required for ENGL 0370 WP (Word Processing). (SCANS 2, 9) Prerequisite: None. Corequisite: Students who have not taken and passed the reading section of TASP must enroll in a reading class.

ENGL 1301 Composition and Rhetoric
(23.0401.5112) (3-0) 3 hours
Consists of essentials of correctness and effectiveness in writing skills. Emphasizes reading and writing expository prose. Requires expository essays and collateral readings. Lab fee required for ENGL 1301 (Word Processing). (SCANS 1, 2, 9) Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

ENGL 1302 Composition and Literature
(23.0401.5112) (3-0) 3 hours
Consists of reading and analyzing selected works from the principle genres of literature and introduces research techniques. Requires analytical papers on literature, research exercises, supplemental readings and examinations. (SCANS 1, 2, 9) Prerequisite: ENGL 1301.

ENGL 1312 Report Writing
(23.1101.5112) (3-0) 3 hours
Consists of reading and writing directions, proposals, abstracts, summaries, letters and other report forms commonly used in business and industry. Gives attention to style, paragraphing, organization, mechanics, and usage as they apply to technical writing. Students should check with universities regarding course transferability. Lab fee required for ENGL 1312 (Word Processing). (SCANS 2, 9, 11) Prerequisite: ENGL 0370 passed with a "C" or better or a satisfactory placement score.

ENGL 2307 Creative Writing
(23.0501.5112) (3-0) 3 hours
Introduces the study and writing of fiction and poetry. Presents contemporary writers, market analysis and preparation and submission of manuscripts for publication. An elective course that will not substitute for any required English course in any associate degree program. May be repeated for credit. Will transfer, perhaps, in selected majors at senior institutions. (SCANS 2, 9) Prerequisite: ENGL 1302 or consent of the instructor.

ENGL 2311 Technical and Report Writing
(23.1101.5112) (3-0) 3 hours
Consists of reading and writing technical documents used in business and industry. Offers practical experience in the use of technical terms and in the processes of collection, interpretation, organization, and textual presentation of data. Students should check with universities regarding course transferability. Lab fee required for ENGL 2311 (Word Processing). (SCANS 2, 6, 9) Prerequisite: ENGL 1302 or consent of the department chair.

ENGL 2322 Survey of British Literature I
(23.0801.5112) (3-0) 3 hours
Consists of reading and analyzing significant works of British literature from the Old English period through the Neoclassical period. Requires research paper or several short analytical papers. Required of all English majors. (SCANS 1, 2, 9) Prerequisite: ENGL 1302.

ENGL 2323 Survey of British Literature II
(23.0801.5112) (3-0) 3 hours
Consists of reading and analyzing significant works of British literature from the Romantic period to the present day. Requires research paper or several short analytical papers. Required of all English majors. (SCANS 1, 2, 9) Prerequisite: ENGL 1302.

ENGL 2327 Survey of American Literature I
(23.0701.5112) (3-0) 3 hours
Consists of reading and analyzing significant works of American literature from the Colonial period through the Romantic period. Requires research paper or several short analytical papers. (SCANS 1, 2, 9) Prerequisite: ENGL 1302.

ENGL 2328 Survey of American Literature II
(23.0701.5112) (3-0) 3 hours
Consists of reading and analyzing significant works of American literature from the Realistic period to the present day. Requires research paper or several short analytical papers. (SCANS 1, 2, 9) Prerequisite: ENGL 1302.

ENGL 2332 Survey of World Literature I
(23.0301.5212) (3-0) 3 hours
Consists of reading and analyzing significant works of literature of the western world from the Classical period through the Renaissance. Requires research paper or several short analytical papers. (SCANS 1, 2, 9) Prerequisite: ENGL 1302.

ENGL 2333 Survey of World Literature II
(23.0301.5212) (3-0) 3 hours
Consists of reading and analyzing significant works of literature of the western world from the Neoclassical period through the present day. Requires research paper or several short analytical papers. (SCANS 1, 2, 9) Prerequisite: ENGL 1302.

ENGL 2371 Advanced Literature Analysis
(23.0301.5335) (3-0) 3 hours
Consists of selections of literature organized by genre, period or geographical region. Course descriptions are available each semester prior to registration. This course may be repeated for credit when topics vary. (SCANS 1, 2, 6, 9, 11) Prerequisite: ENGL 1302.

Options

Students who enroll in ENGL 0370 (Word Processing) or ENGL 1301 (Word Processing) and who lack keyboarding skills should also enroll in POFT 1127 Introduction to Keyboarding, a one-hour, nine-week course that develops touch-method skills on the alpha-numeric keyboard.

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

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

A number of English classes are offered via the Internet. Students wishing to take an Internet class are strongly recommended to have their own email account, free and regular access to a computer and sufficient technology to access the multimedia components of the World Wide Web.

Foreign Languages

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

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

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

Course of Study for Associate in Arts Degree Foreign Language Major

	Semester Hrs
General Education Requirements	**43**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3

ENGL (sophomore level) 6
GOVT 2305 Federal Government 3
GOVT 2306 Texas Government 3
HIST 1301 United States History to 1877 3
HIST 1302 United States History From 1877 or
HIST 2301 History of Texas 3
MATH (college level) 3
PHED (any two one-hour activity courses) 2
Science (two sequential laboratory courses) 8
SPCH 1315 Public Speaking or SPCH 1321
Business and Professional Speech 3

Major Requirements 22
Foreign Language 1411 and 1412 8
Foreign Language 1411 and 1412 (second
language) 8
Foreign Language (sophomore level) 6

Approved Elective (see department chair for options) .. 3

Total Semester Hours 68

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

French

FREN 1411 First Year French I
(16.0901.5113) (3-2) 4 hours
A basic course conducted in French for students with no previous experience in French. Emphasizes simple conversation: pronunciation, fluency and vocabulary. Also presents basic grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available as needed. Lab fee required. (SCANS 2, 9) Prerequisite: None.

FREN 1412 First Year French II
(16.0901.5113) (3-2) 4 hours
A continuation of FREN 1411. Has same purposes and uses same techniques. Lab fee required. (SCANS 2, 9) Prerequisite: FREN 1411 or its equivalent.

FREN 2311 Second Year French I
(16.0901.5213) (3-0) 3 hours
A continuation of FREN 1411 and FREN 1412. Conducted in French. Emphasizes conversation based on reading assignments. Includes grammar and composition. Individual help available. (SCANS 2, 9) Prerequisite: FREN 1412 or its equivalent.

FREN 2312 Second Year French II
(16.0901.5231) (3-0) 3 hours
A continuation of FREN 2311. Has same purposes and uses same techniques. (SCANS 2, 9) Prerequisite: FREN 2311 or its equivalent.

German

GERM 1411 First Year German I
(16.0501.5113) (3-2) 4 hours
A basic course conducted in German for students without previous experience in the German language. Emphasizes simple conversation: pronunciation, fluency and vocabulary. Presents basic grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available. Lab fee required. (SCANS 2, 9) Prerequisite: None.

GERM 1412 First Year German II
(16.0501.5113) (3-2) 4 hours
A continuation of GERM 1411. Has same purposes and uses same techniques. Lab fee required. (SCANS 2, 9) Prerequisite: GERM 1411 or its equivalent.

GERM 2311 Second Year German I
(16.0501.5213) (3-0) 3 hours
A sequential continuation of GERM 1411 and 1412. Conducted in German. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many course elements self-paced. Individual help available. (SCANS 2, 9) Prerequisite: GERM 1412 or its equivalent.

GERM 2312 Second Year German II
(16.0501.5213) (3-0) 3 hours
A continuation of GERM 2311. Has same purposes and uses same techniques. (SCANS 2, 9) Prerequisite: GERM 2311 or its equivalent.

Latin

LATI 1411 First Year Latin I
(16.1203.5113) (3-2) 4 hours
An introductory study of Latin for those students with little or no previous knowledge of the language. Includes grammar, syntax and vocabulary with the aim of achieving a reading knowledge of the language. Requires selected readings from Roman authors. Lab fee required. (SCANS 2, 9) Prerequisite: None.

LATI 1412 First Year Latin II
(16.1203.5113) (3-2) 4 hours
A continuation of LATI 1411. Has same purposes and techniques but goes further with vocabulary building and more advanced readings. Lab fee required. (SCANS 2, 9) Prerequisite: LATI 1411 or its equivalent and consent of the instructor.

Spanish

SPAN 1300 Conversational Spanish I
(16.0905.5413) (3-0) 3 hours
Conducted in basic, everyday conversation in simple social contexts. Introduces sound sentence structure but emphasizes basic vocabulary, idiomatic expressions and daily speech. (SCANS 2, 9) Prerequisite: None.

SPAN 1305 Intensive Spanish Practicum
(16.0905.5113) (8-16) [2 weeks] 3 hours
A two-week course of intensive verbal practice in Spanish. Consists of six hours of classes daily with side trips to cultural points of interest. Students will live with local families who speak little or no English. Cost includes round-trip airfare, room and board, institutional tuition and books. Odessa College fees not included. No previous knowledge of Spanish required. Students should check with senior college regarding course transferability. (SCANS 2, 9) Prerequisite: None.

SPAN 1310 Conversational Spanish II
(16.0905.5413) (3-0) 3 hours
A continuation of SPAN 1300. Increases conversational ability and structural knowledge of Spanish. (SCANS 2, 9) Prerequisite: SPAN 1300, its equivalent or consent of the instructor.

SPAN 1411 First Year Spanish I
(16.0905.5113) (3-2) 4 hours
A basic course conducted in Spanish for students without previous experience in Spanish. Emphasizes simple conversation: pronunciation, fluency and vocabulary. Presents basic grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available. Many elements self-paced. Lab fee required. (SCANS 2, 9) Prerequisite: None.

SPAN 1412 First Year Spanish II
(16.0905.5113) (3-2) 4 hours
Conducted in Spanish, a continuation of SPAN 1411. Emphasizes more advanced conversation: pronunciation, fluency and vocabulary. Presents more advanced grammar and composition. May require up to two hours per week of individual practice in the language lab. Individual help available. Many elements self-paced. Lab fee required. (SCANS 2, 9) Prerequisite: SPAN 1411 or its equivalent.

SPAN 2311 Second Year Spanish I
(16.0905.5213) (3-0) 3 hours
Conducted in Spanish, a continuation of SPAN 1411 and SPAN 1412. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many elements self-paced. (SCANS 2, 9) Prerequisite: SPAN 1412 or its equivalent.

SPAN 2312 Second Year Spanish II
(16.0905.5213) (3-0) 3 hours
Conducted in Spanish, a continuation of SPAN 2311. Emphasizes conversation based on reading assignments. Includes grammar and composition. Many elements self-paced. (SCANS 2, 9) Prerequisite: SPAN 2311 or its equivalent.

SPAN 2313 Spanish for Native Speakers of Spanish I
(16.0905.5413) (3-0) 3 hours
Gives special attention to pronunciation, writing, reading and usage for students whose native language is Spanish. Emphasizes structure of the language, generating basic sentence patterns and reading and analyzing brief passages of prose. (SCANS 2, 9) Prerequisite: None.

SPAN 2315 Spanish for Native Speakers of Spanish II
(16.0905.5413) (3-0) 3 hours
A continuation of SPAN 2313. Examines structure of the language and uses advanced material for reading and writing. (SCANS 2, 9) Prerequisite: SPAN 2313 or consent of the instructor.

SPAN 2321 Spanish Literature I
(16.0905.5313) (3-0) 3 hours
Conducted in Spanish, a survey course in Spanish and Latin American literature and culture. Includes reading of short prose and poetry selections for students new to Spanish literature. Includes conversation, writing and grammar review. (SCANS 2, 9) Prerequisite: SPAN 2312, its equivalent or consent of the instructor.

SPAN 2322 Spanish Literature II
(16.0905.5313) (3-0) 3 hours
A continuation of SPAN 2321. Conducted in Spanish. Includes a further study of Spanish and Latin American literature and culture, along with conversation, writing and grammar review. (SCANS 2, 9) Prerequisite: SPAN 2321, its equivalent or consent of the instructor.

Fire Technology

Faculty: LeeDon Martin, chair; Brandon Tate; Dave Parker, Fire Academy Coordinator.

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

Courses stress practical application in understanding building designs, classification of fires, exposure protection, toxic fumes, arson investigation, hazardous materials, fire fighting techniques and standards. The course surveys fire administration with special interest in recruiting, organization, budget, legal aspects, employee effectiveness, evaluation and related problems. The program is planned to develop specific abilities and knowledge for entry-level employment and to provide the necessary educational background for advancing into a highly responsible position in the profession.

Note: Enrollment in EMSP 1160 requires student liability insurance and health and accident insurance.

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

All cadets enrolled in the Fire Academy must pass and receive an EMT-Basic certification from the Texas Department of Health. This certification must be received by the cadet by the completion of the fall semester. Failure to receive an EMT-Basic certification by the cadet will result in the cadet being removed from the Odessa College Fire Academy.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Fire Technology

Semester Hrs

FIRST YEAR

First Semester

EMSP 1160 Clinical – Emergency Medical Technology/Technician – Basic Clinical 1
EMSP 1501 Emergency Medical Technician – Basic .. 5
FIRT 1301 Fundamentals of Fire Protection 3
FIRT 1305 Public Education Programs 3
FIRT 1311 Fire Service Hydraulics 3

Second Semester

FIRT 1307 Fire Prevention Codes & Inspection 3
FIRT 1315 Hazardous Materials I 3
FIRT 1319 Firefighter Health & Safety 3
FIRT 1331 Firefighting Strategies & Tactics I 3
FIRT 1353 Legal Aspects of Fire Protection 3

SECOND YEAR

Third Semester

ENGL 1301 Composition & Rhetoric or ENGL 1312 Report Writing 3
EPCT 1301 Hazardous Waste Operations and Emergency Response 3
FIRT 2331 Firefighting Strategies & Tactics II 3
GOVT 2305 Federal Government or GOVT 2306 Texas Government 3
HPRS 1106 Medical Terminology 1
MATH 1332 Structures of College Mathematics I or higher-level math 3
PHED (any one-hour activity course) 1

Fourth Semester

BMGT 1305 Communications in Management 3
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
Elective 3
FIRT 2380 Cooperative Education – Fire Protection & Safety Technology/Technician 3
PHED (any one-hour activity course) 1
SPCH 1315 Public Speaking or SPCH 1321 Business & Professional Speech 3
PLUS one course from the following list 3
ARTS 1301 Art Appreciation
ENGL 1302 Composition and Literature
SPAN 1300 Conversational Spanish I
SPAN 2313 Spanish for Native Speakers of Spanish I

Total Semester Hours 66

Course of Study for Associate in Applied Science Degree Fire Administration

Semester Hrs

FIRST YEAR

First Semester

EMSP 1160 Clinical – Emergency Medical Technology/Technician – Basic Clinical 1
EMSP 1501 Emergency Medical Technician – Basic 5
FIRS 1401 Firefighter Certification I 4
FIRS 1407 Firefighter Certification II 4

Second Semester

FIRS 1413 Firefighter Certification III 4
FIRS 1419 Firefighter Certification IV 4
FIRS 1423 Firefighter Certification V 4
FIRS 1429 Firefighter Certification VI 4
FIRS 1433 Firefighter Certification VII 4

SECOND YEAR

Third Semester

ENGL 1301 Composition & Rhetoric or
ENGL 1312 Report Writing 3
EPCT 1301 Hazardous Waste Operations
and Emergency Response 3
FIRT 2331 Firefighting Strategies & Tactics II 3
GOVT 2305 Federal Government or
GOVT 2306 Texas Government 3
MATH 1332 Structures of College
Mathematics I or higher-level math 3
PHED (any one-hour activity course) 1

Fourth Semester

BMGT 1305 Communications in Management 3
COSC 1301 Microcomputer Applications (or
higher level) or demonstrated proficiency 3
FIRT 1305 Public Education Programs 3
FIRT 2380 Cooperative Education – Fire
Protection & Safety Technology/Technician 3
PHED (any one-hour activity course) 1
SPCH 1315 Public Speaking or SPCH 1321
Business & Professional Speech 3
PLUS one course from the following list 3
ARTS 1301 Art Appreciation
ENGL 1302 Composition and Literature
SPAN 1300 Conversational Spanish I
SPAN 2313 Spanish for Native Speakers of
Spanish I

Total Semester Hours 69

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

Certificates of Technology

Level I certificates are TASP-waived.

Level I – Basic Fire Fighter Academy

Semester Hrs

First Semester

EMSP 1160 Clinical – Emergency Medical
Technology/Technician – Basic Clinical 1
EMSP 1501 Emergency Medical Technician – Basic .. 5
FIRS 1401 Firefighter Certification I 4
FIRS 1407 Firefighter Certification II 4

Second Semester

FIRS 1413 Firefighter Certification III 4
FIRS 1419 Firefighter Certification IV 4
FIRS 1423 Firefighter Certification V 4
FIRS 1429 Firefighter Certification VI 4
FIRS 1433 Firefighter Certification VII 4

Total Semester Hours 34

Level III – Advanced Fire Technology

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

Major Requirements

FIRT 1303 Fire & Arson Investigation I 3
FIRT 1309 Fire Administration I 3
FIRT 1329 Building Codes and Construction 3

Total Semester Hours 9

FIRE TECHNOLOGY COURSES

FIRS 1401 Firefighter Certification I

(43.0203) (3-3) 4 hours

An introduction to firefighter safety and development. Topics include Texas Commission on Fire Protection Rules and Regulations, firefighter safety, fire science, personal protective equipment, self-contained breathing apparatus, and fire reports and records. Students will discuss core fire service subjects; demonstrate the use of self-contained breathing apparatus; explain and identify fire service reports and records; relate fire service subject matter to firefighting safety and survival. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRS 1407 Firefighter Certification II

(43.0203) (2-4) 4 hours

The study of basic principles and skill development in handling fire service hose and ladders. Topics include the distribution system of water supply, basic building construction and emergency service communication, procedures and equipment. Students will describe hose construction, care, maintenance and testing; demonstrate hose rolls, drags, carries and loads; identify the principles of ladder construction, care and testing; identify the types of water distribution systems and demonstrate proficiency in water supply operations; list the types of construction and building material hazards that affect firefighter safety; state the procedures of receiving alarms and identify alarm devices, equipment and radio procedures. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRS 1413 Firefighter Certification III
(43.0203) (2-4) 4 hours
General principles of fire apparatus, pump operations, fire streams and public operations as they relate to fundamental development of basic firefighter skills. Students will identify the types of fire apparatus; describe the operation of fire pumps; demonstrate fire stream operations and fire pump operations; and explain the importance of public relations as a member of fire service. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRS 1419 Firefighter Certification IV
(43.0203) (2-4) 4 hours
A study of equipment, tactics and procedures used in forcible entry, ventilation, salvage and overhaul. Preparation for certification as a basic firefighter. Students will identify and safely use, maintain and clean forcible entry tools; describe the effects of proper ventilation, decisions to ventilate and demonstrate methods of ventilation; describe the purpose of salvage; demonstrate various folds and rolls of covers, salvage throws, use of water catchalls and various mop up procedures; describe and identify safety precautions, dangerous building conditions, value of overhaul and overhaul procedures; and demonstrate safe handling of debris. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRS 1423 Firefighter Certification V
(43.0203) (2-4) 4 hours
The study of ropes and knots, rescue procedures and techniques, and hazardous materials. Preparation for certification as a basic firefighter. Students will describe and demonstrate proper rescue techniques to include search, removal and packing of victims; describe and demonstrate life safety, harnesses, repelling and vehicle extrication; describe and demonstrate various parts of the rope, various knots and their uses; and identify definitions of hazardous materials and describe incident management of hazardous materials. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRS 1429 Firefighter Certification VI
(43.0203) (2-4) 4 hours
The study of fire inspection techniques and practices, public transportation, fire cause determination. Topics include fire protection systems, wildland fire, and pre-incident planning. Preparation for certification as a basic firefighter. Students will identify and describe the procedure to determine point of origin, events of fire, cause, factors indicating arson, the protection of evidence and the importance of securing the fire scene; list the components of pre-incident planning, and perform a facility survey; explain wildland fire suppression terminology and methods including location, sizing of fire, suppression techniques and safety. Describe the purpose of National Fire Protection Association (NFPA) 13 and (NFPA) 14 standards applicable to fire protection systems; state recommended procedures using apparatus, equipment and resources available as they apply to the modes of public transportation; and explain the purpose of the NFPA 101, life safety code, applicable to fire prevention inspections. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRS 1433 Firefighter Certification VII
(43.0203) (2-4) 4 hours
An in-depth study and practice of simulated emergency operations and hands-on live fire training exercises, incident command procedures, and combined operations using proper extinguishing methods. Emphasis on safety. Students will describe the general requirements of National Fire Protection Association (NFPA) standards applicable to live fire; extinguish or control live fires while using hose streams and portable extinguishers safely and effectively; and operate within a command structure utilized by all participants. This is the capstone course for the Basic Fire Fighter Academy Level I certificate. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisite: Consent of department chair.

FIRT 1191 Special Topics in Fire Protection and Safety Technology/Technician
(43.0201) (0-3) 1 hour
Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. (SCANS 3, 7, 8, 9, 10) Prerequisite: None.

FIRT 1301 Fundamentals of Fire Protection
(43.0202) (3-0) 3 hours
Study of the philosophy, history and fundamentals of public and private fire protection. Topics include statistics of fire and property loss, agencies involved in public and private protection, legislative development, departmental organization, training and staffing. Students will describe a modern fire protection agency; outline the organizational and staffing requirements for fire protection; and identify public and private fire protection agencies. (SCANS 1, 2, 6, 7, 8, 9) Prerequisite: None.

FIRT 1303 Fire and Arson Investigation I
(43.0201) (3-0) 3 hours
In-depth study of basic fire and arson investigation practices. Emphasis on fire behavior principles related to fire cause and origin determination. The student will determine point of origin and the cause of the fire; identify motives of fire setters; and describe the

elements of the combustion process. (SCANS 2, 4, 5, 6, 7, 9) Prerequisite: None.

FIRT 1305 Public Education Programs
(43.0202) (2-2) 3 hours
Preparation of firefighters and fire officers to develop public fire safety awareness. Emphasis on implementation of fire and public safety programs in an effort to reduce the loss of life. The student will identify safety programs for various target groups; and conduct fire and public safety programs within a community. Lab fee required. (SCANS 6, 7, 8, 9) Prerequisite: None.

FIRT 1307 Fire Prevention Codes and Inspections
(43.0201) (3-0) 3 hours
Study of local building and fire prevention codes. Emphasis on fire prevention inspections, practices, and procedures. Students will identify and apply provisions of local building and fire prevention codes to fire prevention inspections and describe fire inspection practices and procedures including hazard recognition and correction. (SCANS 7, 8, 9, 10) Prerequisite: None.

FIRT 1309 Fire Administration I
(43.0202) (3-0) 3 hours
Introduction to the organization and management of a fire department and the relationship of government agencies to the fire service. Emphasis on fire service leadership from the perspective of the company officer. The student will explain the intra-organizational cooperation needed for a fire department to function properly; describe fundamental management and organizational principles; and demonstrate leadership and management skills at the company grade level. (SCANS 6, 7, 9, 10) Prerequisite: None.

FIRT 1311 Fire Service Hydraulics
(43.0201) (2-2) 3 hours
Study of water distribution systems and fire stream development as related to fire protection and suppression. Students will describe basic principles of hydraulics including principles of fluids and fluid dynamics; identify and describe components of a water distribution system; determine fire flows for various types of occupancies; recognize and explain various types of fire pumps and pump operational procedures; calculate pump pressure for various types of hose lays; and describe various types of nozzles and the application of each type. Lab fee required. (SCANS 3, 6, 8) Prerequisite: None.

FIRT 1315 Hazardous Material I
(43.0201) (3-0) 3 hours
Study of the chemical characteristics and behavior of various materials. Topics include storage, transportation, handling hazardous emergency situations, and the most effective methods of hazard mitigation. Students will recognize hazardous materials in various shipping and storage containers; explain chemical characteristics and how they may react under certain conditions; and describe the most effective methods of hazard mitigation. (SCANS 6, 8, 9) Prerequisite: None.

FIRT 1319 Firefighter Health and Safety
(43.0201) (3-0) 3 hours
Study of firefighter occupational safety and health in emergency and non-emergency situations. Students will identify and describe components of a firefighter safety and health program; explain safety practices and procedures related to emergency and non-emergency operations; and outline the components of a firefighter wellness program. (SCANS 6, 7, 8, 9, 11) Prerequisite: None.

FIRT 1329 Building Codes and Construction
(43.0201) (3-0) 3 hours
Examination of building codes and requirements, construction types, and building materials. Topics include walls, floorings, foundations, and various roof types and the associated dangers of each. The student will explain model building codes; discuss National Fire Protection Association 101 (NFPA 101); and compare and contrast construction types. (SCANS 6, 8, 9) Prerequisite: None.

FIRT 1331 Firefighting Strategies and Tactics I
(43.0202) (2-4) 3 hours
Analysis of the nature of fire problems and selection of initial strategies and tactics including an in-depth study of efficient and effective use of manpower and equipment to mitigate the emergency. Students will recognize potential scenarios in various fire situations; select and implement strategies and tactics; and describe components of an incident management system. Lab fee required. (SCANS 4, 7, 8, 9) Prerequisite: None.

FIRT 1353 Legal Aspects of Fire Protection
(43.0202) (3-0) 3 hours
Study of the rights, duties, liability concerns, and responsibilities of public fire protection agencies while performing assigned duties. Students will summarize basic criminal and civil law; discuss relevant tort law; and describe state and federal legal systems. (SCANS 6, 7, 9, 10, 11) Prerequisite: None.

FIRT 2331 Firefighting Strategies and Tactics II
(43.0202) (3-0) 3 hours
Continuation of Firefighting Strategies and Tactics I. Emphasis on use of incident command in large scale command problems and other specialized fire problems. Students will explain and implement incident command; diagram a fire attack on a high rise building;

and develop strategies to mitigate various specific emergencies. (SCANS 6, 7, 8, 9) Prerequisite: FIRT 1331 or consent of department chair.

FIRT 2380 Cooperative Education – Fire Protection and Safety Technology/Technician
(43.0201) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

French (see English and Foreign Languages)

Geography (see Geology, Anthropology and Geography)

Geology, Anthropology and Geography

Faculty: G. Brent McAfee, chair.

Geology

Geology is a study of the Earth, its history, materials, changing life, and the processes that have resulted in its present form. For students who do not wish more than a year of geology, the principal value will be primarily on an increased interest in and understanding of their environment. However, for those majoring in geology, petroleum or civil engineering, and ecological or environmental studies, the first year of geology courses provides necessary background for further study. GEOL 1403 and GEOL 1404 will serve as a required physical and/or natural science for non-science majors at most universities.

Course of Study for Associate in Science Degree Geology

	Semester Hrs
General Education Requirement	**59**
CHEM 1311 General Inorganic Chemistry I and CHEM 1111 Fundamentals of Chemistry Laboratory I	4
CHEM 1312 General Inorganic Chemistry II and CHEM 1112 Fundamentals of Chemistry Laboratory II	4
COSC 1401 Microcomputer Applications	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH 1314 College Algebra or higher level math	3
MATH 1316 Plane Trigonometry or higher level math	3
MATH 1348 Analytic Geometry or higher level math	3
MATH 2413 Calculus I or higher level math	4
PHED (any two one-hour activity courses)	2
PHYS 1401 College Physics I or PHYS 2425 Engineering Physics I	4
PHYS 1402 College Physics II or PHYS 2426 Engineering Physics II	4
SPCH 1315 Public Speaking	3

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

Total Semester Hours **71**

GEOLOGY COURSES

GEOL 1403 Physical Geology
(40.0601.5103) (3-3) 4 hours
This course is a study of the physical and chemical aspects of the Earth's interior and exterior crust. Students will study the origin, occurrence, and classification of minerals, rocks, structures and landforms. Laboratory activities involve the students in organizing and processing data related to the classification of minerals and rocks and principles underlying the relationships between topographic maps and geological processes. Lab fee required. (SCANS 6, 9) Prerequisite: None.

GEOL 1404 Historical Geology
(40.0601.5103) (3-3) 4 hours
Students study the chronological sequence of events in the physical history of the Earth and its life forms. Laboratory activities involve the students in acquiring and evaluating data related to fossils and their relationship to ancient environments. Students also organize and process data related to the classification of fossils and principles underlying the relationships between lithology, age, structure and geological map interpretation. Lab fee required. (SCANS 6, 9) Prerequisite: None.

Anthropology

Anthropology is a comprehensive study of man and his works. The discipline includes human origin and development, variation in physical types, and aspects of human culture such as family patterns and customs, economics, religions, languages, and handicrafts and technology. ANTH 2301 and ANTH 2351 will fulfill social science requirements at many universities.

ANTHROPOLOGY COURSES

ANTH 2301 Physical Anthropology
(45.0301.5125) (3-0) 3 hours
This course is a study of the physical characteristics of man. Students will interpret data related to modern man, fossil man, and higher primates. Students organize and process data related to physical characteristics of modern man and analyze principles underlying the relationships between modern man and prehistoric man. (SCANS 6, 9) Prerequisite: GEOL 1403 or consent of the department chair.

ANTH 2351 Cultural Anthropology
(45.0201.5325) (3-0) 3 hours
Students will study human culture in the historical perspective. Students also organize and process data related to the development of culture as well as comparing principles and relationships of present cultures. (SCANS 6, 9) Prerequisite: None.

Geography

Courses in geography are designed to acquaint students with the world and its peoples. Major aspects of both physical and cultural geography are studied in an integrated manner in order to provide a greater understanding of world conditions. GEOG 1301 and GEOG 1302 will fulfill social science requirements at many colleges.

GEOGRAPHY COURSES

GEOG 1301 Principles of Geography I
(45.0701.5125) (3-0) 3 hours
Students are taught to understand and interpret physical and cultural geography of North and South American countries. Students also organize and process data related to geographic maps of the various countries. (SCANS 6) Prerequisite: None.

GEOG 1302 Principles of Geography II
(45.0701.5125) (3-0) 3 hours
Students study the physical and cultural geography of Europe, Asia, Africa, Australia, and the more important island groups. Students also organize and process data related to geographic maps of the countries and island groups. (SCANS 6) Prerequisite: None.

German (see English and Foreign Languages)

Government (see Social Sciences)

Heating (see Air Conditioning)

History (see Social Sciences)

Human Development (see Psychology)

Human Services

Faculty: James Jordan, chair.

Odessa College offers a program in human services (alcohol and drug abuse) for those students who wish to be licensed by the Texas Commission on Alcohol and Drug Abuse (TCADA) as a Licensed Chemical Dependency Counselor (LCDC) in order to accept employment relating to victims of alcohol and drug abuse. The core curriculum in human services can lead to an associate in applied science degree or a certificate of completion in human services. The human services program provides the student with the required 270 clock hours of chemical dependency coursework as well as the supervised 300-hour practicum.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

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

	Semester Hrs
General Education Requirements	**30**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HPRS 1106 Medical Terminology	1
MATH 1332 Structures of College Mathematics I or higher level math	3
PHED (any two one-hour activity courses)	2
PSYC 2301 Introduction to Psychology	3
SPCH 1311 Introduction to Speech Communication or SPCH 1321 Business and Professional Speech	3
Major Requirements	**33**
DAAC 1304 Pharmacology of Addiction	3
DAAC 1307 Addicted Family Intervention	3
DAAC 1309 Assessment Skill of Alcohol and Other Drug Addictions	3
DAAC 1311 Counseling Theories	3
DAAC 1314 Dynamics of Group Counseling	3
DAAC 1317 Basic Counseling Skills	3
DAAC 1319 Introduction to Alcohol and Other Drug Addictions	3
DAAC 1341 Counseling Alcohol and Other Drug Addictions	3
DAAC 1343 Current Issues	3
DAAC 2366 Practicum – Alcohol/Drug Abuse Counseling	3
*Approved Elective	3
Total Semester Hours	**63**

*See department chair for list of approved electives.

Students who wish only to qualify to take the TCADA licensure or TAAP certification examination may do so by successfully completing 21 semester hours of human services courses including DAAC 2366 Practicum.

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

Students entering the program must meet with the department chair prior to enrollment. Students will need to provide proof of immunization against tetanus/diphtheria, rubella (German measles), rubeola (measles), mumps, and hepatitis B prior to entering the program.

Human Services Certificate Program

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

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I – Alcohol and Drug Abuse

	Semester Hrs
General Education Requirement	**9**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
SPCH 1311 Introduction to Speech Communication or SPCH 1321 Business and Professional Speech	3
Major Requirements	**21**
DAAC 1304 Pharmacology of Addiction	3
DAAC 1311 Counseling Theories	3
DAAC 1317 Basic Counseling Skills	3

DAAC 1319 Introduction to Alcohol and Other Drug Addictions 3
DAAC 1341 Counseling Alcohol and Other Drug Addictions 3
DAAC 2366 Practicum – Alcohol/Drug Abuse Counseling 3
DAAC (any 3-hour DAAC Course) 3

Total Semester Hours 30

HUMAN SERVICES COURSES

DAAC 1304 Pharmacology of Addiction

(51.1501) (3-0) 3 hours

Psychological, physiological, and sociological effects of mood altering substances and behaviors and their implications for the addiction process are discussed. Emphasis is placed on pharmacological effects of tolerance, dependency/withdrawal, cross addiction, and drug interaction. (SCANS 5, 6, 10, 11) Prerequisite: None.

DAAC 1307 Addicted Family Intervention

(51.1501) (3-0) 3 hours

An introduction to the family as a dynamic system focusing on the effects of addiction pertaining to family roles, rules, and behavior patterns. Discuss the impact of mood altering substances and behaviors and therapeutic alternatives as they relate to the family from a multicultural and transgenerational perspective. (SCANS 5, 6, 9, 11) Prerequisite: DAAC 1317, DAAC 1311 or department chair approval.

DAAC 1309 Assessment Skill of Alcohol and Other Drug Addictions

(51.1501) (3-0) 3 hours

Examines procedures by which a counselor/program identifies and evaluates an individual's strengths, weaknesses, problems, and needs which will be used in the development of a treatment plan. Prepares the student to appropriately explain assessment results and individual rights to clients. (SCANS 5, 6, 9, 10) Prerequisite: DAAC 1304, DAAC 1311, DAAC 1317 and DAAC 1319 or department chair approval.

DAAC 1311 Counseling Theories

(51.1501) (3-0) 3 hours

An introduction to major theories of various treatment modalities including Reality therapy, Psycho-dynamic, grief therapy, Client-centered therapy, Rational-Emotive Therapy, cognitive-behavioral approaches such as life skills training, behavior modification, and the introduction to experiential therapies as they relate to detoxification, residential, outpatient, and extended treatment. (SCANS 5, 6, 9, 10, 11) Prerequisite: None.

DAAC 1314 Dynamics of Group Counseling

(51.1501) (3-0) 3 hours

An introduction to the patterns and dynamics of group interactions across the life span. Focus includes group therapy, structure, types, stages, development, leadership, therapeutic factors, the impact of groups on the individual, group growth, and behavior. Effective group facilitation skills and techniques used to address special population issues and needs are covered. Effective case management and record keeping are addressed. (SCANS 5, 6, 9, 11) Prerequisite: DAAC 1311, DAAC 1317 or department chair approval.

DAAC 1317 Basic Counseling Skills

(51.1501) (3-0) 3 hours

This course is designed to facilitate development of the basic communication skills necessary to develop an effective helping relationship with clients. Includes the utilization of special skills to assist individuals, families, or groups in achieving objectives through exploration of a problem and its ramifications; examination of attitudes and feelings; consideration of alternative solutions; and decision making. (SCANS 5, 6, 9, 11) Prerequisite: None.

DAAC 1319 Introduction to Alcohol and Other Drug Addictions

(51.1501) (3-0) 3 hours

Causes and consequences of addiction as they relate to the individual, family, community, and society are discussed. Response alternatives regarding intervention, treatment, education, and prevention are reviewed. Competencies and requirements for licensure in Texas are explained. Addiction issues related to diverse populations are presented. (SCANS 5, 7, 9, 10) Prerequisite: None.

DAAC 1341 Counseling Alcohol and Other Drug Addictions

(51.1501) (3-0) 3 hours

This course will focus on special skills and techniques in the application of counseling skills for the Alcohol and Other Drug (AOD) client. Design and utilization of treatment planning using a treatment team approach will be introduced. Confidentiality and ethical issues will be reviewed and practiced. (SCANS 5, 7, 9, 10) Prerequisite: None.

DAAC 1343 Current Issues

(51.1501) (3-0) 3 hours

A study of issues that impact addiction counseling. Special populations, dual diagnosis, ethics, gambling, and infectious diseases associated with addiction counseling will be investigated. (SCANS 4, 5, 7, 9, 10, 11) Prerequisites: DAAC 1304, DAAC 1311, DAAC 1317 and DAAC 1319 or department chair approval.

DAAC 1391 Special Topics in Alcohol/Drug Abuse Counseling: Clinical Supervision
(51.1501) (3-0) 3 hours
Topics address recently identified current events, skills, knowledges, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Assists students in defining and conceptualizing models and types of supervision. Areas of discussion include supervisory relationships and counselor development, supervision, methods and techniques covering the roles, focus, group supervision, multicultural issues, and the methods of assessing and evaluating supervision. (SCANS 5, 6, 9, 11) Prerequisites: DAAC 1311 and DAAC 1317.

DAAC 2366 Practicum – Alcohol/Drug Abuse Counseling
(51.1501) (0-21) 3 hours
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. (SCANS 4, 5, 6, 9, 10, 11) Prerequisites: 18 semester hours of DAAC courses including DAAC 1311, DAAC 1317, and a "B" average in all DAAC coursework and department chair approval.

[redacted] (see Air Conditioning)

[redacted] (see English and Foreign Languages)

Law Enforcement/ Criminal Justice

Faculty: Jim McKown, chair; Sidney Lyle, Brad S. Miller, Geoffrey Schwende.

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

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

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Law Enforcement/Criminal Justice Option

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3

GOVT 2305 Federal Government or
GOVT 2306 Texas Government 3
MATH 1332 Structures of College Mathematics I
or higher level math 3
PHED (any two one-hour activity course) 2
SPCH 1315 Public Speaking or
SPCH 1321 Business and Professional Speech ... 3
PLUS one course from the following list 3
ENGL 1302 Composition and Literature
HIST 2301 History of Texas
SPAN 1300 Conversational Spanish I

Related Requirements 4
POFI 2401 Word Processing or POFT 1429
Keyboarding and Document Formatting or
POFT 2401 Document Formatting and
Skill building 4

Major Requirements 37
CJCR 1400 LE – Basic Jail Course 4
CJLE 1303 Basic Telecommunication Certification ... 3
CJLE 1333 Traffic Law and Investigation 3
CJLE 1394 Special Topics: Traffic Management
and Supervision 3
CJSA 1347 Police Organization and Administration ..3
CRIJ 1301 Introduction to Criminal Justice 3
CRIJ 1306 Court Systems and Practices 3
CRIJ 1310 Fundamentals of Criminal Law 3
CRIJ 2313 Correctional Systems and Practices 3
CRIJ 2314 Criminal Investigation 3
CRIJ 2323 Legal Aspects of Law Enforcement 3
CRIJ 2328 Police System and Practices 3

PLUS two courses from the following list 6
CRIJ 1307 Crime in America 3
CRIJ 1313 Juvenile Justice System 3
CRIJ 2301 Community Resources in Corrections ... 3

***Elective** (choose from list below) 3**

Total Semester Hours 70

***Electives:** CJCR 1304 LE – Probation and Parole; CJCR 1391 Special Topics: Corrections/Correctional Administration; CJLE 1211 Basic Firearms; CJSA 1308 Criminalistics I; CJSA 1325 Criminology.

Students must complete 70 hours as approved by the department chair to meet degree requirements. Any variance from prerequisites or any substitution of courses must have prior, written approval.

Law Enforcement/Corrections Option

Semester Hrs

General Education Requirements 20
COSC 1301 Microcomputer Applications (or
higher level) or demonstrated proficiency 3
ENGL 1301 Composition and Rhetoric or
ENGL 1312 Report Writing 3
GOVT 2305 Federal Government or
GOVT 2306 Texas Government 3
MATH 1332 Structures of College Mathematics I
or higher level math 3
PHED (any two one-hour activity courses) 2
SPCH 1315 Public Speaking or
SPCH 1321 Business & Professional Speech 3
PLUS one course from the following list 3
ENGL 1302 Composition and Literature
HIST 2301 History of Texas
SPAN 1300 Conversational Spanish I

Related Requirements 4
POFI 2401 Word Processing or POFT 1429
Keyboarding and Document Formatting or
POFT 2401 Document Formatting and
Skillbuilding 4

Major Requirements 37
CJCR 1304 LE – Probation and Parole 3
CJCR 1391 Special Topics: Corrections/
Correctional Administration 3
CJCR 1400 LE – Basic Jail Course 4
CJLE 1303 Basic Telecommunication
Certification 3
CRIJ 1301 Introduction to Criminal Justice 3
CRIJ 1306 Court Systems and Practices 3
CRIJ 1307 Crime in America 3
CRIJ 1310 Fundamentals of Criminal Law 3
CRIJ 1313 Juvenile Justice System 3
CRIJ 2313 Correctional Systems and
Practices 3
CRIJ 2314 Criminal Investigation 3
CRIJ 2323 Legal Aspects of Law Enforcement 3

PLUS any nine hours selected from the following pool of courses 9
CJLE 1211 Basic Firearms 2
CJLE 1333 Traffic Law and Investigation 3
CJLE 1394 Special Topics: Traffic Management
and Supervision 3
CJSA 1308 Criminalistics I 3
CJSA 1325 Criminology 3
CJSA 1347 Police Organization and
Administration 3
CRIJ 2301 Community Resources in Corrections ... 3
CRIJ 2328 Police System and Practices 3

Total Semester Hours 70

Students must complete 70 hours as approved by the department chair to meet degree requirements. Any variance from prerequisites or any substitution of courses must have prior, written approval.

Certificates of Completion in Law Enforcement

Level I certificates are TASP-waived.

Level I – Emergency Telecommunications/Dispatcher

	Semester Hrs
General Education Requirements	**13**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
POFI 2401 Word Processing or POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skill Building	4
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**22**
CJCR 1400 LE – Basic Jail Course	4
CJLE 1303 Basic Telecommunication Certification	3
CRIJ 1301 Introduction to Criminal Justice	3
CRIJ 1306 Court Systems and Practices	3
CRIJ 1307 Crime in America	3
CRIJ 1310 Fundamentals of Criminal Law	3
CRIJ 2314 Criminal Investigation	3
Total Semester Hours	**35**

Level I – County Correctional Officer

	Semester Hrs
General Education Requirements	**7**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
POFI 2401 Word Processing or POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skill Building	4
Major Requirements	**10**
CJCR 1400 LE – Basic Jail Course	4
CRIJ 1301 Introduction to Criminal Justice	3
CRIJ 1307 Crime in America	3
Total Semester Hours	**17**

Level I – Basic Law Enforcement Academy Certificate

The basic academy for peace officers is designed for persons interested in obtaining a peace officer's license and pursuing law enforcement as a career. The training curriculum segments mandated by the Texas Commission on Law Enforcement Officer Standards and Education (TCLEOSE) have been equated to four courses (20 semester hours) in the law enforcement curriculum. College credit for the six academic courses will be awarded for successful completion of the academy and will be recorded in the Registrar's Office at Odessa College.

Prior to admission to the academy program, applicants must complete an application packet.

	Semester Hrs
Major Requirements	**20**
CJLE 1506 Basic Peace Officer I	5
CJLE 1512 Basic Peace Officer II	5
CJLE 1518 Basic Peace Officer III	5
CJLE 1524 Basic Peace Officer IV	5
Related Requirements	**2**
PHED 1106 Jogging and Walking	1
PHED 1111 Weight Training	1
Total Semester Hours	**22**

LAW ENFORCEMENT/CRIMINAL JUSTICE COURSES

CJCR 1304 LE – Probation and Parole

(43.0102) (3-0) 3 hours

A survey of the structure, organization, and operation of probation and parole services. Emphasis on applicable state statutes and administrative guidelines. The student will describe the professional qualifications for employment as a probation or parole practitioner; demonstrate skills in management and treatment practices; and create and develop community relations strategies. (SCANS 2, 3, 7, 9, 11) Prerequisite: None.

CJCR 1391 Special Topics in Corrections/ Correctional Administration

(43.0102) (3-0) 3 hours

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The course also involves an in-depth look at community programs for adult and juvenile offenders and treatment modalities in various correctional settings. Student will discuss and debate future trends associated with community-based correction in America. (SCANS 6, 7, 9, 10, 11) Prerequisite: None.

CJCR 1400 LE – Basic Jail Course

(43.0102) (4-1) 4 hours

Provides instruction in human relations, observation, evaluation of prisoners, booking procedures, classification, mug shots, fingerprinting, strip searches,

meals, medical services, visitation, inmates rights and privileges, detention areas, key, knife and tool control, disturbances, riots, fire procedures, and release procedures. Taught in accordance with the current TCLEOSE instructor guides provided by the Commission for course #1005. The student will comply with licensure requirements of the state of Texas; demonstrate skills in the care, custody and control of jail inmates; and demonstrate an understanding of legal issues, gender and cultural diversity, and stress management techniques in a local correctional environment. Completion of course qualifies student to sit for licensure examination. (SCANS 2, 7, 9, 11) Prerequisite: None.

CJCR 2325 LE – Legal Aspects of Corrections
(43.0102) (3-0) 3 hours
A study of operation, management and legal issues affecting corrections. Analysis of constitutional issues involving rights of the convicted, as well as civil liability of correctional agencies and staff. The student will assess current case, statutory and constitutional law applicable to the correctional setting including clients, inmates and staff; explain and describe the various types and classifications of correctional populations; and explain consequences of civil and criminal liabilities. (SCANS 1, 2, 7, 9, 10, 11) Corequisites: CJSA 1318 and CRIJ 2301.

CJLE 1211 Basic Firearms
(43.0107) (1-2) 2 hours
Instruction in firearm safety, cleaning and care techniques, proper shooting principles, and proficiency with a handgun and shotgun. Student will learn basic repairs and adjustments to the weapon and will have to conduct live fire on the range. Lab fee required. Lab fee does not include ammunition. (SCANS 6, 7, 8, 11) Prerequisite: Be a declared CJLE major, be enrolled in other CJLE courses or consent of department chair.

CJLE 1303 Basic Telecommunication Certification
(43.0107) (3-0) 3 hours
Topics include overview of law enforcement functions, history of public safety communications, federal laws regulating public safety communications, radio communication systems, radio operations, fire and EMS dispatch considerations, telephone operations, law enforcement information systems, communication records, logs and documentation, legal issues, emergency management, police emergency situations, 9-1-1/computer aided dispatch, media relations, stress management, and crises intervention. Required course for law enforcement telecommunication personnel prior to completion of 12 months of service. The student will demonstrate radio operations, identify legal issues regarding telecommunications, process radio logs and documentation, prioritize emergency calls for management, and identify crisis intervention techniques. (SCANS 1, 2, 5, 6, 8, 9, 10) Prerequisite: None.

CJLE 1333 Traffic Law and Investigation
(43.0107) (3-0) 3 hours
Instruction in the basic principles of traffic control, traffic law enforcement, court procedures, and traffic law. Emphasis on the need for a professional approach in dealing with traffic law violators and the police role in accident investigation and traffic supervision. The student will identify background and underlying principles of the traffic law enforcement effort; describe the legal requirements which govern and control the making and enforcement of criminal laws and traffic laws in particular; explain the procedures to maximize the individual officer's personal safety during a stop, particularly in a criminal situation; explain the factors which influence the officer and violator during their face to face contact; explain the importance of meeting the objectives of a traffic program, i.e. reduction of traffic fatalities and prosecution of traffic offenses; and identify the various enforcement activities that lead to achieving an effective traffic program. (SCANS 1, 3, 6, 9, 11) Prerequisite: None.

CJLE 1394 Special Topics in Law Enforcement/ Police Science: Traffic Management and Supervision
(43.0107) (3-0) 3 hours
Students will examine police responsibilities in traffic planning, and will interpret written information, charts and graphs in order to project the cost of traffic flow maintenance. Students will write proposals to allocate manpower and equipment on a cost effective basis in order to solve or reduce engineering problems associated with the enforcement of traffic laws. Students will make comprehensive investigative reports of vehicle accidents and demonstrate an understanding of state reporting procedure for accidents involving casualties. (SCANS 1, 2, 4, 5, 6, 7, 9, 10, 11) Prerequisite: CJLE 1333.

CJLE 1506 Basic Peace Officer I
(43.0107) (3-6) 5 hours
Introduction to fitness and wellness, history of policing, professionalism and ethics, United States Constitution and Bill of Rights, criminal justice system, Texas Penal Code, Texas Code of Criminal Procedure, civil process, and stress management. This course taken in conjunction with Basic Peace Officer II, III and IV will satisfy the TCLEOSE-approved Basic Peace Officer Training Academy. (SCANS 6, 7, 9, 10, 11) Prerequisite: None. Corequisite: CJLE 1512, CJLE 1518, CJLE 1524.

CJLE 1512 Basic Peace Officer II
(43.0107) (3-6) 5 hours
Basic preparation for a new peace officer. Covers field note taking, report writing, "use of force" law and concepts, problem solving, multiculturalism, professional policing approaches, patrol procedures, victims of crime, family violence, MHMR, crowd management, HAZMAT, and criminal investigation. This course taken in conjunction with Basic Peace Officer I, III and IV will satisfy the TCLEOSE-approved Basic Peace Officer Academy. (SCANS 6, 7, 9, 10, 11) Prerequisite: None. Corequisite: CJLE 1506, CJLE 1518, CJLE 1524.

CJLE 1518 Basic Peace Officer III
(43.0107) (3-6) 5 hours
Basic preparation for a new peace officer. Covers laws pertaining to controlled substances, crowd management, personal property, and crime scene investigation. This course taken in conjunction with Basic Peace Officer I, II and IV will satisfy the TCLEOSE-approved Basic Peace Officer Academy. (SCANS 6, 7, 9, 10, 11) Prerequisite: None. Corequisite: CJLE 1506, CJLE 1512, CJLE 1524.

CJLE 1524 Basic Peace Officer IV
(43.0107) (3-6) 5 hours
Basic preparation for a new peace officer. Covers laws directly related to police field work. Topics include Texas Transportation Code, intoxicated driver, Texas Penal code, elements of crimes, Texas Family Code, Texas Alcoholic Beverage Code, and civil liability. Requires the demonstration and practice of the skills of a police officer including patrol, driving, traffic stop skills, use of force, mechanics of arrest, firearm safety, and emergency medical care. Also includes study of the techniques and procedures used by police officers on patrol. Includes controlled substance identification, handling abnormal persons, traffic collision investigation, note taking and report writing, vehicle operation, traffic direction, crowd control, and jail operations. This course taken in conjunction with Basic Peace Officer I, II and III will satisfy the TCLEOSE-approved Basic Peace Officer Training Academy. (SCANS 6, 7, 9, 10, 11) Prerequisite: None. Corequisite: CJLE 1506, CJLE 1512, CJLE 1518.

CJSA 1308 Criminalistics I
(43.0104) (3-0) 3 hours
Introduction to the field of criminalistics. Topics include the application of scientific and technical methods in the investigation of crime including location, identification, and handling of evidence for scientific analysis. The student will describe the care required in identifying, collecting and preserving evidence for scientific examination and explain the significance of field and laboratory finding. Lab fee required. (SCANS 2, 4, 6, 7, 8, 9) Prerequisite: CRIJ 2314.

CJSA 1318 Court Management
(43.0104) (3-0) 3 hours
Exploration of operational issues in the administration of American courts. Topics include responsibilities of court personnel, records management, and organizational management topics. The student will identify operational issues in the administration of American courts including duties and responsibilities of court personnel; explain contemporary record management systems; and outline code of ethics, management styles, budgeting procedures and critical thinking. (SCANS 1, 2, 4, 6, 7, 9, 11) Corequisites: CJCR 2325 and CRIJ 2301.

CJSA 1325 Criminology
(43.0104) (3-0) 3 hours
Current theories and empirical research pertaining to crime and criminal behavior and its causes, methods of prevention, systems of punishment, and rehabilitation. The student will identify and explain the various theories of causation of criminal behavior; identify and appraise the avenue of prevention; outline the various research methods/methodology used in criminological research; and identify the categories and sources of criminological data utilized in interpreting crime trends. (SCANS 1, 2, 6, 7, 9, 10, 11) Prerequisite: CRIJ 1301.

CJSA 1347 Police Organization and Administration
(43.0104) (3-0) 3 hours
Study of the principles of organizational structure and administration. Topics include theories of management, motivation, and leadership. Focus on a quality approach toward police community interaction. The student will identify principles of organization, administration, management, motivation and leadership; and describe the quality approach to community relations. (SCANS 1, 2, 6, 7, 9, 11) Prerequisite: CRIJ 1301.

CRIJ 1301 Introduction to Criminal Justice
(43.0104.5124) (3-0) 3 hours
History and philosophy of criminal justice and ethical considerations; crime defined; its nature and impact; overview of criminal justice system; law enforcement; court system; prosecution and defense; trial process; corrections. The student will describe and explain the history, philosophy and ethical considerations of criminal justice; define the nature and impact of crime on society and how it is integrated into the criminal justice system; distinguish between the civil and criminal court systems; and interpret the relationship between the components of the criminal justice system. (SCANS 1, 2, 5, 6, 9, 11) Prerequisite: None.

CRIJ 1306 Court Systems and Practices
(22.0101.5424) (3-0) 3 hours
The judiciary in the criminal justice system; structure of the American Court system; prosecution; right to counsel; pre-trial release; grand juries; adjudication process; types and rules of evidence, sentencing. The student will describe the American judiciary system and its structure; identify the roles of judicial officers; identify the trial processes from pretrial to sentencing; and interpret the role of evidence. (SCANS 1, 2, 5, 6, 7, 9, 11) Prerequisite: CRIJ 1301.

CRIJ 1307 Crime in America
(45.0401.5225) (3-0) 3 hours
American crime problems in historical perspective; social and public policy factors affecting crime; impact and crime trends; social characteristics of specific crimes; prevention of crime. The student will explain the psychological, social, and economic impact of crime in society and identify characteristics of major crimes, the impact on society and the prevention thereof. (SCANS 1, 2, 3, 4, 6, 7, 9, 11) Prerequisite: None.

CRIJ 1310 Fundamentals of Criminal Law
(22.0101.5324) (3-0) 3 hours
A study of the nature of criminal law; philosophical and historical development; major definitions and concepts; classification of crime; elements of crimes and penalties using Texas statutes as illustrations; criminal responsibilities. The student will explain the historical and philosophical development of the nature of criminal law; describe definitions and concepts of criminal law and the classifications of crimes and penalties using Texas statutes as illustrations; list the elements of crimes using the Texas statutes as an illustration; and discuss criminal responsibilities as they apply to the criminal statutes. (SCANS 1, 4, 6, 7, 9, 11) Prerequisites: CRIJ 1301.

CRIJ 1313 Juvenile Justice System
(43.0104.5224) (3-0) 3 hours
A study of the juvenile justice process to include specialized juvenile law, role of the juvenile law, role of the juvenile courts, role of police agencies, role of correctional agencies, and theories concerning delinquency. The student will describe the juvenile law and the role of juvenile courts; explain the roles of police and correctional agencies concerning delinquency; and review and contract the theories of delinquent conduct. (SCANS 1, 2, 6, 9) Prerequisite: None.

CRIJ 2301 Community Resources in Corrections
(43.0104.5324) (3-0) 3 hours
An introductory study of the role of the community in corrections; community programs for adults and juveniles; administration of community programs; legal issues; future trends in community treatment. The student will identify alternatives to incarceration; compare and contrast the strengths and weaknesses inherent in contemporary models of intermediate sanctions; and appraise future trends in community treatment options. (SCANS 1, 2, 9, 10, 11) Corequisites: CJCR 2325 and CJSA 1318.

CRIJ 2313 Correctional Systems and Practices
(43.0104.5424) (3-0) 3 hours
Corrections in the criminal justice system; organization of correctional systems; correctional role; institutional operations; alternatives to institutionalization; treatment and rehabilitation; current and future issues. The student will identify the organization and role of corrections; distinguish operations and procedure within correctional programs; and appraise rehabilitation, alternatives to institutionalization, and future issues. (SCANS 2, 4, 6, 7, 8, 9, 10, 11) Prerequisite: None.

CRIJ 2314 Criminal Investigation
(43.0104.5524) (3-0) 3 hours
Investigative theory; collection and preservation of evidence; sources of information; interview and interrogation; uses of forensic sciences; case and trial preparation. The student will define the goals and objectives of criminal investigation; demonstrate ability to conduct proper crime scene investigations; illustrate the use of forensic science for various statutory offenses; and organize the criminal case including field notes, reports, crime scene activities and mandatory documentation of statutory warning. (SCANS 2, 3, 6, 9, 10, 11) Prerequisite: CRIJ 1301.

CRIJ 2323 Legal Aspects of Law Enforcement
(43.0104.5624) (3-0) 3 hours
Police authority; responsibilities; constitutional constraints; laws of arrest, search, and seizure; police liability. The student will define police authority and explain the responsibilities and constitutional restraints as enumerated in the Texas Constitution, United States Constitution, and Bill of Rights. The student will outline the law of arrest and search and seizure developed through court decisions and describe the criminal and civil liability that result from improper acts and/or the failure to act. (SCANS 1, 2, 6, 7, 9, 10) Prerequisite: CRIJ 1301.

CRIJ 2328 Police System and Practices
(43.0104.5724)(3-0) 3 hours
The police profession; organization of law enforcement systems; the police role; police discretion; ethics; police-community interaction; current and future issues. The student will explain the application of ethics, discretion, and sensitivity to the police profession and describe the organization of law enforcement systems and its relationship to current and future issues. (SCANS 2, 4, 6, 7, 8, 9, 10, 11) Prerequisites: CRIJ 1301 and CRIJ 1307.

Legal Assistant

Faculty: Nancy Stewart, chair; Carol Kirk.

The legal assistant curriculum was developed to qualify men and women for positions as assistants or aides to the legal profession and to upgrade the qualifications of legal support personnel. Upon completion of this curriculum, the legal assistant graduate will qualify to work under the supervision of a lawyer and may perform such duties as case screening, investigation and evaluation, detail work pertaining to probate matters, income tax returns, searching public records and court files, office management, accounting, library service, preparation of legal memoranda, servicing and filing of legal documents and preparing legal forms.

There is no unique curriculum for students planning to pursue a career in law. Generally, a liberal arts education is preferred. To insure that the pre-law student enrolls in the proper courses, the student must consult with the pre-law advisor at the accepting four-year college prior to registration each semester. The associate of applied science degree requirements listed under Degree Requirements (refer to index) will serve as a basic curriculum guide. The student is encouraged to take elective course work from the legal assistant program as part of a pre-law degree. Again, seek assurance from the accepting four-year pre-law advisor at the senior college that course work from the legal assistant program will transfer.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Legal Assistant

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business I or higher level math	3
PHED (any two one-hour activity course)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ENGL 1302 Composition and Literature	
PHIL 1301 Introduction to Philosophy I	
SPAN 1300 Conversational Spanish I	
SPAN 2313 Spanish for Native Speakers of Spanish I	
Major Requirements	**38**
LGLA 1303 Legal Research	3
LGLA 1305 Legal Writing	3
LGLA 1313 Introduction to Paralegal Studies	3
LGLA 1323 Employment Law	3
LGLA 1346 Civil Litigation I	3
LGLA 1347 Civil Litigation II	3
LGLA 1353 Will, Trusts and Probate Administration	3
LGLA 1355 Family Law	3
LGLA 2239 Certified Legal Assistant Review	2
LGLA 2303 Torts and Personal Injury Law	3
LGLA 2313 Criminal Law and Procedure	3
LGLA 2333 Advanced Legal Document Preparation	3
LGLA 2366 Practicum	3
Related Requirements	**13**
POFI 2401 Word Processing	4
POFL 1305 Legal Terminology	3
POFT 1302 Business Communications I	3
POFT 2303 Speed and Accuracy Building	3
Total Semester Hours	**71**

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I – Legal Assistant

Major Requirements	**22**
LGLA 1303 Legal Research	3
LGLA 1305 Legal Writing	3
LGLA 1313 Introduction to Paralegal Studies	3
POFI 2401 Word Processing	4
POFL 1305 Legal Terminology	3
POFT 1302 Business Communications I	3
POFT 2303 Speed and Accuracy Building	3
Total Semester Hours	**22**

A total of 22 semester hours and a minimum grade point average of 2.0 are required for a level I certificate.

Level II – Advanced Legal Assistant

The 22 semester hours specified in level I certificate – legal assistant plus the following courses are required:

General Education Requirements **3**
- ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3

Major Requirements **21**
- LGLA 1346 Civil Litigation I 3
- LGLA 1347 Civil Litigation II 3
- LGLA 1353 Wills, Trusts and Probate Administration 3
- LGLA 1355 Family Law 3
- LGLA 2303 Torts and Personal Injury Law 3
- LGLA 2333 Advanced Legal Document Preparation 3
- LGLA 2366 Practicum 3

Total Semester Hours **46**

National Association of Legal Assistants (NALA) – Upon completion of the associate degree or certificate program, students may become eligible to take the NALA Certified Legal Assistant Examination (CLA). Full-time students and/or those taking legal assistant courses may qualify for student membership in the national organization.

LEGAL ASSISTANT COURSES

LGLA 1303 Legal Research
(22.0103) (3-0) 3 hours
This course provides a working knowledge of the fundamentals of effective legal research. Topics include law library techniques, computer assisted legal research, briefs and legal memoranda. (SCANS 4, 6, 7) Prerequisite: None.

LGLA 1305 Legal Writing
(22.0103) (3-0) 3 hours
This course provides a working knowledge of the fundamentals of effective legal writing. Topics include briefs, legal memoranda, case and fact analysis, citation forms, and legal writing styles. (SCANS 1, 6) Prerequisite: None.

LGLA 1313 Introduction to Paralegal Studies
(22.0103) (3-0) 3 hours
This course provides an overview of the paralegal profession including ethical obligations, regulation, professional trends and issues, and the paralegal's role in assisting the delivery of legal services. (SCANS 5, 6, 9, 10, 11) Prerequisite: None.

LGLA 1323 Employment Law
(22.0103) (3-0) 3 hours
This course presents fundamental concepts of, and the paralegal's role in, employment and labor law. Topics include contracts of employment, governmental regulations, discrimination issues, and worker's compensation. (SCANS 1, 2, 4, 7, 10) Prerequisite: None.

LGLA 1346 Civil Litigation I
(22.0103) (3-0) 3 hours
This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Civil Litigation I together with Civil Litigation II covers litigation from the pretrial stage to the post trial phase. (SCANS 4, 6, 9, 10, 11) Prerequisite: None.

LGLA 1347 Civil Litigation II
(22.0103) (3-0) 3 hours
This course presents fundamental concepts and procedures of civil litigation with emphasis on the paralegal's role. Civil Litigation II together with Civil Litigation I covers litigation from the pretrial stage to the post trial stage. (SCANS 2, 7) Prerequisite: LGLA 1346.

LGLA 1353 Wills, Trusts and Probate Administration
(22.0103) (3-0) 3 hours
This course presents fundamental concepts of the law of wills, trusts and probate administration with emphasis on the paralegal's role. (SCANS 2, 6, 7) Prerequisite: None.

LGLA 1355 Family Law
(22.0103) (3-0) 3 hours
This course presents fundamental concepts of family law with emphasis on the paralegal's role. Topics include formal and informal marriages, divorce, annulment, marital property, and the parent-child relationship. (SCANS 6, 7, 9) Prerequisite: None.

LGLA 2239 Certified Legal Assistant Review
(22.0103) (2-0) 2 hours
This course provides a review of the mandatory and optional topics covered in the Certified Legal Assistant Examination administered by the National Association of Legal Assistants.

LGLA 2301 Environmental Law
(22.0103) (3-0) 3 hours
This course presents fundamental concepts of environmental law with emphasis on the paralegal's role. Topics include terminology, creation of environmental law, and the application of statutes and government regulations to specific fact situations. (SCANS 1, 2, 4, 7, 10) Prerequisite: None.

LGLA 2303 Torts and Personal Injury Law
(22.0103) (3-0) 3 hours
This course presents fundamental concepts of tort law with emphasis on the paralegal's role. Topics include intentional torts, negligence, and strict liability. (SCANS 2, 6, 7) Prerequisite: None.

LGLA 2313 Criminal Law and Procedure
(22.0103) (3-0) 3 hours
This course introduces the criminal justice system including procedures from arrest to final disposition, principles of federal and state law, and the preparation of pleadings and motions. (SCANS 1, 4, 6, 7, 9, 11) Prerequisite: Consent of department chair.

LGLA 2333 Advanced Legal Document Preparation
(22.0103) (3-0) 3 hours
Preparation of legal documents based on hypothetical fact situations drawn from various areas including real estate, family law, contracts, litigation, and business organizations. (SCANS 2) Prerequisite: LGLA 1313 (may be taken concurrently).

LGLA 2366 Practicum – Paralegal/Legal Assistant
(22.0103) (0-25) 3 hours
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

Machining – Industrial Machinist Technology –

(formerly Metal Trades Technologies)

Faculty: James Mosman, chair.

The associate in applied science degree in industrial machinist technology is designed to provide students a broad background of basic knowledge in the field of mechanical design and production. Skills are developed in the operation of machine tools, mathematics, communications, layout and blueprint reading so as to provide students with sufficient knowledge for entry employment in the trade.

While a certificate of technology with an emphasis in machine technology will prepare the student to be an effective employee, the associate in applied science degree provides the necessary educational background for advancing to positions of even greater responsibility in the industry.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Industrial Machinist Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or higher level math	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	

Technical Core **19**
- DFTG 1405 Technical Drafting I or DFTG 1409 Basic Computer-Aided Drafting 4
- MCHN 1438 Machining I – Basic Machine Shop I 4
- OSHT 2401 OSHA Regulations – General Industry 4
- PTRT 1301 Overview of Petroleum Industry 3
- WLDG 1421 Introduction to Welding Fundamentals 4

Major Requirements **29**
- INMT 1441 Computer Integrated Manufacturing 4
- INMT 2334 NC/CNC Programming 3
- MCHN 1320 Precision Tools and Measurement 3
- MCHN 1413 Basic Milling Operations 4
- MCHN 1441 Basic Machine Shop II 4
- MCHN 2381 Cooperative Education – Machinist/Machine Technologist 3
- MCHN 2433 Advanced Lathe Operations or MCHN 1416 Machine Tool Repair 4
- MCHN 2437 Advanced Milling Operations or MCHN 1416 Machine Tool Repair 4

Total Semester Hours **68**

Certificates of Technology in Industrial Machinist Technology

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

Level I certificates are TASP-waived.

Level I – Computerized Numerical Control Programmer

Semester Hrs
- COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
- DFTG 1405 Technical Drafting or DFTG 1409 Basic Computer-Aided Drafting 4
- INMT 1441 Computer Integrated Manufacturing 4
- INMT 2334 NC/CNC Programming 3
- MCHN 1438 Machining I – Basic Machine Shop I ... 4

Total Semester Hours **18**

Level I – Milling Machine Operator

Semester Hrs
- MCHN 1413 Basic Milling Operations 4
- MCHN 1438 Machining I – Basic Machine Shop I ... 4
- MCHN 1441 Basic Machine Shop II 4
- MCHN 2437 Advanced Milling Operations or MCHN 1416 Machine Tool Repair 4

Total Semester Hours **16**

Level I – Engine Lathe Operator

Semester Hrs
- COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
- MCHN 1438 Machining I – Basic Machine Shop I 4
- MCHN 1441 Basic Machine Shop II 4
- MCHN 2433 Advanced Lathe Operations or MCHN 1416 Machine Tool Repair 4

Total Semester Hours **15**

Level II – Machinist Option

Semester Hrs
- COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
- ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3
- DFTG 1405 Technical Drafting or DFTG 1409 Basic Computer-Aided Drafting 4
- INMT 1441 Computer Integrated Manufacturing 4
- INMT 2334 NC/CNC Programming 3
- MATH 1314 College Algebra or higher level math 3
- MCHN 1320 Precision Tools and Measurement 3
- MCHN 1416 Machine Tool Repair or MCHN 2433 Advanced Lathe Operations 4
- MCHN 1438 Machining I – Basic Machine Shop I 4
- MCHN 1441 Basic Machine Shop II 4
- MCHN 2381 Cooperative Education – Machinist/Machine Technologist 3
- WLDG 1421 Introduction to Welding Fundamentals 4

Total Semester Hours **42**

Level II – Machine Shop Foreman Option

Semester Hrs
- COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency 3
- ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3
- DFTG 1405 Technical Drafting or DFTG 1409 Basic Computer-Aided Drafting 4
- INMT 1441 Computer Integrated Manufacturing . 4
- INMT 2334 NC/CNC Programming 3
- MATH 1314 College Algebra or higher level math 3
- MCHN 1320 Precision Tools and Measurement 3
- MCHN 1413 Basic Milling Operations 4
- MCHN 1438 Machining I – Basic Machine Shop I 4
- MCHN 1441 Basic Machine Shop II 4
- MCHN 2381 Cooperative Education – Machinist/Machine Technologist 3

MCHN 2433 Advanced Lathe Operations or MCHN 1416 Machine Tool Repair 4
OSHT 2401 OSHA Regulations – General Industry 4
WLDG 1421 Introduction to Welding Fundamentals 4

Total Semester Hours 50

MACHINE TECHNOLOGY COURSES

INMT 1441 Computer Integrated Manufacturing

(15.0603) (2-6) 4 hours

A study of the principles and application of computer integrated manufacturing. Employs all aspects of a system including but not limited to integration of material handling, manufacturing, and computer hardware and programming. The student will develop an understanding of computer integrated manufacturing; and employ material handling, process and/or manufacturing equipment as a system. The student will integrate computer software and equipment in a computer integrated manufacturing system and network a computer integrated manufacturing system. Student may work with a lab partner to complete required projects. Special tasks assigned to meet specific needs to satisfy quality expectations. Lab fee required. (SCANS 1, 3, 5, 6, 8, 9) Prerequisite: MCHN 2433 or consent of department chair.

INMT 2334 NC/CNC Programming

(15.0603) (2-3) 3 hours

A study of the principles and concepts of numerical control through computer applications, specifically in the area of programming for the control of machine tools in CIM. The student will identify the basic types of numerical-controlled machines; demonstrate an understanding of the fundamental steps of planning for the use of numerical control; describe axes relationships and tape readout characteristics; write an exercise in specific programming for an NC/CNC machine; and machine a model of a program he/she has written. Competencies emphasize setup operation, organization of graphs and troubleshooting. Student may work with a lab partner to complete required projects. Special tasks assigned to meet specific needs to satisfy quality expectations. Lab fee required. (SCANS 1, 3, 5, 6, 8, 9) Prerequisite: INMT 1441 or consent of department chair.

MCHN 1320 Precision Tools and Measurement

(48.0501) (2-4) 3 hours

An introduction to the modern science of dimensional metrology. Emphasis on the identification, selection, and application of various types of precision instruments associated with the machining trade. Practice of basic layout and piece part measurements while using standard measuring tools. The student will describe common methods of measurement conversion; determine the degree of precision measurement required; identify various types of precision instruments; interpret and confirm blueprints requirements; convert English numbers to metric numbers and metric to English; compute total tolerances between mating parts; calibrate various types of precision measuring instruments to a standard; and select and use precision measurement tools. Lab fee required. (SCANS 1, 2, 6, 8) Prerequisite: None.

MCHN 1401 Sheet Metal I

(48.0506) (3-3) 4 hours

An introduction to the materials, tools and techniques used in the sheet metal industry. Review of trade math problems involving measurement of lines, area, volume, weight, and geometric figures. Introduction of types and uses of hand, layout and cutting tools along with bending and forming machines. Practice of material types and properties along with the principles of layout and metal forming. The student will identify common sheet metal and hand tools and machines; identify and select common fasteners; match materials and their properties; select materials for proper applications; and list layout procedures. The student will calculate area, volume and weight of geometric figures; use hand and layout tools; bending and forming machines, fasteners, parallel and radial line development, and triangulation in developing patterns; and cut, bend, form and join sheet metal fittings. Lab fee required. (SCANS 1, 2, 3, 8, 10) Prerequisite: None.

MCHN 1405 Metals and Heat Treatment

(48.0501) (2-3) 4 hours

Designed for students going into the workforce as CNC Operators, manual machinists, tool designers, or heat treat operators. Topics include properties of metals and heat treatment of metals. The student will identify chemical, mechanical, and physical properties of materials; determine the hardness and strength of ferrous and nonferrous metals; use heat treat procedures to change the properties of the metal. This course requires students to understand and interpret the terminology related to the properties and uses of ferrous and nonferrous metals and other alloys, create reports analyzing the specimens, and perform industrial tests to determine alloying elements. Lab fee required. (SCANS 1, 2, 6, 8) Prerequisite: None.

MCHN 1413 Basic Milling Operations

(48.0501) (2-6) 4 hours

An introduction to the common types of milling machines, basic parts, nomenclature, basic operations and procedures, machine operations, safety; machine mathematics; blueprint reading; and theory. This is a follow-up course to MCHN 1441. The student will describe milling parts and functions; use formulas to

calculate speeds and feeds; identify types of milling machines; describe the difference between climb and conventional milling; calculate speeds and feeds for milling machines; set up milling machines; and operate milling machines. Students will use a variety of equipment such as milling machines, lathes and universal grinder. Calculations of material usage and advanced machine finishes will be the students' responsibility to maintain during the completion of required projects. Students also will learn to work with customers to satisfy their expectations and promote confidence in work performance and to apply advanced machine practices to the students' performance. Lab fee required. (SCANS 1, 3, 4, 5, 8, 9, 10) Prerequisite or corequisite: MCHN 1441 or consent of department chair.

MCHN 1416 Machine Tool Repair
(48.0507) (2-6) 4 hours
Basic repair of machines tools, disassembly, parts fabrication, and assembly of machine types, including related math, blueprint reading and safety. The student will identify parts and functions of various machine tools; define gearing and torque, read and interpret technical manuals, disassemble and reassemble machine parts, perform toleranced assembly proper place and proper fit, clean all parts before and after assembly, and test machine tool for proper working condition. This is the capstone course for the Machinist Option Level II Certificate. Lab fee required. (SCANS 1, 4, 5, 6, 8, 9) Prerequisite: MCHN 1413 and MCHN 1441 or consent of department chair.

MCHN 1438 Machining I – Basic Machine Shop I
(48.0501) (2-6) 4 hours
An introductory course that assists the student in understanding the machinist occupation in industry. The student begins by using basic machine tools such as the lathe, milling machine, drill press, power saw, and bench grinder. Machine terminology, theory, math, part layout, and bench work using common measuring tools included. Emphasis is placed on shop safety, housekeeping, and preventive maintenance. The student will identify machine parts and their functions; select layout tools and techniques; define machine shop terminology; perform basic machine setups; calculate common shop formulas; perform semi-precision and precision layout; execute grinding techniques; demonstrate basic machine operations; apply proper measuring tools; select and acquire materials, interpret simple blueprints and apply appropriate machine shop technology to complete the assigned tasks and describe complex systems to co-workers and supervisors. Students will learn problem-solving techniques and be responsible for producing quality work. Students will maintain and assist in repair of machines and perform daily maintenance, and are responsible for time management and performance. Requires grinding and sharpening single-point cutting tools for lathe and drill press projects. Lab fee required. (SCANS 1, 3, 4, 7, 8, 9, 10, 11) Prerequisite: None.

MCHN 1441 Basic Machine Shop II
(48.0501) (2-6) 4 hours
A continuation of Basic Machine Shop I (MCHN 1438). The student will identify machine parts and their functions; select layout tools and techniques; define machine shop terminology; perform basic machine setups; calculate common shop formulas; perform semi-precision layout; execute grinding techniques; demonstrate basic machine operations; and apply proper measuring tools. Students will learn to understand and interpret more complex blueprints, and approach practical problems using precision measuring instruments. Advanced math skills will be stressed for speeds and feeds calculations. Students will select and use a variety of equipment such as power hacksaw, bandsaw and pedestal grinders. This course stresses advanced lathe operation and set up and requires classroom and laboratory performance to demonstrate maximum machine tool performance. Lab fee required. (SCANS 1, 3, 4, 8, 9, 10) Prerequisite or corequisite: MCHN 1438 or consent of department chair.

MCHN 2381 Cooperative Education – Machinist/ Machine Technologist
(48.0501) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. As outlined in the learning plan, the student will master the theory, concept and skills involving the tools, materials, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental and legal systems associated with the particular occupation and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

MCHN 2433 Advanced Lathe Operations
(48.0501) (2-6) 4 hours
An advanced study of the lathe operations. The identification and/or use of special cutting tools and support tooling, such as form tools, carbide inserts, taper attachments, follower, and steady rest. Close tolerance machining required. The student will identify and apply special lathe tooling; interpret advanced operation formulas; list machine and work setup procedures; list and explain machine operation

procedures; calculate speeds and feeds; calculate machine movement; perform advanced setups utilizing support tooling; and perform advanced machining operations to specifications. Requires more complex projects and higher performance standards. This is the capstone course for the Engine Lathe Operator Option Level I Certificate. Lab fee required. (SCANS 1, 4, 5, 8, 9) Prerequisite or corequisite: MCHN 1413 or consent of department chair.

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

Management

Faculty: J.D. Roberts, chair; Sue Jones, Connie Nichols.

The mission of the management department of Odessa College is to serve the needs of the for-profit and not-for-profit business and industry communities in our service area by providing supervisory skills training for current and future employees. We are also dedicated to providing knowledge to individuals to enable them to be successful in both their personal and professional lives.

Students can earn an associate in applied science degree in management or can opt for one of four certificates of technology including general management, leadership, small business and industrial supervision.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Management

	Semester Hrs
General Education Requirements.	**26**
ACCT 1370 Introduction to College Accounting	3
COSC 1301 Microcomputer Applications or ITSC 1401 Introduction to Computers	3 or 4
ECON 2301 Principles of Macroeconomics or ECON 2302 Principles of Microeconomics	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1324 Mathematical Analysis for Business I or any other college-level mathematics	3
PHED (any two one-hour activity courses)	2
SPCH 1321 Business & Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	
Major Requirements	**27**
BMGT 1301 Supervision	3
BMGT 1303 Principles of Management	3
BMGT 1305 Communications in Management	3
BMGT 2303 Problem Solving and Decision Making	3

BMGT 2309 Leadership 3
BMGT 2311 Management of Change 3
BMGT 2382 Cooperative Education – Business Administration and Management, General 3
HRPO 1311 Human Relations 3
MRKG 1311 Principles of Marketing 3

***Approved management courses 15**

Total Semester Hours 68

*See department chair for list of approved courses.

Certificates of Technology in Management

Level I certificates are TASP-waived.

Level I – General Management Option

Semester Hrs

BMGT 1301 Supervision 3
BMGT 1303 Principles of Management 3
BMGT 1305 Communications in Management 3
BMGT 2303 Problem Solving and Decision Making 3
BMGT 2382 Cooperative Education – Business Administration and Management, General 3
COSC 1301 Microcomputer Applications or ITSC 1401 Introduction to Computers ..... 3 or 4
HRPO 1311 Human Relations 3
*Approved management course 3

Total Semester Hours 24

*See department chair for list of approved courses.

Level I – Small Business Option

Semester Hrs

ACCT 1370 Introduction to College Accounting ... 3
BMGT 1301 Supervision 3
BMGT 1305 Communications in Management 3
BMGT 2382 Cooperative Education – Business Administration and Management, General 3
BUSG 1315 Small Business Operations 3
BUSG 2309 Small Business Management 3
COSC 1301 Microcomputer Applications or ITSC 1401 Introduction to Computers ..... 3 or 4
HRPO 1311 Human Relations 3
MRKG 1311 Principles of Marketing 3
*Approved management course 3

Total semester hours 30

*See department chair for list of approved courses.

Level I – Leadership Option

Semester Hrs

BMGT 1305 Communications in Management 3
BMGT 2303 Problem Solving and Decision Making 3
BMGT 2309 Leadership 3
BMGT 2311 Management of Change 3
BMGT 2341 Strategic Management 3
BMGT 2382 Cooperative Education – Business Administration and Management, General 3
HRPO 1311 Human Relations 3
HRPO 1393 Special Topics in Organizational Behavior – Ethics in the Workplace 3

Total Semester Hours 24

Level I – Industrial Supervision Option

Semester Hours

BMGT 1301 Supervision 3
BMGT 1303 Principles of Management 3
BMGT 1305 Communications in Management 3
BMGT 1331 Production and Operation Management 3
BMGT 2303 Problem Solving and Decision Making 3
BMGT 2382 Cooperative Education – Business Administration and Management, General 3
COSC 1301 Microcomputer Applications or ITSC 1401 Introduction to Computers ..... 3 or 4
HRPO 1311 Human Relations 3
OSHT 1313 Accident Prevention, Inspection and Investigation 3
*Approved management course 3

Total semester hours 30

*See department chair for list of approved courses.

Level III – Management Advanced Skills Certificate

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

Semester Hrs

ENGL 2311 Technical and Report Writing 3
ITSC 1305 Introduction to PC Operating Systems .. 3
*Approved management course (advanced) 3

Total Semester Hours 9

*See department chair for list of approved courses.

MANAGEMENT COURSES

BMGT 1191, 1291 or 1391 Special Topics in Business Administration and Management, General

(52.0201) (1-0, 2-0 or 3-0) 1, 2 or 3 hours

Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Learning outcomes/objectives are determined by local occupational need and business and industry trends. (SCANS 5, 6, 11) Prerequisite: None.

BMGT 1301 Supervision

(52.0201) (3-0) 3 hours

A study of the role of the supervisor. Managerial functions as applied to leadership, counseling, motivation, and human skills are examined. The student will explain the role, characteristics and skills of a supervisor and the principles of planning, leading, controlling, staffing and organizing at the supervisory level. The student will identify and discuss the human skills necessary for supervision; explain motivational techniques and give examples of how they can be utilized by a supervisor; and structure a working environment which will provide a variety of ways for employees to be motivated. Lab fee required. (SCANS 4, 5, 6, 7, 11) Prerequisite: None.

BMGT 1303 Principles of Management

(52.0201) (3-0) 3 hours

Concepts, terminology, principles, theories, and issues in the field of management. The student will explain the various theories and processes of management including its functions; identify roles of leadership in business; and recognize elements of the communication process and the guidelines for organizational design. The student will interpret interpersonal roles related to work groups and demonstrate a knowledge of the basic language of management. Lab fee required. (SCANS 4, 5, 10, 11) Prerequisite: None.

BMGT 1305 Communications in Management

(52.0201) (3-0) 3 hours

Basic theory and processes of communication skills necessary for the management of an organization's workforce. The student will explain the communication process; identify communication channels and their relationship to semantics and perception; compare and contrast the relationship of communication and management; and demonstrate competencies in verbal and written communication skills through oral and written presentations. Lab fee required. (SCANS 2, 5, 6, 11) Prerequisite: None.

BMGT 1307 High Performance Work Teams

(52.0201) (3-0) 3 hours

A study of the basic principles of building and sustaining teams in organizations including team dynamics and process improvement. The student will analyze the process of team building; integrate interpersonal skills, group dynamics and leadership in the workings of a team; and participate in a team to apply tools and techniques of the problem solving process. Lab fee required. (SCANS 5, 6, 7, 9, 10) Prerequisite: None.

BMGT 1313 Principles of Purchasing

(52.0202) (3-0) 3 hours

The purchasing process as it relates to such topics as inventory control, price determination, vendor selection, negotiation techniques and ethical issues. The student will describe the purchasing function as it relates to other departments within the company; identify the basic concepts used in purchasing decisions; and explain the relationships of materials management and inventory control to the purchasing process. Lab fee required. (SCANS 4, 5, 9, 10, 11) Prerequisite: None.

BMGT 1331 Production and Operations Management

(52.0205) (3-0) 3 hours

Fundamentals of the various techniques used in the practice of production management to include location, design, and resource allocation. The student will identify important factors of plant location and design, resource allocation, and equipment selection and utilization; and demonstrate the ability to use planning, scheduling, inventory management and quality control techniques. Lab fee required. (SCANS 4, 5, 6, 7, 9) Prerequisite: None.

BMGT 2303 Problem Solving and Decision Making

(52.0201) (3-0) 3 hours

Decision making and problem solving processes in organizations, utilizing logical and creative problem solving techniques. Application of theory is provided by experiential activities such as small group discussions, case studies, and the use of other managerial decision aids. The student will identify individual, group and organizational decision making processes; solve managerial problems using logical and creative problem solving techniques; and use managerial decision aids. Lab fee required. (SCANS 6, 7, 9, 11) Prerequisite: None.

BMGT 2309 Leadership

(52.0201) (3-0) 3 hours

Concepts of leadership and its relationship to management. Prepares the student with leadership and communication skills needed to motivate and identify.

The student will determine individual leadership styles as related to self and others; distinguish differences between leadership and management; explain the effects of leadership style on organizational environment and its result on followers' motivation; and apply principles of leadership to organizational group dynamics. Lab fee required. (SCANS 5, 6, 7, 9, 11) Prerequisite: None.

BMGT 2311 Management of Change
(52.0201) (3-0) 3 hours
Knowledge, skills, and tools that enable a leader/organization to facilitate change in a pro-active participative style. The student will explain the roles of change agent and champion in the process of change within the organization; show the progression of change from introduction to completion, examining barriers to successful implementation; and demonstrate ability to analyze internal and external environments as well as stakeholder issues in showing need for change. Lab fee required. (SCANS 5, 6, 7, 9, 11) Prerequisite: None.

BMGT 2331 Principles of Quality Management
(52.0201) (3-0) 3 hours
Quality of productivity in organizations. Includes planning for quality throughout the organization, analysis of costs of quality, and employee empowerment. The student will define the role of quality in production and service systems; explain concepts related to quality costs; list and define the quality improvement process using analysis; and participate in problem solving experiences through creative team development. Lab fee required. (SCANS 5, 6, 7, 9) Prerequisite: None.

BMGT 2341 Strategic Management
(52.0201) (3-0) 3 hours
A study of the strategic management process, including analysis of how organizations develop and implement a strategy for achieving organizational objectives in a changing environment. The student will explain the processes involved in management strategy development and develop a strategic management plan for an organization. Lab fee required. (SCANS 4, 6, 7, 9) Prerequisite: Six hours of business management courses or consent of department chair.

BMGT 2382 Cooperative Education – Business Administration and Management, General
(52.0201) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

BUSG 1315 Small Business Operations
(52.0701) (3-0) 3 hours
A course in the unique aspects of managing a small business. Topics address management functions including how managers plan, exercise leadership, organize, and control the operations. The student will discuss the unique aspects of managing a small business; explain the importance of developing employees to enhance business profits; describe the employment process; explain the elements of total quality management programs; compare purchasing procedures and inventory control in two small businesses; and compare computerized operations of two small businesses. Lab fee required. (SCANS 2, 6, 7, 9) Prerequisite: None.

BUSG 1393 Special Topics in Finance, General: Dollars and Sense and Personal Finance
(52.0801) (3-0) 3 hours
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course places emphasis on eight key elements of financial planning; obtaining, planning, saving, borrowing, spending, managing risk, investing, and retirement and estate planning. Lab fee required. (SCANS 4, 6, 8, 9) Prerequisite: None.

BUSG 2307 Legal and Social Environment of Business
(52.0101) (3-0) 3 hours
The role of law in business and society including government regulations of business, legal reasoning, sources of law, social policy, legal institutions, antitrust, security regulations, consumer protection, environmental laws, worker health and safety, employment discrimination, and other laws affecting business. Lab fee required. (SCANS 5, 6, 7, 9) Prerequisite: None.

BUSG 2309 Small Business Management
(52.0701) (3-0) 3 hours
A course on how to start and operate a small business. Topics include facts about a small business, essential management skills, how to prepare a business plan, financial needs, marketing strategies, and legal issues. The student will describe important issues about small business; identify essential management skills required of a successful entrepreneur; and prepare a business plan. Lab fee required. (SCANS 6, 7, 9, 10) Prerequisite: None.

HRPO 1311 Human Relations
(52.1003) (3-0) 3 hours
Practical application of the principles and concepts of the behavioral sciences to interpersonal relationships in the business and industrial environment. The student will evaluate human relations including diversity, attitudes, self-esteem and interpersonal skills to promote career success; identify and evaluate the causes and effects of stress in the workplace; develop individual and group communication, listening and decision making skills; and analyze how theories of motivation and human behavior impact strategies of change management. Lab fee required. (SCANS 5, 7, 9, 10, 11) Prerequisite: None.

HRPO 1393 Special Topics in Organizational Behavior Studies: Ethics in the Workplace
(52.1003) (3-0) 3 hours
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Students will analyze and discuss various views of the concept of right and wrong and the impact of global and cross-cultural issues related to ethics in the workplace. Lab fee required. (SCANS 5, 6, 9, 10, 11) Prerequisite: None.

HRPO 2301 Human Resources Management
(52.1001) (3-0) 3 hours
Behavioral and legal approach to the management of human resources in organizations. The student will describe and explain the development of human resources management; evaluate current methods of job analysis, recruitment, selection, training/development, performance appraisal, promotion, and separation; discuss management's ethical, socially responsible, and legally required actions; assess methods of compensation and benefits planning; and examine the role of strategic human resource planning in support of organizational mission and objectives. Lab fee required. (SCANS 4, 5, 6, 7, 11) Prerequisite: None.

HRPO 2307 Organizational Behavior
(52.1003) (3-0) 3 hours
The analysis and application of organizational theory, group dynamics, motivation theory, leadership concepts, and the integration of interdisciplinary concepts from the behavioral sciences. The student will explain organizational theory as it relates to management practices, employee relations, and structure of the organization to fit its environment and operation; analyze leadership styles and determine their effectiveness in employee situations; discuss experience in managing and resolving organizational problems; describe the impact of corporate culture and atmosphere on employee behavior; and analyze and discuss team dynamics, team building strategies and cultural diversity. Lab fee required. (SCANS 5, 6, 7, 9, 11) Prerequisite: None.

IMED 2309 Internet Commerce
(10.0101) (3-0) 3 hours
An overview of the Internet as a marketing and sales tool with emphasis on developing a prototype for electronic commerce. Topics include database technology, creating web sites in order to collect information, performing on-line transactions, and generating dynamic content. Students will perform audience analysis; state marketing objectives; analyze design strategies for secure data transfer; write web pages to use real-time processing capabilities; and design a web site that interacts with a database. Lab fee required. (SCANS 4, 6, 8, 9) Prerequisite: None.

INSR 1391 Special Topics in Insurance and Risk Management
(52.0805) (3-0) 3 hours
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Students will learn how to integrate insurance, wills, and trusts as part of an overall financial plan including investment options. Lab fee required. (SCANS 1, 3, 4, 6, 9) Prerequisite: None.

LMGT 1319 Introduction to Business Logistics
(52.0203) (3-0) 3 hours
A systems approach to managing activities associated with traffic, transportation, inventory management and control, warehousing, packaging, order processing, and materials handling. The student will explain the terms and how they relate to the overall concept of logistics; explain the legal aspects and regulatory agencies as they relate to logistics management; and demonstrate ability to apply decision-making techniques based on time, materials and space. Lab fee required. (SCANS 4, 5, 6, 7, 9) Prerequisite: None.

MRKG 1302 Principles of Retailing [formerly BMGT 1302]
(52.1401) (3-0) 3 hours
Introduction to the retailing environment and its relationship to consumer demographics, trends and traditional/nontraditional retailing markets. The employment of retailing techniques and the factors that influence modern retailing. The student will identify consumer demographics, trends and traditional/ nontraditional retailing markets; describe retailing techniques and steps in the selling process; and list the factors that influence price setting, site location, store design, legislation, competition, the merchandise mix and the economy. Lab fee required. (SCANS 3, 6, 8, 9, 10) Prerequisite: None.

MRKG 1311 Principles of Marketing
(52.1401) (3-0) 3 hours
Introduction to the marketing functions; identification of consumer and organizational needs; explanation of economic, psychological, sociological, and global issues; and description and analysis of the importance of marketing research. The student will identify the marketing mix components in relation to market segmentation; explain the economic, psychological, sociological and global factors which influence consumer and organizational decision-making processes; and interpret market research data to forecast industry trends and meet customer demands. Lab fee required. (SCANS 4, 6, 7, 9, 10, 11) Prerequisite: None.

Mass Communication –

Faculty: Steve Goff, chair.

Mass communication students at Odessa College enroll mainly for three purposes: to prepare for university transfer, to prepare themselves vocationally for a career and to broaden their exposure to the mass media.

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

To offer students an opportunity to gain valuable experience while attending college, Odessa College operates a public radio station, KOCV-FM. Practicums also help give on-site professional experience to the mass communication student.

Course of Study for Associate in Arts Degree Broadcasting

	Semester Hrs
General Education Requirements	**49**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
Foreign Language or Science (eight hours in same discipline)	8
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH (college level)	3
PHED (any two one-hour activity courses)	2
Philosophy, Psychology, Sociology, Anthropology or Economics courses	6
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**6**
COMM 1307 Introduction to Mass Communication	3
COMM 1335 Survey of Radio and Television	3

PLUS any nine hours selected from the following courses 9

- COMM 1318 Basic Photography I 3
- COMM 1336 Television Production I 3
- COMM 1337 Television Production II 3
- COMM 2120 Practicum in Electronic Media 1
- COMM 2121 Practicum in Electronic Media 1
- COMM 2122 Practicum in Electronic Media 1
- COMM 2220 Practicum in Electronic Media 2
- COMM 2303 Audio and Radio Production 3
- COMM 2311 News Gathering and Writing I 3
- COMM 2315 News Gathering and Writing II 3
- COMM 2324 Practicum in Electronic Media 3
- COMM 2325 Practicum in Electronic Media 3
- COMM 2326 Practicum in Electronic Media 3
- COMM 2331 Announcing for Radio and Television 3

Total Semester Hours 64

Course of Study for Associate in Arts Degree Mass Communication

	Semester Hrs
General Education Requirements	**49**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric.	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
Foreign Language or Science (six to eight hours in same discipline)	8
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH (college level)	3
PHED (any two one-hour activity courses)	2
Philosophy, Psychology, Sociology, Anthropology or Economics courses	6
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**3**
COMM 1307 Introduction to Mass Communication	3

PLUS any 12 hours selected from the following courses 12

- COMM 1131 Publications 1
- COMM 1132 Publications 1
- COMM 1316 News Photography 3
- COMM 1318 Basic Photography I 3
- COMM 1319 Basic Photography II 3
- COMM 1335 Survey of Radio and Television 3
- COMM 1336 Television Production I 3
- COMM 2131 Publications 1
- COMM 2132 Publications 1
- COMM 2303 Audio and Radio Production 3
- COMM 2311 News Gathering and Writing I 3
- COMM 2315 News Gathering and Writing II 3
- COMM 2325 Practicum in Electronic Media 3
- COMM 2326 Practicum in Electronic Media 3

Total Semester Hours 64

MASS COMMUNICATION COURSES

COMM 1131, 1132, 2131, 2132 Publications

(09.0401.5406) (0-5) 1 hour each

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

COMM 1307 Introduction to Mass Communication

(09.0403.5106) (3-0) 3 hours

Surveys basic facets affecting human interaction through mass communication. This course is designed to develop understanding of the interrelationships of the mass media in society and to help project the future of communication in an ever changing world. (SCANS 6, 7, 9) Prerequisites: TASP competency in reading and writing or consent of instructor.

COMM 1316 News Photography

(09.0401.5506)

PHTC 1351 Photojournalism I

(50.0406) (2-4) 3 hours

Presentation of photographic techniques used by photojournalists in newspapers, magazines, and trade publications including news, feature, sports, editorial portraits, and photo essays. Includes a study of layout design and the freelance market. Lab fee required. (SCANS 2, 5, 6, 8, 9) Prerequisites: COMM 1318 or ARTS 2356.

COMM 1318 Basic Photography I

(50.0605.5126)

ARTS 2356 Photography I

(50.0605.5126) (2-4) 3 hours

Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry, and presentation skills. Emphasis on design, history, and contemporary trends as a means of developing an understanding of photographic aesthetics. The student

will assess and select equipment, supplies and techniques to incorporate basic theories of film, exposure, development, filters and printing. Students will use efficient learning techniques to acquire and apply creative knowledge and to communicate with others. Lab fee required. (SCANS 4, 8, 9, 11) Prerequisite: None.

COMM 1319 Basic Photography II
(50.0605.5226)
ARTS 2357 Photography II
(50.0605.5226) (2-4) 3 hours
Extends the students' knowledge of technique and guides them in developing personal outlooks toward specific applications of the photographic process. Students will use efficient learning techniques to acquire and apply creative knowledge and to communicate with others. Designed for additional experience in the photographic medium. Lab fee required. (SCANS 4, 8, 9, 11) Prerequisites: COMM 1318 or ARTS 2356 or its equivalent.

COMM 1335 Survey of Radio and Television
(09.0403.5206) (3-0) 3 hours
Examines the development, regulation, economics, social responsibilities and industry practices in broadcasting and cable communication, non-broadcast television, new technology and other communication systems. (SCANS 6, 7, 8) Prerequisites: TASP competency in reading and writing or consent of instructor.

COMM 1336 Television Production I
(10.0104.5206) (1-2) 3 hours
Presents practical experience in the operation of television studio and control room equipment, with an emphasis on production. Includes pre-production techniques, student involvement in direction and assignments to all crew positions for class productions. Lab fee required. (SCANS 5, 6, 8, 11) Prerequisites: TASP competency in reading and writing or consent of instructor.

COMM 1337 Television Production II
(10.0104.5206) (1-2) 3 hours
Continuation of the television production sequence. Presents practical experience in the operation of television studio and control room equipment with an emphasis on production. Includes pre-production techniques, student involvement in direction and assignments to all crew positions for class productions. Lab fee required. (SCANS 5, 6, 8, 11) Prerequisites: TASP competency in reading and writing or consent of the instructor.

COMM 2120, 2121, 2122 Practicum in Electronic Media
(09.0701.5306) (0-5) 1 hour each
Provides framework for student participation at KOCV-FM, the college radio station. Requires working as a team member for a minimum of five hours per week at the station and attending staff meetings designed to keep students abreast of happenings at the station and in the industry. Lab fee required. (SCANS 5, 8, 9, 10, 11) Prerequisites: COMM 1307 or COMM 1335 or consent of the KOCV-FM station manager; TASP competency in reading and writing or consent of instructor.

COMM 2220 Practicum in Electronic Media
(09.0701.5306) (2-3) 2 hours
This practicum is designed to allow students to tailor their Odessa College experience to their future career goals in radio or television. Students may choose practicum experience at various local stations or KOCV-FM or produce specific projects. Lab fee required. (SCANS 5, 8, 9, 10, 11) Prerequisites: TASP competency in reading and writing or consent of instructor, successful completion or current enrollment in another broadcasting course and approval of the faculty advisor and prospective practicum site management.

COMM 2303 Audio/Radio Production
(10.0104.5106) (1-3) 3 hours
Presents the concepts and techniques of sound production, including the coordinating and directing of all aspects of sound production from the design of the production to the finished product, with emphasis on the manipulation of equipment and sound sources and direction of talent. Lab fee required. (SCANS 6, 8, 9) Prerequisites: COMM 1307 or COMM 1335 or consent of instructor; TASP competency in reading and writing or consent of instructor.

COMM 2311 News Gathering and Writing I
(09.0401.5706) (3-0) 3 hours
Introduces the basic fundamentals of news writing for all mass media. Students will be instructed in the methods and techniques used for gathering, processing and delivering news in a professional manner. Lab fee required. (SCANS 2, 7, 9) Prerequisites: COMM 1307, basic typing skills and competency in diction and grammar required.

COMM 2315 News Gathering and Writing II
(09.0401.5806) (3-0) 3 hours
Continuation of the news gathering and writing sequence. Specialized news story forms will be highlighted with an emphasis on advanced reporting techniques. Students will write stories for broadcast during the news programs on KOCV-FM. Lab fee required. (SCANS 7, 9) Prerequisites: COMM 2311 or consent of the instructor.

COMM 2324, 2325, 2326 Practicum in Electronic Media

(09.0701.5306) (2-4) 3 hours each

This practicum is designed to allow students to tailor their Odessa College experience to their future career goals in mass media. Students may choose practicum experience at various local or campus media organizations or produce specific projects. Lab fee required. (SCANS 5, 8, 9, 10, 11) Prerequisites: TASP competency in reading and writing or consent of instructor; successful completion or current enrollment in another broadcasting course and approval of the faculty advisor and prospective practicum site management.

COMM 2331 Announcing for Radio and Television

(09.0701.5406) (1-2) 3 hours

Helps prepare the student for a career in voice talent for radio and television. Includes proper pronunciation, articulation, interviewing, reading of news and commercial copy and announcing music and sports. Lab fee required. (SCANS 1, 6, 9, 11) Prerequisites: COMM 1307 or COMM 1335 or consent of instructor; TASP competency in reading and writing or consent of instructor.

Mathematics

Faculty: Dr. Charles Sweatt, chair; Jim Camp, Theresa Evans, Dr. James Fields, Nikki Handley, Debra Lackey, Dr. Glynna Strait, Dr. Margaret Street.

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

Course of Study for Associate in Science Degree Mathematics

	Semester Hrs
General Education Requirements	**41**
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
Lab Science	12
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3
Major Requirements	**22**
MATH 2318 Linear Algebra	3
MATH 2320 Differential Equations	3
*MATH 2412 Pre-Calculus Math	4
MATH 2413 Calculus I	4
MATH 2414 Calculus II	4
MATH 2415 Calculus III	4
Related Requirements	**4**
COSC 1401 Microcomputer Applications	4
Total Semester Hours	**67**

*Students not prepared for MATH 2412 Pre-Calculus Math should enroll in MATH 1314 College Algebra or a

lower-level math course before enrolling in MATH 2412. Preregistration testing is available for placement aid for students planning to take MATH 0371, MATH 0372, MATH 0375, MATH 1314 or MATH 1332.

MATHEMATICS COURSES

MATH 0170 Math Study Skills

(32.0101.5212) (0-1) 1 hour

A math study skills course designed to enable students to receive assistance in specific mathematics courses taken with a "B or better" contract. Tutorial help, computer-assisted instruction, videotapes and TASP study materials are available to support this course. This course is a corequisite with a college level course taken with a "B or better" contract. MATH 0170 will satisfy TASP liability only if concurrently enrolled in college level mathematics course. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0171 Fundamental Math

(32.0104.5119) (0-1) 1 hour

Provides a review of fundamental mathematics. Presents the use of number concepts and computation skills. Includes solving word problems using integers, fractions and decimals as well as percents, ratios and proportions. Includes how to interpret information from a graph, table or chart and use measure of central tendency, and variability. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0172 Algebra – Graphing and Equations

(32.0104.5119) (0-1) 1 hour

Provides a review of algebra – graphing and equations. Presents graphs of numbers and number relationships. Introduces how to solve one- and two-variable equations including word problems. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0173 Algebra – Operations and Quadratics

(32.0104.5119) (0-1) 1 hour

Provides a review of algebra – operations and quadratics. Presents operations with algebraic expressions. Investigates problems involving quadratic equations, inequalities and their graphs. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0174 Geometry and Problem Solving

(32.0104.5119) (0-1) 1 hour

Provides a review of geometry and reasoning. Presents problems involving geometric figures, investigates how to apply reasoning skills and apply combinations of mathematical skills to solve problems. The student will learn to prioritize time and develop self-discipline in this self-paced course as well as learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Lab fee required. (SCANS 3, 4, 8, 9) Prerequisite: Completion of MATH 0375 or consent of the instructor.

MATH 0370 Arithmetic

(32.0104.5119) (3-0) 3 hours

A developmental course for students with weak preparation in fundamental mathematics and who are deficient in math, English and/or reading. Presents basic arithmetic operations (whole numbers, fractions, decimals, and signed numbers), percents and proportions, metric and American systems of units, geometric measurements, and statistical graphs. MATH 0370 must be passed with a "C" or better in order to progress to next appropriate course. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: Consent of instructor. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0371 Pre-Algebra

(32.0104.5119) (3-0) 3 hours

A developmental course using whole numbers, decimals, fractions, integers, linear equations, problem solving, geometry formulas, real number properties, polynomials, exponents, radicals, equations, and graphs of lines. Credit is not transferable. This course does not

satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: MATH 0370 passed with a "C" or better or satisfactory placement score. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0372 Introductory Algebra
(32.0104.5119) (3-0) 3 hours
A developmental course that introduces elementary algebra with some arithmetic review. Includes signed numbers and rational numbers with operations through exponentiation; algebraic expressions and their operations; linear equations and inequalities including applications, and graphs. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: MATH 0371 passed with a "C" or better or satisfactory placement score. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 0375 Intermediate Algebra
(32.0104.5219) (3-0) 3 hours
A developmental course that provides a study of real number operations, linear equations and inequalities including systems, function notation, quadratic inequalities, exponents and radicals, polynomial and radical equations, and their graphs. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning, and problem solving. Credit is not transferable. This course does not satisfy requirements for any degree plan at Odessa College. Placement testing is available. Attendance is mandatory for TASP liable students. Lab fee required. (SCANS 3, 8, 9) Prerequisite: MATH 0372 passed with a "C" or better or satisfactory placement score. Corequisite: 14 hours in the Math Academic Resource Lab.

MATH 1314 College Algebra
(27.0101.5419) (3-0) 3 hours
Includes sets, complex numbers, quadratic and quadratic form equations, inequalities, functions, systems of equations and topics selected from exponential and logrithmic functions, matrices, determinants, binomial theorem, math induction and sequences and series. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. Placement testing available. (SCANS 3, 8, 9, 11) Prerequisite: MATH 0375 passed with a "C" or better, high school algebra II, or an independent school district/OC concurrent enrollment form.

MATH 1316 Plane Trigonometry
(27.0101.5319) (3-0) 3 hours
Presents trigonometric functions, formulas, solutions of right triangles and applications, variations of functions with changes in angles, trigonometric equations, identities, solutions of oblique triangles and applications, logarithmic functions, inverse functions and complex numbers. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite or corequisite: MATH 1314 or equivalent competency, or an independent school district/OC concurrent enrollment form.

MATH 1324 Mathematical Analysis for Business I
(27.0301.5219) (3-0) 3 hours
Develops quantitative methods of analysis for business problems. Includes study of set theory, symbolic logic, mathematical relationships, vectors and matrices, break-even interpretations, linear programming, probability and expected value as aids in formulating business decisions. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. (SCANS 3, 8, 9) Prerequisite: MATH 0375 passed with a "C" or better, high school algebra II, or equivalent competency.

MATH 1325 Mathematical Analysis for Business II
(27.0301.5219) (3-0) 3 hours
Includes elementary calculus of differentiation, integration and application. Emphasizes application to business and economic problems. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 1324.

MATH 1332 Structures of College Mathematics I
(27.0101.5119) (3-0) 3 hours
Topics covered will include sets, logic, number systems, relations and applications, concepts of mathematics and problem solving. The student will learn to select appropriate mathematical techniques and technologies and use these skills in problem solving. Students will

develop and/or discover mathematical relationships. This course is designed primarily for liberal arts and education majors. (SCANS 3, 8, 9, 11) Prerequisite: MATH 0375 or high school Algebra II or passing score on TASP math section.

MATH 1333 Structures of College Mathematics II

(27.0101.5119) (3-0) 3 hours

Topics covered will include algebra, geometry, measurement, and an introduction to probability and statistics. The student will learn to select appropriate mathematical techniques and technologies and use these skills in problem solving. The students will develop and/or discover mathematical relationships. This course is designed primarily for liberal arts and education majors. (SCANS 3, 8, 9, 11) Prerequisites: MATH 1332 or MATH 0375 or satisfactory placement score.

MATH 1342 Mathematical Statistics

(27.0501.5119) (3-0) 3 hours

Introduces elements of statistics. Includes frequency distributions, measures of central tendency, elementary probability, binomial distribution, measures of variation, normal distributions, random sampling, tests of significance, t-test and chi-square test. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. Recommended for students in education, social science and physical science as well as mathematics. (SCANS 3, 6, 8, 9) Prerequisite: MATH 0375 passed with a "C" or better or satisfactory placement score.

MATH 1348 Analytic Geometry

(27.0101.5519) (3-0) 3 hours

Presents fundamental concepts, straight line, circle, conics, simplification of equations, algebraic curves, transcendental curves, polar coordinates, parametric equations and other concepts. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 1316 or equivalent, or completed independent school district/OC concurrent enrollment form.

MATH 1442 Business Statistics

(27.0501.5119) (3-3) 4 hours

Provides an introduction to techniques of collection, presentation analysis and interpretation of numerical data. Stresses application of correlation methods, analysis of variance, dispersion, sampling, quality control, reliability, mathematical models and programming. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. (SCANS 3, 6, 8, 9) Prerequisite: MATH 1324.

MATH 2318 Linear Algebra

(27.0101.6119) (3-0) 3 hours

Presents a study of vector spaces, linear transformations, matrix algebra, eigenvalues, eigenvectors and applications. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 2414.

MATH 2320 Differential Equations

(27.0301.5119) (3-0) 3 hours

A study of equations of order one, linear differential equations, non-homogeneous equations, differential operators, the Laplace transform, inverse transforms, applications, equations of order one and higher degree. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 2414.

MATH 2412 Pre-Calculus Math

(27.0101.5819) (4-0) 4 hours

Presents the study of applications of algebra and trigonometry, elementary functions and their graphs including polynomial, rational, exponential, logarithmic, and trigonometric functions, conic sections, rotation of axes, parametric equations and the use of polar, cylindrical and spherical coordinates. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 1314 or equivalent.

MATH 2413 Calculus I

(27.0101.5919) (4-0) 4 hours

Presents a study of rate of change of functions, limits, derivatives of algebraic and trigonometric functions, integration and applications. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite or corequisite: MATH 1348 or MATH 2412.

MATH 2414 Calculus II
(27.0101.5919) (4-0) 4 hours
Extends topics of MATH 2413 to include differentiation and integration of a wider class of functions, including logarithmic, exponential, and inverse trigonometric functions. Indeterminate forms and improper integrals are analyzed. More advanced techniques of integration are developed, and application of these techniques are presented for solving a wider range of problems including volumes of solids, arc length, work, and moments of mass. Also taught are sequences and infinite series, plane curves, parametric equations, polar coordinates, and polar equations of conics. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 2413.

MATH 2415 Calculus III
(27.0101.5919) (4-0) 4 hours
Presents the study of vectors and motion in space. Vector valued functions, multivariable functions, partial differentiation and multiple integration of multivariable functions and their application. Also presented are Lagrange multipliers, line integrals, Green's and Stoke's Theorems. The student will learn to select appropriate mathematical techniques and technologies and use skills in information organizing, processing, planning and problem solving. The student should be able to probe for mathematical meaning and, perhaps, describe these meanings to others. (SCANS 3, 8, 9, 11) Prerequisite: MATH 2414.

Music

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

The Odessa College music department, offering an associate in arts degree in music, provides a high quality academic program and cultural enrichment for all Ector County area residents. Courses and performing organizations supply pre-professional training for the music major, fulfill general education requirements, and offer personal enrichment and enjoyment for area residents. As a service to the community, the department presents performances of faculty, students, and ensembles; hosts area music clinics and competitions; and furnishes performance facilities for area music teachers. The music department is a member of the Texas Association of Music Schools and the Texas Music Educators Association.

Course of Study for Associate in Arts Degree Music

	Semester Hrs
General Education Requirements	**35**
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
Foreign Language, Math, or Science	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MUSI 1309 Introduction to Music Literature	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3
Major Requirements	**31**
Class Piano, Secondary Piano, or Piano Ensemble (Piano Majors)	4
Freshman Principal Instrument or Voice	4
MUSI 1308 Introduction to Music Literature	3
MUSI 1311 and MUSI 1312 Freshman Music Theory	6
MUSI 2311 and MUSI 2312 Advanced Study of Harmony	6
Music Ensemble	4
Sophomore Principal Instrument or Voice	4
Total Semester Hours	**66**

MUSIC ENSEMBLE COURSES

MUSI 1121, 1122, 2121, 2122 Concert Band
(50.0903.5526) (0-3) 1 hour each
Performance oriented course for students with at least high school playing experience. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1, 5, 10, 11) Prerequisite: None.

MUSI 1123, 1124, 2123, 2124 Orchestra
(50.0903.5526) (0-3) 1 hour each
Performance oriented course for students who can play music of moderate difficulty on an orchestral instrument. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1, 5, 10, 11) Prerequisite: Consent of the instructor.

MUSI 1131, 1132, 2131, 2132 Jazz Ensemble
(50.0903.5626) (0-3) 1 hour each
Performance oriented course for students with at least high school playing experience. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1, 5, 10, 11) Prerequisite: Consent of the instructor.

MUSI 1133, 1134, 2133, 2134 String Ensemble
(50.0903.5626) (0-3) 1 hour each
Performance oriented course for students who can play music of moderate difficulty on a stringed instrument (violin, viola, cello, bass). Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1, 5, 10, 11) Prerequisite: Consent of the instructor.

MUSI 1137, 1138, 2137, 2138 Piano Ensemble and Accompanying
(50.0903.5626) (0-3) 1 hour each
Designed to improve ensemble playing and to provide training in techniques of vocal and instrumental accompanying. Also emphasizes harmonization, improvisation, and transposition skills. Four semester hours required of all keyboard majors. (SCANS 1, 5, 11) Prerequisite: Consent of the instructor for all non-keyboard majors.

MUSI 1241, 1242, 2241, 2242 A Cappella Choir
(50.0903.5726) (0-6) 2 hours each
A required course for music majors whose primary instrument is voice, or an elective course for non-music majors. Studies include fundamental vocal techniques and choral literature representing many styles and composers from all periods of music. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1, 5, 10, 11) Prerequisite: Admission by audition with acceptance based on musical ability and voice quality.

MUSI 1151, 1152, 2151, 2152 Vocal Ensemble
(50.0903.5826) (0-3) 1 hour each
An elective course designed to acquaint the student with chamber music for the small vocal ensemble of all periods of music. Participation in all performances expected. Students will enhance their music reading and listening skills and will develop social skills and responsibility through group performance. (SCANS 1, 5, 10, 11) Prerequisite: Selection from the A Cappella Choir by audition with acceptance based on musical ability and voice quality.

MUSIC CLASSES

MUSI 1301 Music Fundamentals
(50.0904.5526) (3-0) 3 hours
This course is open to all students and is a basic study of the principles of music and music theory information including notation, scales, intervals, and chords. (SCANS 6) Prerequisite: None.

MUSI 1306 Music Appreciation
(50.0902.5126) (3-0) 3 hours
This course is open to all students and is designed to increase a student's understanding and enjoyment of the world's music. Music history information and listening skills will be acquired through a multimedia approach which includes lectures, videos, recordings, and live performances. (SCANS 6, 11) Prerequisite: None.

MUSI 1308, 1309 Introduction to Music Literature
(50.0902.5226) (3-0) 3 hours each
A chronological survey course for music majors, which acquaints students with musical composition from the Middle Ages through the 20th century. Historical aspects, as well as the music itself, are presented. Music history information and listening skills will be acquired through various audiovisual aids, including videotapes, CDs, CD-ROMs, workbooks, and textbook. Required of all music majors. (SCANS 6, 11) No prerequisite for MUSI 1308. Prerequisite for MUSI 1309: Consent of instructor.

MUSI 1311, 1312 Freshman Music Theory
(50.0904.5126) (3-3) 3 hours each
Reviews basic music theory, followed by study of diatonic melody, diatonic triadic and seventh chord harmony, embellishing tones, modes and motivic variation procedures through analysis, part-writing, composition, ear-training, sight-singing, rhythmic reading and keyboard applications. Required for all music majors. (SCANS 6, 11) Prerequisite for MUSI 1312: MUSI 1311.

MUSI 2311, 2312 Advanced Study of Harmony
(50.0904.5226) (3-3) 3 hours each
Presents secondary seventh chords, modulation, chromatic melody and harmony, and small forms through analysis, part-writing, composition, ear-training, sight-singing, rhythmic reading and keyboard applications. Twentieth century melody and harmony and large forms are studied during the second semester. Required for all music majors. (SCANS 6, 11) Prerequisite for MUSI 2311: MUSI 1312. Prerequisite for MUSI 2312: MUSI 2311.

MUSI 1371, 1372 Piano Literature
(50.0902.5226) (3-0) 3 hours each
Surveys and studies solo literature for piano. Emphasizes individual and period idioms and styles. MUSI 1371 presents origins of keyboard and solo piano literature of the 18th century. MUSI 1372 presents solo piano literature of the 19th and 20th centuries. Information is acquired and listening skills are enhanced through the use of cassette tapes, videotapes, CDs, CD-ROMs, and live performance. (SCANS 6, 11) Prerequisite: Consent of the instructor.

MUSI 1160 Italian Diction
(50.0908.5326) (2-0) 1 hour
Emphasizes Italian language and diction. Designed to promote ability to sing and phonetically spell the Italian language through listening and speaking exercises. Vocabulary derived from words commonly used in song and opera. (SCANS 11) Prerequisite: None.

MUSI 2160 German Diction
(50.0908.5326) (2-0) 1 hour
Emphasizes German language and diction. Designed to promote ability to sing and phonetically spell the German language through listening and speaking exercises. Vocabulary derived from words commonly used in song and opera. (SCANS 11) Prerequisite: MUSI 1160.

MUSI 2161 French Diction
(50.0908.5326) (2-0) 1 hour
Emphasizes French language and diction. Designed to promote ability to sing and phonetically spell the French language through listening and speaking exercises. Vocabulary derived from words commonly used in song and opera. (SCANS 11) Prerequisite: MUSI 1160.

MUSI 1170, 1171 General Foundations in Music
(50.0904.5426) (0-1/2) 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for listening, creating rhythmic responses, and reading music notation. This course may involve an individual study project. Lab fee required. (SCANS 1, 11) Prerequisite: None.

MUSI 1172, 1173 Instrumental Foundations in Music
(50.0904.5426) (0-1/2) 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for satisfactory performance in playing an instrument, listening, creating rhythmic responses, and reading music notation. Lab fee required. (SCANS 1, 11) Prerequisite: None.

MUSI 1174, 1175 Keyboard Foundations in Music
(50.0904.5426) (0-1/2) 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for satisfactory performance in playing a keyboard instrument, listening, creating rhythmic responses, and reading music notation. Lab fee required. (SCANS 1, 11) Prerequisite: None.

MUSI 1176, 1177 Vocal Foundations in Music
(50.0904.5426) (0-1/2) 1 hour each
Offered on an elective basis to meet special needs of students to develop their musical ability. Emphasizes the necessary skills for satisfactory vocal performance, listening, creating rhythmic responses, and reading music notation. Lab fee required. (SCANS 1, 11) Prerequisite: None.

MUSI 1181, 1182, 2181, 2182 Class Piano
(50.0907.5126) (1-2) 1 hour each
Courses for music majors designed to develop basic skills related to playing the piano through both class and individual participation. Begins with fundamental elements of music, including music reading, basic concepts of elementary music theory (melody, rhythm, harmony), chord structure, harmonization, ensemble playing and improvisation. Class taught in state-of-the-art piano lab, using digital keyboards, sequencers and computers. (SCANS 1, 5, 6, 8) Prerequisite: Consent of the instructor.

PRIVATE LESSONS

Private study of piano, organ, voice, string, brass, woodwind, and percussion instruments is available to all students on both beginning and advanced levels of instruction. Students will develop and/or enhance their music reading and listening skills through practice and performance on their instrument. Music majors will have a one-hour lesson on their major instrument. They may also have a one-half hour lesson on a secondary instrument. Non-music majors may have a one-half hour or one-hour lesson. Five hours of practice per week are required for a one-half hour lesson, and 10 hours for a one-hour lesson. (SCANS 1, 11) Private instruction fee required. Prerequisite: None.

NON-MUSIC MAJOR COURSES

MUAP 1189, 1190, 2189, 2190 Applied Music
(50.0903.5426) (0-1/2) 1 hour each

MUAP 1289, 1290, 2289, 2290 Applied Music
(50.0903.5426) (0-1) 2 hours each

MUSIC MAJOR COURSES

MUAP 1201, 1202 Freshman Violin
(50.0903.5426) (0-1) 2 hours each

MUAP 2201, 2202 Sophomore Violin
(50.0903.5426) (0-1) 2 hours each

MUAP 1205, 1206 Freshman Viola
(50.0903.5426) (0-1) 2 hours each

MUAP 2205, 2206 Sophomore Viola
(50.0903.5426) (0-1) 2 hours each

MUAP 1209, 1210 Freshman Cello
(50.0903.5426) (0-1) 2 hours each

MUAP 2209, 2210 Sophomore Cello
(50.0903.5426) (0-1) 2 hours each

MUAP 1213, 1214 Freshman Double Bass
(50.0903.5426) (0-1) 2 hours each

MUAP 2213, 2214 Sophomore Double Bass
(50.0903.5426) (0-1) 2 hours each

MUAP 1217, 1218 Freshman Flute
(50.0903.5426) (0-1) 2 hours each

MUAP 2217, 2218 Sophomore Flute
(50.0903.5426) (0-1) 2 hours each

MUAP 1221, 1222 Freshman Oboe
(50.0903.5426) (0-1) 2 hours each

MUAP 2221, 2222 Sophomore Oboe
(50.0903.5426) (0-1) 2 hours each

MUAP 1225, 1226 Freshman Bassoon
(50.0903.5426) (0-1) 2 hours each

MUAP 2225, 2226 Sophomore Bassoon
(50.0903.5426) (0-1) 2 hours each

MUAP 1229, 1230 Freshman Clarinet
(50.0903.5426) (0-1) 2 hours each

MUAP 2229, 2230 Sophomore Clarinet
(50.0903.5426) (0-1) 2 hours each

MUAP 1233, 1234 Freshman Saxophone
(50.0903.5426) (0-1) 2 hours each

MUAP 2233, 2234 Sophomore Saxophone
(50.0903.5426) (0-1) 2 hours each

MUAP 1237, 1238 Freshman Cornet or Trumpet
(50.0903.5426) (0-1) 2 hours each

MUAP 2237, 2238 Sophomore Cornet or Trumpet
(50.0903.5426) (0-1) 2 hours each

MUAP 1241, 1242 Freshman French Horn
(50.0903.5426) (0-1) 2 hours each

MUAP 2241, 2242 Sophomore French Horn
(50.0903.5426) (0-1) 2 hours each

MUAP 1245, 1246 Freshman Trombone or Baritone
(50.0903.5426) (0-1) 2 hours each

MUAP 2245, 2246 Sophomore Trombone or Baritone
(50.0903.5426) (0-1) 2 hours each

MUAP 1253, 1254 Freshman Tuba
(50.0903.5426) (0-1) 2 hours each

MUAP 2253, 2254 Sophomore Tuba
(50.0903.5426) (0-1) 2 hours each

MUAP 1257, 1258 Freshman Percussion
(50.0903.5426) (0-1) 2 hours each

MUAP 2257, 2258 Sophomore Percussion
(50.0903.5426) (0-1) 2 hours each

MUAP 1261, 1262 Freshman Classical Guitar
(50.0903.5426) (0-1) 2 hours each

MUAP 2261, 2262 Sophomore Classical Guitar
(50.0903.5426) (0-1) 2 hours each

MUAP 1265, 1266 Freshman Organ
(50.0903.5426) (0-1) 2 hours each

MUAP 2265, 2266 Sophomore Organ
(50.0903.5426) (0-1) 2 hours each

MUAP 1269, 1270 Freshman Piano
(50.0903.5426) (0-1) 2 hours each

MUAP 2269, 2270 Sophomore Piano
(50.0903.5426) (0-1) 2 hours each

MUAP 1281, 1282 Freshman Voice
(50.0903.5426) (0-1) 2 hours each

MUAP 2281, 2282 Sophomore Voice
(50.0903.5426) (0-1) 2 hours each

MUAP 1165, 1166, 2165, 2166 Secondary Organ
(50.0903.5426) (0-1/2) 1 hour each

MUAP 1169, 1170, 2169, 2170 Secondary Piano
(50.0903.5426) (0-1/2) 1 hour each

MUAP 1181, 1182, 2181, 2182 Secondary Voice
(50.0903.5426) (0-1/2) 1 hour each

MUAP 1187, 1188, 2187, 2188 Secondary Instrument
(50.0903.5426) (0-1/2) 1 hour each

Nursing - RN

Faculty: Charlene Reeves, director; Marylin Boomer, Laura Cralle, Amanda Darling, Dee Ann Decker, Carmen Edwards, Mary Kipple, Eva Mauldin, Gail Meagher, Robbie Rogers, Barbara Stone, Peggy Thurston, Lori Wingate.

The curriculum of the Odessa College nursing programs prepares the student for a variety of experiences in health care, including hospitals, home health care services, mental health agencies and occupational care in industry. Nursing is a caring-oriented human experience requiring a well-educated nurse. Odessa College nursing programs are designed to allow students maximum flexibility to obtain this education. Options available to complete this goal are listed below.

RN - Associate Degree Level - Day Option:

The RN Associate Degree Program allows the student to qualify as an eligible candidate to take the National Council for Licensure Examination (NCLEX) for registered nurses (RN). The student will receive an associate in applied science degree.

RN - Associate Degree Level - Evening Option:

The RN Evening Option is designed for students to attend nursing classes and clinicals primarily during the evening and/or Saturday hours, with the exception of the psychiatric clinicals, which will be offered during daytime hours. Classes are admitted in the fall of even numbered years. Successful completion qualifies the student as a candidate for application to take the National Council for Licensure Examination for the RN.

Transition Option for the LVN - Associate Degree Level:

The Transition Option is designed for persons who are already licensed vocational nurses. The transition courses are the initial courses, which serve to validate and enhance nursing skills. This brings the LVN to the level of the generic nursing student entering the second year of the RN Associate Degree Nursing Program. Upon successful completion of these courses, the LVN will receive 14 hours of advanced credit. Successful completion of the second year qualifies the student as a candidate for application to take the National Council for Licensure Examination for the RN.

The associate degree program is accredited by the Board of Nurse Examiners for the State of Texas and the National League for Nursing Accrediting Commission. The vocational programs are accredited by the Board of Vocational Nurse Examiners for the State of Texas. Curriculum plans are approved by the Texas Higher Education Coordinating Board. Information concerning tuition and fees, and length of the program are available from NLNAC, 61 Broadway, New York, NY 10006; 1-800-669-9656.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Admission Requirements for the Day Option, RN; Evening Option, RN; and the Transition/ Validation for the RN Option:

1. Applications must be submitted by:
   - April 1 for fall admission.
   - October 1 for spring admission.
2. Persons who have been convicted of a felony or misdemeanor or who have a history of substance abuse must request and have a cleared declaratory order from the Board of Nurse Examiners for the State of Texas (BNE) prior to admission. Eligibility for licensure will be decided by BNE investigation. Persons who have been convicted of a felony may not qualify as an eligible candidate to take the National Council for Licensure Examination (NCLEX) - RN.
3. Prerequisites for Day Option (Prerequisites for RN - Evening Option are listed under degree plan):
   - BIOL 2401, Anatomy and Physiology I (completed within last five years or permission from director).
   - BIOL 2402, Anatomy and Physiology II (completed within last five years or permission from director).
   - HPRS 1106, Medical Terminology
   - PSYC 2301, Introduction to Psychology
4. College cumulative GPA 2.5 or higher in all courses.
5. Official high school transcript or GED.
6. Passed TASP and/or satisfactory scores on ASSET placement tests.
7. A satisfactory score on the nursing entrance exam (NET).
8. Current CPR certification in Basic Life Support for Professionals (American Heart Association Course C or Red Cross Basic Life Support for the Professional).
9. Proof of health and accident insurance and professional liability coverage.
10. Students wishing to apply for admission or persons seeking additional information should contact the nursing department at Odessa College.
11. All courses (nursing and non-nursing) must be passed with a grade of "C" or better.
12. Students are required to achieve a passing score (90% probability) on a comprehensive exit examination in order to graduate and take the National Council Licensure Examination for registered nurses.
13. Any student who fails the exit exam twice will be given an incomplete grade ("I") and will be required to remediate and retest. A third failure of the exit exam will result in retaking the fourth semester course or dismissal from the program.
14. All students re-enrolling in the nursing program must meet the admission and graduation requirements as stated in the current Odessa College Catalog of Courses and must re-apply to the nursing program.
15. Day and evening option RN students must be a Certified Nursing Assistant (CNA) prior to admission. Candidates must submit current licensure to be considered.

Although English language proficiency is not required for admission to the nursing options, successful completion of the program necessitates good communication skills in English. There is no discrimination due to age, sex, color, race, cultural or ethnic background, or national origin.

The nursing programs focus on the nursing care of clients with common health problems. Clinical experience is concurrent within each course and includes medical, surgical, obstetrical, pediatric, mental health, geriatric nursing experiences and special selected services. All courses in the curriculum are required. A general education course may be required prior to some nursing courses.

Students must complete the outcome competencies for each level with a minimum grade of "C" in nursing courses and general education courses before progressing to the next semester. A grade of "D" or "F" is unacceptable. Students must maintain a cumulative GPA of 2.5 or above in all course work each semester.

Note: Nursing students are required to maintain coverage in health and accident insurance. Professional liability insurance is mandatory.

Nursing students are responsible for their own transportation to clinical facilities. The nursing department assumes no responsibility for students employed in an agency. Students are personally responsible and liable for any activity participated in while employed. Professional liability insurance purchased by students is valid in the student role and not in the employment role.

RN – Day Option

The Day Nursing Option is designed to allow students maximum flexibility in education. Successful completion of the second year of nursing courses results in an associate in applied science degree and the qualifications to take the licensure exam for registered nurse (RN). All nursing students must have current CPR certification and are governed by policies in the Nursing Student Handbook.

Semester Hrs

Prerequisites/Bridge Courses 12

BIOL 2401 Anatomy and Physiology I 4
BIOL 2402 Anatomy and Physiology II 4
HPRS 1106 Medical Terminology 1
PSYC 2301 Introduction to Psychology 3

FIRST YEAR

Summer Session II

ENGL 1301 Composition and Rhetoric 3
SPCH 1321 Business & Professional Speech 3

First Semester

RNSG 1201 Pharmacology 2
RNSG 1215 Health Assessment 2
RNSG 1341 Common Concepts of Adult Health ... 3
RNSG 1360 Clinical – Basic 3
RNSG 1413 Foundations for Nursing Practice 4

Second Semester

COSC 1301 Microcomputer Applications 3
PSYC 2314 Life Span Growth & Development 3
RNSG 1361 Clinical – Complex 3
RNSG 1443 Complex Concepts of Adult Health 4

SECOND YEAR

First Semester

BIOL 2420 Microbiology 4
PHED 1100 Lifestyle Assessment & Modification . 1
RNSG 2201 Care of Children and Families 2
RNSG 2208 Maternal/Newborn Nursing and Women's Health 2
RNSG 2260 Clinical – Obstetrics 2
RNSG 2261 Clinical – Pediatrics 2

Second Semester

RNSG 2121 Management of Client Care 1
RNSG 2161 Clinical – Mental Health 1
RNSG 2163 Clinical – Management 1
RNSG 2262 Clinical – Advanced 2
RNSG 2313 Mental Health Nursing 3
RNSG 2331 Advanced Concepts of Adult Health . 3
PLUS one course from the following list 3
ENGL 1302 Composition and Literature
PHIL 2306 Introduction to Philosophy II (Ethics)
SPAN 1300 Conversational Spanish I

Total Hours 72

Students successfully completing the associate-degree level are eligible to take the state board examination for licensure as a registered nurse.

RN Associate Degree Nursing Program – Evening Option

The Odessa College RN Evening Option offers students a sequence of evening and/or Saturday classes leading to an associate in applied science degree and preparation to take the licensing examination for a registered nurse. Nursing courses begin in the fall semester of even numbered years. Psychiatric clinical experiences may be held during day hours. Prior to entering the nursing program, the student must have completed the prerequisite course requirements designated in the curriculum and be currently certified in CPR and be a Certified Nurse Assistant (CNA). All students are governed by policies in the Nursing Student Handbook.

Semester Hrs

Prerequisite/Bridge Courses 32

BIOL 2401 Anatomy and Physiology I 4
BIOL 2402 Anatomy and Physiology II 4
BIOL 2420 Microbiology 4
COSC 1301 Microcomputer Applications 3
ENGL 1301 Composition and Rhetoric 3
HPRS 1106 Medical Terminology 1
PHED 1100 Lifestyle Assessment and Modification 1
PSYC 2301 Introduction to Psychology 3
PSYC 2314 Life Span Growth and Development ... 3
SPCH 1321 Business and Professional Speech 3
PLUS one course from the following list 3
ENGL 1302 Composition and Literature
PHIL 2306 Introduction to Philosophy II (Ethics)
SPAN 1300 Conversational Spanish I

FIRST YEAR

First Semester

RNSG 1201 Pharmacology 2
RNSG 1215 Health Assessment 2
RNSG 1341 Common Concepts of Adult Health ... 3
RNSG 1360 Clinical – Basic 3
RNSG 1413 Foundations for Nursing Practice 4

Second Semester

RNSG 1361 Clinical – Complex 3
RNSG 1443 Complex Concepts of Adult Health 4

SECOND YEAR

First Semester

RNSG 2201 Care of Children and Families 2
RNSG 2208 Maternal/Newborn Nursing and Women's Health 2
RNSG 2260 Clinical – Obstetrics 2
RNSG 2261 Clinical – Pediatrics 2

Second Semester

RNSG 2121 Management of Client Care 1
RNSG 2161 Clinical – Mental Health 1
RNSG 2163 Clinical – Management 1
RNSG 2262 Clinical – Advanced 2
RNSG 2313 Mental Health Nursing 3
RNSG 2331 Advanced Concepts of Adult Health . 3

Total Hours 72

Transition Option for the LVN – Associate Degree Level

Prior to taking the transition courses, licensed vocational nurses must be licensed to practice nursing in the state of Texas. Upon successful completion of the transition courses, students will follow the curriculum for the upper level program. All nursing students must have current CPR certification and are governed by policies in the Nursing Student Handbook.

Semester Hrs

Prerequisite Courses

BIOL 2401 Anatomy and Physiology I 4
BIOL 2402 Anatomy and Physiology II 4
COSC 1301 Microcomputer Applications 3
HPRS 1106 Medical Terminology 1
PSYC 2301 Introduction to Psychology 3
PSYC 2314 Life Span Growth and Development ... 3
PLUS one course from the following list 3
ENGL 1302 Composition and Literature
PHIL 2306 Introduction to Philosophy II (Ethics)
SPAN 1300 Conversational Spanish I

FIRST YEAR

First Semester

RNSG 1201 Pharmacology 2
*RNSG 1443 Complex Concepts of Adult Health .. 4
*RNSG 2162 Clinical – Transition 1
*RNSG 2207 Transition to Nursing Practice 2
SPCH 1321 Business & Professional Speech 3

Second Semester

BIOL 2420 Microbiology 4
ENGL 1301 Composition and Rhetoric 3
RNSG 2201 Care of Children and Families 2
RNSG 2208 Maternal/Newborn Nursing and Women's Health 2
RNSG 2260 Clinical – Obstetrics 2
RNSG 2261 Clinical – Pediatrics 2

SECOND YEAR

First Semester

PHED 1100 Lifestyle Assessment and Modification 1
RNSG 2121 Management of Client Care 1
RNSG 2161 Clinical – Mental Health 1
RNSG 2262 Clinical – Advanced 2
RNSG 2313 Mental Health Nursing 3
RNSG 2331 Advanced Concepts of Adult Health . 3

*When students have successfully completed RNSG 1443, RNSG 2162, and RNSG 2207 they are eligible to enter the second year of the curriculum.

NURSING COURSES

RNSG 1201 Pharmacology

(51.1601) (1-3) 2 hours

Introduction to the science of pharmacology with emphasis on the actions, interactions, adverse effects, and nursing implications of each drug classification. Topics include the roles and responsibilities of the nurse in safe administration of medications (including calculations), within a legal/ethical framework. Lab fee required. (SCANS 1, 2, 3, 6, 9) Prerequisites: BIOL 2401 and BIOL 2402.

RNSG 1215 Health Assessment

(51.1601) (1-3) 2 hours

Development of skills and techniques required for a comprehensive health assessment within a legal/ethical framework. Lab fee required. (SCANS 1, 2, 5, 6, 9, 10, 11) Prerequisites: BIOL 2401 and BIOL 2402.

RNSG 1341 Common Concepts of Adult Health

(51.1601.6314) (3-0) 3 hours

Study of the general principles of caring for selected adult clients and families in structured settings with common medical-surgical health care needs related to each body system. Emphasis on knowledge judgment, skills, and professional values within a legal/ethical framework. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, HPRS 1106, and PSYC 2301.

RNSG 1360 Clinical – Basic

(51.1601.6914) (0-9) 3 hours

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, HPRS 1106, and PSYC 2301.

RNSG 1361 Clinical – Complex

(51.1601.6914) (0-9) 3 hours

A health-related work-based learning experience that

enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 1201, RNSG 1215, RNSG 1341, RNSG 1360, and RNSG 1413. Corequisite: RNSG 1443.

RNSG 1413 Foundations for Nursing Practice
(51.1601.5114) (3-3) 4 hours
Introduction to the role of the professional nurse as provider of care, coordinator of care, and member of the profession. Topics include but are not limited to the fundamental concepts of nursing practice, history of professional nursing, a systematic framework for decision-making, mechanisms of disease, the needs and problems that nurses help patients manage, and basic psychomotor skills, Emphasis on knowledge, judgment, skills and professional values within a legal/ethical framework. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, HPRS 1106, and PSYC 2301. Corequisites: RNSG 1201 and RNSG 1215.

RNSG 1443 Complex Concepts of Adult Health
(51.1601.6414) (3-3) 4 hours
Integration of previous knowledge and skills related to common adult health needs into the continued development of the professional nurse as a provider of care, coordinator of care, and member of a profession in the care of adult clients/families in structured health care settings with complex medical-surgical health care needs associated with each body system. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, HPRS 1106, PSYC 2301, RNSG 1201, RNSG 1215, RNSG 1341, RNSG 1360, and RNSG 1413. Corequisites: RNSG 1361, or RNSG 2162 and RNSG 2207.

RNSG 2121 Management of Client Care
(51.1601) (1-0) 1 hour
Exploration of leadership and management principles applicable to the role of the nurse as a provider of care, coordinator of care, and member of a profession. Includes application of knowledge, judgment, skills, and professional values with a legal/ethical framework. (SCANS 1, 2, 3, 4, 5, 6, 7, 9, 10, 11) Prerequisites: RNSG 2201, RNSG 2208, RNSG 2260, and RNSG 2261. Corequisite: RNSG 2163.

RNSG 2161 Clinical – Mental Health
(51.1601.6914) (0-3) 1 hour
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 2201, RNSG 2208, RNSG 2260, and RNSG 2261. Corequisite: RNSG 2313.

RNSG 2162 Clinical – Transitions
(51.1601.6914) (0-3) 1 hour
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, COSC 1301, HPRS 1106, PSYC 2301, PSYC 2314, RNSG 1201, RNSG 1215 and a Texas license to practice as an LVN. Corequisite: RNSG 2207.

RNSG 2163 Clinical – Management
(51.1601.6914) (0-3) 1 hour
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 2201, RNSG 2208, RNSG 2260, and RNSG 2261. Corequisite: RNSG 2121.

RNSG 2201 Care of Children and Families
(51.1601.5814) (2-0) 2 hours
Study of concepts related to the provision of nursing care for children and their families, emphasizing judgment, and professional values within a legal/ethical framework. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 1201, RNSG 1215, RNSG 1341, RNSG 1360, RNSG 1361, RNSG 1413, and RNSG 1443. Corequisite: RNSG 2261.

RNSG 2207 Transition to Nursing Practice
(51.1601) (1-2) 2 hours
Introduction to selected concepts related to the role of the professional nurse as a provider of care, coordinator of care, and member of the profession. Review of trends and issues impacting nursing and health care today and in the future. Topics include knowledge, judgment, skill, and professional values within a legal/ethical framework. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, COSC 1301, HPRS 1106, PSYC 2301, PSYC 2314, RNSG 1201, RNSG 1215 and a Texas license to practice as a LVN. Corequisites: RNSG 1443 and RNSG 2162.

RNSG 2208 Maternal/Newborn Nursing and Women's Health
(51.1601.5914) (1-3) 2 hours
Study of concepts related to the provision of nursing care for normal childbearing families and those at risk, as well as women's health issues; competency in knowledge, judgment, skill, and professional values within a legal/ethical framework, including a focus on normal and high-risk needs for the childbearing family during the preconception, prenatal, intrapartum, neonatal, and postpartum periods; and consideration of selected issues in women's health. Lab fee required.

(SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 1201, RNSG 1215, RNSG 1341, RNSG 1360, RNSG 1361, RNSG 1413, and RNSG 1443. Corequisite: RNSG 2260.

RNSG 2260 Clinical - Obstetrics
(51.1601.6914) (0-6) 2 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 1361 and RNSG 1443. Corequisite: RNSG 2208.

RNSG 2261 Clinical - Pediatrics
(51.1601.6914) (0-6) 2 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 1361 and RNSG 1443. Corequisite: RNSG 2201.

RNSG 2262 Clinical - Advanced
(51.1601.6914) (0-6) 2 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 2201, RNSG 2208, RNSG 2260, and RNSG 2261. Corequisite: RNSG 2331.

RNSG 2313 Mental Health Nursing
(51.1601.5514) (3-0) 3 hours
Principles and concepts of mental health, psychopathology, and treatment modalities related to the nursing care of clients and their families. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RNSG 2201, RNSG 2208, RNSG 2260, and RNSG 2261. Corequisite: RNSG 2161.

RNSG 2331 Advanced Concepts of Adult Health
(51.1601) (2-3) 3 hours
Application of advanced concepts and skills for the development of the professional nurse's roles in complex nursing situations with adult clients/families with complex health needs involving multiple body systems in intermediate and critical care settings. Emphasis on knowledge, judgment, skills, and professional values within a legal/ethical framework. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: BIOL 2401, BIOL 2402, HPRS 1106, PSYC 2301, RNSG 1201, RNSG 1215, RNSG 1341, RNSG 1360, RNSG 1361, RNSG 1413, RNSG 1443, RNSG 2201, RNSG 2208, RNSG 2260, and RNSG 2261. Corequisite: RNSG 2262.

Nursing - LVN

Faculty - Andrews: Patricia Bayless, chair; Stacy Crownover, coordinator; Teresa Blakeney.

Faculty - Monahans: Patricia Bayless, chair; Elizabeth Hodges.

The curriculum of the Odessa College nursing programs prepares the student for a variety of experiences in health care, including hospitals, home health care services, mental health agencies and occupational care in industry. Nursing is a caring-oriented human experience requiring a well-educated nurse. Odessa College nursing programs are designed to allow students maximum flexibility to obtain this education.

The Vocational Nursing Option is designed for those students who wish to complete their education at the vocational level. Successful completion of the vocational level qualifies the student as an eligible candidate to take the National Council for Licensure Examination for PN. The student will receive a certificate of completion.

The vocational programs are accredited by the Board of Vocational Nurse Examiners for the State of Texas. Curriculum plans are approved by the Texas Higher Education Coordinating Board. Information concerning tuition and fees, and length of the program are available from NLNAC, 61 Broadway, New York, NY 10006; 1-800-669-9656.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Admission requirements for LVN Option:

1. Applications should be submitted no later than March 1 for fall admission.
2. Official high school transcript or GED.
3. College cumulative GPA of 2.0 or higher in all courses.
4. A satisfactory score on the vocational nursing entrance exam.
5. Current CPR certification (American Heart Association Course C or Red Cross Basic Life Support for the Professional).
6. Persons who have been convicted of a felony will not qualify as an eligible candidate to take the National Council for Licensure Examination (NCLEX) - Practical Nurse (PN).

7. Students wishing to apply for admission or persons seeking additional information should contact either the Student Development Center at Odessa College or the program chairs in Andrews or Monahans.
8. All courses must be passed with a grade of "C" or better. A "C" is 75%.
9. All qualified applicants will be interviewed by the program chair in either Andrews or Monahans.
10. Proof of health and accident insurance and professional liability coverage.

Although English language proficiency is not required for admission to the nursing options, successful completion of the program necessitates good communication skills in English. There is no discrimination due to age, sex, color, race, cultural or ethnic background, or national origin.

The nursing programs focus on the nursing care of clients with common health problems. Clinical experience is concurrent within each course and includes medical, surgical, obstetrical, pediatric, psychiatric, geriatric nursing experiences and special selected services. All courses in the curriculum are required.

Students must complete the outcome competencies for each level with a minimum grade of "C" in nursing courses. A grade of "D" or "F" is unacceptable. Students must maintain a cumulative GPA of 2.0 or above in all course work each semester.

Note: Nursing students are required to maintain coverage in health and accident insurance. Professional liability insurance is mandatory.

Nursing students are responsible for their own transportation to clinical facilities. The nursing department assumes no responsibility for students employed in an agency. Students are personally responsible and liable for any activity participated in while employed. Professional liability insurance purchased by students is valid in the student role and not in the employment role.

Vocational Nursing Option – Andrews and Monahans Extensions

The Vocational Nursing Option is offered at the Andrews and Monahans extension sites. It is designed for those students who wish to complete their education at the vocational level. Successful completion of the vocational level qualifies the student as an eligible candidate to take the National Council for Licensure Examination for vocational nurses. The student will receive a certificate of completion from Odessa College.

Course of Study for Certificate of Completion

Semester Hrs

First Semester

VNSG 1227 Essentials of Medication Administration 2
VNSG 1360 Clinical – Practical Nurse I 3
VNSG 1405 Health Science 4
VNSG 1500 Nursing in Health and Illness I 5
VNSG 1502 Applied Nursing Skills I 5

Second Semester

VNSG 1219 Professional Development 2
VNSG 1406 Maternal/Newborn Nursing 4
VNSG 1407 Pediatric Nursing 4
VNSG 1461 Clinical – Practical Nurse II 4
VNSG 1509 Nursing in Health and Illness II 5

Summer Session I and II

VNSG 1238 Mental Illness 2
VNSG 1463 Clinical – Practical Nurse III 4
VNSG 1510 Nursing in Health and Illness III 5

Total Hours 49

NURSING COURSES

VNSG 1219 Professional Development

(51.1613) (2-0) 2 hours

Study of the importance of professional growth. Topics include the role of the licensed vocational nurse in the multi-disciplinary health care team, professional organizations, and continuing education. The student will describe the role of the licensed vocational nurse in multi-disciplinary settings inclusive of basic principles of leadership and management; discuss the role of professional organizations and regulatory agencies, and identify criteria and appropriate resources for continuing education. (SCANS 1, 2, 5, 6, 7, 9, 10, 11) Prerequisites: VNSG 1227, VNSG 1360, VNSG 1405, VNSG 1500, and VNSG 1502.

VNSG 1227 Essentials of Medication Administration

(51.1613) (2-1) 2 hours

General principles of medication administration including determination of dosage, preparation, safe administration, and documentation of multiple forms of drugs. Instruction includes various systems of measurement. The student will demonstrate accurate dosage calculation; discuss the principles of medication administration safety; and identify the elements of accurate documentation of medication administration. Math proficiency is determined by examination. (SCANS 1, 2, 3, 4, 5, 6, 9, 10, 11) Prerequisite: None.

VNSG 1238 Mental Illness
(51.1613) (2-0) 2 hours
Study of human behavior with emphasis on emotional and mental abnormalities and modes of treatment incorporating the nursing process. The student will identify common mental illnesses and maladaptive behavior; utilize the nursing process to assist in planning care for the individual with mental illness or maladaptive behavior; and discuss trends in the management of the individual requiring psychotherapeutic treatment and pharmacologic agents. Therapeutic communication is emphasized. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: VNSG 1219, VNSG 1406, VNSG 1407, VNSG 1461, and VNSG 1509. Corequisite: VNSG 1463.

VNSG 1360 Clinical – Practical Nurse I
(51.1613) (0-17) 3 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None. Corequisites: VNSG 1227, VNSG 1405, VNSG 1500, and VNSG 1502.

VNSG 1405 Health Science
(51.1613) (3-3) 4 hours
An introduction to the general principles of anatomy and physiology, nutrition, and microbiology that are necessary for understanding body processes and basic principles underlying health promotion and therapeutic interventions. The student will identify and describe major body structures and functions which comprise the major body systems; recognize and describe the relationship of nutrition to health and illness across the life span; identify microorganisms as causative agents in disease; and identify common causes for disease, modes of transmission, and methods of prevention and control. (SCANS 1, 2, 3, 5, 6, 7, 9) Prerequisite: None.

VNSG 1406 Maternal/Newborn Nursing
(51.1613) (3-2) 4 hours
A study of the biological, psychological, and sociological concepts applicable to basic needs of the family including childbearing and neonatal care. Topics include physiological changes related to pregnancy, fetal development, and nursing care of the family during labor and delivery and the puerperium. The student will discuss human reproduction and fetal development as related to the normal aspects of childbearing; identify common complications of the mother and newborn during prenatal, antenatal, and postnatal periods; and relate characteristics of the normal newborn and associated nursing interventions to meet identified health care needs utilizing the nursing process. Pharmacological concepts and nutritional considerations will be explored. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: VNSG 1227, VNSG 1360, VNSG 1405, VNSG 1500, and VNSG 1502. Corequisite: VNSG 1461.

VNSG 1407 Pediatric Nursing
(51.1613) (3-2) 4 hours
Study of the care of the pediatric client and family during health and disease. Emphasis on growth and developmental needs. The student will discuss primary nursing care of the pediatric client and family during health and disease; and utilize growth and developmental concepts applicable to the pediatric client. Pharmacological concepts and nutritional considerations will be explored. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: VNSG 1227, VNSG 1360, VNSG 1405, VNSG 1500, and VNSG 1502. Corequisite: VNSG 1461.

VNSG 1461 Clinical – Practical Nurse II
(51.1613) (0-20) 4 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Successful completion of the first vocational nursing semester. Corequisites: VNSG 1406, VNSG 1407, and VNSG 1509.

VNSG 1463 Clinical – Practical Nurse III
(51.1613) (0-18) 4 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Successful completion of the second vocational nursing semester. Corequisites: VNSG 1238 and VNSG 1510.

VNSG 1500 Nursing in Health and Illness I
(51.1613) (4-4) 5 hours
Introduction to general principles of growth and development, primary health care needs of the client across the life span, and therapeutic nursing interventions. The student will recognize the uniqueness of the gerontologic client related to physical, mental, and emotional changes associated with the aging process; describe the psychosocial, growth and development, and physiological needs of clients across the life span; identify common and overt and actual and potential primary health care needs of the client; identify the basic interventions to support the client and family during life stages including death and dying; identify pharmacological agents and related nursing interventions; and demonstrate competency in dosage calculations. Selected medical-surgical disorders will be

presented along with nutritional concepts pertinent to those diseases. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None. Corequisite: VNSG 1360.

VNSG 1502 Applied Nursing Skills I
(51.1613) (3-6) 5 hours
Introduction to and application of primary nursing skills. Emphasis on utilization of the nursing process and related scientific principles. The student will describe the underlying principles of selected nursing skills and their relationship to client health status; demonstrate satisfactory performance of selected nursing skills utilizing principles of safety; and identify the nursing process used to solve basic client care problems across the life span utilizing appropriate medical terminology. Historical aspects of nursing are examined along with legal implications pertinent to the profession. Communication skills and individual accountability are emphasized. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

VNSG 1509 Nursing in Health and Illness II
(51.1613) (3-6) 5 hours
Introduction to common health problems requiring medical and surgical interventions. The student will compare and contrast normal physiology of body systems to pathologic variations in the adult client with medical-surgical health problems; compare and contrast diagnostic evaluation and treatment of the adult client with common medical-surgical health problems; incorporate nutrition, drug therapy, and nursing interventions in developing plans of care to meet the needs of the adult client experiencing common medical-surgical health problems; and utilize the nursing process in caring for the adult client with common medical-surgical health problems. Emphasis is placed on professional collaboration among health care providers. Critical thinking exercises are incorporated. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: VNSG 1227, VNSG 1360, VNSG 1405, VNSG 1500, and VNSG 1502. Corequisite: VNSG 1461.

VNSG 1510 Nursing in Health and Illness III
(51.1613) (3-6) 5 hours
Continuation of Nursing in Health and Illness II. Further study of common medical-surgical health problems of the client including concepts of mental illness. Incorporates knowledge necessary to make the transition from student to graduate vocational nurse. The student will compare and contrast normal physiology of body systems to pathologic variations in the adult client with common medical-surgical health problems; compare and contrast diagnostic evaluation and treatment of the adult client with common medical-surgical health problems; incorporate nutrition, drug therapy, and nursing interventions in developing plans of care to meet the needs of the adult client experiencing common medical-surgical health problems; utilize the nursing process in caring for adults with common medical-surgical health problems and related nursing interventions; and utilize learned skills and knowledge for transition from student to graduate vocational nurse. Critical thinking exercises continue throughout this course. The capstone experience is the PN Comprehensive Predictor for vocational nurses. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: VNSG 1219, VNSG 1406, VNSG 1407, VNSG 1461, and VNSG 1509. Corequisite: VNSG 1463.

Occupational Safety and Health Technology

Faculty: J.D. Roberts, chair; Lynn Reese.

The occupational safety and health degree is designed for people entering the safety and/or environmental department within their company or for those who seek employment in this demanding field. The two-year program is designed to equip the safety/environmental professional with the tools needed to keep his/her company in compliance with current regulatory agencies and to create a safe and healthy work environment for all employees.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Occupational Safety and Health Technology

	Semester Hrs
General Education Requirements	**27**
BIOL 2406 Environmental Biology or GEOL 1403 Physical Geology	4
COSC 1301 Microcomputer Applications (or higher level) or demonstrated proficiency	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government	3
MATH 1314 College Algebra or higher level math	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology or HRPO 1311 Human Relations	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	
Major Requirements	**37**
EPCT 1301 Hazardous Waste Operations and Emergency Response	3
EPCT 1341 Principles of Industrial Hygiene	3
EPCT 1344 Environmental Sampling and Analysis	3
EPCT 1349 Environmental Regulation Interpretation and Applications	3
OSHT 1309 Physical Hazard Control	3
OSHT 1313 Accident Prevention, Inspection and Investigation	3
OSHT 1325 Safety Training Presentation Techniques	3
OSHT 2380 Cooperative Education – Occupational Safety and Health Technology/Technician	3
OSHT 2401 OSHA Regulations – General Industry	4
QCTC 1301 Total Quality Management	3
QCTC 1341 Statistical Process Control	3
*OSHT Elective (any OSHT course not required)	3
Related Requirements	**8**
EMSP 1501 EMT Basic	5
PTRT 1301 Overview of Petroleum Industry	3
Total Semester Hours	**72**

*Students may choose from the following pool of courses depending on their individual interest and local industry need: OSHT 1321 Fire Protection Systems, OSHT 1391 or 1491 Special Topics in Occupational Safety and Health Technology/Technician, OSHT 1405 OSHA Regulations – Construction Industry, OSHT 2405 Ergonomics and Human Factors in Safety.

Course of Study for Certificate of Technology

Level I certificates are TASP-waived.

Level I – Occupational Safety and Health Technology

	Semester Hrs
General Education Requirements	**6**
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major Requirements	**22**
EPCT 1301 Hazardous Waste Operations and Emergency Response	3
EPCT 1344 Environmental Sampling and Analysis	3
OSHT 1313 Accident Prevention, Inspection and Investigation	3
OSHT 1325 Safety Training Presentation Techniques	3
OSHT 2380 Cooperative Education – Occupational Safety and Health Technology/Technician	3

OSHT 2401 OSHA Regulations – General Industry 4
QCTC 1301 Total Quality Management 3

Related Requirements 3
PTRT 1301 Overview of Petroleum Industry 3

Total Semester Hours 31

OCCUPATIONAL SAFETY AND HEALTH TECHNOLOGY COURSES

EPCT 1301 Hazardous Waste Operations and Emergency Response (HAZWOPER) Training and Related Topics

(15.0507) (3-0) 3 hours

Minimum certification requirements of a hazardous waste site worker as found in 29CFR-1910.120 and 40CFR.264 and 265.16. Designed for industrial, manufacturing and technical workers where state/ federal regulations require industrial safety training. Course completers will be certified as a Hazardous Waste Operations Emergency Response Technician (HAZWOPER). Students will be required to exhibit problem-solving, self management, and communication skills while working within a safety environmental team. Within this team environment, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

EPCT 1341 Principles of Industrial Hygiene

(15.0507) (3-1) 3 hours

Basic concepts in threshold limits, dose response, and general recognition of occupational hazards, including sampling statistics, calibration, and equipment use. A study of the control of occupational hazards; and sample collection and evaluation methods. Students learn to anticipate, recognize, evaluate and control environmental factors or stresses arising in or from the work place. Students will prepare written reports and recommend actions as a team effort on the results of their findings from workplace sampling. Lab fee required. (SCANS 1, 2, 5, 7, 8, 9, 10) Prerequisite: OSHT 1313 or consent of department chair.

EPCT 1344 Environmental Sampling and Analysis

(15.0507) (3-0) 3 hours

Sampling protocol, procedures, quality control, preservation technology, and field analysis. Emphasis on analysis commonly performed by the field technician. The student will demonstrate proper selection of basic monitoring equipment and instrument calibration, sampling, field analysis, and preservation procedures; representative sampling methods; and prepare and evaluate documentation associated with sampling and field analysis. Competencies include performing and interpreting basic theories, functions, application and analysis of those instruments used in air, water and soil monitoring. The student will be able to prepare a report on the impurities and pollutants in the environment. (SCANS 1, 2, 3, 6, 8, 9) Prerequisite: None.

EPCT 1349 Environmental Regulation Interpretation and Applications

(15.0507) (3-0) 3 hours

An in-depth study of the major federal and state environmental regulations. Covers all pertinent regulatory requirements and strictures affixed to industry by agencies such as the RRC, DOT, FERC, DOE and OSHA. The student will read, interpret and analyze the effects of such rulings and prepare the proper responses. (SCANS 1, 2, 6, 9) Prerequisite: None.

OSHT 1309 Physical Hazards Control

(15.0701) (3-0) 3 hours

A study of the common physical hazards in industry and methods of workplace design and redesign to control hazards. Emphasis on the regulation codes and standards associated with the control of physical hazards. The student will identify the common physical hazards in industry; design a hazard free work environment; utilize hazard recognition techniques to implement safe control practices; describe the hazard control measures used in workplace designs; and list Occupational Safety and Health Administration (OSHA) standards and other applicable codes and describe their applications. Student will compile a list of written process safety information for employees involved with highly hazardous chemicals and recommend the purchasing of safety equipment. Students will be required to exhibit problem-solving, self-management and communication skills while working in a safety analysis group. Within this group, students will be responsible for organizing and evaluating safe use, storing, manufacturing, handling or moving hazardous chemicals at the job site or any combination of these activities. (SCANS 1, 4, 5, 6, 9, 10, 11) Prerequisite: None.

OSHT 1313 Accident Prevention, Inspection, and Investigation

(15.0701) (3-0) 3 hours

Principles and practices providing a basis for understanding the nature of occupational hazard recognition, accident prevention, loss reduction, inspection techniques, and accident investigation analysis. The student will recognize common occupational hazards; list Occupational Safety and Health Administration (OSHA) standards and other applicable codes and describe their applications; describe the components of an effective accident investigation; analyze factors which contributed to

accidents and recommend appropriate changes to prevent further accidents; and explain the components of an effective safety inspection and make appropriate recommendations to correct hazards identified by the inspection. Competencies include safety and health considerations in the workplace. The student will read accident forms, evaluate and recognize accident causes, effects and safeguards. Student will be required to exhibit problem-solving, self management and communication skills while working within a safety and health group. Within this group, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 1, 4, 5, 6, 9, 10, 11) Prerequisite: None.

OSHT 1321 Fire Protection Systems
(15.0701) (3-0) 3 hours
Study of fire protection systems and their applications with emphasis on the National Fire Protection Association codes. The student will explain the elements of fire chemistry theory; summarize fire protection methods; describe appropriate application of each fire protection method; and identify the National Fire Protection Association codes in the industrial/business environment. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

OSHT 1325 Safety Training Presentation Techniques
(15.0701) (3-0) 3 hours
General principles of developing and presenting effective industrial/business training. Emphasis on instructor qualifications and responsibilities, principles of learning and teaching, methods and techniques of teaching including use of teaching aids, and presentation skills. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

OSHT 1391 or OSHT 1491 Special Topics in Occupational Safety and Health Technology/ Technician
(15.0701) (3-0) or (4-0) 3 or 4 hours
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

OSHT 1405 OSHA Regulations – Construction Industry
(15.0701) (3-2) 4 hours
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to the construction industry. Designed for industrial, manufacturing and technical workers where state/ federal regulations require industrial safety training. Course competencies meet 29-CFR-1910 and 1926. Course includes hazard communication, lock-out/tag-out, emergency action, confined space entry, and other industry related subjects. Major emphasis will be placed on written programs, training requirements and implementation of the programs to withstand OSHA inspection and civil litigation. Students will be required to exhibit problem-solving, self management and communication skills while working within a safety environmental team. Within this team environment, students will be responsible for effective allocation of resources and group monitoring of team decisions. Lab fee required. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

OSHT 2380 Cooperative Education – Occupational Safety and Health Technology/ Technician
(15.0701) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/ industry. Directly related to a technical discipline, specific learning objectives guide the student through the work experience. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

OSHT 2401 OSHA Regulations – General Industry
(15.0701) (4-0) 4 hours
A study of Occupational Safety and Health Administration (OSHA) regulations pertinent to general industry. Designed for industrial, manufacturing and technical workers where state/federal regulations require industrial safety training. Course competencies meet 29-CFR-1910 and 1926. Course includes hazard communication, lock-out/tag-out, emergency action, confined space entry and other industry related subjects. Major emphasis will be placed on written programs, training requirements and implementation of the programs to withstand OSHA inspection and civil litigation. Students will be required to exhibit problem-solving, self management and communication skills

while working within a safety environmental team. Within this team environment, students will be responsible for effective allocation of resources and group monitoring of team decisions. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

OSHT 2405 Ergonomics and Human Factors in Safety
(15.0701) (3-2) 4 hours
A study of the relationship of human behavior and ergonomics as applied to safety. The student will explain the psychology and human behavior related to workplace safety; identify ergonomic hazards and recommend appropriate controls; write an ergonomic proposal, which provides recommendations to management; and relate the human factors which contribute to ergonomic hazards. Lab fee required. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

QCTC 1301 Total Quality Management
(15.0702) (3-0) 3 hours
The study of integrating work processes using team participation through employee empowerment and teamwork emphasizing the philosophy of customer service and satisfaction. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

QCTC 1341 Statistical Process Control
(15.0702) (3-0) 3 hours
Components of statistics including techniques of collection, presentation, analysis, and interpretation of numerical data as applied to statistical control. Stresses application of correlation methods, analysis of variance, dispersion, sampling quality control, reliability, mathematical models, and programming. Students will be required to exhibit problem-solving, self-management and communication skills while working within a safety assessment group. Within this group, students will be responsible for effective measurement of safety performance, unsafe conditions and contributing factors. Students will be required to calculate using various models, probabilities and accident rates. (SCANS 1, 3, 4, 5, 6, 9, 10, 11) Prerequisite: None.

Office Systems Technology

Faculty: Nancy Stewart, chair; Billie Duncan, Wende Ramos.

The office systems technology program is designed to provide students with an intensive training in up-to-date technological skills for immediate employment in the business, medical or legal office. The program also offers students the opportunity to upgrade their skills in the most recent software in order to obtain better employment.

The office systems technology associate in applied science degree is offered with an emphasis in office systems technology, medical or legal. This degree provides students with a broad knowledge of office procedures and applications in the computer and other automated equipment.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Office Systems Technology

	Semester Hrs
General Education Requirements	**20**
*COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business or higher level math	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ENGL 1302 Composition and Literature	
SPAN 1300 Conversational Spanish I	
SPAN 2313 Spanish for the Native Speaker of Spanish I	
Major Requirements	**48**
*ACNT 1403 Introduction to Accounting I	4
ITSW 2431 Advanced Word Processing	4
POFI 1449 Spreadsheet	4
*POFI 2401 Word Processing	4
POFT 1301 Business English	3

POFT 1409 Administrative Office Procedures I 4
POFT 1425 Business Math and Machine Application 4
*POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skillbuilding 4
POFT 2303 Speed and Accuracy Building 3
POFT 2312 Business Correspondence & Communication 3
POFT 2365 Practicum – Administrative Assistant/Secretarial Science, General 3
POFT 2401 Document Formatting and Skillbuilding 4
ITSC 2421 Integrated Software Applications II 4

Related Requirements 3
HRPO 1311 Human Relations 3

Total Semester Hours 71

Course of Study for Certificate of Technology

Level I certificates are TASP-waived.

Level I – Office Clerk

Semester Hrs

*ACNT 1403 Introduction to Accounting I 4
*POFI 2401 Word Processing 4
POFT 1301 Business English 3
POFT 1425 Business Math and Machine Application 4
*POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skillbuilding 4
POFT 2303 Speed and Accuracy Building 3

Total Semester Hours 22

A total of 22 semester hours and a minimum grade point average of 2.0 are required for a level I certificate.

Level I – Accounting Technician

Semester Hrs

ACNT 1331 Federal Income Tax: Individual 3
ACNT 1392 Special Topics in Accounting Technician 3
*ACNT 1403 Introduction to Accounting I 4
ACNT 1411 Introduction to Computerized Accounting 4
ACNT 2369 Practicum – Accounting Technician 3
POFI 1449 Spreadsheet 4
POFT 1301 Business English 3

Total Semester Hours 24

A total of 24 semester hours and a minimum grade point average of 2.0 are required for a level I certificate.

Level II – Office Assistant

The 22 semester hours specified in Level I Certificate – Office Clerk plus the following courses:

Semester Hrs

General Education Requirements 9
*COSC 1301 Microcomputer Applications (or higher level) 3
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business or higher level math 3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

Major Requirements 26
ITSC 2421 Integrated Software Applications II 4
ITSW 2431 Advanced Word Processing 4
POFI 1449 Spreadsheet 4
POFT 1409 Administrative Office Procedures I 4
POFT 2312 Business Correspondence & Communication 3
POFT 2365 Practicum – Administrative Assistant/Secretarial Science, General 3
POFT 2401 Document Formatting and Skillbuilding or ACNT 1411 Introduction to Computerized Accounting 4

Total Semester Hours 57

A total of 57 semester hours and a minimum grade point average of 2.0 are required for a level II certificate.

Level III (Advanced Skills Certificate) – Office Management Specialist

Students may earn a Level III Certificate (Advanced Skills Certificate) – Office Management Specialist by completing the following requirements. Level III certificates may only be awarded along with or following completion of associate or higher-level degree.

Semester Hrs

Major Requirements 4
ITSC 2421 Integrated Software Applications II 4

Related Requirements 6
BMGT 1303 Principles of Management 3
BMGT 2303 Problem Solving and Decision Making . 3

Total Semester Hours 10

A total of 10 semester hours and a minimum grade point average of 2.0 are required for a Level III Certificate (Advanced Skills Certificate) – Office Management Specialist.

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

Course of Study for Associate in Applied Science Degree Office Systems Technology – Legal Emphasis

	Semester Hrs
General Education Requirements	**20**
*COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business or higher level math	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ENGL 1302 Composition and Literature	
SPAN 1300 Conversational Spanish I	
SPAN 2313 Spanish for the Native Speaker of Spanish I	
Major Requirements	**51**
*ACNT 1403 Introduction to Accounting I	4
POFI 1449 Spreadsheet	4
*POFI 2401 Word Processing	4
POFL 1305 Legal Terminology	3
POFL 1459 Legal Transcription	4
POFL 2401 Legal Document Processing	4
POFT 1301 Business English	3
POFT 1409 Administrative Office Procedures I	4
POFT 1425 Business Math and Machine Applications	4
POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skillbuilding	4
POFT 2303 Speed and Accuracy Building	3
POFT 2312 Business Correspondence & Communication	3
POFT 2365 Practicum – Administrative Assistant/Secretarial Science, General	3
POFT 2401 Document Formatting and Skillbuilding or ITSW 2431 Advanced Word Processing	4
Total Semester Hours	**71**

Course of Study for Certificate of Technology

Level I certificates are TASP-waived.

Level I – Legal Office Clerk

	Semester Hrs
*POFI 2401 Word Processing	4
POFL 1305 Legal Terminology	3
POFT 1301 Business English	3
POFT 1425 Business Math and Machine Applications	4
*POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skillbuilding	4
POFT 2303 Speed and Accuracy Building	3
Total Semester Hours	**21**

A total of 21 semester hours and a minimum grade point average of 2.0 are required for a level I certificate.

Level II – Legal Office Assistant

A total of 21 semester hours specified in Level I Certificate – Legal Office Clerk plus the following courses:

	Semester Hrs
General Education Requirements	**9**
*COSC 1301 Microcomputer Applications (or higher level)	3
MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business I or higher level math	3
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Major requirements	**26**
*ACNT 1403 Introduction to Accounting I	4
POFI 1449 Spreadsheet	4
POFL 1459 Legal Transcription	4
POFT 1409 Administrative Office Procedures I	4
POFT 2312 Business Correspondence & Communication	3
POFT 2365 Practicum – Administrative Assistant/ Secretarial Science, General	3
POFT 2401 Document Formatting and Skillbuilding or ITSW 2431 Advanced Word Processing	4
Total Semester Hours	**56**

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

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

Level III (Advanced Skills Certificate) – Legal Office Technology Specialist

Students may earn a Level III Certificate (Advanced Skills Certificate) – Legal Office Technology Specialist by completing the following requirements. Level III certificate may only be awarded along with or following completion of associate or higher level degree.

Major Requirements **4**
- ITSC 2421 Integrated Software Applications II 4

Related Requirements **6**
- LGLA 1313 Introduction to Paralegal Studies 3
- LGLA 2333 Advanced Legal Document Preparation 3

Total Semester Hours **10**

A total of 10 semester hours and a minimum grade point average of 2.0 are required for a Level III Certificate (Advanced Skills Certificate) – Legal Office Technology Specialist.

Course of Study for Associate in Applied Science Degree Office Systems Technology – Medical Emphasis

Semester Hrs

General Education Requirements **20**
- *COSC 1301 Microcomputer Applications (or higher level) 3
- ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing 3
- GOVT 2305 Federal Government or GOVT 2306 Texas Government 3
- MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business or higher level math 3
- PHED (any two one-hour activity courses) 2
- SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3
- PLUS one course from the following list 3
  - ENGL 1302 Composition and Literature
  - SPAN 1300 Conversational Spanish I
  - SPAN 2313 Spanish for the Native Speaker of Spanish I

Major Requirements **51**
- *ACNT 1403 Introduction to Accounting I 4
- POFI 1449 Spreadsheet 4
- *POFI 2401 Word Processing 4
- POFM 1202 Computers in Health Care 2
- POFM 1213 Medical Terminology I 2
- POFM 1353 Medical Coding 3
- POFM 1431 Medical Transcription I 4
- POFT 1301 Business English 3
- POFT 1409 Administrative Office Procedures I 4
- POFT 1425 Business Math and Machine Applications 4
- *POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skillbuilding 4
- POFT 2303 Speed and Accuracy Building 3
- POFT 2312 Business Correspondence & Communication 3
- POFT 2365 Practicum – Administrative Assistant/ Secretarial Science, General 3
- POFT 2401 Document Formatting and Skillbuilding or ITSW 2431 Advanced Word Processing 4

Total Semester Hours **71**

A total of 71 semester hours and a grade point average of 2.0 are required for associate in applied science degree.

Course of Study for Certificate of Technology

Level I certificates are TASP-waived.

Level I – Medical Office Clerk

Semester Hrs

- *POFI 2401 Word Processing 4
- POFM 1213 Medical Terminology I 2
- POFM 1353 Medical Coding 3
- POFT 1301 Business English 3
- POFT 1425 Business Math and Machine Applications 4
- *POFT 1429 Keyboarding and Document Formatting or POFT 2401 Document Formatting and Skillbuilding 4
- POFT 2303 Speed and Accuracy Building 3

Total Semester Hours **23**

A total of 23 semester hours and a minimum grade point average of 2.0 are required for a level I certificate.

Level II – Medical Office Assistant

The 23 semester hours specified in Level I Certificate – Medical Office Clerk, plus the following courses:

General Education Requirements **9**
- *COSC 1301 Microcomputer Applications (or higher level) 3
- MATH 1314 College Algebra or MATH 1324 Mathematical Analysis for Business I or higher level math 3
- SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

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

Major Requirements **24**
*ACNT 1403 Introduction to Accounting I 4

POFM 1202 Computers in Health Care 2
POFM 1431 Medical Transcription I 4
POFT 1409 Administrative Office Procedures I 4
POFT 2312 Business Correspondence & Communication 3
POFT 2365 Practicum – Administrative Assistant/ Secretarial Science, General 3
POFT 2401 Document Formatting and Skillbuilding or ITSW 2431 Advanced Word Processing 4

Total Semester Hours **56**

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

Level III (Advanced Skills Certificate) – Medical Office Technology Specialist

Students may earn a Level III (Advanced Skills Certificate) – Medical Office Technology Specialist by completing the following requirements. Level III certificate may only be awarded along with or following completion of associate of higher-level degree.

BIOL 2404 Human Anatomy & Physiology 4
ITSC 2421 Integrated Software Applications II or ITSW 2431 Advanced Word Processing 4
POFM 2413 Medical Transcription II 4

Total Semester Hours **12**

A total of 12 semester hours and a minimum grade point average of 2.0 are required for Level III (Advanced Skills Certificate) – Medical Office Technology Specialist.

OFFICE SYSTEMS TECHNOLOGY COURSES

ACNT 1331 Federal Income Tax: Individual
(52.1601) (3-0) 3 hours
A study of the laws currently implemented by the IRS, providing a working knowledge of preparing taxes for the individual. (SCANS 1, 2, 3, 6, 8, 9, 10) Prerequisite: ACNT 1403.

ACNT 1392 Special Topics in Accounting Technician
(52.0302) (3-0) 3 hours
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. Special topics include: Governmental and Not-for-Profit Accounting, Auditing, and Intermediate Accounting. (SCANS 1, 2, 3, 6, 8, 9, 10) Prerequisite: ACNT 1403.

ACNT 1403 Introduction to Accounting I
(52.0302) (3-2) 4 hours
A study of analyzing, classifying, and recording business transactions in a manual and computerized environment. Emphasis on understanding the complete accounting cycle and preparing financial statements, bank reconciliations, and payroll. Lab fee required. (SCANS 1, 2, 3, 6, 8, 9, 10) Prerequisite: None.

ACNT 1411 Introduction to Computerized Accounting
(52.0302) (3-2) 4 hours
Introduction to utilizing the computer in maintaining accounting records, making management decisions, and processing common business applications with primary emphasis on a general ledger package. Lab fee required. (SCANS 1, 2, 3, 6, 8, 9, 10) Prerequisite: ACNT 1403.

ACNT 2369 Practicum – Accounting Technician
(52.0302) (0-25) 3 hours
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. (SCANS 2, 3, 4, 5, 6, 7, 9, 11) Prerequisite: Consent of department chair.

ITSC 2421 Integrated Software Applications II
(11.0101) (3-2) 4 hours
Continued study of computer applications from business productivity software suites. Instruction in embedding data and linking and combining documents using word processing, spreadsheets, databases, and/or presentation media software. Lab fee required. (SCANS 2, 3, 4, 5, 6, 7, 8, 9, 10) Prerequisite: POFI 2401.

ITSW 2431 Advanced Word Processing
(11.0301) (3-2) 4 hours
Continuation of the study of word processing including advanced applications in merging, macros, graphics, desktop publishing, and extensive formatting for technical documents. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9, 10) Prerequisite: POFI 2401.

POFI 1449 Spreadsheet
(52.0407) (3-2) 4 hours
In-depth coverage in the use of a spreadsheet software package. Topics include worksheet creation and manipulation functions, templates, macro programming database functions, data-table features and graphics. Lab fee required. (SCANS 2, 3, 6, 9) Prerequisite: POFT 1429 or approval of department chair. Corequisite: POFT 1425 or approval of instructor.

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

POFI 2401 Word Processing
(52.0407) (3-2) 4 hours
In-depth coverage of word processing software application. Emphasis on the use of text editing features to produce business documents. Lab fee required. (SCANS 1, 2, 6, 8, 9, 10) Prerequisite: POFT 1429 or equivalent.

POFL 1305 Legal Terminology
(52.0403) (3-0) 3 hours
An introduction to legal terminology including spelling, pronunciation, and definition of legal terms and an overview of the law and the professions. (SCANS 1, 2, 6, 11) Prerequisite: None.

POFL 1459 Legal Transcription
(52.0403) (3-2) 4 hours
Skill development in comprehensive vocabulary, listening, organizing, and transcribing client-quality documents used in a legal office. Lab fee required. (SCANS 1, 2, 3, 4, 6, 9) Prerequisites: POFI 2401 or other word processing skills, POFL 1305, and POFT 1429 or equivalent, or type 50 wpm.

POFL 2401 Legal Document Processing
(52.0403) (3-2) 4 hours
Skill development in the production of legal documents used in the legal and court systems. Lab fee required. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10) Prerequisites: POFI 2401 and POFL 1305.

POFM 1202 Computers in Health Care
(52.0404) (1-2) 2 hours
Introduction to a computerized method for the management and operation of health care information systems for various types of medical facilities. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9, 11) Prerequisite: None.

POFM 1213 Medical Terminology I
(52.0404) (2-0) 2 hours
Instruction in the practical application of a medical vocabulary system. Topics include structure; recognition; analysis; definitions; spelling; pronunciation; and combination of medical terms from prefixes, suffixes, roots, and combining forms. Identify correct pronunciation, spelling and definitions of medical terms; and interpret correctly the contents of a written patient scenario. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 11) Prerequisite: None.

POFM 1353 Medical Coding
(52.0404) (3-1) 3 hours
Presentation and application of basic coding rules, principles, guidelines, and conventions utilizing various coding systems. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 11) Prerequisite: POFM 1213.

POFM 1431 Medical Transcription I
(52.0404) (3-2) 4 hours
Fundamentals of medical transcription including basic reports such as history and physicals, discharge summaries, consultations, operative reports, and other medical reports. Emphasis on development of speed and accuracy. Lab fee required. (SCANS 1, 2, 3, 4, 6, 9) Prerequisites: POFI 2401 or other word processing skills, POFM 1213 or equivalent, or type 50 wpm, and POFT 2401.

POFM 2413 Medical Transcription II
(52.0404) (3-2) 4 hours
Skill development in the production of medical reports including history and physicals, consultations, discharge summaries, operative reports, and other medical reports. Emphasis on speed and accuracy. Lab fee required. (SCANS 1, 2, 4, 6, 9) Prerequisites: POFM 1213, POFM 1431, and POFT 1301 or equivalent, type 50 wpm, some word processing experience will be needed for some reports.

POFT 1127 Introduction to Keyboarding
(52.0408) (0-3) 1 hour
Skill development in keyboarding with emphasis on alphabet, number, and symbol keys by touch. Skills can be applied to computers, typewriters, and other equipment with keyboards. Lab fee required. (SCANS 1, 4, 6, 9, 10) Prerequisite: None.

POFT 1301 Business English
(52.0501) (3-0) 3 hours
Introduction to a practical application of basic language usage skills with emphasis on fundamentals of writing and editing for business. (SCANS 1, 2, 9, 11) Prerequisite: None.

POFT 1409 Administrative Office Procedures I
(52.0401) (3-2) 4 hours
Study of current office procedures, duties, and responsibilities applicable to an office environment. Lab fee required. (SCANS 2, 4, 6, 8, 10) Prerequisites: POFI 1449, POFI 2401, POFT 1301 and POFT 1429.

POFT 1425 Business Math and Machine Applications
(52.0408) (3-2) 4 hours
Skill development in the use of electronic calculators and business math functions. Emphasis on business problem-solving skills using spreadsheet software and/or electronic calculator/keyboard. Lab fee required. (SCANS 1, 3, 4, 8, 9) Prerequisite: MATH 0371 or consent of department chair.

POFT 1429 Keyboarding and Document Formatting
(52.0408) (3-2) 4 hours
Skill development in the operation of the keyboard by touch applying proper keyboarding techniques. Emphasis on development of acceptable speed and accuracy levels and formatting basic documents. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9) Prerequisite: None.

POFT 2303 Speed and Accuracy Building
(52.0408) (2-3) 3 hours
Review, correct, improve, and/or perfect touch keyboarding techniques for the purpose of increasing speed and improving accuracy. Lab fee required. (SCANS 1, 4, 6, 8) Prerequisite: POFT 1429.

POFT 2312 Business Correspondence & Communication
(52.0501) (3-0) 3 hours
Development of writing skills to produce effective business documents. Instruction in proofreading and editing skills necessary to assure accuracy in written documents and business correspondence. (SCANS 1, 2, 3, 4, 5, 6, 8, 9, 10, 11) Prerequisites: POFT 1301 and POFT 2401.

POFT 2365 Practicum – Administrative Assistant/ Secretarial Science, General
(52.0401) (0-25) 3 hours
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. General training and experiences take place in a workplace. The college along with the employer develop and document an individualized plan for the student. The plan relates the workplace training and experiences to the student's general and technical course of study. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

POFT 2401 Document Formatting and Skillbuilding
(52.0408) (3-2) 4 hours
A continuation of keyboarding skills in document formatting, emphasizing speed, and accuracy. Emphasis on proofreading, editing, and following instructions, and keying documents from various copy. Lab fee required. (SCANS 1, 2, 3, 4, 6, 8, 9, 10) Prerequisite: POFT 1429 or equivalent.

Orientation

Faculty: Dr. Sherrie Lang, director; Angelica Moreno.

ORIE 1100 Orientation is designed to assist those new to Odessa College in gaining the knowledge necessary to function effectively in a college environment. To improve student success, the course will teach academic skills and provide information on available campus resources. Students will be encouraged to develop more definite career plans and an educational plan to fit the career goal. Students will also have a contact point with an Odessa College professional (the course instructor) during the most crucial eight weeks of their college career. ORIE 1100 Orientation is required for first-time students who are taking six or more credit hours.

ORIE 1100 Orientation
(32.0101.5212) (1-0) 1 hour
Helps students gain skills and knowledge necessary to function effectively in a college environment. Familiarizes students with the catalog, handbook and campus. Includes information on the policies, rules and regulations of Odessa College, the state-mandated TASP testing requirement and standards of progress. Students are required to complete a life skills component (including time management, stress management, test-taking techniques, etc.), an occupational aptitude and interest survey, and a course evaluation. Required of all first-time students who enroll in six or more semester hours during their first semester of attendance. (SCANS 4, 5, 6, 7, 10). Prerequisite: None.

Petroleum Technology

Faculty: J.D. Roberts, chair.

The Odessa College petroleum technology program is designed for people entering the industry for the first time and for employees in the industry who want to upgrade their skills. The two-year program is suggested for men and women who plan to work for producers, manufacturers, service firms or supply firms. New students are encouraged to meet with the department chair prior to registration.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Petroleum Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government	3
MATH 1314 College Algebra	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	
Major Requirements	**39**
PTRT 1301 Overview of Petroleum Industry	3
PTRT 1303 Drilling	3
PTRT 1307 Production Methods	3
PTRT 1309 Corrosion Basics	3
PTRT 1312 Petroleum Regulations	3
PTRT 1316 Petroleum Computer Applications	3
PTRT 1324 Petroleum Instrumentation	3
PTRT 2331 Well Completions	3
PTRT 2332 Artificial Lift	3
PTRT 2336 Well Workover	3
PTRT 2380 Cooperative Education – Petroleum Technology/Technician	3
*Petroleum Electives (any petroleum course not required in degree plan)	6
Related Requirements	**10**
EPCT 1301 Hazardous Waste Operations and Emergency Response	3
OSHT 1325 Safety Training Presentation Techniques	3
OSHT 2401 OSHA Regulations – General Industry	4
Total Semester Hours	**69**

*Petroleum Electives: Students may choose from the following list of courses depending on their individual needs: PTRT 1306 Drilling Fluids, PTRT 1317 Natural Gas Processing I, PTRT 1318 Natural Gas Production, PTRT 1321 Oil Field Hydraulics, PTRT 2337 Natural Gas Processing II, PTRT 2340 Well Stimulation, PTRT 2341 Pipelining, PTRT 2343 Refining Methods, PTRT 1391 or PTRT 1491 Special Topics in Petroleum Technology/ Technician.

Certificate of Technology Options

Level I certificates are TASP-waived.

Level I – Well Head Pumper

	Semester Hrs
Major Requirements	
ENGL 1312 Report Writing	3
PTRT 1301 Overview of Petroleum Industry	3
PTRT 1307 Production Methods	3
PTRT 1309 Corrosion Basics	3
PTRT 1316 Petroleum Computer Applications	3
PTRT 2332 Artificial Lift	3
PTRT 2336 Well Workover	3
*Approved Elective (see "Petroleum Electives" listed above for options)	3
Total Semester Hours	**24**

Level I – Gas Compressor Operator

	Semester Hrs
Major Requirements	
ENGL 1312 Report Writing	3
PTRT 1301 Overview of Petroleum Industry	3
PTRT 1312 Petroleum Regulations	3
PTRT 1316 Petroleum Computer Applications	3
PTRT 1317 Natural Gas Processing I	3
PTRT 2337 Natural Gas Processing II	3
*Approved Elective (see "Petroleum Electives" listed above for options)	3
Total Semester Hours	**21**

Level I – Gas Plant Operator

	Semester Hrs
Major Requirements	
ENGL 1312 Report Writing	3
PTRT 1301 Overview of Petroleum Industry	3
PTRT 1309 Corrosion Basics	3
PTRT 1312 Petroleum Regulations	3
PTRT 1316 Petroleum Computer Applications	3
PTRT 1317 Natural Gas Processing I	3
PTRT 2337 Natural Gas Processing II	3
*Approved Elective (see "Petroleum Electives" listed above for options)	3
Total Semester Hours	**24**

Level I – Refinery Panel Operator

	Semester Hrs
Major Requirements	
ENGL 1312 Report Writing	3
PTRT 1301 Overview of Petroleum Industry	3
PTRT 1312 Petroleum Regulations	3
PTRT 1316 Petroleum Computer Applications	3
PTRT 1324 Petroleum Instrumentation	3
PTRT 2343 Refining Methods	3
*Approved Elective (see "Petroleum Electives" listed above for options)	3
Total Semester Hours	**21**

Level I – Corrosion Technician

	Semester Hrs
Major Requirements	
METL 2301 Internal Corrosion Control	3
METL 2305 Atmospheric Corrosion Control	3
METL 2341 Cathodic Protection	3
PTRT 1301 Overview of the Petroleum Industry	3
PTRT 1307 Production Methods	3
PTRT 1309 Corrosion Basics	3
PTRT 2380 Cooperative Education – Petroleum Technology/Technician	3
Total Semester Hours	**21**

METL 2301 Internal Corrosion Control

(15.0611) (3-0) 3 hours

An in-depth study of internal corrosion found in oil and gas wells, pipelines, refineries, process plants, and other industrial installations including the common forms of nondestructive testing, internal corrosion monitoring techniques, and chemical corrosion treatment methods. The student will demonstrate a knowledge of the principles and forms of internal corrosion; demonstrate the ability to operate, calibrate, and maintain all common internal corrosion testing equipment; perform common gas, liquid, and solid analysis; and analyze corrosion rates by examining liquid, solid, and gas analysis reports. The student will demonstrate knowledge of internal corrosion mitigation methods appropriate to specific corrosion problems; demonstrate work habits, which include safety, cleanliness, efficiency, quality of work, and respect for expensive instrumentation; and calculate corrosion rates and scaling tendencies. The student will apply the principles of corrosion to design, operate, and maintain corrosion control systems within the guidelines of a budget. (SCANS 3, 4, 6, 8, 9) Prerequisite: None.

METL 2305 Atmospheric Corrosion Control

(15.0611) (3-0) 3 hours

An in-depth study of atmospheric corrosion control by coatings which includes surface preparation, coating selection, coating application, inspection, and failure analysis. The student will identify the mechanisms utilized by coatings to control corrosion; select appropriate coating materials for specific corrosion applications; determine the appropriate surface preparation and application procedures required for all common coating materials; and demonstrate the ability to operate, calibrate, and maintain all common coating inspection instruments. The student will demonstrate work habits which include safety, cleanliness, efficiency, quality of work, and respect for expensive instrumentation; recognize the causes of common coating failures; and identify the corrective measures needed to modify or improve the performance of equipment. (SCANS 3, 4, 6, 8, 9) Prerequisite: None.

METL 2341 Cathodic Protection

(15.0611) (3-0) 3 hours

An in-depth study of corrosion control of buried or submerged metallic structures utilizing both impressed and galvanic cathodic protection systems. Emphasis on regulatory compliance for pipelines and underground storage tanks. The student will demonstrate knowledge of metallic corrosion theory; describe the two types of cathodic protection and determine the best design based upon economic considerations; demonstrate the ability to operate and maintain cathodic protection instruments; and demonstrate work habits which include safety, cleanliness, efficiency, quality of work, and respect for expensive instrumentation. The student will comprehend pipeline schematics, mapping systems, and other record keeping practices related to cathodic protection; identify federal and state rules and regulations which apply to cathodic protection installations, troubleshoot cathodic protection systems; and apply the principles of corrosion to design, operate, and maintain corrosion control systems within the guidelines of a budget. (SCANS 3, 4, 6, 8, 9) Prerequisite: None.

PTRT 1301 Overview of Petroleum Industry
(15.0903) (3-0) 3 hours
An overview of the entire petroleum industry. Purposes and proper procedures in a variety of different petroleum technologies: exploration, drilling, production, transportation, marketing, and refining. The student will be able to prioritize activities and reason the relationship between finding oil and gas and transporting it to the refinery. The student will be responsible for reading and analyzing charts and diagrams and calculating downhole volumes, displacements and pressures. (SCANS 1, 3, 4, 6, 8, 9) Prerequisite: None.

PTRT 1303 Drilling
(15.0903) (3-0) 3 hours
A study of practices and procedures that are involved in drilling operations. Topics on rig equipment, casing design, fishing, and proper procedures to successfully drill a well are implemented. Instruction in volume calculations, hydrostatic pressures, formations pressures, and analyzing problems in downhole drilling operations. (SCANS 1, 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1306 Drilling Fluids
(15.0903) (3-0) 3 hours
A study of the functions and properties of the fluids used in drilling an oil or gas well. The various types of mud systems for different formations will be discussed and developed. Competencies include performing and interpreting basic calculations and tests that are performed on the fluids used in the drilling process. The student will be able to evaluate and recognize the functions and properties of these various fluids and prepare a daily report on his/her findings. (SCANS 1, 2, 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1307 Production Methods
(15.0903) (3-0) 3 hours
An introduction to the different methods associated with petroleum production: natural flow and artificial lift. The student will also develop skills and competency in lease layout and specific recovery methods such as water flooding, chemical flooding, thermal processes, and CO_2 injections. The student will perform basic calculations, interpret graphical results and evaluate information for particular oil or gas wells. (SCANS 1, 2, 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1309 Corrosion Basics
(15.0903) (3-0) 3 hour
Principles of corrosion such as basic electrochemistry processes. Addresses the deterioration of materials, devices, or pieces of oil field (or other) machinery/ equipment. Emphasis on terminology associated with metallic and nonmetallic corrosion. A problem-based course to provide competencies in the corrosive effects on surface and downhole equipment, pipelines and other oilfield situations. Students will analyze basic causes and recommend the most reliable solutions. (SCANS 1, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1312 Petroleum Regulations
(15.0903) (3-0) 3 hours
A course in regulatory requirements and structures affixed to the petroleum industry by state and agencies. Topics include the Texas Railroad Commission, the Texas Natural Resource Conservation Commission, Occupational Safety and Health Administration, Department of Energy, and Department of Transportation. The student will analyze the effects of such rulings and prepare the proper responses. (SCANS 1, 2, 6, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1316 Petroleum Computer Applications
(15.0903) (3-0) 3 hours
An overview of computer applications in the petroleum industry. Covers the history, fundamentals, terminology, and software for different petroleum applications. Includes solving problems and projecting income from a producing oil and gas well. Lab fee required. (SCANS 2, 3, 6, 8, 9) Prerequisite: None.

PTRT 1317 Natural Gas Processing I
(15.0903) (3-0) 3 hours
An overview of natural gas processing operations. Fundamentals of gas processing, the nature of heat and how it implements the process, gas plant processing equipment, and procedures from raw materials to the refined product. (SCANS 2, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1318 Natural Gas Production
(15.0903) (3-0) 3 hours
An overview of the aspects of natural gas production including gas well testing; field handling of gas well casing head gas; separation, metering, and dehydration equipment; and gas compression/transportation systems. Includes handling corrosives, corrosive and inert gases, and equipment for separation, dehydration and control of natural gas. (SCANS 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1321 Oil Field Hydraulics
(15.0903) (3-0) 3 hours
Presents hydraulics applicable to drilling, completion, and production. Includes calculating and evaluating the characteristics of the flowing and static fluids in various tubular and annular systems. (SCANS 1, 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1324 Petroleum Instrumentation

(15.0903) (3-0) 3 hours

Surveys the instruments, measurements, and control devices used within the major aspects of the petroleum industry. Basic terminology, functions, and applications of the various instruments will be discussed. (SCANS 1, 2, 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 1391 or PTRT 1491 Special Topics in Petroleum Technology/Technician

(15.0903) (3-0) or (4-0) 3 or 4 hours

Topics address recently identified current events, skills, knowledge and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: None.

PTRT 2331 Well Completions

(15.0903) (3-0) 3 hours

Prepares the student to evaluate the effects of drilling through the production formation and choose the tools and procedures for completing a drilled wellbore. The student will participate as a team member in recognizing problems and implementing a correct plan of action in completing an oil or gas well. (SCANS 1, 2, 5, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2332 Artificial Lift

(15.0903) (3-0) 3 hours

Practical aspects of artificial lift in conventional production systems. Designed for students who have completed Production Methods (PTRT 1307) and who need further knowledge of various lift systems. Includes such topics as sucker rod pumps, tubing and rod strings, tubing anchors, beam pumps, gas lift and submersible pumping systems, wellheads and equipment involved in secondary recovery systems. (SCANS 6, 7, 8) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2336 Well Workover

(15.0903) (3-0) 3 hours

In-depth study and analysis of the various problems associated with the producing wellbore. Students discuss and evaluate the economics of working over an oil or gas well. Presents basic competencies of oil and gas well servicing, workover, plugging, reentry, equipment needs and maintenance programs. Students will perform basic calculations, interpret wellbore schematics, prepare a schedule and select procedures, organize and evaluate information, and decide an economical plan for working over an oil or gas well. (SCANS 1, 2, 3, 4, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2337 Natural Gas Processing II

(15.0903) (3-0) 3 hours

A course in accuracy, quality, and validation of gas and liquid measurement techniques for field and plant operating personnel. General principles of correct techniques of measurement and proper procedures to correct errors will be emphasized. (SCANS 2, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2340 Well Stimulation

(15.0903) (3-0) 3 hours

Variables necessary for stimulating oil or gas wells to increase production. Includes factors in determining the economics of a producing well as to fracture oil acidize the pay zones. (SCANS 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2341 Pipelining

(15.0903) (3-0) 3 hours

An overview of the construction, repair, and maintenance of pipeline systems: product, oil, natural gas, salt water, and fresh water. Appropriate types of lines for various applications will be discussed. (SCANS 3, 6, 8, 9) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2343 Refining Methods

(15.0903) (3-0) 3 hours

An overview of petroleum refining techniques including the process, equipment, and support personnel necessary to convert crude petroleum or natural gas into the different products and uses. (SCANS 8) Prerequisite: PTRT 1301 or consent of the department chair.

PTRT 2380 Cooperative Education – Petroleum Technology/Technician

(15.0903) (1-20) 3 hours

Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. As outlined in the learning plan, the student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of the department chair.

Photography

Faculty: Steve Goff, chair.

Odessa College's photography program provides quality photo education for all members of the community. Photo students explore professional and artistic aspects of this visual medium by training in the basics of photography as a subject, a profession and a technology. A variety of courses are offered, including development of black and white, commercial technique, professional portraiture, color, the history of photography and areas of independent study. Opportunities are provided for students to exercise their creative talents. Upon completion of the photo curriculum, students will be prepared for continued studies at a university or entry-level positions in the photographic industry. While limited equipment and some scholarships are available for those considering photography as a major, the department welcomes all students.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Photography

	Semester Hrs
General Education Requirements	**26**
ARTS 1311 Design I	3
COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1332 Structures of College Mathematics I or higher level math	3
PHED (any two one-hour activity courses)	2
PSYC 2302 Applied Psychology	3
SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	
Major Requirements	**39**
*COMM 1307 Introduction to Mass Communication	3
COMM 1318 or ARTS 2356 Photography I	3
COMM 1319 or ARTS 2357 Photography II	3
PHTC 1313 History of Photography	3
PHTC 1341 Color Photography I	3
PHTC 1343 Expressive Photography	3
PHTC 1345 Illustrative Photography I	3
PHTC 1349 Photo Digital Imaging I	3
PHTC 2301 Intermediate Photography	3
PHTC 2341 Color Photography II	3
PHTC 2349 Photo Digital Imaging II	3
PHTC 2380 Cooperative Education – Commercial Photography	3
PLUS one course from the following list	3
PHTC 1347 Landscape Photography	
PHTC 1351 Photojournalism I or	
COMM 1316 News Photography	
PHTC 2331 Architectural Photography	
Total Semester Hours	**65**

*Course description may be found in the Mass Communication section of this catalog.

Course of Study for Certificate of Completion

Level I certificates are TASP-waived.

Level I – Photo Lab Assistant

	Semester Hrs
COMM 1318 or ARTS 2356 Photography I	3
COMM 1319 or ARTS 2357 Photography II	3
PHTC 1341 Color Photography I	3
PHTC 1349 Photo Digital Imaging I	3
PHTC 2301 Intermediate Photography	3
PHTC 2341 Color Photography II	3
Total Semester Hours	**18**

Level I – Digital Imaging Assistant

	Semester Hrs
COMM 1318 or ARTS 2356 Photography I	3
COMM 1319 or ARTS 2357 Photography II	3
PHTC 1341 Color Photography I	3
PHTC 1349 Photo Digital Imaging I	3
PHTC 2341 Color Photography II	3
PHTC 2349 Photo Digital Imaging II	3
Total Semester Hours	**18**

Level I – Portrait Studio Assistant

	Semester Hrs
COMM 1318 or ARTS 2356 Photography I	3
COMM 1319 or ARTS 2357 Photography II	3
PHTC 1341 Color Photography I	3
PHTC 1349 Photo Digital Imaging I	3
PHTC 1353 Portraiture I	3
PHTC 2301 Intermediate Photography	3
PHTC 2341 Color Photography II	3

PHTC 2349 Photo Digital Imaging II 3
PHTC 2353 Portraiture II 3

Total Semester Hours 27

PHOTOGRAPHY COURSES

COMM 1318 Photography I
(50.0605.5126)
ARTS 2356 Photography I
(50.0605.5126) (2-4) 3 hours
Introduction to the basics of photography. Includes camera operation, techniques, knowledge of chemistry and presentation skills. Emphasis on design, history and contemporary trends as a means of developing an understanding of photographic aesthetics. The student will assess and select equipment, supplies and techniques to incorporate basic theories of film, exposure, development, filters and printing. Students will use efficient learning techniques to acquire and apply creative knowledge and to communicate with others. Lab fee required. (SCANS 4, 8, 9, 11) Prerequisite: None.

COMM 1319 Photography II
(50.0605.5226)
ARTS 2357 Photography II
(50.0605.5226) (2-4) 3 hours
Extends the students' knowledge of technique and guides them in developing personal outlooks toward specific applications of the photographic process. Students will use efficient learning techniques to acquire and apply creative knowledge and to communicate with others. Designed for additional experience in the photographic medium. Lab fee required. (SCANS 4, 8, 9, 11) Prerequisite: COMM 1318 or ARTS 2356 or its equivalent.

PHTC 1313 History of Photography
(50.0406) (3-0) 3 hours
A historical survey of the technical and aesthetic development of photography. Topics include the beginnings of the medium, inventors, development of photographic equipment, styles of the creative masters, aesthetic themes, and the social impact of photography. (SCANS 6) Prerequisite: None.

PHTC 1341 Color Photography I
(50.0406) (2-4) 3 hours
Examination of color theory as it applies to photography. Emphasis on color concepts and the intricacies of seeing and photographing in color. Students will learn how to select color films and filters for various photographic lighting conditions. Emphasis is on printing from color negatives with assignments designed to help the student identify the intricacies of seeing and photographing in color. Lab fee required. (SCANS 4, 8) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 1343 Expressive Photography
(50.0406) (2-4) 3 hours
A study of formal, professional, and individual uses of photography by applying photographic technology to personalized needs. Emphasis on creative visual thinking and problem solving and the exploration of personal vision. Lab fee required. (SCANS 8, 9) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 1345 Illustrative Photography I
(50.0406) (2-4) 3 hours
Instruction in the technical aspects involved in commercial photography. Topics include lighting equipment, techniques of production photography, reproduction principles, illustrative techniques, and advertising. Students will learn how to organize and maintain equipment and materials in a photographic studio and select proper lighting for a variety of photographic studio situations. Lab fee required. (SCANS 4, 6, 8) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 1347 Landscape Photography
(50.0406) (2-4) 3 hours
Skill development in the inspection of the landscape visually and photographically utilizing various camera formats. Topics include exploration of historic, geographical, and cultural locations, and review of landscape photographers. Special travel fee may be required. Lab fee required. (SCANS 6) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 1349 Photo Digital Imaging I
(50.0406) (2-4) 3 hours
Instruction in the computer as an electronic darkroom. Topics include color and gray scale images and image conversion and presentation. Students will select and choose a variety of image-capture devices utilizing Adobe Photoshop. Computer scanning techniques include image control, manipulation and enhancement of photographs and line art plus the importing and exporting of text and graphics from multiple sources. Lab fee required. (SCANS 4, 8) Prerequisite: COMM 1318 or ARTS 2356, or consent of instructor.

PHTC 1351 Photojournalism I
(50.0406)
COMM 1316 News Photography
(09.0401.5506) (2-4) 3 hours
Presentation of photographic techniques used by photojournalists in newspapers, magazines, and trade publications including news, feature, sports, editorial portraits, and photo essays. Includes a study of layout design and the freelance market. Lab fee required. (SCANS 2, 5, 6, 8, 9) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 1353 Portraiture I
(50.0406) (2-4) 3 hours
A study of the photographic principles applied to portrait lighting, posing, printing, and subject rapport. Introduces skills to produce professional studio portraiture. Practice gained by making photographs through actual work with adult and child models. Students will learn to assume leadership roles by directing posing techniques of models and selecting proper camera lenses and backgrounds during portrait sessions. Lab fee required. (SCANS 5, 8) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 2301 Intermediate Photography
(50.0406) (2-4) 3 hours
Study of advanced exposure and printing techniques, archival printing, toning and printing for maximum print quality. Introduction to a variety of camera formats. Designed to give advanced experience in darkroom printing and developing procedures. The course allows students to acquire and evaluate numerous films and papers for various photographic situations. Students will select appropriate photo supplies and equipment for shooting assignments. Includes projection printing, contact printing, black and white print finishing, toning and mixing photographic chemistry. Successful completion qualifies student to work as a black and white lab technician in the photographic industry. Lab fee required. (SCANS 4, 6, 8) Prerequisite: COMM 1318 or ARTS 2356.

PHTC 2331 Architectural Photography
(50.0406) (2-4) 3 hours
Study of the equipment, processes, and procedures necessary for the photography of building exteriors and interiors, dusk/night and night architectural landscapes, and construction progress. Lab fee required. (SCANS 4, 6, 8) Prerequisite: COMM 1318 or ARTS 2356 or PHTC 1345.

PHTC 2341 Color Photography II
(50.0406) (2-4) 3 hours
Skill development in advanced color image production. Emphasis on use of specialized color techniques and applications. Lab fee required. (SCANS 4, 8) Prerequisite: PHTC 1341.

PHTC 2349 Photo Digital Imaging II
(50.0406) (2-4) 3 hours
Continued skill development in the use of the computer for retouching, copying, photographic restoration, color correction, data importation, composite imaging, and background dropout and replacement. Students will utilize layout and design programs such as Adobe Photoshop, Adobe Illustrator, Adobe PageMaker and/or Quark Express. Lab fee required. (SCANS 4, 8) Prerequisite: PHTC 1349.

PHTC 2353 Portraiture II
(50.0406) (2-4) 3 hours
A continuation of the study of principles of effective portraiture with specific emphasis on unique presentation and environmental and location studies. Lab fee required. (SCANS 5, 8) Prerequisite: PHTC 1353.

PHTC 2380 Cooperative Education – Commercial Photography
(50.0406) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

Physical and Health Education

Faculty: Karin Carlson, chair; Timi Brown, Paul Chavez, Derrick Elliott, Pat Hodges, Jeff Kelly, Lamont Mason, Orlando Ontiveroz, Tammy Thompson, Robert Wagner, Jim Watkins, Rick Zimmerman.

Physical education is the sum of all those changes that take place in individuals as the result of movement experience.

The principal objectives of this department are as follows: (1) to develop the students' neuromuscular skill and organic system through movement experiences, (2) to increase the students' knowledge, insight, understanding and interest in movement experiences and (3) to improve the students' recreational and leisure-time skills as well as their standards of behavior in these selected movement areas.

Since movement is the medium through which this department achieves its objectives, students have several opportunities to select those movement experiences (from 34 different areas in the physical education curriculum) that will best contribute to their well-being, their leisure-time skills and to their total educational development. The physical education department offers two options for the associate degree.

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

Course of Study for Associate in Science Degree Exercise and Sport Science Option

	Semester Hrs
General Education Requirements	**45**
**BIOL 1406 General Biology I	4
**BIOL 1407 General Biology II	4
COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH 1314 College Algebra or higher level math	3
MATH 1342 Mathematical Statistics or higher level math	3
Science (with lab)	4
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
Elective	**3**
Major Requirements	**10**
*PHED (any four one-hour activity courses)	4
PHED 1301 Orientation in Health, Physical Education and Recreation	3
PHED 2376 Prevention and Care of Athletic Injuries	3
***Approved Electives**	**9**
Total Semester Hours	**67**

*PHED 1100 should be the first course taken in physical education.
**CHEM 1311, CHEM 1312, plus CHEM 1111 and CHEM 1112, may be substituted for BIOL 1406 and BIOL 1407.
***Electives will be selected from the following two/three-hour classes based on senior institution requirements: PHED 1238, PHED 1304, PHED 1306, PHED 1308, PHED 1309, PHED 1321, PHED 1322, PHED 1331, PHED 2278, PSYC 2301 and SOCI 1301.

Students majoring in exercise and sport science in preparation for a teaching career are required to take four activity classes selected from the following areas:

One class from Fitness Activities
One class from Lifetime Activities
One class from Team Sports
One class from Aquatics

It is suggested that PHED 1100 be the first course taken in physical education. Competitive athletics courses will not be counted toward the four-activity requirement for exercise and sport science majors.

In addition, it is also recommended that exercise and sport science majors take more than the minimum of four one-hour activity classes in their preparation for a teaching career. Students should consider the requirements of the senior college to which they intend to transfer and plan their junior college scholastic schedule accordingly.

Physical education activity classes meet three hours weekly for one semester-hour credit. An activity class may be repeated once for credit. All physical education activity classes require a lab fee.

Course of Study for Associate in Science Degree Athletic Training Option

	Semester Hrs
General Education Requirements	**44**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4

COSC 1301 Microcomputer Applications (or higher level) 3
ENGL 1301 Composition and Rhetoric 3
ENGL 1302 Composition and Literature 3
ENGL (sophomore level) 3
GOVT 2305 Federal Government 3
GOVT 2306 Texas Government 3
HIST 1301 United States History to 1877 3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas 3
MATH 1314 College Algebra or higher level math 3
*PHED (any two one-hour activity courses) 2
Science (with lab) 4
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech 3

Elective 3

Major Requirements 13
PHED 1171 Athletic Training Clinical Practicum I 1
PHED 1304 Personal and Community Health 3
PHED 1306 First Aid 3
PHED 2171 Athletic Training Clinical Practicum II 1
PHED 2278 Nutrition in Exercise and Sport 2
PHED 2376 Prevention and Care of Athletic Injuries 3

****Approved Electives 6**

Total Semester Hours 66

*PHED 1100 should be the first course taken in physical education.
** Approved Electives: CHEM 1311, CHEM 1312, ITSC 1401, PHED 1238, PHED 1301, PHED 1331, PSYC 2301 and SOCI 1301.

The athletic training program is designed to meet the lower level requirements of the National Trainers Association and the state of Texas Licensure Act for Athletic Trainers. The program is a practical education-work experience approach to gaining the knowledge and skills needed to fulfill requirements for national certification as determined by the NATA and Texas state licensure as determined by the Texas Department of Health.

The Odessa College physical education degree option in athletic training is designed to meet the first two-year needs of students interested in pursuing a career in athletic training and meeting the specific educational and practicum requirements outlined by these two organizations.

FITNESS ACTIVITIES

PHED 1100 Lifestyle Assessment and Modification

(36.0108.5123) (0-3) 1 hour
Provides learning opportunities to introduce and maintain higher education health standards. Includes assessment of cardiovascular endurance, muscular strength and endurance, flexibility, body composition, nutrition, stress and blood pressure. Students will select and participate in physical activities which will produce desired physical results. This course culminates with an individualized lifelong wellness plan. Lab fee required. (SCANS 3, 4, 9, 10) Prerequisite: None.

PHED 1101 Aerobic Dance

(36.0108.5123) (0-3) 1 hour
A total body conditioning program emphasizing cardiovascular endurance, muscular strength and endurance, flexibility, coordination, and muscle tone. Students will perform basic calculations to determine appropriate target heart rate zones, establish fitness goals, and select appropriate activities to attain those goals. Students will participate in a group project. An exercise log will be kept by class participants detailing time spent in aerobic activities. Students will analyze postural and nutritional habits and be encouraged to initiate healthful lifestyle changes when needed. Includes a preliminary one-time, two-hour orientation. Lab fee required. (SCANS 3, 4, 5, 9, 10) Prerequisite: None.

PHED 1102 Cycling

(36.0108.5123) (0-3) 1 hour
Designed to give basic understanding of principles of cycling; includes pedal cadence, shifting, gear ratio, training safety and maintenance. Students will be required to set personal fitness goals and to monitor their progress during the course. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1103 Defensive Tactics

(36.0108.5123) (0-3) 1 hour
Includes lectures, demonstrations and practice in basic skills and techniques of a variety of defensive movements and protection methods. Students will learn vulnerable areas of the human body that will enable students to defend themselves against an attacker. Self-confidence and self-management will be enhanced by class participation. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1104 Advanced Defensive Tactics

(36.0108.5123) (0-3) 1 hour
Includes lectures, demonstrations and practice in basic advanced techniques of self-protection as well as

striking and delivering a variety of kicks. Self-confidence and self-management will be enhanced by class participation. Lab fee required. (SCANS 9, 10) Prerequisite: PHED 1103.

PHED 1105 Gymnastics
(36.0108.5123) (0-3) 1 hour
Includes instruction in performance of various gymnastics skills on all apparatus. Instruction includes flexibility and strength training as well as spotting techniques. Student will use efficient learning techniques to acquire and apply new knowledge and skills. Each student will develop self-esteem and self-management skills through participation in this class. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1106 Jogging/Walking
(36.0108.5123) (0-3) 1 hour
A computer-monitored, instructor-guided program to enhance cardiovascular fitness through jogging and/or walking. Students will perform basic calculations to determine appropriate target heart rate zones. Students will establish fitness goals and select appropriate activities to attain these goals. Pre- and post-assessments will allow students to monitor progress toward their fitness goals. Includes a preliminary one-time, two-hour orientation. Lab fee required. (SCANS 3, 4, 9, 10) Prerequisite: None.

PHED 1107 Judo/Karate
(36.0108.5123) (0-3) 1 hour
Emphasizes basic skills and techniques of American karate. Students will learn vulnerable areas of the human body and be instructed in defensive and offensive techniques to protect oneself. Students will work in small groups and partner situations in which personal qualities will be a secondary benefit of this class. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1108 Physical Conditioning, Aerobic Super Circuit
(36.0108.5123) (0-3) 1 hour
Combines weightlifting with aerobic activities in a structured, formatted conditioning program that trains the whole body. Orientation and physical assessments enable students to personalize their workouts and help them attain their fitness goals. Workouts are computer-monitored and instructor-enhanced. Includes a preliminary one-time, two-hour orientation. Lab fee required. (SCANS 4, 9, 10) Prerequisite: None. (Must be at least 16 years old.)

PHED 1109 Physical Conditioning, Aerobic Super Circuit – Advanced
(36.0108.5123) (0-3) 1 hour
Combines weightlifting with aerobic activities in a structured, formatted conditioning program that trains the whole body. Orientation and physical assessments enable students to personalize their workouts and help them attain their fitness goals. Workouts are computer-monitored and instructor-enhanced. Also includes instruction in the proper techniques of training specific body areas. Includes a preliminary one-time, two-hour orientation. Lab fee required. (SCANS 3, 4, 9, 10) Prerequisite: PHED 1108 or consent of the instructor. (Must be at least 16 years old.)

PHED 1110 Trampoline
(36.0108.5123) (0-3) 1 hour
A gymnastics class specializing in acquisition of various trampoline skills, including flexibility and spotting. Uses efficient learning techniques to acquire and apply new knowledge and skills. Sociability and self-control will be secondary benefits of class participation. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1111 Weight Training
(36.0108.5123) (0-3) 1 hour
Emphasizes increasing strength through proper techniques of lifting and weight training. Orientation and physical assessments enable students to personalize their workouts and help them attain their fitness goals. Students will perform basic calculations to determine appropriate workload, volume, sets, repetitions, intensity, progression and recovery to meet their fitness goals. Includes a preliminary one-time, two-hour orientation. Lab fee required. (SCANS 3, 4, 9, 10) Prerequisite: Must be at least 16 years old.

PHED 1112 Adaptive Personalized Fitness
(36.0108.5123) (0-3) 1 hour
This course consists of three major components, (1) cardiovascular conditioning, (2) strengthening exercises, (3) range of motion stretching and relaxation techniques. This class is designed to introduce physically challenged students (P.C.S.) to a variety of physical activities including; rhythmical movement, aquatics, hydro-fitness (resistance training), walking/jogging. P.C.S. are defined as students with temporary injuries, severely obese individuals (over 40% body fat percentage) and permanently disabled students. These individuals will be assessed and given an individualized exercise program. May be repeated for credit. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Approval by the department chair.

PHED 1113 Weight Training, Advanced
(36.0108.5123) (0-3) 1 hour
Continued improvement in strength and flexibility and the opportunity to develop specific muscle groups. Lab fee required. (SCANS 3, 4, 9, 10) Prerequisite: PHED 1111 or consent of the instructor.

LIFETIME ACTIVITIES

PHED 1114, PHED 1115, PHED 2116 Beginning, Intermediate and Advanced Horsemanship
(36.0108.5123) (0-3) 1 hour each
Basic methods and techniques for various riding events such as rodeo, drill, show and speed horses. The course will cover rider preparation for performance, basic equipment and riding style. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Consent of instructor.

PHED 1116 Badminton
(36.0108.5123) (0-3) 1 hour
Instruction and skill development of the basic skills of badminton: serve, clear, smash, drop and net shots. Knowledge of the history, rules and basic strategy for singles and doubles will be acquired. Lab fee required. (SCANS 10) Prerequisite: None.

PHED 1117 Bowling
(36.0108.5123) (0-3) 1 hour
The student will learn the mechanics of the approach, release and execution of three different styles of bowling. The course will also cover scorekeeping (automated and manual), pin and spot bowling, point of aim, rules, etiquette, and fun competitive games. Lab fee required. (SCANS 3, 10) Prerequisite: None.

PHED 1118 Social Dance
(36.0114.5123) (0-3) 1 hour
Includes instruction in basic dance skills, positions, rhythms, steps and formation, i.e. country western (cotton-eyed Joe, two-step, waltz, polka, and schottische), line dancing, and conventional ballroom as well as most current and most popular dances. Lab fee required. (SCANS 5, 9, 10) Prerequisite: None.

PHED 1119 Golf
(36.0108.5123) (0-3) 1 hour
The student will learn the basic fundamentals of golf including grip, putting, chipping, and full swing. The course will cover a basic understanding of rules, etiquette, and types of competitive play available to the golfer. Lab fee required. (SCANS 3, 9, 10) Prerequisite: None.

PHED 1120 Ice-Skating, Beginning
(36.0108.5123) (0-3) 1 hour
This course is designed to introduce the student to the fundamental skills of ice-skating as they relate to body control, technique, balance and power. Emphasis is placed on basic skills necessary to perform introductory movements in skating, including falling down and getting up, walking, gliding and stopping. Lab fee required. (SCANS 2, 5, 6, 8, 9, 10, 11) Prerequisite: None.

PHED 1121 Racquetball
(36.0108.5123) (0-3) 1 hour
Instruction in and development of fundamental skills such as basic strokes, basic shots, serve, court positioning, rules and variations of the game. Lab fee required. (SCANS 10) Prerequisite: None.

PHED 1122 Recreational Sports
(36.0108.5123) (0-3) 1 hour
Presents skills and rules for pool, ping-pong and a variety of board games. Emphasis will be on the aspects of participation in these activities, as well as the cognitive and affective nature of rules, history, skills and etiquette of the sport/games. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1123 Skiing
(36.0108.7123) (0-3) 1 hour
This course is designed to prepare the student for efficient skiing techniques to apply to different types of terrain/snow conditions encountered on the required ski trips during the mid-winter and/or spring sessions. Students should check with senior institution regarding course transferability. Special travel fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1124 Tennis, Beginning
(36.0108.5123) (0-3) 1 hour
Emphasizes beginning skills in execution of forehand and backhand strokes, the serve and the volley. Includes rules, strategies and etiquette in both singles and doubles. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1125 Tennis, Advanced
(36.0108.5123) (0-3) 1 hour
Emphasis placed on proper execution of basic strokes as well as specialty shots such as the lob, overhead and spins. Includes competitive activities in singles and doubles. Lab fee required. (SCANS 9, 10) Prerequisite: PHED 1124 or consent of the instructor.

PHED 2120 Ice-Skating, Advanced
(36.0108.5123) (0-3) 1 hour
This course is designed for the intermediate and advanced ice-skating student. Emphasis is placed on improving the power and proficiency of basic skills, with attention focused on these additional skills: forward and backward crossovers, inside and outside edge glides, turns such as forward inside and outside mohawks, one-foot turns, and combinations of the above. Lab fee required. (SCANS 2, 5, 6, 8, 9, 10, 11) Prerequisite: PHED 1120 or consent of instructor.

TEAM SPORTS

PHED 1128 Basketball, Men's
(36.0108.5123) (0-3) 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific basketball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5, 9, 10) Prerequisite: None.

PHED 1129 Basketball, Women's
(36.0108.5123) (0-3) 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific basketball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5, 9, 10) Prerequisite: None.

PHED 1130 Cheerleading
(36.0108.5123) (0-3) 1 hour
Introduces basic skills and techniques of cheerleading such as partner stunts, incorporation of pyramids, safety techniques and jumps. By participating as a team, individuals learn how to cooperate with other team members in solving problems and in motivating a crowd. Performing at athletic events permits the individuals an opportunity to exhibit responsibility as well as to build self-esteem. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1131 Football, Touch
(36.0108.5123) (0-3) 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific football problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5, 9, 10) Prerequisite: None.

PHED 1132 Rodeo
(36.0108.5123) (0-3) 1 hour
Presents rules of the sport while instructing individuals on the fundamentals of all rodeo events, both men's and women's individual and team. The class teaches individuals how to contribute to a group effort while encouraging individuals to excel in one specialized rodeo area. Participants are taught how to recognize and solve specific rodeo event problems. Students are also encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1133 Softball
(36.0108.5123) (0-3) 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific softball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5, 9, 10) Prerequisite: None.

PHED 1134 Volleyball
(36.0108.5123) (0-3) 1 hour
Presents rules of the sport while emphasizing individual and team fundamentals. The class teaches individuals how to contribute to a group effort and how to recognize specific volleyball problems and devise strategies to overcome those problems. In addition, participants are encouraged to set individual and team goals and exert effort necessary to accomplish those goals. Lab fee required. (SCANS 5, 9, 10) Prerequisite: None.

AQUATICS

PHED 1146 Red Cross Life Saving (Life Guarding)
(36.0108.5123) (0-3) 1 hour
An advanced aquatic course that prepares the individual to deal with life threatening situations in various aquatic environments. Skills areas include assists, carries, defenses, releases, equipment rescues, facility safety and others. NRC lifeguard certification is offered upon successful completion. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Advanced swimming skills.

PHED 1147 Swimming, Beginning
(36.0108.5123) (0-3) 1 hour
This course in basic water safety is designed to make adults reasonably safe while in or near water. Topics include: physical and mental adjustment to water, buoyancy and body positioning, propulsion and coordinated stroking, and personal safety. Fundamentals of swimming and fitness will be stressed. Lab fee required. (SCANS 9, 10) Prerequisite: None.

PHED 1148 Fitness Swimming
(36.0108.5123) (0-3) 1 hour
Aerobic fitness developed through lap swimming. Other fitness parameters include strength, flexibility, nutrition

and proper body weight. Physiological principles of exercise. Lab fee required. (SCANS 4, 9, 10) Prerequisite: PHED 1147 or the ability to execute the five basic swimming strokes in deep water.

PHED 1149 Water Sports/Games
(36.0108.5123) (0-3) 1 hour
A water conditioning program emphasizing muscle tone, strength, flexibility, coordination and cardiovascular endurance. This will be accomplished through participation in several water sports activities (water polo, volleyball and basketball). Emphasis will be on basic skills, rules, and strategies of each activity. Both individual and team effort will be stressed. Lab fee required. (SCANS 5, 9, 10) Prerequisite: PHED 1147 or consent of the instructor.

PHED 1150 Water Aerobics
(36.0108.5123) (0-3) 1 hour
Personal instruction, in an aquatic environment, which emphasizes muscle tone, strength, flexibility and cardiovascular endurance. Emphasis is placed on learning exercises, calculation of individual target heart rates and in developing a routine. Each student will design and lead the class in the routine he or she has developed. Includes a preliminary one-time orientation. Lab fee required. (SCANS 3, 4, 5, 9, 10) Prerequisite: None.

PHED 1152 Scuba Diving
(36.0108.5323) (0-3) 1 hour
The course includes instruction in the proper use of equipment, safety, physiology and open water diving. Drills are performed under water as to how divers can work together in assisting one another in dangerous situations. Students completing course requirements will receive certification. Special fee may be required. Lab fee required. (SCANS 5, 9, 10) Prerequisite: PHED 1147 or consent of the instructor.

COM

PHED 1136 Baseball, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced baseball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1137 Basketball, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced basketball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1138 Golf, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced golfers competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1139 Rodeo, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced participants in rodeo competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1141 Track and Field, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced participants in track and field competing on the collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1142 Softball, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced softball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 6, 7, 8, 9, 10) Prerequisite: Consent of the instructor.

PHED 1171 Athletic Training Clinical Practicum I
(31.0506.7123) (1-20) 1 hour
Designed to satisfy the first-year practical experience of the athletic training student. Students will be instructed in documentation preparation, record keeping, and evaluation in the athletic training room. Students will experience individual and team "hands on" preparation in the areas of competition/practice preparation, competition/practice, and therapeutic settings. Students will be taught to recognize problems and design a plan of action for services such as, but not limited to, taping, bandaging, illness/injury evaluation, first aid emergency care, rehabilitation and related services. An ethical course of action will be stressed throughout the course. This course is under the supervision of a NATA-certified and state of Texas-licensed athletic trainer. Lab fee required. (SCANS 2, 4, 5, 6, 9, 10) Prerequisite: Admission to the student athletic training program and consent of the instructor.

PHED 2136 Baseball, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced baseball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10)
Prerequisite: Consent of the instructor.

PHED 2137 Basketball, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced basketball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10)
Prerequisite: Consent of the instructor.

PHED 2138 Golf, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced golfers competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 2139 Rodeo, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced participants in rodeo competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10)
Prerequisite: Consent of the instructor.

PHED 2141 Track and Field, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced participants in track and field competing on the collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 2142 Softball, Varsity
(36.0108.5123) (0-3) 1 hour
Designed for advanced softball players competing on collegiate level. Students will be taught to apply new knowledge and skills to improve individual and team performance. An understanding of the team concept and team unity will be stressed. (SCANS 5, 6, 7, 8, 9, 10)
Prerequisite: Consent of instructor.

PHED 2171 Athletic Training Clinical Practicum II
(31.0506.7223) (1-20) 1 hour
Continuation of PHED 1171 for the second year athletic training student. Includes practice experience in athletic training room management, medical referral and disposition of athletic injuries. Students will be instructed in how to set up a plan of action for injury administration and related services using both an individual and team approach. This course will also include instruction in documentation procedures and record keeping. An ethical course of action will be stressed. Lab fee required. (SCANS 2, 4, 5, 6, 9, 10)
Prerequisite: PHED 1171 and/or consent of the instructor.

PHYSICAL AND HEALTH EDUCATION LECTURE COURSES

PHED 1166 CPR for Allied Health
(51.0301.5316) (0-1) 1 hour
Provides multi-media and skills instruction in American Red Cross CPR at the professional rescuer (those with a duty to respond) level. Emphasis is placed on individual and group skills for responsible action, decision making, and problem solving when faced with an emergency situation; utilization of knowledge necessary for special resuscitation situations; and maintenance of recognized standards of ethical care by first responders. Certification may be obtained in adult one rescuer, adult two rescuer, infant and child CPR. Complies with O.S.H.A. standards, and meets or exceeds Department of Transportation national and state requirements for first responder courses as recognized by the Texas Department of Health. Lab fee required. (SCANS 5, 7, 9, 10, 11) Prerequisites: Proof of admission into an allied health program and consent of instructor.

PHED 1238 Personal Health Assessment and Strategies
(31.0501.5223) (2-0) 2 hours
Provides instruction in lifestyle assessment and behavior change strategies in areas of physical fitness, nutrition and stress management. Emphasis is placed on the analysis of these components to enable the student to calculate body fat percentage, recognize deficiencies in diet and nutrition, reinforce positive health behaviors conducive to longevity and fitness, and select relevant activities leading to the improvement of personal health. (SCANS 3, 4, 7, 9, 10) Prerequisite: None.

PHED 1301 Orientation in Health, Physical Education and Recreation
(31.0501.5223) (3-0) 3 hours
Provides instruction in the historical and philosophical basis of physical and health education and recreation. Emphasis is placed on understanding the foundations and objectives of curricula development; identifying activities and skills relevant to program development in physical and health education and recreation;

demonstrating leadership skills in group discussions and activities pertinent to organization of educational principles of program development consistent with the goal of new curricula design, sociological and biological aspects of physical and health education and recreation; and reinforcing positive personal characteristics consistent with ethical and social aspects of physical and health education and recreation. (SCANS 4, 5, 6, 7, 9, 10) Prerequisite: None.

PHED 1304 Personal and Community Health
(51.0301.5116) (3-0) 3 hours
Provides instruction in the study of body organs and systems and health concepts and problems. Emphasis is placed on understanding the basic structure and functions of the human body, organizing and evaluating social systems for personal and community health, participating actively in projects with local public and community health systems demonstrating decision-making and problem-solving skills pertinent to delivery of social health services, and utilizing positive social characteristics when dealing with personal, public, and community health concerns. (SCANS 4, 5, 6, 9, 10) Prerequisite: None.

PHED 1306 First Aid
(51.0301.5316) (3-0) 3 hours
Provides multimedia instruction in American Red Cross standard first aid and CPR. Covers techniques for injury assessment, bandaging and splinting, and safe transportation of injured. Emphasis is placed on individual and group skills for responsible action, decision making, and problem solving when faced with an emergency or nonemergency situation; utilization of knowledge necessary for specific injury conditions; maintenance of standards of ethical care for first aid care. Certification may be obtained in basic adult and infant/child CPR. Lab fee required. (SCANS 5, 7, 9, 10, 11) Prerequisite: None.

PHED 1308 Techniques of Officiating Sports I
(12.0204.5109) (2-2) 3 hours
Provides instruction in effective officiating methods and techniques for sports such as baseball, basketball and track. Emphasis is placed on rules interpretation and the positive communication of that interpretation to others, organization of rules information relative to game and tournament play and protest procedures, utilization of problem-solving techniques relevant to officiating contests, and maintenance of a positive self-image and sociability in group contest environments. Lab fee required. (SCANS 5, 6, 9, 10) Prerequisite: Consent of the instructor.

PHED 1309 Techniques of Officiating Sports II
(12.0204.5109) (2-2) 3 hours
Continues instruction in effective officiating methods and techniques for sports such as baseball, basketball and track. Emphasis is placed on rules interpretation and the positive communication of that interpretation to others, organization of rules information relative to game and tournament play and protest procedures, utilization of problem-solving techniques relevant to officiating contests, and maintenance of a positive self-image and sociability in group contest environments. Lab fee required. (SCANS 5, 6, 9, 10) Prerequisite: Consent of the instructor.

PHED 1321 Techniques of Coaching Sports I
(31.0506.5123) (2-2) 3 hours
Provides instruction in fundamental skills of coaching, individual and team play, organization of practices, and the handling of teams during the competitive seasons of sports such as baseball, basketball and track. Emphasis is placed on the ability of the coach to teach, exercise leadership, negotiate internal team problems, organize and communicate necessary information pertinent to team success, monitor team progress, utilize problem-solving and decision-making skills, maintain ethical standards and responsibility for team actions, and clearly demonstrate skills necessary for effective communication and motivation of the team. Lab fee required. (SCANS 5, 6, 7, 9, 10, 11) Prerequisite: Consent of the instructor.

PHED 1322 Techniques of Coaching Sports II
(31.0506.5123) (2-2) 3 hours
Continues fundamental skills, individual and team play, organization of practices and handling of teams during the competitive season for sports such as baseball, basketball and track. Lab fee required. (SCANS 5, 6, 7, 9, 10, 11) Prerequisite: Consent of the instructor.

PHED 1331 Movement and Recreation
(31.0501.5223) (2-2) 3 hours
Provides instruction in recreational activity training in basic movement skills. Emphasis is placed on the exploration and development of these skills through the utilization of simple games and activities, teaching and diversification of perceptual motor experiences to a broad population, organization and evaluation of information pertinent to the acquisition of movement skills, maintenance of responsible and ethical guidelines persistent with a target population, and development of communication skills necessary for the educational process. Lab fee required. (SCANS 4, 5, 6, 9, 10, 11) Prerequisite: None.

PHED 1332 Game Skills for Equestrian Sports and Recreation
(31.0101.5123) (2-1) 3 hours
The survey and development of skills necessary to perform equine sporting and recreational activities. This is a lecture/lab course covering rules and skills of many horseback games, from judged events to timed events such as polo, cutting, reining, western pleasure, barrel racing, pole bending, working cow horse, dressage, and jumping. Lab fee required. (SCANS 5, 9, 10) Prerequisite: Consent of the instructor.

PHED 1346 Drug Use and Abuse
(51.0301.5216) (3-0) 3 hours
Provides instruction in the current use and abuse of drugs in today's society. Emphasis is placed on physiological, sociological and psychological factors involved in the use and abuse of drugs. This course also will include instruction in the personal, legal and societal consequences of substance abuse. (SCANS 5, 6, 7, 9, 10) Prerequisite: None.

PHED 2278 Nutrition in Exercise and Sport
(31.0501.5223) (2-0) 2 hours
Provides instruction in the importance of proper nutrition in regard to physical activity and specifically sports participation. Emphasis is placed on basic nutritional concepts, demonstration of basic mathematical calculations in determining caloric intake and expenditure, decision-making skills necessary for determining optimal weight and proper hydration, and demonstration of ethics and personal integrity in regards to ergogenic aids to athletic performance. (SCANS 3, 9, 10) Prerequisite: None.

PHED 2376 Prevention and Care of Athletic Injuries
(51.0301.5316) (3-0) 3 hours
Provides instruction in the study of the athletic training room and its problems, including massage, taping, bandaging, and care of sprains, strains, and wounds common to athletic participation. Emphasis is placed on basic administrative procedures and written record-keeping skills, management of time and materials necessary for the proper function of the training room, participation and service to clients served by the athletic trainer, acquisition and evaluation of information relative to injury assessment and prevention of athletic injury, proper communication of care and rehabilitation of athletic injuries, demonstration of problem-solving and decision-making skills relative to injury care and management, and maintenance of responsibility, ethical behavior, and self limitation in the treatment of athletic injuries. (SCANS 2, 4, 5, 6, 9, 10) Prerequisite: None.

Physical Therapist Assistant

Faculty: Lynn Dammann, chair; Peggy Manning, academic coordinator of clinical education; Tana Pipes, paraprofessional.

The physical therapist assistant program leads to an associate in applied science degree and encompasses a two-year course of study. The program is designed to prepare educated health workers to perform certain physical therapy procedures and related tasks under the direction and supervision of a licensed physical therapist. The physical therapist assistant performs treatment procedures that involve the therapeutic use of heat, cold, electromagnetic radiations, traction, compression, water, massage, ultrasound and therapeutic exercise and assists the physical therapist with evaluative procedures.

The curriculum balances general educational and technical courses and includes supervised clinicals at hospitals and private clinics. These combined experiences provide students with an opportunity for educational development as well as occupational competence. Licensure of physical therapist assistants is required in the State of Texas and graduates are eligible to take the licensure examination.

Because clinical space is limited, students are admitted selectively. To be considered for admission to the program, prospective students must be high school graduates or equivalent, achieve a satisfactory score on selected entrance examinations, complete BIOL 2401 Anatomy and Physiology I and BIOL 2402 Anatomy and Physiology II, have good character references, complete a specified number of volunteer or observation hours in a physical therapy clinic, and be approved by the program admissions committee. After being accepted, students must maintain a grade of "C" in all physical therapist assistant courses. An average of "C" or better must be maintained in all other courses. Students failing to meet these scholastic requirements will be dropped from the program. The physical therapist assistant program is accredited by the Commission on Accreditation in Physical Therapy Education of the American Physical Therapy Association.

Note: All physical therapist assistant students are required to have health and accident insurance and specified immunizations. Liability insurance is also required and is a part of the regular college fee schedule.

Applicants or other interested persons seeking additional information should contact the Student Development Center at Odessa College. Testing deadline is February 28 and application deadline is March 31.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Physical Therapist Assistant

	Semester Hrs
Prerequisite Courses	**8**
BIOL 2401 Anatomy and Physiology I	4
BIOL 2402 Anatomy and Physiology II	4

FIRST YEAR

Summer Session

ENGL 1301 Composition and Rhetoric	3
HPRS 1106 Medical Terminology	1
MATH 1332 Structures of College Math I	3

First Semester

COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1302 Composition and Literature	3
PTHA 1201 The Profession of Physical Therapy	2
PTHA 1305 Basic Patient Care Skills	3
PTHA 1321 Clinical Pathophysiology	3

Second Semester

PHED 1166 CPR for Allied Health	1
PSYC 2301 Introduction to Psychology or PSYC 2302 Applied Psychology	3
PTHA 1325 Communication in Health Care	3
PTHA 1431 Physical Agents	4
SPCH 1321 Business and Professional Speech	3

Summer Session

PTHA 2460 Clinical I	4

SECOND YEAR

First Semester

PTHA 1413 Functional Anatomy	4
PTHA 2201 Assessment Skills	2
PTHA 2361 Clinical II	3
PTHA 2409 Therapeutic Exercise	4

Second Semester

PTHA 2431 Management of Neurological Disorders	4
PTHA 2435 Rehabilitation Techniques	4
PTHA 2462 Clinical III	4

Total Hours	**72**

PHYSICAL THERAPIST ASSISTANT COURSES

PTHA 1201 The Profession of Physical Therapy
(51.0806) (2-0) 2 hours
Introduction to the profession of physical therapy including the historical and current scope of physical therapy. Legal aspects and ethical concepts that help prepare the student to participate as a member of the health care team and terminology used in the profession are studied. (SCANS 1, 2, 4, 5, 6, 11) Corequisites: PTHA 1305 and PTHA 1321.

PTHA 1305 Basic Patient Care Skills
(51.0806) (1-6) 3 hours
Introduction to the theory and application of basic patient handling, functional skills, assessment techniques, and data collection techniques. Vital signs, medical asepsis, dressings and bandaging, body mechanics, bed mobility and transfers, normal sensorimotor development and developmentally-based preambulation activities and progressive gait training are studied. (SCANS 1, 2, 6, 9, 11) Corequisites: PTHA 1201 and PTHA 1321.

PTHA 1321 (Clinical) Pathophysiology
(51.0806) (3-0) 3 hours
Study of the pathogenesis, prognosis, and therapeutic management of diseases/conditions commonly encountered in physical therapy. The ability to acquire information specific to diagnoses that affect the physical therapy treatment setting, diseases and injuries involving the musculoskeletal and neuromuscular systems, and the need for physical therapy intervention are stressed. (SCANS 1, 2, 5, 6, 11) Corequisites: PTHA 1201 and PTHA 1305.

PTHA 1325 Communication in Health Care
(51.0806) (3-0) 3 hours
Integration of communication theories and principles for optimal delivery of health care. Encompasses psychosocial aspects of health care; verbal, nonverbal and written communication skills; patient-practitioner interaction, including working with diverse patient populations throughout the life span with special emphasis on the geriatric population; and concepts of the practitioner's self-esteem and self-management and their impact on the health care setting. (SCANS 1, 2, 5, 6, 7, 10, 11) Prerequisites: PTHA 1201, PTHA 1305 and PTHA 1321. Corequisite: PTHA 1431.

PTHA 1413 Functional Anatomy
(51.0806) (3-3) 4 hours
Study of human anatomy and its application to the motion of the musculoskeletal system as it relates to normal activities and dysfunctions. Integration of skills

related to the kinesiological assessment of the human body. Provides the student with a working knowledge of the human musculoskeletal and neuromuscular systems and an understanding of how these systems interact to produce efficient human movement. (SCANS 1, 2, 6, 11) Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1431 and PTHA 2460. Corequisites: PTHA 2201, PTHA 2361, and PTHA 2409.

PTHA 1431 Physical Agents
(51.0806) (2-6) 4 hours
Study of the biophysical principles, assessment, and application of therapeutic physical agents with specific emphasis on indications, contraindications, medical efficacy, and physiological effects. Thermal agents, hydrotherapy, ultrasound, electromagnetic radiations, electrical current, biofeedback, traction, intermittent compression, continuous passive motion, and therapeutic massage are studied. (SCANS 1, 2, 3, 6, 8, 9, 11) Prerequisites: PTHA 1201, PTHA 1305 and PTHA 1321. Corequisite: PTHA 1325.

PTHA 2201 Assessment Skills
(51.0806) (1-3) 2 hours
Study of assessment techniques used in physical therapy to prepare the physical therapist assistant to assist physical therapy management. The acquisition of muscle function information by use of manual muscle testing; joint range of motion information by use of goniometry; gait information by use of rudimentary gait analysis; and sensory, coordination, and postural assessments are included. (SCANS 1, 2, 3, 6, 9) Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1431 and PTHA 2460. Corequisites: PTHA 1413, PTHA 2361 and PTHA 2409.

PTHA 2361 Clinical II – Physical Therapy Assistant
(51.0806) (0-16) [12 weeks] 3 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This intermediate clinical provides continued exposure to the clinical environment. Students observe and utilize skills obtained in the classroom and laboratory. Provides opportunities for selecting and applying procedures and equipment, improving decision-making, problem-solving and reasoning abilities. Consists of a two day per week experience for twelve weeks under close supervision by a licensed physical therapist or licensed physical therapist assistant. (SCANS 1, 2, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1431 and PTHA 2460. Corequisites: PTHA 1413, PTHA 2201 and PTHA 2409.

PTHA 2409 Therapeutic Exercise
(51.0806) (2-6) 4 hours
Critical examination of concepts and application of techniques related to therapeutic exercise and functional training. Elements of normal and abnormal function and facilitation of responses desired in the performance of exercise; monitoring and correcting patient performance; and decision-making, problem-solving and reasoning skills as they relate to therapeutic exercise from a diagnosis/symptom-related perspective are studied and integrated with functional anatomy. (SCANS 1, 2, 5, 6, 9, 11) Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1431 and PTHA 2460. Corequisites: PTHA 1413, PTHA 2201 and PTHA 2361.

PTHA 2431 Management of Neurological Disorders
(51.0806) (3-3) 4 hours
Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected neurological disorders. Time management, creative thinking, decision-making, problem solving and reasoning abilities as they relate to progressing the plan of care are emphasized. Sections of study will include selected progressive disabilities, traumatic brain injury, cerebral vascular accident, spinal cord injury, and pediatrics. This course is completed during the first part of the semester to allow for the final full-time clinical. (SCANS 1, 2, 5, 6, 9, 11) Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1413, PTHA 1431, PTHA 2201, PTHA 2361, PTHA 2409 and PTHA 2460. Corequisites: PTHA 2435 and PTHA 2462.

PTHA 2435 Rehabilitation Techniques
(51.0806) (3-3) 4 hours
Advanced course integrating previously learned and new skills/techniques into the comprehensive rehabilitation of selected long-term pathologies. Time management, creative thinking, decision-making, problem solving and reasoning abilities as they relate to progressing the plan of care are emphasized. Sections of study will include selected progressive disabilities, prosthetics, orthotics, cardiac rehabilitation, respiratory care, sports medicine, work hardening, and burn care. This course is completed during the first part of the semester to allow for the final full-time clinical. (SCANS 1, 2, 5, 6, 9, 11) Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1413, PTHA 1431, PTHA 2201, PTHA 2361, PTHA 2409 and PTHA 2460. Corequisites: PTHA 2431 and PTHA 2462.

PTHA 2460 Clinical I – Physical Therapy Assistant [formerly PTHA 2488]
(51.0806) (0-40) [6 weeks] 4 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This basic clinical provides the initial exposure to the clinical environment. Students observe and utilize skills obtained in the classroom and laboratory. Provides opportunities for selecting and applying procedures and equipment, improving decision-making, problem-solving and reasoning abilities. Consists of six weeks full-time experience under close supervision by a licensed physical therapist or licensed physical therapist assistant. (SCANS 1, 2, 4, 5, 6, 7, 8, 9, 10, 11)
Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325 and PTHA 1431.

PTHA 2462 Clinical III – Physical Therapy Assistant [formerly PTHA 2489]
(51.0806) (0-40) [6 weeks] 4 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. This advanced clinical provides the final clinical experience. Consists of a six-week, full-time experience designed as a capstone experience to simulate an actual working environment. Students observe and utilize skills obtained in the classroom and laboratory. Provides opportunities for selecting and applying procedures and equipment, improving decision-making, problem-solving and reasoning abilities. The student will be able to improve upon the skills already learned and add additional techniques specific to individual facilities. Close supervision by a licensed physical therapist or licensed physical therapist assistant is required. Upon completion of this clinical, an additional capstone experience in the form of a mock state board exam is included. (SCANS 1, 2, 4, 5, 6, 7, 8, 9, 10, 11)
Prerequisites: PTHA 1201, PTHA 1305, PTHA 1321, PTHA 1325, PTHA 1413, PTHA 1431, PTHA 2201, PTHA 2361, PTHA 2409, and PTHA 2460. Corequisites: PTHA 2431 and PTHA 2435.

Physics

Faculty: G. Brent McAfee, chair; Dr. Ashok Khosla.

The principal objective of the physics department is to train physicists at the college level. In addition, it seeks to provide for certain other majors the foundation in the fundamental physical principles necessary for effective work in engineering, medicine, dentistry, chemistry and technology.

Course of Study for Associate in Science Degree Physics

	Semester Hrs
General Education Requirements	**59**
COSC 1401 Microcomputer Applications	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
Foreign language sequence 1411, 1412, 2311, 2312	14
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
*MATH 2413 Calculus I	4
MATH 2414 Calculus II	4
MATH 2415 Calculus III	4
MATH 2320 Differential Equations	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking	3
Major Requirements	**8**
PHYS 2425 Engineering Physics I	4
PHYS 2426 Engineering Physics II	4
Total Semester Hours	**67**

*Prerequisite to MATH 2413 should be taken during the summer prior to freshman enrollment. Students with strong mathematics background should consider advanced standing examinations.

PHYSICS COURSES

PHYS 1401 College Physics I
(40.0801.5303) (3-3) 4 hours
A study of classical mechanics, molecular physics, and heat with applications. Recommended for students of medicine, dentistry, veterinary medicine, optometry, biology, and architecture. The student will be involved in reading information or problems and using critical-thinking skills and mathematics to organize the information or to arrive at an answer; also requires

student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisite: Passed all sections of the TASP exam and have a working knowledge of algebra and trigonometry.

PHYS 1402 College Physics II
(40.0801.5303) (3-3) 4 hours
A study of classical electricity, magnetism, mechanical wave motion, optics, and practical aspects of modern physics. The student will be involved in reading information or problems and using critical-thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisite: PHYS 1401.

PHYS 2425 Engineering Physics I
(40.0801.5403) (3-3) 4 hours
A study of classical mechanics, and thermodynamics for students aspiring to professional academic degrees in the fields of physical science, various engineering specialties, and mathematics. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisite or corequisite: MATH 2413.

PHYS 2426 Engineering Physics II
(40.0801.5403) (3-3) 4 hours
A study of classical electricity, magnetism, waves, and optics from a theoretical and engineering application viewpoint. The student will be involved in reading information or problems and using critical thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisite: PHYS 2425. Prerequisite or corequisite: MATH 2414.

PHYS 2427 Engineering Physics III
(40.0801.5403) (3-3) 4 hours
A study of modern physics including atomic and nuclear phenomena, relativity, and quantum effects. The student will be involved in reading information or problems and using critical-thinking skills and mathematics to organize the information or to arrive at an answer; also requires student writing skills in order to communicate the information acquired in a written format. Lab fee required. (SCANS 1, 3, 6, 9) Prerequisite: PHYS 2426.

Plumbing (see Air Conditioning)

Psychology and Sociology

Faculty: Jane Hellinghausen, chair; Dr. Art Brownell, Carla Wells.

The psychology/sociology department offers freshman- and sophomore-level courses in psychology and sociology with a wide selection for both disciplines. The science of psychology studies human development and behavior throughout the lifespan, learning, thinking and mood states, gender differences, and relationships. Students are introduced to methodology, critical thinking, and application of psychological principles to everyday life. Career paths offer students a wide selection of occupations including neuropsychology, clinical practice, research, teaching, industrial/organizational and communications. Psychology majors may choose between an associate of arts (A.A.) or an associate of science (A.S.) degree.

The science of sociology studies the multitude of social and cultural influences that are significant to the development of the individual over his/her lifetime. Group dynamics, marriage and family living, juvenile delinquency, race and ethnicity, relationship dynamics and human sexuality empower the student with a wide application of sociological methodology. Career paths offer students many opportunities in government, business, academia, law enforcement, communications, public and/or private research, medical and gerontological occupations.

Psychology/sociology majors are encouraged to organize their degree plans with the assistance and advice of the department chair and academic counselors. It is the responsibility of the student to forecast the transferability of his/her degree plan to university curricula.

Course of Study for Associate in Arts Degree Psychology or Sociology

	Semester Hrs
General Education Requirements	**53**
COSC 1401 Microcomputer Applications	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
General Education Elective	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3

Lab Sequence in BIOL, CHEM, GEOL or PHYS 8
MATH 1332 Structures of College Mathematics I 3
MATH 1333 Structures of College Mathematics II 3
PHED (any two one-hour activity courses) 2
PHIL 2301 Introduction to Philosophy I or PHIL 2306 Introduction to Philosophy II 3
SPCH 1315 Public Speaking 3

In addition to the 53 hours listed above, the student must choose one of the following options.

Psychology Option

	Semester Hrs
Major Requirements	**12**
PSYC 2301 Introduction to Psychology	3
PSYC 2302 Applied Psychology	3
PSYC 2308 Child Psychology	3
SOCI 1301 Principles of Sociology	3
Total Semester Hours	**65**

Note: The following electives may be substituted for above courses to accommodate the transferring institution: PSYC 2303 Business Psychology, PSYC 2306 Human Sexuality, PSYC 2314 Lifespan Growth and Development, PSYC 2315 Psychology of Adjustment, and PSYC 2319 Social Psychology.

Sociology Option

	Semester Hrs
Major Requirements	**12**
PSYC 2301 Introduction to Psychology	3
SOCI 1301 Principles of Sociology	3
SOCI 1306 Social Problems	3
SOCI 2326 Social Psychology	3
Total Semester Hours	**65**

Note: The following electives may be substituted for above courses to accommodate the transferring institution: SOCI 2301 Sociology of the Family, and SOCI 2306 Human Sexuality.

Course of Study for Associate in Science Degree Psychology

	Semester Hrs
General Education Requirements	**52**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
CHEM 1311/1111 General Inorganic Chemistry I/ Fundamentals of Chemistry Lab I	4
CHEM 1312/1112 General Inorganic Chemistry II/ Fundamentals of Chemistry Lab II	4
COSC 1401 Microcomputer Applications	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH 1314 College Algebra or higher level math	3
MATH 1342 Mathematical Statistics	3
PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech	3
Major Requirements	**12**
PSYC 2301 Introduction to Psychology	3
PSYC 2302 Applied Psychology	3
PSYC 2308 Child Psychology	3
SOCI 1301 Principles of Sociology	3
Total Semester Hours	**64**

Course of Study for Associate in Science Degree Sociology

	Semester Hrs
General Education Requirements	**52**
BIOL 1406 General Biology I	4
BIOL 1407 General Biology II	4
CHEM 1311/1111 General Inorganic Chemistry I/ Fundamentals of Chemistry Lab I	4
CHEM 1312/1112 General Inorganic Chemistry II/ Fundamentals of Chemistry Lab II	4
COSC 1401 Microcomputer Applications	4
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	3
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
MATH 1314 College Algebra or higher level math	3
MATH 1342 Mathematical Statistics	3
PHED (any two one-hour activity courses)	2
SPCH 1321 Business and Professional Speech	3
Major Requirements	**12**
SOCI 1301 Principles of Sociology	3
SOCI 1306 Social Problems	3
SOCI 2326 Social Psychology	3
PSYC 2301 Introduction to Psychology	3
Total Semester Hours	**64**

PSYC 2301 Introduction to Psychology

(42.0101.5125) (3-0) 3 hours

Presents a basic understanding of psychological terms, theories, and methodologies in the scientific discipline that studies behavior and mental processes. Cognitive abilities such as problem solving, decision making, and communication, affective states like building self-esteem and sociability, and behavioral events, where one participates as a group member, are explored. Information acquisition, interpretation, and communication of a psychological nature are the basis on which this course is predicated. In this way, psychological principles are understandable in the context of biology, the brain, neurotransmitters and hormones, personality theory, learning principles, life-span development, relationships, abnormal psychology, and therapies. A wide application of a variety of topics is the focus of this introductory course. (SCANS 5, 6, 9, 10, 11) Prerequisite: None.

PSYC 2302 Applied Psychology

(42.0101.5225) (3-0) 3 hours

Presents a wide array of interpersonal challenges relating to the workplace. Critical workplace competencies include leadership, negotiation, team building, cohesiveness, and communication. Analyzing the interrelationships of organizational behavior across the spectrum from our similarities to our diversities is a major focus. Personal qualities that reinforce job success such as responsibility, sociability, self-management, and workplace ethics are presented in practical, job-related situations to enhance the student's job future as an effective and valued employee. (SCANS 5, 6, 7, 9, 10) Prerequisite: None.

PSYC 2303 Business Psychology

(42.0101.5225) (3-0) 3 hours

Through the presentation of workplace interpersonal skills students are introduced to Industrial/ Organization Psychology. Taking an integrative and eclectic approach to the art and science of I/O psychology, the following topics will be addressed: organizational behavior, group dynamics, conflict resolution, politics, sabotage and scapegoating, workplace romance, communication, motivation, personality variables, leadership, and stress and adaptation. Students will apply cognitive strategies to real-life workplace scenarios. (SCANS 5, 6, 7, 9, 10) Prerequisite: None.

PSYC 2306 Human Sexuality

(42.0101.5325) (3-0) 3 hours

An in-depth study of human sexuality across the life cycle utilizing legal, ethical, sociological, biological and psychological perspectives. Course incorporates current research and theories to explore the impact of social and cultural expectations on human sexual behavior. (SCANS 6, 9, 10, 11) Prerequisite: None.

PSYC 2308 Child Psychology

(42.0701.5125) (3-0) 3 hours

Presents the developmental stages of prenatal; birth; infancy; early, middle, and late childhood; and adolescence. Focuses on the influences of, and interaction between, biological/genetic factors (nature) and environmental/learned factors (nurture). Studies cognitive, physical, socioemotional, psychological, and language development at all stages. Requires ten hours of observation of a preschool child and a written case study. (SCANS 1, 2, 4, 6, 9) Prerequisite: None.

PSYC 2314 Lifespan Growth and Development

(42.0701.5125) (3-0) 3 hours

Presents the developmental stages of prenatal; birth; infancy; early, middle, and late childhood; adolescence; young, middle, and late adulthood; and end of life issues. Focuses on the influence of, and interaction between, biological/genetic factors (nature) and environmental/learned factors (nurture). Studies cognitive, physical, socioemotional, and psychological development at all stages. Requires six hours of observation of a preschool child and a written case study. Also requires a special written project involving interaction with an adolescent or adult. (SCANS 1, 2, 4, 6, 9) Prerequisite: None.

PSYC 2315 Psychology of Adjustment

(42.0101.5625) (3-0) 3 hours

Adjustment to life's difficult side is the focus of this course. Effectively managing one's time in the face of stress and time constraints, coping with a diversity of perception from others, interpreting and communicating information from others in different social settings provides students with a wide application of psychological information. In more tangential ways, personal qualities such as responsibility in the face of conflict and frustration will be addressed, along with self-management, and communication of problems and concerns to others that often present barriers to healthy adjustment. (SCANS 4, 5, 6, 9, 10, 11) Prerequisite: None.

PSYC 2319 Social Psychology

(42.1601.5125) (3-0) 3 hours

Presents methodologies and research dealing with human behavior in social situations. Interpersonal abilities, being a team member, leadership roles, and adjustment to diversity are a major focus. Problem solving in groups, communicating with others, self-management skills, and responsibility as psychosocial attributes will be addressed. The way society's institutions, group affiliations, and group dynamics influence an individual's behavior is the emphasis of this course. (SCANS 5, 9, 10, 11) Prerequisite: None.

SOCIOLOGY

SOCI 1301 Principles of Sociology
(45.1101.5125) (3-0) 3 hours
Introduces the student to sociological concepts, theories and new ways of thinking about social issues such as poverty, inequality and deviance. Examines various social institutions and their contributions to social life; identifies the social groups that make up society; and explores the significance of culture and social structure for understanding human behavior. Course also available via Internet. (SCANS 6, 9) Prerequisite: None.

SOCI 1306 Social Problems
(45.1101.5225) (3-0) 3 hours
Critically analyzes the causes of, responses to and implications of numerous social problems utilizing a sociological imagination. Course includes field trips and guest speakers to obtain firsthand knowledge of social problems and to meet professionals who work directly with them. The course is designed to introduce students to social problems as well as to stimulate critical thinking about problems and related policy issues. (SCANS 5, 6, 7, 9, 10, 11) Prerequisite: None.

SOCI 2301 Sociology of the Family
(45.1101.5425) (3-0) 3 hours
Emphasizing cultural, class and racial diversity, the course examines various dynamics of marriages, families and other intimate relationships. Course includes an introduction to theories, concepts and research methods used in the sociological study of marriages and families. Love and mate selection; sexuality, reproduction and birth; communication and conflict; and divorce and marriage are among many of the issues covered. (SCANS 2, 5, 6, 9, 10, 11) Prerequisite: None.

SOCI 2306 Human Sexuality
(42.0101.5325) (3-0) 3 hours
An in-depth study of human sexuality across the life cycle utilizing legal, ethical, sociological, biological and psychological perspectives. Course incorporates current research and theories to explore the impact of social and cultural expectations on human sexual behavior. (SCANS 6, 9, 10, 11) Prerequisite: None.

SOCI 2326 Social Psychology
(42.1601.5125) (3-0) 3 hours
Surveys research and theories dealing with human behavior in social situations. Includes attitudes, prejudice, interpersonal attraction, group behavior, conformity, motivation and conflict. Students may elect subject area heading appropriate to their major. Students may not receive credit for both PSYC 2319 and SOCI 2326. (SCANS 5, 9, 10, 11) Prerequisite: None.

Radiologic (X-Ray) Technology

Faculty: Sue Leach, chair; Carrie Nanson, clinical coordinator; Dr. James Sheehan, medical advisor.

Odessa College, in cooperation with local hospitals, offers a radiologic technology program designed to provide understanding, proficiency and skill. The program is accredited by the Joint Review Committee on Education in Radiologic Technology (JRCERT). Upon successful completion of the program, students are granted an associate in applied science degree, are eligible to apply for the certification examination given by the American Registry of Radiologic Technologists in diagnostic x-ray technology, and are eligible for state certification.

The curriculum balances general educational and technical courses with supervised practicums at local hospitals. These combined experiences provide students with an opportunity for educational development as well as occupational competence during the 24-month program.

Available practicum space limits enrollment; therefore, students are admitted on a selective basis. To be considered for admission to the program, a prospective student must be a high school graduate or equivalent, must achieve a satisfactory score on selected entrance examinations, must have character references and must be approved by the program admissions committee. After being accepted, students must maintain a "C" average in all radiologic technology courses and an average of "C" in all other courses, or they will be dropped from the program. Prior to entering the practicum portion of the program, students are required to complete a physical examination, which includes drug screening. Background checks are required for all applicants.

Applicants or other interested persons seeking additional information should contact the radiologic technology program director or the Student Development Center at the college. Prospective students are to submit their application packets for admission by April 30, for review by the admissions committee.

Note: All students are required to maintain a policy of health and accident insurance and proof of specified immunizations. Liability insurance is also required and is a part of the regular college fee schedule.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Radiologic Technology

Semester Hrs

Summer Session II

HIST 1301 United States History to 1877 or
HIST 1302 United States History From 1877 or
HIST 2301 History of Texas 3
*RADR 1301 Introduction to Radiography 3
RADR 1311 Basic Radiographic Procedures 3

FIRST YEAR

First Semester

**BIOL 2404 Human Anatomy and Physiology 4
RADR 1266 Practicum I 2
RADR 1303 Patient Care 3
RADR 2301 Intermediate Radiographic Procedures 3
RADR 2309 Radiographic Imaging Equipment 3

Second Semester

PHED (any one-hour activity course) 1
RADR 1313 Principles of Radiographic Imaging I 3
RADR 1366 Practicum II 3
RADR 2305 Principles of Radiographic Imaging II 3
RADR 2431 Advanced Radiographic Procedures 4

Summer Session I

ENGL 1301 Composition and Rhetoric 3
RADR 1367 Practicum III 3

Summer Session II

COSC 1301 Microcomputer Applications (or higher level) 3

SECOND YEAR

First Semester

RADR 2217 Radiographic Pathology 2
RADR 2333 Advanced Medical Imaging 3
RADR 2366 Practicum IV 3
SPCH 1321 Business and Professional Speech 3

Second Semester

MATH 1332 Structures of College Mathematics I or higher level math 3
RADR 1291 Special Topics in Medical Radiologic Technology 2
RADR 2313 Radiation Biology and Protection 3
RADR 2367 Practicum V 3

Summer Session I

RADR 1167 Practicum VI 1
RADR 2235 Radiologic Technology Seminar 2

Total Hours 72

*Note: RADR 1301 may not make during Summer Session II (this class is also offered in the spring semester on Tuesday and Thursday from 6-7:20 p.m.). RADR 1301 is open to anyone considering a career in radiologic technology.

**Note: BIOL 2404 is offered during other semesters as an Internet course.

RADIOLOGIC TECHNOLOGY COURSES

RADR 1167 Practicum VI – Medical Radiologic Technology/Technician

(51.0907) (0-8) 1 hour

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. A health practicum will be an unpaid learning experience. The student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Requires rotating through different work areas. Competencies include: performance of all duties required of a registered radiologic technologist to include patient positioning, technical factor selection, interpersonal communication skills and film critique (film evaluation regarding anatomy, positioning and technical factors); reading and understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the required supervision; ability to prioritize and organize activities necessary to complete examinations; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting the radiologist with fluoroscopic examinations; demonstrating specific exams on a patient (performance evaluation). Includes the following clinical rotations: ultrasound, nuclear medicine, radiation therapy and quality assurance. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 2367. Corequisite: RADR 2235.

RADR 1266 Practicum I – Medical Radiologic Technology/Technician
(51.0907) (0-16) 2 hours
Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. A health practicum will be an unpaid learning experience. Introduces the clinical environment at a major facility. The student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Introduces the clinical environment at a major facility. Requires rotating through different work areas. Student participates as a team member while learning to develop and utilize good interpersonal communication skills, better enabling the student to meet patients' needs. Competencies include: the production of standard radiographs of the chest, abdomen and upper and lower extremities to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment when producing standard radiographs on patients with direct supervision (pre-competency) and indirect supervision (post-competency); demonstrate ability to prioritize and organize activities necessary to complete examinations; evaluate and correct performance (in the presence of a technologist) following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; demonstration of specific exams on a patient (performance evaluation). Presents clinical introduction to fluoroscopic examination and film critique. (SCANS 1, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 1311 or consent of department chair. Corequisites: RADR 1303, RADR 2301, and RADR 2309.

RADR 1291 Special Topics in Medical Radiologic Technology/Technician – Professionalism
(51.0907) (2-0) 2 hours
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. The student is required to prepare a cover letter and resume. Learning outcomes/objectives are determined by local occupational need and business and industry trends. (SCANS 1, 2, 6, 7, 9) Prerequisite: RADR 2333. Corequisites: RADR 2313 and RADR 2367.

RADR 1301 Introduction to Radiography
(51.0907) (3-0) 3 hours
An overview of the historical development of radiography, basic radiation protection, an introduction to medical terminology, ethical and legal issues for health care professionals, and an orientation to the program and the health care system. Also an introduction to basic physics of x-ray equipment and auxiliary devices, prime exposure factors, technical factors of film quality, infection control procedures, patient transportation and body mechanics will be presented. The student will define basic medical terms; exhibit ethical and legal standards; demonstrate basic radiation protection practices and relate the role of radiography to health care. The student will demonstrate a basic understanding of radiographic equipment and auxiliary devices and identify the prime exposure factors. (SCANS 1, 2, 3, 6, 9, 10) Prerequisite: None. Corequisite: RADR 1311 or none.

RADR 1303 Patient Care
(51.0907) (3-0) 3 hours
An introduction in patient assessment, infection control procedures, emergency and safety procedures, communication and patient interaction skills, and basic pharmacology. Also includes locating and understanding information on the patient chart, venipuncture, and sterile technique. The student will assess patient condition; demonstrate accepted infection control and general safety practices; recognize emergency situations; assess effective communication skills; identify applicable pharmaceuticals and their applications; and demonstrate proper sterile technique; and perform venipuncture on a phantom arm. (SCANS 1, 2, 3, 5, 6, 9, 10, 11) Prerequisite: RADR 1311 or consent of department chair. Corequisites: RADR 1266, RADR 2301 and RADR 2309.

RADR 1311 Basic Radiographic Procedures
(51.0907) (1-6) 3 hours
An introduction to radiographic positioning terminology, the proper manipulation of equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of basic anatomy. The areas to be presented cover the upper extremity to include the shoulder girdle and the lower extremity to include the pelvis. The student will define radiographic positioning terms; manipulate equipment properly; position and align anatomical structure and equipment for upper and lower extremity radiography; and evaluate images for proper demonstration of anatomy. Lab fee required. (SCANS 1, 5, 6, 7, 8, 9, 10, 11) Prerequisite: Acceptance to the program. Corequisite: RADR 1301.

RADR 1313 Principles of Radiographic Imaging I

(51.0907) (3-1) 3 hours

An introduction to radiographic image qualities and the effects of exposure variables upon these qualities. The student will define, recognize, and evaluate qualities of the radiographic image; and analyze the effects of exposure variables upon each image quality. Lab fee required. (SCANS 1, 2, 3, 6, 7, 8, 9) Prerequisite: RADR 2309. Corequisites: RADR 1366, RADR 2305 and RADR 2431.

RADR 1366 Practicum II – Medical Radiologic Technology/Technician

(51.0907) (0-24) 3 hours

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. A health practicum will be an unpaid learning experience. The student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Introduces the day shift clinical environment at a major facility. Requires rotating through different work areas. Competencies include: production of standard radiographs of the chest, abdomen and upper and lower extremities with indirect supervision (post-competency); film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment when producing standard radiographs on patients, with direct supervision (pre-competency) and indirect supervision (post-competency); demonstrate ability to prioritize and organize activities necessary to complete examinations; students evaluate and correct performance, in the presence of a technologist, following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting the radiologist with fluoroscopic examinations and demonstrating specific examinations on a patient (performance evaluation). (SCANS 1, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 1266. Corequisites: RADR 1313, RADR 2305, and RADR 2431.

RADR 1367 Practicum III – Medical Radiologic Technology/Technician

(51.0907) (0-24) 3 hours

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. A health practicum will be an unpaid learning experience. The student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Emphasizes practice of basic radiographic procedures in positioning and darkroom techniques. Causes student to use anatomical terms. Requires rotating through different work areas. Competencies include: discussion and demonstration of all standard radiographic positions, with direct supervision (pre-competency) and indirect supervision (post-competency), to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; evaluating and correcting performance, in the presence of a technologist, following a discussion identifying the problem and solution; completing necessary paperwork (some on computer) related to radiographic examinations performed; assisting radiographers in obtaining radiographs on trauma patients; assisting the radiologist with fluoroscopic examinations and demonstrating specific exams on a patient (performance evaluation). Includes the following in clinical rotations: special procedures, CT, breast imaging, magnetic resonance, and quality assurance. (SCANS 1, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 1366.

RADR 2217 Radiographic Pathology

(51.0907) (2-1) 2 hours

A presentation of the disease process and common diseases and their appearance on medical images. The student will classify types of diseases; explain the pathogenesis of common diseases; and identify the appearance of common diseases on medical images. Lab fee required. (SCANS 1, 2, 3, 6, 9, 11) Prerequisites: RADR 1313, RADR 2305 and RADR 2309. Corequisites: RADR 2333 and RADR 2366.

RADR 2235 Radiologic Technology Seminar

(51.0907) (2-0) 2 hours

A capstone course focusing on the synthesis of professional knowledge, skills, and attitudes in preparation for professional employment and lifelong learning. The student will synthesize professional knowledge, skills, and attitudes; demonstrate entry-

level competencies for professional employment; and demonstrate skills for lifelong learning. Special fee required. (SCANS 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 2313. Corequisite: RADR 1167.

RADR 2301 Intermediate Radiographic Procedures

(51.0907) (2-4) 3 hours

A continuation of the study of the proper manipulation of radiographic equipment, positioning and alignment of the anatomical structure and equipment, and evaluation of images for proper demonstration of anatomy. The areas to be presented include the thorax, abdomen, spine and routine contrast media procedures, trauma radiography and radiographic foreign body localization. Also includes review of upper and lower extremity radiography, topographic anatomy, and routine diagnostic positioning. The student will manipulate equipment properly, position and align anatomical structures to include the thorax, abdomen, spine and routine contrast media procedures and equipment; evaluate images for proper demonstration of anatomy. Students will participate in teams demonstrating their ability to work with diversity, exercise leadership and teach others new skills, and demonstrate mastery of positioning of the upper and lower extremities. Lab fee required. (SCANS 1, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 1311 or consent of department chair. Corequisites: RADR 1266, RADR 1303 and RADR 2309.

RADR 2305 Principles of Radiographic Imaging II

(51.0907) (3-1) 3 hours

A continuation of the study of radiographic imaging technique formulation, image quality assurance, and the synthesis of all variables in image production. Discusses equipment maintenance, equipment troubleshooting, departmental design and administration. Explores innovative techniques of imaging. The student will formulate techniques to optimize image quality, minimize patient exposure, and preserve equipment; apply methods of image quality assurance; and adapt technical variables to changing conditions. Lab fee required. (SCANS 1, 2, 3, 6, 7, 8, 9) Prerequisite: RADR 2309. Corequisites: RADR 1313, RADR 1366 and RADR 2431.

RADR 2309 Radiographic Imaging Equipment

(51.0907) (3-0) 3 hours

A study of the equipment and physics of x-ray production, basic x-ray circuits, and the relationship of equipment components to the imaging process. The student will describe the equipment and physics of x-ray production; describe basic x-ray circuits; and relate equipment components to the imaging process. (SCANS 1, 2, 3, 6, 8, 11) Prerequisite: RADR 1311 or consent of department chair. Corequisites: RADR 1266, RADR 1303 and RADR 2301.

RADR 2313 Radiation Biology and Protection

(51.0907) (3-0) 3 hours

A study of the effects of radiation exposure on biological systems, typical medical exposure levels, methods for measuring and monitoring radiation, and methods for protecting personnel and patients from excessive exposure. Presents a review of atomic physics. The student must write and present a term paper. The student will describe the biophysical mechanisms of radiation damage and the somatic and genetic effects of radiation exposure on humans; state typical dose ranges for routine radiographic procedures; explain basic methods and instruments for radiation monitoring, detection, and measurement; and apply appropriate radiation protection practices. (SCANS 1, 2, 3, 6, 7, 9, 11) Prerequisite: RADR 2333. Corequisites: RADR 1291 and RADR 2367 .

RADR 2333 Advanced Medical Imaging

(51.0907) (3-0) 3 hours

An exploration of specialized imaging modalities. An introduction to the use of computers in medical imaging, to include neuroradiography, digital x-ray imaging, angiography, arteriography, foreign body localization, stereoradiography and interventional procedures. The student will describe the various specialized imaging modalities; and differentiate between images produced by different modalities and identify the anatomy demonstrated. The student will also explain the use of computers in medical imaging. (SCANS 1, 2, 6) Prerequisites: RADR 1313, RADR 2305, RADR 2309 and RADR 2431. Corequisites: RADR 2217 and RADR 2366.

RADR 2366 Practicum IV – Medical Radiologic Technology/Technician

(51.0907) (0-24) 3 hours

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. A health practicum will be an unpaid learning experience. The student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Introduces the student to special clinical rotations. Requires rotating through different work areas. Competencies include: discussion and demonstration of all standard radiographic positions and ability to produce radiographs on trauma patients, with direct supervision (pre-competency) and indirect supervision (post-

competency), to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; evaluate and correct performance, in the presence of a technologist, following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting radiographers in obtaining radiographs on trauma patients; assisting the radiologist with fluoroscopic examinations; and demonstrating specific examinations on a patient (performance evaluation). Includes the following clinical rotations: special procedures, computerized tomography, breast imaging, magnetic resonance, cardiac catherization laboratory, ultrasound, nuclear medicine, radiation therapy and quality assurance. (SCANS 1, 4, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 1367. Corequisites: RADR 2217 and RADR 2333.

RADR 2367 Practicum V – Medical Radiologic Technology/Technician

(51.0907) (0-22) 3 hours

Practical, general workplace training supported by an individualized learning plan developed by the employer, college, and student. A health practicum will be an unpaid learning experience. The student will apply the theory, concepts, and skills involving specialized materials, tools, equipment, procedures, regulations, laws, and interactions within and among political, economic, environmental, social, and legal systems associated with the occupation and the business/industry and will demonstrate legal and ethical behavior, safety practices, interpersonal and teamwork skills, and appropriate written and verbal communication skills using the terminology of the occupation and the business/industry. Introduces the student to special clinical rotations. Requires rotating through different work areas. Competencies include: discussion and demonstration of all standard radiographic positions and ability to produce radiographs on trauma patients, with direct supervision (pre-competency) and indirect supervision (post-competency), to include film critique (film evaluation regarding anatomy, positioning and technical factors); reading, understanding and demonstrating understanding of positioning materials by selecting necessary equipment and producing standard radiographs on patients with the necessary supervision; ability to prioritize and organize activities necessary to complete examinations; evaluate and correct performance (in the presence of a technologist) following a discussion identifying the problem and solution; completion of necessary paperwork (some on computer) related to radiographic examinations performed; assisting radiographers in obtaining radiographs on trauma patients; assisting the radiologist with fluoroscopic examinations; demonstrating specific examinations on a patient (performance evaluation). Includes the following clinical rotations: ultrasound, nuclear medicine, radiation therapy and quality assurance. (SCANS 1, 4, 5, 8, 11) Prerequisite: RADR 2366. Corequisites: RADR 1291 and RADR 2313.

RADR 2431 Advanced Radiographic Procedures

(51.0907) (3-3) 4 hours

Continuation of positioning; alignment of the anatomical structure and equipment, evaluation of images for proper demonstration of anatomy and related pathology. Presents cross-sectional anatomy, male and female studies, ultrasound, computed radiography and magnetic resonance imaging, and a review of the thorax, abdomen, spine and routine contrast media procedures. The student will position and align the anatomical structures of the cranium and evaluate images for proper demonstration of anatomy. Also, the student will be able to identify male and female radiographic studies and equipment; be able to identify cross-sectional anatomy structures; demonstrate mastery of the anatomy and positioning of the thorax, abdomen, spine and routine contrast media procedures; and demonstrate a basic understanding of magnetic resonance imaging and ultrasound. Lab fee required. (SCANS 1, 5, 6, 7, 8, 9, 10, 11) Prerequisite: RADR 2301. Corequisites: RADR 1313, RADR 1366 and RADR 2305.

Reading

Faculty: Tammy Patni, chair; Mona Sandlin, Pam Williamson.

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

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

These courses implement multimedia, including computerized instruction, and support the philosophy that a person's ultimate reading potential is never reached. Because effective study skills predominately depend on precise reading abilities, learning methods are an integrated element in the curriculum. Time spent in this program is an investment in self. All people, regardless of their reading ability or what kind of student they may be, can improve their reading skills.

Courses listed below do not satisfy requirements as electives for any degree at Odessa College. Students who intend to transfer to another community college, senior college or university should check with that institution to determine whether hours earned in reading will transfer for degree credit. Students who enroll for Basic English (0370) and have not taken and passed the reading section of TASP must enroll in a reading class.

READ 0371 Basic Reading

(32.0108.5212) (3-0) 3 hours

Initiates instruction in developmental reading with emphasis on building vocabulary, increasing reading rate, and improving comprehension. Aims to empower students with independent learning techniques and effective study skills to enhance self-esteem and reaffirm the belief in self as a successful learner. Includes individual diagnosis of reading strengths and weaknesses for placement in multileveled materials. Lab fee required. (SCANS 1, 9, 10) Prerequisite: None or placement by counselors.

READ 0372 College Reading

(32.0108.5212) (3-0) 3 hours

Stresses efficient learning techniques and application of reading and study skills. Students are encouraged to establish habits that result in increased success in learning in both the classroom and workplace environments. Includes diagnosis of individual reading strengths and weaknesses for placement in multilevel course that includes computer exercises, timed reading practices and vocabulary study. Lab fee required. (SCANS 1, 9, 10) Prerequisite: None or placement by counselors.

READ 0373 Advanced College Reading

(32.0108.5212) (3-0) 3 hours

Continues independent work to maintain improved critical reasoning skills designed to meet specific needs in comprehension, vocabulary, reading rate, and study skills. The student monitors and corrects ineffective behavior as he assesses himself accurately, sets personal goals, and monitors progress. Lab fee required. (SCANS 1, 7, 9, 10) Prerequisite: READ 0372 passed with a "C" or better, satisfactory placement score or reading faculty approval.

COLLEGE READING TECHNIQUES

The college reading techniques course provides an alternative reading program with structured, individualized, self-paced instruction in a multimedia and multilevel environment that includes computer instruction. Regardless of present reading ability, students can expect to increase vocabulary and reading rate, and improve comprehension. Effective study techniques offer opportunities to improve performance in both academic and vocational-technical courses.

Diagnostic tests are administered to determine placement levels and specific areas of need. Post-tests evaluate progress during the semester. Through student-teacher conferences, a self-paced plan of action is developed to set immediate and long-range goals.

Students should consult with the instructor in person immediately upon registration to arrange meeting times for this one-hour self-paced course.

READ 0171 Improving Reading Skills

(32.0108.5212) (0-2) 1 hour

Introduces self-paced, individualized instruction in a multimedia environment which is designed to teach the student efficient reading techniques. Students establish habits that result in increased success in learning in both the classroom and workplace environments, which ultimately can result in higher self-esteem. Through independent learning activities, the student learns to validate his understanding of reading materials, increase vocabulary with various written activities and gain in individual reading rates. Lab fee required. (SCANS 1, 4, 7, 10) Prerequisite: None.

Refrigeration (see Air Conditioning)

Religion (see Social Sciences)

Respiratory Care

Faculty: Jacque Sullivan, chair; Dr. John Bray, medical director.

Odessa College offers an intensive program, which prepares the student to become an integral part of the allied health team. The program graduates a student with an associate of applied science degree and qualifies them to apply for the Certified Respiratory Therapist (CRT) examination administered by the National Board for Respiratory Care.

The curriculum balances general educational and technical courses with supervised clinical practice in conjunction with area medical affiliates. These combined experiences provide students with an opportunity for educational development as well as occupational competence during the 24-month program.

Students are admitted on a selected basis due to limited space in the clinical area of study. To be considered for admission to the program, a prospective student must be a high school graduate or equivalent, achieve a satisfactory score on selected entrance exams, complete a hospital observation, and be approved by the admissions committee. After acceptance into the program, all students are required to maintain a grade of "C" or better in all respiratory care courses and must maintain a "C" average or better in all other courses. Students failing to meet these scholastic requirements will be dropped from the program. All respiratory care courses must be taken in the proper sequence as described in the catalog. Prior to entering the clinical portion of the program, students are required to complete a physical examination, including drug screening, background check, and provide records of current immunization status.

Note: All respiratory care students are required to have health and accident insurance. Liability insurance is also required and is part of the regular college fee schedule.

The Odessa College respiratory care program is accredited by the Committee on Accreditation of Allied Health Programs through the recommendations of the Committee on Accreditation of Respiratory Care.

Students wishing to apply or seeking additional information should contact the Student Development Center. Prospective students are to submit their applications for admission prior to March 31.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Respiratory Therapy

FIRST YEAR

Semester Hrs

Summer Session I

BIOL 2401 Anatomy and Physiology I 4
MATH 1332 Structures of College Mathematics I or higher level math 3

Summer Session II

BIOL 2402 Anatomy and Physiology II 4

Fall Semester

COSC 1301 Microcomputer Applications (or higher level) 3
PHED 1166 CPR for Allied Health 1
RSPT 1103 Medical Terminology 1
RSPT 1160 Clinical Practice I 1
RSPT 1325 Respiratory Care Sciences 3
RSPT 1410 Respiratory Care Procedures I 4

Spring Semester

RSPT 1213 Basic Respiratory Care Pharmacology 2
RSPT 1360 Clinical Practice II 3
RSPT 1411 Respiratory Care Procedures II 4
RSPT 2310 Cardiopulmonary Disease 3
SPCH 1321 Business and Professional Speech 3

Summer Sessions I & II

RSPT 2314 Mechanical Ventilation 3
RSPT 2360 Clinical Practice III 3

SECOND YEAR

Fall Semester

BIOL 2420 Microbiology 4
RSPT 2325 Cardiopulmonary Diagnostics 3
RSPT 2353 Neonatal/Pediatric Cardiopulmonary ... 3
RSPT 2361 Clinical Practice IV 3

Spring Semester

ENGL 1301 Composition and Rhetoric 3
HIST 1301 United States History to 1877 or HIST 1302 United States History From 1877 3
RSPT 2133 Respiratory Care Case Management 1
RSPT 2231 (Clinical) Simulations in Respiratory Care 2
RSPT 2247 Specialties in Respiratory Care 2
RSPT 2363 Clinical Practice V 3

Total Hours 72

RSPT 1103 Medical Terminology

(51.0908) (1-0) 1 hour

An introduction to medical terms which will provide the student with the written and verbal skills necessary to communicate with health care personnel. (SCANS 1) Prerequisite: Admission to respiratory care program. Corequisites: RSPT 1160, RSPT 1325 and RSPT 1410.

RSPT 1160 Clinical – Respiratory Therapy Technician – Clinical Practice I

(51.0908) (0-6) 1 hour

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Provides the initial exposure to the hospital environment. Strengthens communication and decision-making skills by observation and administration of respiratory care modalities. Requires application of patient assessment techniques, utilizing medical terminology, documentation, interpretation of medical records, and provides opportunity to apply sterilization techniques. (SCANS 1, 5, 6, 8, 9, 11) Prerequisite: Admission to respiratory care program. Corequisites: RSPT 1103, RSPT 1325 and RSPT 1410.

RSPT 1213 Basic Respiratory Care Pharmacology

(51.0908) (2-0) 2 hours

A study of basic pharmacological principles/practices of respiratory care drugs. Emphasis on classification, routes of administration, dosages/calculations, and physiological interaction. (SCANS 3, 6, 7, 8, 9, 11) Prerequisites: RSPT 1103, RSPT 1160, RSPT 1325 and RSPT 1410. Corequisites: RSPT 1360, RSPT 1411 and RSPT 2310.

RSPT 1325 Respiratory Care Sciences

(51.0908) (2-4) 3 hours

A study of cardiopulmonary sciences including physics, math, chemistry, and statistics. Lab fee required. (SCANS 2, 3, 6, 8, 9, 11) Prerequisites: Admission to respiratory care program. Corequisites: RSPT 1103, RSPT 1160 and RSPT 1410.

RSPT 1360 Clinical – Respiratory Therapy Technician – Clinical Practice II

(51.0908) (0-16) 3 hours

A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Allows students to participate as a member of the health care team in a clinical setting, including decision-making and troubleshooting skills. Enforces the personal qualities for success such as workplace ethics, time-management and organizational skills, responsibility, and sociability. (SCANS 4, 5, 8, 9, 10) Prerequisites: RSPT 1103, RSPT 1160, RSPT 1325 and RSPT 1410. Corequisites: RSPT 1213, RSPT 1411 and RSPT 2310.

RSPT 1410 Respiratory Care Procedures I

(51.0908) (3-4) 4 hours

Provides students with the essential knowledge of the equipment and techniques used in the treatment of pulmonary disease and their clinical application. The following areas are discussed in-depth: oxygen therapy, humidity and aerosol therapy, hyperinflation therapy, chest physiotherapy, pulse oximetry, arterial puncture, and interpretation. Lab fee required. (SCANS 3, 8) Prerequisite: Admission to respiratory care program. Corequisites: RSPT 1103, RSPT 1160 and RSPT 1325.

RSPT 1411 Respiratory Care Procedures II

(51.0908) (3-4) 4 hours

Provides student with essential knowledge of airway care and mechanical ventilation. Airway care includes indication, techniques, equipment, and hazards and complications. Mechanical ventilation includes indications, initiation, modes, clinical application, management, complications, and weaning. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RSPT 1103, RSPT 1160, RSPT 1325 and RSPT 1410. Corequisites: RSPT 1213, RSPT 1360 and RSPT 2310.

RSPT 2133 Respiratory Care Case Management

(51.0908) (1-0) 1 hour

Preparation and presentation of the case study. Instruction in the investigation, organization, and presentation of the material, including preparation of questions for group discussion. (SCANS 3, 6, 7, 8, 9) Prerequisites: RSPT 2325, RSPT 2353 and RSPT 2361. Corequisites: RSPT 2231, RSPT 2247 and RSPT 2363.

RSPT 2231 (Clinical) Simulations in Respiratory Care

(51.0908) (2-0) 2 hours

The theory and history of clinical simulation examinations. Topics include the construction types, scoring, and mechanics of taking the exam along with practice in taking both written and computerized simulations, and basic concepts of computer usage. (SCANS 6) Prerequisites: RSPT 2325, RSPT 2353 and RSPT 2361. Corequisites: RSPT 2133, RSPT 2247 and RSPT 2363.

RSPT 2247 Specialties in Respiratory Care

(51.0908) (1-2) 2 hours

An introduction to areas of interest in which the Respiratory Therapist may find application and/or employment. The depth of instruction will provide the indications, expected outcomes, hazards and methods

for hyperbaric oxygen (HBO), extracoporeal membrane oxygenation (ECMO), nitric oxide (NO), sleep studies, nutritional assessment, metabolic monitoring, exercise/stress testing, and electroencephalograms. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RSPT 2325, RSPT 2353 and RSPT 2361. Corequisites: RSPT 2133, RSPT 2231 and RSPT 2363.

RSPT 2310 Cardiopulmonary Disease
(51.0908) (2-4) 3 hours
A discussion of pathogenesis, pathology, diagnosis, history, prognosis, manifestations, treatment, and detection of cardiopulmonary diseases. Lab fee required. (SCANS 1, 3, 6, 8) Prerequisites: RSPT 1103, RSPT 1160, RSPT 1325 and RSPT 1410. Corequisites: RSPT 1213, RSPT 1360 and RSPT 1411.

RSPT 2314 Mechanical Ventilation
(51.0908) (2-3) 3 hours
Preparation to conduct the therapeutic procedures to achieve adequate, spontaneous, and artificial ventilation with emphasis on ventilator classification, methods, principles, and operational characteristics. Also included are the indications, complications, and physiologic effects/principles of mechanical ventilation. Lab fee required. (SCANS 3, 6, 8, 9) Prerequisites: RSPT 1213, RSPT 1360, RSPT 1411 and RSPT 2310. Corequisite: RSPT 2360.

RSPT 2325 Cardiopulmonary Diagnostics
(51.0908) (2-4) 3 hours
A study of physical, radiological, hemodynamic, laboratory, nutritional, and cardiopulmonary diagnostic assessment of the pulmonary patient. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RSPT 2314 and RSPT 2360. Corequisites: RSPT 2353 and RSPT 2361.

RSPT 2353 Neonatal/Pediatric Cardiopulmonary Care
(51.0908) (2-4) 3 hours
A study of acute care, monitoring, and management as applied to the neonatal and pediatric patient. Lab fee required. (SCANS 3, 6, 7, 8, 9) Prerequisites: RSPT 2314 and RSPT 2360. Corequisites: RSPT 2325 and RSPT 2361.

RSPT 2360 Clinical – Respiratory Therapy Technician – Clinical Practice III
(51.0908) (0-12) 3 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Provides the student opportunities to demonstrate responsibility, creative thinking, and decision-making skills in critical area. (SCANS 4, 5, 6, 7, 8, 9, 10, 11) Prerequisites: RSPT 1213, RSPT 1360, RSPT 1411 and RSPT 2310. Corequisite: RSPT 2314.

RSPT 2361 Clinical – Respiratory Therapy Technician – Clinical Practice IV
(51.0908) (0-16) 3 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Prepares the student for advanced respiratory techniques including radiologic techniques, operating room rotations, neonatal care, cardiac catheterization, and adult and pediatric critical care. (SCANS 5, 6, 7, 8, 9, 10, 11) Prerequisites: RSPT 2314 and RSPT 2360. Corequisites: RSPT 2325 and RSPT 2353.

RSPT 2363 Clinical – Respiratory Therapy Technician – Clinical Practice V
(51.0908) (0-16) 3 hours
A health-related work-based learning experience that enables the student to apply specialized occupational theory, skills, and concepts. Direct supervision is provided by the clinical professional. Completion of the clinical experience prepares the student to perform as a respiratory therapist. (SCANS 2, 4, 5, 6, 7, 8, 9) Prerequisites: RSPT 2325, RSPT 2353 and RSPT 2361. Corequisites: RSPT 2133, RSPT 2231 and RSPT 2247.

Safety (see Occupational Safety and Health Technology)

Social Sciences

Faculty: Dr. Bill Rutherford, chair; Linda D. Brown, Dr. Brian Dille, James Gaddy, Robert Glen Findley, Dr. Tom Heiting, Dr. Dick Kennedy, Dr. Mike Myers, Robert Porter.

Social sciences deal with the three basic relationships that mankind has dealt with since time began. These relationships involve man with his fellow man (history, economics, government, psychology and sociology), man with God (religion) and man with himself (philosophy). No one can challenge the effect that philosophers, historical events, political and social theories, economic ideas and religious concepts have had on mankind.

The four-semester curricula outlined below lead to an associate in arts degree in economics, government and history. Courses are offered in philosophy and religion, but they should be taken as electives only. Students desiring to major in philosophy or religion should consult with the senior college or upper-level institution to which they will transfer regarding transferability of courses.

The social sciences provide students with analytical tools needed for effective participation in a democratic society; they also open doors to various career opportunities. A background in the social sciences is particularly suitable to government employment (such as in the Social Security Administration), social welfare employment, the Federal Reserve banks and other types of government jobs. The social sciences also provide a background that is useful for a career in business, teaching and other professions.

Course of Study for Associate in Arts Degree Economics, Government and History Options

	Semester Hrs
General Education Requirements	**52**
COSC 1301 Microcomputer Applications (or higher level)	3
• ENGL 1301 Composition and Rhetoric	3
• ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
Foreign Language 1411 and 1412	8
Foreign Language (sophomore level)	6
GOVT 2305 Federal Government	3
• GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
• HIST 1302 United States History From 1877 or	
• HIST 2301 History of Texas	3
• MATH 1332 Structures of College Mathematics I or higher level math	3
MATH 1333 Structures of College Mathematics II or higher level math	3
PHED (any two one-hour activity courses)	2
• SPCH 1315 Public Speaking	3
Major Requirements	**12**
• ECON 2301 Principles of Macroeconomics	3
ECON 2302 Principles of Microeconomics	3
HIST 2311 Western Civilization I	3
HIST 2312 Western Civilization II	3
Total Semester Hours	**64**

ECONOMICS COURSES

ECON 2301 Principles of Macroeconomics

(45.0601.5125) (3-0) 3 hours

Provides organization, communication, and interpretation of fundamental, analytic concepts of economic theory and practice. Emphasizes macroeconomic theory and practice. Includes money and banking, national income and employment, economic growth, public spending and international economy. (SCANS 6) Prerequisite: None.

ECON 2302 Principles of Microeconomics

(45.0601.5125) (3-0) 3 hours

Designed to provide communication and interpretation of fundamental analytic concepts of economic theory and practice. Emphasizes micro-economic theory and problem solving. Includes basic theory, price and output determination under varying conditions and income distributions and factor prices. (SCANS 6, 9) Prerequisite: None.

GOVERNMENT COURSES

GOVT 2304 Introduction to Political Science

(45.1001.5225) (3-0) 3 hours

This course is an introduction and survey of the basic terminology, major conceptual frameworks, methods of research and data analysis associated with the substantive study of politics and the discipline of political science. Strongly recommended for all political science majors. (SCANS 6, 9) Prerequisite: None.

GOVT 2305 Federal Government

(45.1002.5125) (3-0) 3 hours

Disseminates information and interprets the development of American political thought, the origins and development of the U.S. Constitution, federalism, public opinion, and the political process of American Democracy. Includes and interprets information on the institutions of government including the presidency,

Congress, the courts, the bureaucracy of the U.S. government. Includes study of domestic and foreign policy issues such as civil rights, national defense, managing the economy, and welfare. This course does not satisfy the government requirement for teacher certification by the Texas Educational Agency. (SCANS 6) Prerequisite: None.

GOVT 2306 Texas Government

(45.1002.5125) (3-0) 3 hours

Introduction to the history and practice of government at the state and local levels with a special emphasis to Texas. Topics include a study of general political theory, the Texas Constitution, structure of Texas government, citizen participation, elections and the general functions of county and municipal governments. This course satisfies the government requirement for teacher certification by the Texas Education Agency. (SCANS 6) Prerequisite: None.

HISTORY COURSES

HIST 1301 United States History to 1877

(45.0802.5125) (3-0) 3 hours

Organizes, interprets, and evaluates the European background, establishment of colonial foundations, rise of American nationality, growth and sectional crisis, and the Civil War and Reconstruction. (SCANS 6, 9) Prerequisite: None.

HIST 1302 United States History From 1877

(45.0802.5125) (3-0) 3 hours

Deals with the growth of big businesses and accompanying problems. Includes the interpretation and evaluation of American imperialism, causes and results of World War I, causes of World War II, postwar adjustments and prospective solutions. (SCANS 6, 9) Prerequisite: None.

HIST 2301 History of Texas

(45.0802.5225) (3-0) 3 hours

Organizes and interprets the history of Texas. Stresses European approach to Texas, Spanish and French rivalry, exploration and control, Anglo-American colonization, relations with Mexico, Texas Revolution, Texas as a republic, annexation, statehood, reconstruction and other political and economic developments. (SCANS 6, 9) Prerequisite: None.

HIST 2311 Western Civilization I

(45.0801.5425) (3-0) 3 hours

Surveys and interprets the social, economic and political developments in Medieval and Modern Europe. Emphasizes the Renaissance, Protestant Reformation, overseas expansion during 16th and 17th centuries, struggle for parliamentary government in England, French Revolution and Napoleonic period. (SCANS 6) Prerequisite: None.

HIST 2312 Western Civilization II

(45.0801.5425) (3-0) 3 hours

Includes an interpretation and evaluation of the Napoleonic era, rise of liberalism and nationalism, causes and results of World War II, postwar problems and prospective solutions. (SCANS 6, 9) Prerequisite: None.

HIST 2313 History of England I

(45.0801.5425) (3-0) 3 hours

A survey of the political and cultural development of England from prehistory through the Restoration Period with particular emphasis on the early peoples; Medievalism; the wars of succession; the Protestant Reformation; Elizabethan England; and the events and atmosphere of the Restoration. (SCANS 1, 6, 11) Prerequisite: None.

HIST 2314 History of England II

(45.0801.5425) (3-0) 3 hours

A survey of history which examines the political and cultural history of England, including the emergence of Parliamentary democracy; the Age of Revolution; the Industrial Revolution; Victorianism; the British Empire; the world wars; post-colonialism; and modern-day Britain. (SCANS 1, 6, 9, 11) Prerequisite: None.

HIST 2380 Mexican-American History

(45.1101.5325) (3-0) 3 hours

A survey of the political, economic and social-cultural roles of the Mexican-Americans from the Spanish colonial period to the present with a focus on the history of the U.S. Mexican border. (SCANS 6, 9) Prerequisite: None.

HIST 2381 African-American History

(45.1101.5325) (3-0) 3 hours

Organizes and interprets the role and contributions of African-Americans to the development and culture of the United States. (SCANS 6) Prerequisite: None.

PHILOSOPHY AND RELIGION COURSES

PHIL 1301 Introduction to Philosophy I

(38.0101.5112) (3-0) 3 hours

Presents an adventure in ideas including the interpretation of those ideas. Asks anew, ultimate questions about the significance of life. With insights gleaned from world's greatest philosophers, students seek to clarify own ideas and beliefs concerning themselves, their world and their ultimate destiny. Critical thinking is an important component of this course. (SCANS 6, 9) Prerequisite: None.

PHIL 2306 Introduction to Philosophy II (Ethics)
(38.0101.5312) (3-0) 3 hours
Introduces ethical theories based on answers given by the world's greatest philosophers to the questions, "What makes acts right?" and""What is the good life?" Discusses and interprets the nature of goodness, duty and freedom. Considers selected ethical problems in light of each basic ethical system. (SCANS 6, 9) Prerequisite: None.

BIBL 1171 Acts of the Apostles
(1-0) 1 hour
Communicates and interprets expansion of Christian beliefs, practices and fellowships from Palestine to outlying parts of the Roman Empire. Includes personality study of Peter, John, Paul and other apostles. (SCANS 6) Prerequisite: None.

BIBL 1372 Old Testament History
(3-0) 3 hours
An introduction and survey of the Old Testament. Emphasizes historical setting, types of religious literature and religious element underlying the whole. (SCANS 6) Prerequisite: None.

BIBL 1373 New Testament History
(3-0) 3 hours
Introduces survey of the New Testament. Emphasizes life and teachings of Jesus as found in the Gospels, expansion of early Christianity, a brief study of Paul's epistles, the general epistles and Revelation. (SCANS 6) Prerequisite: None.

BIBL 2371 History of the Life of Christ
(3-0) 3 hours
Presents a study of the life of Christ as portrayed by Matthew, Mark, Luke and John. (SCANS 6) Prerequisite: None.

BIBL 2372 The Life and Letters of Paul
(3-0) 3 hours
Consists of a study of the life and ministry of the apostle Paul. Examines his writings and central ideas. (SCANS 6) Prerequisite: None.

Sociology (see Psychology and Sociology)

Spanish (see English and Foreign Languages)

Speech

Faculty: William Neff, Vicki Patrick, Joe Willis.

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

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

Introduction to Speech Communication, Business and Professional Speech, and Public Speaking are course offerings considered to be "core" classes because they help fulfill the communication requirements at most colleges and universities.

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

Course of Study for Associate in Arts Degree Speech

	Semester Hrs
General Education Requirements	**48**
COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric	3
ENGL 1302 Composition and Literature	3
ENGL (sophomore level)	6
Foreign language 1411 and 1412	8
GOVT 2305 Federal Government	3
GOVT 2306 Texas Government	3
HIST 1301 United States History to 1877	3
HIST 1302 United States History From 1877 or HIST 2301 History of Texas	3
PHED (any two one-hour activity courses)	2
Science (two sequential semesters of a laboratory science)	8
SPCH 1315 Public Speaking	3
Major Requirements	**15**
SPCH 1311 Introduction to Speech Communication or SPCH 1318 Interpersonal Communication	3
SPCH 1321 Business and Professional Speech	3
SPCH 2333 Discussion and Small Group Communication	3
SPCH 2335 Argumentation and Debate	3
SPCH 2341 Introduction to Oral Interpretation	3
Total Semester Hours	**63**

SPCH 1311 Introduction to Speech Communication

(23.1001.5112) (3-0) 3 hours

This course introduces the oral communication process through study of interpersonal skills. The course applies practices of communication in dyadic and group environments. Variables of nonverbal communication, self-esteem, listening techniques, presentational speaking and cultural diversities are examined. (SCANS 5, 10, 11) Prerequisite: None.

SPCH 1315 Public Speaking

(23.1001.5312) (3-0) 3 hours

In this course the student learns to apply oral communication skills toward a specified audience. Organization of ideas, the persuasion process, and audience analysis are components of the course objectives. The student will demonstrate these objectives through prepared messages using appropriate verbal and nonverbal techniques. (SCANS 5, 6, 9, 10, 11) Prerequisite: None.

SPCH 1318 Interpersonal Communications

(23.1001.5412) (3-0) 3 hours

This course enables students to analyze and practice communication in one-on-one relationships. Topics include problem solving, decision-making, working with diversity, information processing, understanding of self and others, and effective speaking and listening skills in interpersonal contexts. (SCANS 5, 6, 9, 10, 11) Prerequisite: None

SPCH 1321 Business and Professional Speech

(23.1001.5212) (3-0) 3 hours

In this course students improve written and oral communication skills which affect business environments. Emphasis is placed on organizational networks, interviewing, presentational address, listening, and group work. The student will integrate these components with managerial methods and business image maintenance. Variables of culture and personality are analyzed. This course utilizes a "hands on" approach to application of the course materials. (SCANS 5, 6, 7, 9, 10, 11) Prerequisite: None.

SPCH 2333 Discussion and Small Group Communication

(23.1001.5612) (3-0) 3 hours

This course introduces the group communication process as it applies to various situations. Emphasis is placed on group theories and development, leadership concepts, personality role development and problem solving methods. Participation in group presentations is required. (SCANS 5, 6, 7, 9, 10, 11) Prerequisite: None.

SPCH 2335 Argumentation and Debate

(23.1001.5912) (3-0) 3 hours

This course introduces various argumentation techniques. The student will learn basic research skills and methods of cataloging evidence. The student will learn to organize and present ideas in effective communication paradigms. Individual debate and team formats will be demonstrated. (SCANS 5, 6, 9, 10, 11) Prerequisite: None.

SPCH 2341 Introduction to Oral Interpretation

(23.1001.5712) (3-0) 3 hours

This course focuses on analysis and performance of written literature. The reader's evaluation of the literature and personal creativity are utilized toward a targeted objective for a specific audience. (SCANS 1, 6, 9, 10, 11) Prerequisite: None.

Welding – Industrial Welding Technology —

Faculty: James Mosman, chair.

The associate in applied science degree in industrial welding technology provides the student with sufficient skills in electric arc and gas welding procedures for entry employment in these occupations. Students completing the associate degree program will have sufficient background in mathematics, communications, blueprint reading, layout to interpret engineers' plans and instructions, and to work as a supporting technician with minimum orientation.

While a certificate of technology with an emphasis in welding technology will prepare the student to be an effective employee, the associate in applied science degree provides the necessary educational background for advancing to positions of even greater responsibility in the industry.

Due to the implementation of the Workforce Education Course Manual mandated by the Texas Higher Education Coordinating Board, course prefixes have changed. However, courses previously taken toward degree or certificate requirements are not affected.

Course of Study for Associate in Applied Science Degree Industrial Welding Technology

	Semester Hrs
General Education Requirements	**20**
COSC 1301 Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
GOVT 2305 Federal Government or GOVT 2306 Texas Government	3
MATH 1314 College Algebra or MATH 1332 Structures of College Mathematics I or higher level math	3
PHED (any two one-hour activity courses)	2
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
PLUS one course from the following list	3
ARTS 1301 Art Appreciation	
ENGL 1302 Composition and Literature	
HIST 1302 United States History From 1877	
HIST 2301 History of Texas	
SPAN 1300 Conversational Spanish I	
Technical Core	**15**
BMGT 1301 Supervision	3
MCHN 1438 Machining I – Basic Machine Shop I	4
WLDG 1413 Introduction to Blueprint Reading for Welders	4
WLDG 1421 Introduction to Welding Fundamentals	4
Major Requirements	**35**
WLDG 1430 Introduction to Gas Metal Arc (GMAW) Welding	4
WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG 1435 Introduction to Pipe Welding	4
WLDG 1437 Introduction to Metallurgy	4
WLDG 2381 Cooperative Education – Welder/Welding Technologist	3
WLDG 2406 Intermediate Pipe Welding	4
WLDG 2413 Intermediate Welding Using Multiple Processes	4
WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis	4
WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW)	4
Total Semester Hours	**70**

Certificates of Technology in Welding Technology

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

Level I certificates are TASP-waived.

Level I – General Welder

	Semester Hrs
WLDG 1413 Introduction to Blueprint Reading for Welders	4
WLDG 1421 Introduction to Welding Fundamentals	4
WLDG 1430 Introduction to Gas Metal Arc (GMAW) Welding	4
WLDG 1434 Introduction to Gas Tungsten (GTAW) Welding	4
WLDG 2413 Intermediate Welding Using Multiple Processes	4
Total Semester Hours	**20**

Level I – Fitter Welder

	Semester Hrs
WLDG 1413 Introduction to Blueprint Reading for Welders	4
WLDG 1421 Introduction to Welding Fundamentals	4
WLDG 1435 Introduction to Pipe Welding	4
WLDG 2406 Intermediate Pipe Welding	4
WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis	4
Total Semester Hours	**20**

Level I – Pipe Welder

	Semester Hrs
WLDG 1413 Introduction to Blueprint Reading for Welders	4
WLDG 1421 Introduction to Welding Fundamentals	4
WLDG 1430 Introduction to Gas Metal Arc (GMAW) Welding or WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG 1435 Introduction to Pipe Welding	4
WLDG 2406 Intermediate Pipe Welding	4
Total Semester Hours	**20**

Level I – Certified Welder

	Semester Hrs
WLDG 1421 Introduction to Welding Fundamentals	4
WLDG 1430 Introduction to Gas Metal Arc (GMAW) Welding	4
WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG 1435 Introduction to Pipe Welding	4
WLDG 2406 Intermediate Pipe Welding	4
Total Semester Hours	**20**

Level II – Lead Welding Machine Operator

	Semester Hrs
BMGT 1301 Supervision	3
COSC 1301Microcomputer Applications (or higher level)	3
ENGL 1301 Composition and Rhetoric or ENGL 1312 Report Writing	3
MCHN 1438 Machining I – Basic Machine Shop I	4
SPCH 1315 Public Speaking or SPCH 1321 Business and Professional Speech	3
WLDG 1413 Introduction to Blueprint Reading for Welders	4
WLDG 1421 Introduction to Welding Fundamentals	4
WLDG 1430 Introduction to Gas Metal Arc (GMAW) Welding	4
WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding	4
WLDG 1435 Introduction to Pipe Welding	4
WLDG 1437 Introduction to Metallurgy	4
*WLDG 2406 Intermediate Pipe Welding or WLDG 2413 Intermediate Welding Using Multiple Processes or WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis or WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW)	4
Total Semester Hours	**44**

*See department chair prior to enrollment.

WELDING TECHNOLOGY COURSES

WLDG 1413 Introduction to Blueprint Reading for Welders

(48.0508) (2-6) 4 hours

A study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes, including systems of measurement and industry standards. Interpretation of plans and drawings used by industry. The student will define terms and abbreviations; and identify and explain object views, lines and dimensions. The student will identify, explain and interpret weld symbols; identify structural shapes; demonstrate the proper use of measuring devices; read and interpret blueprints; read welding detail drawings; and calculate dimensions and material. Students will be responsible for choosing the proper procedures, tools and equipment to perform assigned actions and be able to explain their selections. Lab fee required. (SCANS 1, 3, 6, 8, 9) Prerequisite: None.

WLDG 1421 Introduction to Welding Fundamentals

(48.0508) (2-6) 4 hours

An introduction to the fundamentals of equipment used in the oxy-fuel and arc welding, including welding and cutting safety, basic oxy-fuel welding and cutting, basic arc welding processes and basic metallurgy. The student will demonstrate safety procedures associated with oxy-fuel and arc process; perform basic welds using oxy-fuel and arc welding equipment; and identify ferrous and nonferrous metals. Students will acquire and evaluate information pertaining to the use of torches and regulators, flame adjustment, soldering, silver soldering, brazing, and arc welding on common metals and safe procedures for handling welding equipment. Emphasis is placed on students' ability to acquire and apply new knowledge and skills. Lab fee required. (SCANS 5, 6, 8, 9, 10, 11) Prerequisite: None.

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

WLDG 1434 Introduction to Gas Tungsten Arc (GTAW) Welding
(48.0508) (2-6) 4 hours
An introduction to the principles of gas tungsten arc welding (GTAW), setup/use of GTAW equipment and safe use of tools and equipment. Welding instruction in various positions on joint designs. The student will describe various joint designs; describe safety rules and equipment; and describe the effects of welding parameters in GTAW; and will weld various structural materials. Competencies include advanced skills using gas tungsten arc welding (GTAW) technology. Presents advantages and disadvantages of different shield and purge gases. Welds tested by AWS standards. Students will learn problem-solving techniques specific to GTAW. Lab fee required. (SCANS 8, 9) Prerequisite or corequisite: WLDG 1421 or consent of the department chair.

WLDG 1435 Introduction to Pipe Welding
(48.0508) (2-6) 4 hours
An introduction to welding of pipe using the shielded metal arc welding process (SMAW), including electrode selection, equipment setup, and safe shop practices. Emphasis on weld positions 1G and 2G using various electrodes. The student will describe equipment and required pipe preparation and perform 1G and 2G welds using various electrodes. Students will be required to evaluate their performance abilities to troubleshoot potential problems. Students will learn to decipher coding system for AWS and proper use of available materials and equipment. Lab fee required. (SCANS 4, 6, 7, 8, 9) Prerequisite or corequisite: WLDG 1421 or consent of department chair.

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

WLDG 2381 Cooperative Education – Welder/ Welding Technologist
(48.0508) (1-20) 3 hours
Career-related activities encountered in the student's area of specialization offered through an individualized agreement among the college, employer, and student. Under the supervision of the college and the employer, the student combines classroom learning with work experience. Includes a lecture component. As outlined in the learning plan, the student will master the theory, concept and skills involving the tools, materials, equipment, procedures, regulations, laws and interactions within and among political, economic, environmental and legal systems associated with the particular occupation and the business/industry; demonstrate ethical behavior, safety practices, interpersonal and teamwork skills, communicating in the applicable technical language of the occupation and the business or industry. Under supervision of college faculty and a workplace supervisor, the student will achieve agreed upon workplace goals and objectives that will enhance the student's competency attainment in the areas of personal, interpersonal, and problem-solving skills. Weekly lectures will address key workplace competencies to enhance the employability of a technically competent graduate. (SCANS 5, 7, 9, 10, 11) Prerequisite: Consent of department chair.

WLDG 2406 Intermediate Pipe Welding
(48.0508) (2-6) 4 hours
A comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Position of welds will be 1G, 2G, 5G and 6G using various electrodes. Topics covered include electrode selection, equipment setup, and safe shop practices. Topics also include ferrous and nonferrous materials. The student will describe equipment and required pipe preparation. Emphasizes technology of welding carbon steel pipe with LH 7018 and stainless electrodes. Welds tested by AWS standards. This is a capstone course for

the Pipe Welder Level I Certificate, Certified Welder Level I Certificate, and the Lead Welding Machine Operator Level II Certificate. Lab fee required. (SCANS 1, 3, 4, 5, 8) Prerequisites: WLDG 1421 and WLDG 1435 and consent of department chair.

WLDG 2413 Intermediate Welding Using Multiple Processes

(48.0508) (2-6) 4 hours

Instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shield metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW) or any other approved welding process. The student will identify proper safety equipment and tools and identify and select the proper welding process for a given application. The student will demonstrate skills training using more than one approved welding process; demonstrate ability to analyze situations and make proper decisions using skills as taught; and select the most economical and practical welding process for the given task. This is a capstone course for the General Welder Level I Certificate and the Lead Welding Machine Operator Level II Certificate. Lab fee required. (SCANS 1, 3, 4, 5, 8, 9) Prerequisites or Corequisites: WLDG 1413, WLDG 1421, WLDG 1430, WLDG 1434 and consent of department chair.

WLDG 2431 Advanced Blueprint Interpretation and Cost Analysis

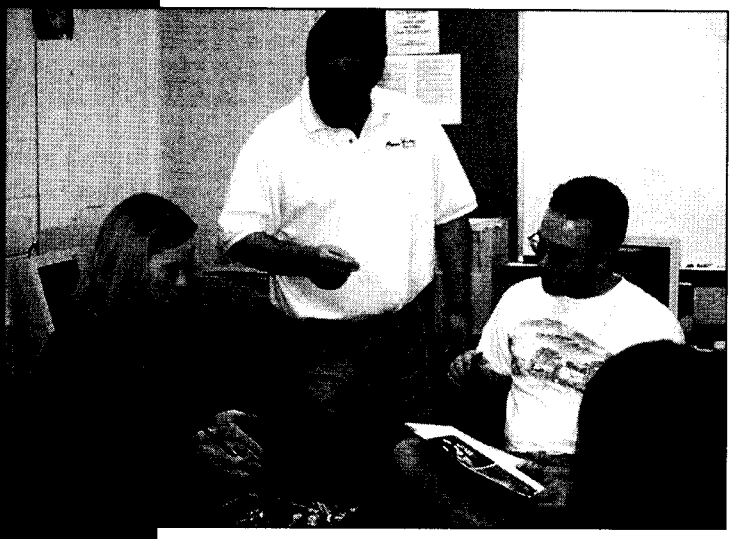
(48.0508) (2-6) 4 hours

A continuation of the Blueprint for Welders course. Emphasis will be placed on inspection, cost analysis, and estimating, including instruction in basic drafting skills. The student will use terms, abbreviations, and weld symbols to produce shop drawings or blueprints and will use mathematical procedures to solve problems, and estimate construction costs and materials. This is a capstone course for the Fitter Welder Level I Certificate and the Lead Welding Machine Operator Level II Certificate. Lab fee required. (SCANS 1, 2, 3, 4, 5, 8, 9) Prerequisites: WLDG 1413 and consent of department chair.

WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW)

(48.0508) (2-6) 4 hours

Advanced topics in GTAW welding, including welding in various positions and directions. (Positions include 1G, 2G, 5G, and 6G.) The student will describe and demonstrate safety rules and equipment used; and the effects of welding parameters in GTAW. The student will weld various joint designs; diagnose welding problems; and perform visual inspections. Welds tested by AWS standards. This is a capstone course for the Lead Welding Machine Operator Level II Certificate. Lab fee required. (SCANS 8, 9) Prerequisites: WLDG 1434 and consent of department chair.



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Children's Center Head Start Coordinator

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General Manager

Doug Cole, A.A., B.A.
Radio Station Manager

Chad Hauris, B.S.
Radio Operations Coordinator

Russell McBride
Program Director

Mike Wadle
Chief Engineer

LEARNING RESOURCES CENTER

Carolyn Petersen, B.S., M.L.S.
Director of Library Services

Donna Clark, B.A., M.L.S.
Public Services Director

Susan Elliott, B.A., M.S.L.S.
Technical Services Director

Pamela Poindexter
Graphic Artist

Pat Quintero, A.A., B.A.
Serials Manager

PECOS TECHNICAL TRAINING CENTER

Michelle Workman, A.A., B.S., M.S.
Director

TECH-PREP

Roger Manning, B.S., M.S.W., Ph.D.
Co-Tech-Prep Coordinator

Wende Ramos A.A., B.B.A.
Co-Tech-Prep Coordinator

Support Staff

ACCOUNTING

Kristi Gibbs, B.B.A.
Director of Accounting

Linda James
Budget & Grants Accountant

Debbie Pollock
Cashier's Office Manager

BOOKSTORE

Sammie Molder, A.A.
Bookstore Manager

CAMPUS POLICE

Alfredo Fonseca, A.A.
Chief of Campus Police

HUMAN RESOURCES

Judy Beard, A.A.
Personnel Specialist

Betty George, A.A.
Benefits Coordinator

Debbie Mapes, B.B.A.
Payroll Specialist

INFORMATION SERVICES

W. Frank Wells, B.B.A.
Director of Information Services

Maxine Benson, A.A.S.
Computer Operator

Brad Elliott, B.A.A.S.
Programmer/Analyst

Charles Everett, A.A.
Database/Senior Systems Analyst

INFORMATION TECHNOLOGY

David Carson, B.A., M.S.
Director of Information Technology

April Vanecek, B.S.
Webmaster

David Blain
Telephone/Computer Technician

Alfredo Forte, A.A.S.
Lead Computer Technician

Kevin Lovell
Computer Technician

Glenn Mendoza
Network Security Technician

Michael Mendoza, B.S.
Network Manager

Henry Ryan
Computer Technician

INSTITUTIONAL RESEARCH AND EFFECTIVENESS

Penny Boss
Research Assistant

PHYSICAL PLANT

Bob Chastain, A.A.S.
Director of Physical Plant

Al Almadova
Custodial Supervisor

Mike Bryant
Grounds Supervisor

Mark Cortez
Electrical, HVAC, Plumbing Supervisor

Lucy Griffith
Administrative Assistant

Bryan Heifner
Director of Building Services

Lionel Loya
Director of Building, Grounds and Maintenance

Philip Stell, A.A.S.
Construction Supervisor

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Roxana Patton, A.S., B.B.A.
Director of Purchasing & Business Services

Patricia Boydstun
Manager of Central Services

Department and Program Chairs or Directors

Agriculture ..... R. Mikel Lemons
Air Conditioning ..... James Mosman
Anthropology ..... G. Brent McAfee
Art ..... Steve Goff
Automotive Technology ..... James McCutcheon
Biology ..... Steve Sofge
Building Construction Technology ..... James Mosman
Business Administration ..... J.D. Roberts
Chemistry ..... G. Brent McAfee
Child and Parent Development .. Lucinda Hurlbut
Clinical Laboratory Sciences ..... Susan Ray
Computer Information Systems ..... Ray Cone
Computer Network and Information Technology ..... Ray Cone
Computer Science ..... Ray Cone
Cosmetology ..... Sylvia Stephens
Culinary Arts ..... Peter Lewis
Developmental Mathematics ..... Niki Handley
Diesel Technology ..... James McCutcheon
Drafting ..... James Mosman
Economics ..... Dr. William Rutherford
Education, Elementary and Secondary ..... Ned Pilcher
Electrical & Electronics ..... Danny Bailey
Emergency Medical Services Professional ..... LeeDon Martin
Engineering ..... Dr. Charles Sweatt
English ..... Dr. Judith Cornes
Fire Technology ..... LeeDon Martin
Foreign Languages ..... Dr. Judith Cornes
Geography ..... G. Brent McAfee
Geology ..... G. Brent McAfee
Government ..... Dr. William Rutherford
History ..... Dr. William Rutherford
Human Services ..... James Jordan
Law Enforcement/Criminal Justice . Jim McKown
Legal Assistant ..... Nancy Stewart
Machining ..... Jim Mosman
Maintenance Technologies ..... Jim Mosman
Management ..... J.D. Roberts
Mass Communication ..... Steve Goff
Mathematics ..... Dr. Charles Sweatt
Music ..... Dr. Kathryn Hoppe
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Nursing, Andrews Vocational Program ..... Patricia Ann Bayless
Nursing, Monahans Vocational Program ..... Patricia Ann Bayless
Occupational Safety and Health Technology ..... J.D. Roberts
Office Systems Technology ..... Nancy Stewart
Petroleum Technology ..... J.D. Roberts
Philosophy ..... Dr. William Rutherford
Photography ..... Steve Goff
Physical Education ..... Karin Carlson
Physical Therapist Assistant ... S. Lynn Dammann
Physics ..... G. Brent McAfee
Psychology ..... Jane Hellinghausen
Radiologic Technology ..... Carolyn Sue Leach
Reading ..... Tammy Patni
Religion ..... Dr. William Rutherford
Respiratory Care ..... Jacquelyn Sullivan
Social Sciences ..... Dr. William Rutherford
Sociology ..... Jane Hellinghausen
Speech ..... To Be Named
Surgical Technology ..... Leola Rutledge
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Barry Phillips III
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ODESSA COLLEGE

Admissions Office
201 W. University
Odessa, Texas 79764
(432) 335-6432

APPLICATION FOR ADMISSION

INSTRUCTIONS: Please print or type. Failure to completely fill out the application could result in a delay in your admission. All documents submitted to the college become part of the official files and cannot be returned.

Semester for which you are applying ❒ Fall ❒ Spring ❒ Midwinter ❒ May Mid-Semester ❒ Summer I ❒ Summer II

STUDENT BACKGROUND

Full legal name _____
last first middle initial prior names

Social security number ____ – ____ – ____ Email _____

Local address _____
street address city state zip county

Permanent address _____
P.O. Box or street address city state zip county

How long have you lived at your permanent address? ___ years ___ months Phone (___) _____ (___) _____
local work

Birth date _____ Age_____ Birthplace _____ Sex: ❒ M ❒ F
month/day/year city & state

Ethnic Background (These items are used to satisfy state/federal reporting requirements and do not affect the admission decision.)

(1) ❒ White – Non-Hispanic (2) ❒ Black – Non-Hispanic (3) ❒ Hispanic
(4) ❒ Asian or Pacific Islander (5) ❒ American Indian or Alaskan Native (6) ❒ Non-Resident

EDUCATION INFORMATION

What is your intended field of study (major) at Odessa College? _____

Last high school attended _____
name of school city county state

Did you graduate from high school? ❒ no ❒ yes If yes, date of graduation _____
month/year

If you did not graduate, do you have a GED? ❒ no ❒ yes If yes, date GED received _____
month/year

Where was GED taken? _____
city & state

Are you currently in high school? ❒ no ❒ yes If yes, anticipated date of graduation _____
month/year

If you are still in high school, are you attending as ❒ concurrent enrollment or ❒ early admission?

Concurrent enrollment allows the student to enroll in a class to earn both high school and college credit.
Early admission allows the student to enroll in a class to earn college credit only.
Both programs require a completed form from the high school.

If you have attended any other colleges or universities, please list them below. List the most recently attended first. Failure to disclose colleges may result in non-admission or dismissal if enrolled. An official transcript that includes grades from the last semester in attendance is required from all institutions previously attended.

COLLEGE/UNIVERSITY NAME	CITY, STATE	DATE ATTENDED	DEGREE RECEIVED

Total semester hours attempted at all colleges/universities ❒ 0-29 hrs ❒ 30-59 hrs ❒ 60+ hrs

Official TASP scores or proof of exemption must be provided prior to enrolling in any college level semester hours unless the student is enrolled in a TASP-waived certificate program. Completion of this application serves as authorization to access your scores.

❒ I have taken TASP. ❒ I am exempt from TASP due to college credit before Fall 1989.
❒ I am exempt from TASP due to: ❒ My high school GPA ❒ TAAS ❒ SAT ❒ ACT scores. ❒ I have not taken TASP.

Rev. 3-03

RESIDENCY

Are you a United States citizen or do you hold Permanent Residence status (valid I-551, "green card") for the U.S.? ❒ no ❒ yes

If you are a permanent resident, date permanent resident card issued: _____ (Attach copy of both sides of card.)

If you are not a permanent resident, has an I-130 or I-140 petition been filed with INS? ❒ no ❒ yes, attach copy of receipt.

Are you a foreign national here on a visa? ❒ no ❒ yes If yes, what type of visa do you have? _____

If you are not a citizen or permanent resident, did you graduate from high school or receive a GED in Texas? ❒ no ❒ yes

If yes, did you live here for the 3 consecutive years before the date of your graduation or receipt of your GED? ❒ no ❒ yes

If yes, did you take any college hours in Texas before the Fall 2001 semester? ❒ no ❒ yes

Are you a Texas resident? ❒ no, skip to Oath of Residency. ❒ yes

Upon whom are you basing your claim of residency? ❒ self (answer #1 below) ❒ parent or legal guardian (answer #2 below)

If you are 17 years or younger or a dependent of your parent or a legal guardian for federal tax purposes, base residency on your parent or legal guardian. If you have a legal guardian, court-appointed guardianship papers must be provided. Power of attorney does not give guardian status.

1. If your claim or residence status is based upon self ...

Do you currently live in Texas? ❒ no ❒ yes If yes, how long have you resided in Texas? _____ Years & Months

If you came here within the past 5 years, why did you move to Texas? _____

❒ education ❒ employment ❒ military assignment ❒ other _____

Are you currently assigned to military duty in Texas? ❒ no ❒ yes If yes, is Texas your home of record? ❒ no ❒ yes

Have you lived in Ector County for the past 6 months? ❒ no ❒ yes If no, how long have you lived here: _____ Years & Months

2. If your claim for residence status is based upon a parent or legal guardian ...

Name of person upon whom claim is based and the relationship to you. _____

Does this person currently live in Texas? ❒ no ❒ yes If yes, how long has he/she resided in Texas? _____ Years & Months

If this person came here within the past 5 years, why did he/she move to Texas?

❒ education ❒ employment ❒ military assignment ❒ other _____

Is he/she currently assigned to military duty in Texas? ❒ no ❒ yes If yes, is Texas the home of record? ❒ no ❒ yes

Is this person a U.S. citizen or permanent resident? ❒ no ❒ yes (If resident, attach copy of both sides of card.)

If no, has INS allowed him/her to file the I-485? ❒ no ❒ yes, attach copy of I-485 receipt.

Is this person a foreign national here on a visa? ❒ no ❒ yes If yes, what type of visa? _____

Has this person lived in Ector County for the past 6 months? ❒ no ❒ yes

If no, how long has he/she lived in Ector County: _____ Months

Has this person claimed you as a dependent for U.S. federal income tax purposes for the tax year preceding your registration? ❒ no ❒ yes

Will this person claim you as a dependent for U.S. federal income tax purposes for the current tax year? ❒ no ❒ yes

OATH OF RESIDENCY

I understand that information submitted herein will be relied upon by college officials to determine my status for admission and residency eligibility. I authorize the college to verify the information I have provided. I agree to notify the proper officials of the institution of any change in the information provided. I certify that the information on this application is complete and correct and understand that the submission of false information is grounds for rejection of my application, withdrawal of any offer of acceptance, cancellation of enrollment or initiation of disciplinary action. I am aware of the meningitis information presented in the Odessa College catalog and/or other sources.

Signature _____ Date _____

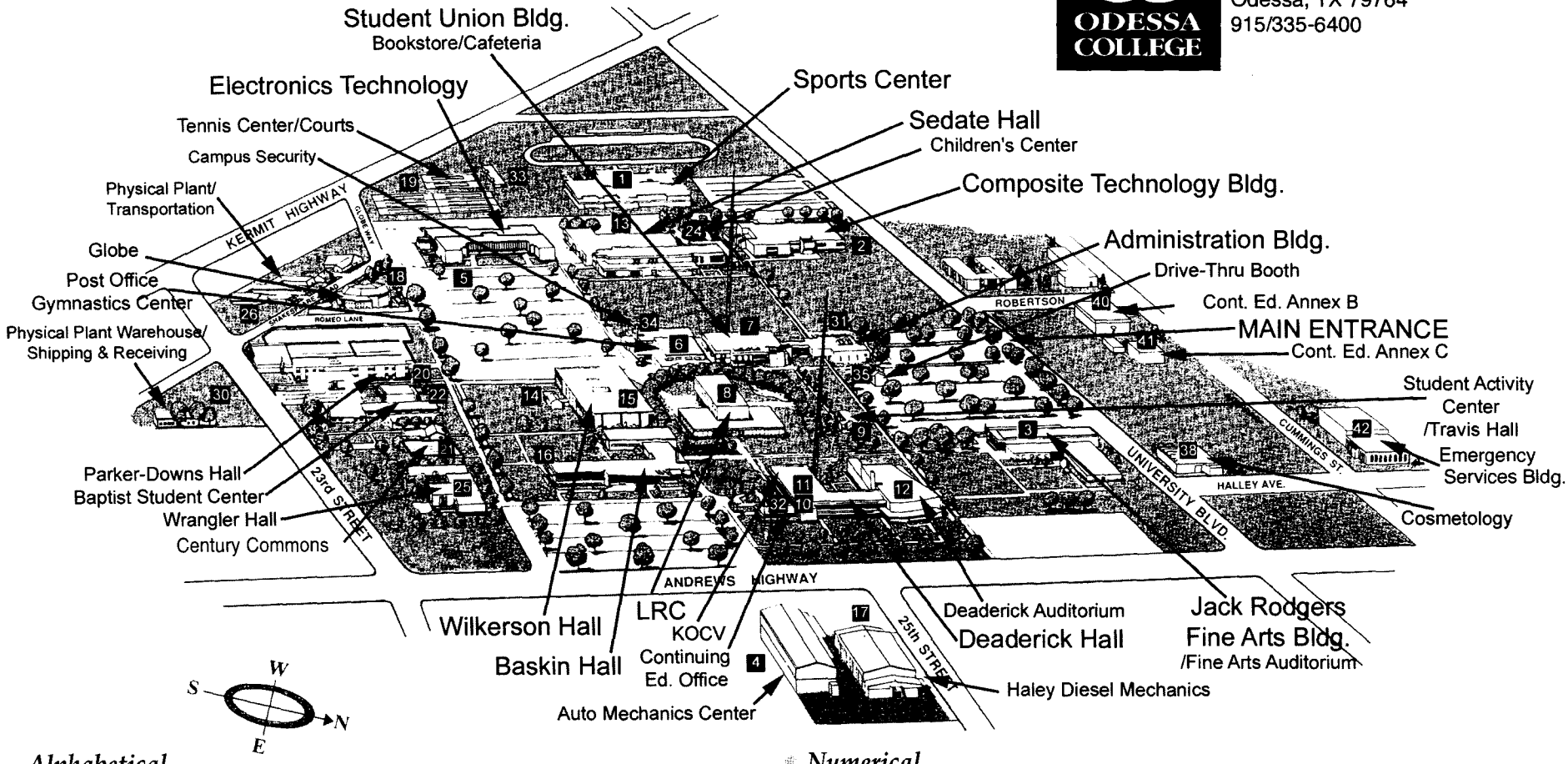
FOR OFFICE USE

Admitted? ❒ no ❒ yes Remarks: _____

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

Campus Map

ODESSA COLLEGE
201 W. University
Odessa, TX 79764
915/335-6400



Alphabetical

Administrative Wing (31)
Auto Mechanics Center (4)
Baptist Student Center (22)
Baskin Hall (16)
Campus Security (34)
Century Commons (21)
Children's Center (24)
Composite Technology Building (2)
Continuing Education Drive-Thru Registration Booth (35)
Continuing Education Annex B (40)
Continuing Education Annex C (41)
Continuing Education Office (32)
Cosmetology Bldg. (38)
Deaderick Auditorium (12)
Deaderick Hall (11)
Electronics Technology Building (5)
Emergency Services Building (42)
The Globe Theater/Anne Hathaway Cottage (18)
Greenhouse (14)
Gymnasium/Gymnastics Center (6)
Haley Diesel Mechanics Training Center (17)
Jack Rodgers Fine Arts Center (3)
KOCV FM (10)
Learning Resources Center (8)
Parker-Downs Hall (20)
Physical Plant Warehouse/
Shipping & Receiving (30)
Physical Plant/Transportation (26)
Sedate Hall (13)
Sports Center (1)
Student Activity Ctr/Travis Hall (9)
Student Union Building/
Bookstore/Cafeteria (7)
Tennis Center (33)
Tennis Courts (19)
Wilkerson Hall (15)
Wrangler Hall (25)

Numerical

1. Sports Center
2. Composite Technology Bldg.
3. Jack Rodgers Fine Arts Ctr.
4. Auto Mechanics Center
5. Electronics Technology Bldg.
6. Gymnasium/Gymnastics Ctr.
7. Student Union Building/
   Bookstore/Cafeteria
8. Learning Resources Center
9. Student Activity Center/Travis Hall
10. KOCV FM
11. Deaderick Hall
12. Deaderick Auditorium
13. Sedate Hall
14. Greenhouse
15. Wilkerson Hall
16. Baskin Hall
17. Haley Diesel Mechanics
    Training Center
18. The Globe Theater/Anne
    Hathaway Cottage
19. Tennis Courts
20. Parker-Downs Hall
21. Century Commons
22. Baptist Student Center
24. Children's Center
25. Wrangler Hall
26. Physical Plant/Transportation
30. Physical Plant Warehouse/
    Shipping & Receiving
31. Administrative Wing
32. Continuing Education Office
33. Tennis Center
34. Campus Security
35. Continuing Education Drive-
    Thru Registration Booth
38. Cosmetology Bldg.
40. Continuing Education Annex B
41. Continuing Education Annex C
42. Emergency Services Building