

# Course Descriptions

## Legend of the Course Descriptions

The credit courses offered by the College are listed in alphabetical order by discipline/program area. A general description of the content of each course is included. Special Topics are courses that are numbered 175-177 and 275-277 and provide students with a vehicle to pursue in depth exploration of special topics of interest. The credits and grade scheme will vary depending on course content. The description and outline is approved by the Dean and filed with the Registrar.

Common abbreviations used in the course descriptions are:

CLV	Voc/Tech Clinic	LBV	Vocational Lab
COP	Cooperative Education	OE	Occupational Experience
CORQ	Corequisite	PED	Physical Education and Recreation
CR	Credit	PRC	Practicum
FIT	Field Instruction	PRI	Private Instruction
LBA	Academic Lab	PRQ	Prerequisite
ILB	Instructional Lab	SEM	Seminar
IND	Independent Study	STA	Art Studio
INT	Internship	STM	Music Studio
L	Lecture	VAR	Variable Credits

The numbers that appear within the parenthesis next to the credit hours represent the total number of contact hours per week, by activity, that the student attends the class assuming a 15-week semester. For instance, a 4 credit hour course that is listed as 2L/3LBV means there are two hours of lecture per week plus three hours vocational lab per week for a total of (5) hours contact time per week for 15 weeks. In this example, the student attends a total of 75 contact hours. The 75 hours can be adjusted to any length term.

## Basic Skills Assessment Test Score Key

Most courses in the following section have pre-requisites. Pre-requisites are requirements that you must complete before enrolling in the course. You can satisfy pre-requisites in one of two ways: 1) by completing the listed pre-requisite courses, or 2) by attaining assessment scores that place you ABOVE the listed pre-requisite course's skill level. (Pueblo Community College only accepts Accuplacer or ACT or SAT assessment scores.)

The chart below shows the required assessment scores for placement into reading, English, and math classes. For example, if you wanted to enroll in Dental Assisting (DEA) 120, the pre-requisites are Reading 090, English 090, and Math 060. To meet these pre-requisites through assessment scores, your scores must be in the following ranges:

Accuplacer Reading (ACCUR)	80 or above.
Accuplacer Sentence Skills (ACCUE)	95 or above.
Accuplacer Elementary Algebra (ACCUM-EA)	45 or above.

If your scores fall below these ranges, you must complete the prerequisite classes. ACT, SAT and Accuplacer results are good for five years from the date that the test was taken.

## Reading

### ACCUPLACER Reading Score

0 – 24

25 – 39

40 – 61

62 – 79

80 – 120

### Required Courses

Guided Placement: See Testing Center for referral

REA 030 or refer to Special Programs

REA 060

REA 090

No basic skills placement required

ACT reading score of 17 or SAT verbal score of 430 places in college level

## English

### ACCUPLACER Sentence Skills Score

0 – 24

25 – 49

50 – 69

70 – 94

95 – 120

### Required Courses

Guided Placement: See Testing Center for referral

ENG 030 or refer to Special Programs

ENG 060

ENG 090

ENG 121

ACT English score of 18 or SAT verbal score of 440 places into ENG 121

## Math

### ACCUPLACER Math Score

0 – 23 (AR)

24 – 56 (AR)

57 – above (AR) and (EA) < 45

45 – 60 (EA)

61 – 84 (EA)

85 – 120 (EA)

### Required Course

Guided Placement: See Testing Center for referral

MAT 030

MAT 060

MAT 090

MAT 106

MAT 121

ACT math score of 19 or SAT score of 460 places into MAT 121

ACCUPLACER Math Key: AR = Arithmetic EA = Elementary Algebra

# Accounting

ACC 101

## FUNDAMENTALS OF ACCOUNTING

3 CR. (3L)

PRQ: CIS 110, MAT 030, or equivalent assessment test scores or department chair/advisor approval. CORQ: ACC 103, MAT 090, BTE 156 highly recommended. Presents the basic elements and concepts of accounting, with emphasis on the procedures used for maintaining journals, ledgers, and other related records, and for the completion of end-of-period reports for small service and merchandising businesses.

ACC 103

## FUNDAMENTALS OF ACCOUNTING LAB

1 CR. (1.5 LBV)

PRQ: CIS 110, MAT 060, or equivalent assessment test scores, or Department Chair approval. CORQ: ACC 101. Designed as the practical lab portion of the Fundamentals of Accounting course. Emphasizes the demonstration of recording accounting information discussed in each chapter of ACC 101.

ACC 115

## PAYROLL ACCOUNTING

3 CR. (3L)

PRQ: ACC 101, CIS 110, MAT 060, or equivalent assessment test scores or Department Chair approval. Studies federal and state employment laws and their effects on personnel and payroll records. The course is non-technical and is intended to give students a practical working knowledge of the current payroll laws and actual experience in applying regulations. Students are exposed to computerized payroll procedures.

ACC 121

## ACCOUNTING PRINCIPLES I

4 CR. (4L)

PRQ: CIS 110, ENG 030, REA 030, MAT 060, or equivalent assessment test score or permission of Department Advisor or Chair. Introduces the study of accounting principles for understanding of the theory and logic that underlie procedures and practices. Major topics include the accounting cycle for service and merchandising companies, special journals and subsidiary ledgers, internal control principles and practices, notes and interest, inventory systems and costing, plant assets and intangible asset accounting, and depreciation methods and practices.

ACC 122

## ACCOUNTING PRINCIPLES II

4 CR. (4L)

PRQ: ACC 121, CIS 110, MAT 060, or equivalent assessment test scores or permission of Department Advisor or Chair. Continues the study of accounting principles as they apply to partnerships and corporations. Major topics include stocks and bonds, investments, cash flow statements, financial analysis, budgeting, and cost and managerial accounting.

ACC 131

## INCOME TAX

3 CR. (3L)

PRQ: ACC 121, ENG 131, CIS 110, REA 090, MAT 090, or equivalent assessment test scores or permission of Department Advisor or Chair. This course is the study of basic concepts of federal income taxation, including gross income, deductions, accounting periods and methods, and property transactions, with emphasis on taxation of individuals and sole proprietorships.

ACC 211

## INTERMEDIATE ACCOUNTING I

4 CR. (4L)

PRQ: MAT 121 or MAT 112, ENG 131, ACC 122, CIS 110, REA 090, or equivalent assessment test scores or permission of Department Advisor or Chair. Focuses on comprehensive analysis of generally accepted accounting principles (GAAP), accounting theory, concepts and financial reporting principles for public corporations. It is the first of a two-course sequence in financial accounting and is designed primarily for accounting and finance majors. Focuses on the preparation and analysis of business information relevant and useful to external users of financial reports. Explores the theories, principles and practices surveyed in Accounting Principles and critically examines 'real-world' financial analysis and reporting issues.

ACC 212

## INTERMEDIATE ACCOUNTING II

4 CR. (4L)

PRQ: ACC 211, CIS 110, REA 090, or equivalent assessment test scores or permission of Department Advisor or Chair. Focuses on the theoretical and practical aspects of accounting for long-term liabilities, stockholders' equity, investments, pensions and leases. Includes income tax allocation, financial statement analysis, cash flow statements and accounting methods changes.

ACC 215

## ACCOUNTING INFORMATION SYSTEMS AND E-BUSINESS

3 CR. (3L)

PRQ: ACC 122, CIS 110, ENG 090, REA 090, MAT 090, or equivalent assessment test scores or permission of Department Advisor or Chair. Studies the principles, concepts and tools used in the analysis, design, implementation and integration of accounting systems, internal controls systems and accounting procedures. Key elements of system analysis, business systems design, accounting software selection, and the acquisition and implementation of systems are studied. Techniques and systems for electronic control systems, electronic data interchange, electronic funds transfer and web commerce are explored.

ACC 216

## GOVERNMENTAL AND NOT-FOR-PROFIT ACCOUNTING

3 CR. (3L)

PRQ: ENG 131, ACC 122, CIS 110, REA 090, MAT 090, or equivalent assessment test scores or permission of Department Advisor or Chair. Addresses concepts of budgetary control as a matter of law and public administration theory. Accounting principles and procedures necessary to implement budgetary controls for governmental units and other not-for-profit institutions and organizations are presented.

ACC 226

## COST ACCOUNTING

3 CR. (3L)

PRQ: ACC 122, CIS 110, ENG 030, REA 060, MAT 060, or equivalent assessment test scores or permission of Department Advisor or Chair. Studies cost accumulation methods and reports. Focuses on the concepts and procedures of job order, process, standard, and direct cost systems, budgeting, planning, and control of costs.

ACC 235

## COMPUTERIZED ACCOUNTING FOR SMALL BUSINESSES

3 CR. (3L)

PRQ: ACC 101 or ACC 121, CIS 110, ENG 030, REA 060, MAT 060, or equivalent assessment test scores or permission of Department Advisor or Chair. Introduces a microcomputer package, such as Quickbooks, One-write Plus or similar accounting application, for use in a small business. Focuses on installation, starting the application and converting a manual accounting system to an electronic system. Includes an easy to use bookkeeping system that incorporates all daily transactions and summarizes records in reports for a complete financial picture.

ACC 245

### **COMPUTERIZED ACCOUNTING WITH A PROFESSIONAL PACKAGE**

3 CR. (3L)

PRQ: CIS 110, ENG 030, REA 060, MAT 060, or equivalent assessment test score, and ACC 101 or ACC 121 or permission of Department Advisor or Chair.

Integrates accounting principles and practices with a computerized accounting package such as Peachtree, DacEasy, or other professional package. Emphasizes computerized functions of the general ledger and integrated accounts payable, accounts receivable, invoicing and payroll systems.

ACC 275

#### **SPECIAL TOPICS**

1-6 CR. (1-6L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

ACC 275

#### **SPECIAL TOPICS: CERTIFIED BOOKKEEPER EXAM**

4 CR. (4L)

PRQ: CIS 110 or equivalent assessment test score, ACC 121, ACC 122, ACC 115 or permission of Department Advisor or Chair. This course is designed to prepare the student for the National Certified Bookkeeper Exam. The examination consists of three tests: (1) Adjustments and Error Corrections (2) Payroll and Depreciation and (3) Inventory. The certification will increase employment opportunities and compensation. The certification will enhance the student's professional image by earning the right to use CB as their professional title.

ACC 287

#### **COOPERATIVE EDUCATION**

3 CR. (9 INT)

PRQ: Permission of Department Advisor or Chair. Provides an opportunity to gain practical experience in applying occupational skills and/or to develop specific skills in a practical work setting. The instructor works with the student to select an appropriate work site, establish learning objectives, and coordinate learning activities with the employer or work site supervisor. For Accounting majors only.

## Advancing Academic Achievement

AAA 075

#### **SPECIAL TOPICS**

.5-6 CR. (L)

Exploration of current topics, issues and activities related to one or more aspects of the named discipline.

AAA 090

#### **ACADEMIC ACHIEVEMENT STRATEGIES**

3 CR. (3L)

PRQ: REA 060 or equivalent assessment test score. Develops personalized approaches to learn and succeed for easier transition into college. Topics include goal-setting, time management, textbook reading strategies, note-taking, test-taking, listening techniques, concentration and memory devices, and critical thinking for student success.

AAA 101

#### **COLLEGE 101: THE STUDENT EXPERIENCE**

1 CR. (1L)

Introduces students to college culture and prepares them for challenges they will face in higher education. Through a series of interactive seminars, students discover learning in a multicultural environment and the use of college and community resources to attain education and career goals.

AAA 109

#### **ADVANCED ACADEMIC ACHIEVEMENT**

3 CR. (3L)

PRQ: 80+ ACCUR Reading Comprehension score. Examines theories and practices associated with successful learning to enhance college success. Areas of study include education and career planning, effective communication, personal management, critical and creative thinking, development of community and awareness of diversity, leadership, and techniques for successful academic performance. Recommended for new and returning students.

AAA 175-177

#### **SPECIAL TOPICS**

1-9 CR. (L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

## American Sign Language

ASL 101

#### **BASIC SIGN LANGUAGE I**

3 CR. (3L)

Provides students with the basic knowledge of communicating with the deaf community or the vocally impaired. Students will be instructed in the basic techniques of this non-traditional form of communication.

ASL 102

#### **BASIC SIGN LANGUAGE II**

3 CR. (3L)

PRQ: ASL 101 or instructor permission. Provides students with expanded knowledge of communicating with the deaf community or the vocally impaired. Students will be instructed in the techniques of this non-traditional form of communication with emphasis on practical applications in social settings and in the workplace.

ASL 125

#### **FINGERSPELLING**

3 CR. (3L)

PRQ: ASL 101 or instructor permission. Provides the student an opportunity to develop expressive and receptive fingerspelling through various class activities.

ASL 135

#### **CONVERSATIONAL ASL**

2 CR. (2L)

PRQ: ASL 102 or instructor permission. Provides the student an extended opportunity to develop a strong grasp of American Sign language (ASL) as well as the cultural features of the language. It helps the student maintain sign language skill. This course is designed for students who have not met the minimum requirements to continue on with ASL 221.

## Anthropology

ANT 101

#### **CULTURAL ANTHROPOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Studies human cultural patterns and learned behavior. Includes linguistics, social and political organization, religion, culture and personality, culture change, and applied anthropology. This course is one of the Statewide Guaranteed Transfer Courses, GT-SS3.

ANT 107

**INTRODUCTION TO ARCHAEOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces the science of recovering the human prehistoric and historic past through excavation, analysis, and interpretation of material remains. Includes a survey of the archaeology of different areas of the Old and New Worlds. Also includes the works of selected archaeologists and discussions of major archaeological theories. This course is one of the Statewide Guaranteed Transfer Courses, GT-SS3.

ANT 111

**PHYSICAL ANTHROPOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Studies human biology and its effects on behavior. Includes principles of genetics and evolution, vertebrates and primates, human origins, human variation, and ecology. This course is one of the Statewide Guaranteed Transfer courses. GT-SS3

ANT 121

**CULTURES OF THE SOUTHWEST**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment score. Includes the major prehistoric cultures (Paleoindian, Desert Culture, Anasazi, Hohokam, Mogollon) and ethnographic views of the historic cultures (Pueblos, Navajo, Apache, Pima, Papago, Spanish-American, and Anglo-American). The purpose of the study is to trace the stages through which these cultures have passed in order to evaluate environmental influences on human activities and to perceive human influences on the environment.

ANT 215

**INDIANS OF NORTH AMERICA**

3 CR. (3L)

PRQ: ANT 101. Studies the Indians of North America from the origins of native peoples in the New World, through the development of geographic culture areas, to European contact and subsequent contemporary Native American issues.

## Architectural Technology

ARC 107

**BLUEPRINT READING  
(RESIDENTIAL/COMMERCIAL)**

3 CR. (3L)

PRQ: REA 060, MAT 060, or equivalent assessment score or Department Chair approval. Covers the interpretation and reading of blueprints and related documents as used in the building trades industry and architect's office.

## Art

ART 110

**ART APPRECIATION**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces the cultural significance of the visual arts, including media, processes, techniques, traditions, and terminology. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

ART 111

**ART HISTORY I**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Provides the knowledge base to understand the visual arts, especially as related to Western culture. Surveys the visual arts from the Ancient through the Medieval periods. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

ART 112

**ART HISTORY II**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Provides the knowledge base to understand the visual arts, especially as related to Western culture. Surveys the visual arts from the Renaissance through the Modern periods. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

ART118

**ART SAMPLER**

1 CR. (2 STA)

Introduces students to basic skills through various art media. This course may be repeated under a different subtitle for a maximum of six credit hours. Encompasses a multitude of one-credit art experiences that expose students to an art form that they may wish to explore further.

ART 121

**DRAWING I**

3 CR. (6 STA)

Investigates the various approaches and media that students need to develop drawing skills and visual perception.

ART 122

**DRAWING II**

3 CR. (6 STA)

Explores expressive drawing techniques with an emphasis on formal composition, color media and content or thematic development.

ART 123

**WATERCOLOR I**

3 CR. (6 STA)

Provides an introduction to the basic techniques and unique aspects of materials involved in the use of either transparent or opaque water media or both. Color theory is included.

ART 124

**WATERCOLOR II**

3 CR. (6 STA)

PRQ: ART 123 or equivalent. Continues the study of watercolor techniques, emphasizing original compositions and experimentation with materials. Color theory is included.

ART 131

**2-D DESIGN**

3 CR. (6 STA)

Examines the basic elements of design, visual perception, and artistic form and composition as they relate to two-dimensional media.

ART 132

**3-D DESIGN**

3 CR. (6 STA)

Focuses on learning to apply the elements and principles of design to three dimensional problems.

ART 138

**PHOTOGRAPHY I**

3 CR. (6 STA)

Introduces black and white photography as a fine art medium and develops skills necessary for basic camera and lab operations.

ART 139

**PHOTOGRAPHY II**

3 CR. (6 STA)

This course is a further exploration in camera and lab operations with an emphasis on individual creativity. It includes the development of a comprehensive portfolio.

ART 140  
**COLOR PHOTOGRAPHY I**  
3 CR. (6 STA)  
Covers the fundamentals of color photography such as color theory and light, production, processing and printing color negatives.

ART 141  
**JEWELRY AND METAL WORK I**  
3 CR. (6 STA)  
Introduces the construction of jewelry designs in metals and small casting techniques.

ART 142  
**JEWELRY AND METAL WORK II**  
3 CR. (6 STA)  
Emphasizes conceptual design development, using casting and specialized techniques.

ART 143  
**DIGITAL PHOTOGRAPHY I**  
3 CR. (6 STA)  
Introduces the basic concepts of digital imaging as applied to photography. Using applicable technology and hands on experience, modern developments are presented leading to the present applications of digital imaging which combine traditional photographic ideas with electronic media. Enables the student to learn how to operate image manipulation software using a variety of scanning equipment, software tools and output devices by executing new assignments and applying these technologies to their photographic process.

ART 154  
**SCULPTURE I**  
3 CR. (6 STA)  
Introduces the fundamentals of sculpture such as modeling, casting, carving, and the processes of assemblage.

ART 155  
**SCULPTURE II**  
3 CR (6 STA)  
Develops an understanding and focus on manipulation of three dimensional form, with greater concentration on individual creativity and style.

ART 161  
**CERAMICS I**  
3 CR. (6 STA)  
Introduces traditional and contemporary ceramic forms and processes including handbuilding and throwing on the potter's wheel.

ART 162  
**CERAMICS II**  
3 CR. (6 STA)  
A continuation of ART 161, this course emphasizes skill, technique and form.

ART 163  
**HANDBUILT CLAY I**  
3 CR. (6 STA)  
Provides instruction in several methods of handbuilding and the study of functional and decorative design elements.

ART 207  
**ART HISTORY – 1900 TO PRESENT**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test scores. Provides students with the knowledge base to understand the visual arts as related to Modern and Contemporary visual art. Surveys world art of the twentieth century, including Modernism to Post-Modernism.

ART 208  
**CULTURE STUDIES**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test scores. Studies the arts and history of a particular culture at the location of that culture. Students view the arts and architecture of the culture in the historical and spatial contexts for which they were designed and in galleries and museums.

ART 209  
**STUDIO ART**  
3 CR. (6 STA)  
Designed for advanced students interested in further exploring an art discipline to develop a more comprehensive portfolio.

ART 211  
**PAINTING I**  
3 CR. (6 STA)  
Explores basic techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting to depict form and space on a two-dimensional surface.

ART 212  
**PAINTING II**  
3 CR. (6 STA)  
This course further explores techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

ART 213  
**PAINTING III**  
3 CR. (6 STA)  
Provides continued exploration of techniques, materials, and concepts used in opaque painting processes in oil or acrylic painting, with emphasis on composition and content development.

ART 221  
**DRAWING III**  
3 CR. (6 STA)  
Offers a continued study of expressive drawing techniques and development of individual style, with an emphasis on composition and technique variation.

ART 225  
**PRINTMAKING I**  
3 CR. (6 STA)  
Introduces the basic techniques and skills of printmaking as a fine art media. Instruction includes an understanding of visual concepts as they relate to prints. May include introduction to relief, intaglio, lithography and screen printing techniques.

ART 239  
**COLOR PHOTOGRAPHY II**  
3 CR. (6 STA)  
Designed for students who are approaching a personal style and aesthetic in the medium of color photography. It is an extension of Color Photography I. Personal expression is stressed through individual critiques.

ART 240  
**LARGE FORMAT PHOTOGRAPHY**  
3 CR. (6 STA)  
Introduces the visual aesthetics and techniques of view camera photography. Students receive hands-on photographic experience with the 4x5 view camera, process film, and produce prints.

ART 241  
**JEWELRY AND METAL WORK III**  
3 CR. (6 STA)  
Focuses upon advanced work and emphasizes experimentation with materials and techniques, individual designs, and superior craftsmanship.

ART 242  
**JEWELRY AND METAL WORK IV**  
3 CR. (6 STA)  
Provides continued study of the properties of metal and stone in creating decorative work. Students employ advanced design and techniques to explore original, personal expression. A variety of materials and approaches are used in discovering new and independently creative finished pieces.

ART 243  
**DIGITAL PHOTOGRAPHY II**  
3 CR. (6 STA)  
PRQ: ART 143 or permission of the instructor. Expands upon the beginning digital photography class. Focuses on digital photography in terms of design and communication factors including color, visual design, lighting, graphics, and aesthetics.

ART 244  
**DIGITAL PHOTO STUDIO**  
3 CR. (6 STA)  
Introduces digital photography as a fine art medium, and develops skills necessary for basic operation of a digital camera and production of digital imagery.

ART 252  
**LANDSCAPE PHOTOGRAPHY**  
2 CR. (4 STA)  
Focuses on traditional and contemporary approaches to landscape photography. Examines technical and aesthetic aspects of landscape photography through group discussions, a field study, lectures, and print and slide critiques.

ART 253  
**STUDIO PHOTOGRAPHY**  
3 CR. (6 STA)  
Explores the creative uses of studio lighting from the perspective of fine art photography with an emphasis on portraiture, three dimensional object photography, and two dimensional collage photography.

ART 261  
**CERAMICS III**  
3 CR. (6 STA)  
Encourages students to develop an individual style of wheel thrown and handbuilt ceramic forms with continuing involvement in surface treatment.

ART 264  
**MARKETING FOR THE VISUAL ARTISTS**  
3 CR. (3L)  
PRQ: 12 credits of any combination of ART courses. Provides students with the framework, tools, and professional materials necessary for the practicing visual artist. Guidelines for writing proposals, artist's statements, and resumes are discussed and practiced. Explores theoretical and practical considerations related to portfolio presentation and exhibiting artwork through hands-on activities, readings, and discussion.

ART 265  
**THE BUSINESS OF VISUAL ART**  
3 CR. (3L)  
Introduces students to the principles and practices involved in creating and operating arts organizations in the profit and not-for-profit art world.

ART 269  
**CERAMIC SCULPTURE**  
3 CR. (6 STA)  
Explores a variety of processes to create three-dimensional images in clay. Focuses on hand-built sculptures, without using a potter's wheel and relying on very basic tools. Encourages creative experimentation and engaging in the process.

ART 277  
**SPECIAL TOPICS**  
.25-6 CR. (STA)  
Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

## Astronomy

AST 101  
**ASTRONOMY I**  
4 CR. (3L/2 LBA)  
PRQ: REA 090, MAT 060, ENG 060, CIS 110 or equivalent assessment test scores. Focuses on the history of astronomy, the tools of the astronomer and the contents of the solar system including the planets, moons, asteroids, comets, and meteoroids. Incorporates laboratory experience. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

AST 102  
**ASTRONOMY II**  
4 CR. (3L/2 LBA)  
PRQ: REA 090, MAT 060, ENG 060, CIS 110 or equivalent assessment test scores. Emphasizes the structure and life cycle of the stars, the sun, galaxies, and the universe as a whole, including cosmology and relativity. Incorporates laboratory experience. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

## Auto Service Technology

ASE 110  
**BRAKES I**  
3 CR. (2L/1.5 LBV)  
Covers basic operation of automotive braking systems. Includes operation, diagnosis, and basic repair of disc brakes, drum brakes, and basic hydraulic systems.

ASE 120  
**BASIC AUTOMOTIVE ELECTRICITY**  
2 CR. (1.5L/.75 LBV)  
Introduces automotive electricity and includes basic electrical theory, circuit designs, and wiring methods. Focuses on multi-meter usage and wiring diagrams.

ASE 123  
**AUTOMOTIVE BATTERY, STARTING, AND CHARGING SYSTEMS**  
2 CR. (1.5L/.75 LBV)  
Covers the operation, testing, and servicing of automotive battery, starting, and charging systems. Includes voltage and amperage testing of starter and generator, load testing and maintenance of a battery, and starter and generator overhaul.

ASE 124  
**ADVANCED IGNITION SYSTEM DIAGNOSIS AND REPAIR**  
2 CR. (1L/1.5 LBV)  
Focuses on lecture and related laboratory experiences in the diagnosis, service, adjustments and repair of various ignitions systems on customer vehicles.

ASE 130  
**GENERAL ENGINE DIAGNOSIS**  
2 CR. (1L/1.5 LBV)  
Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors.

ASE 132  
**IGNITION SYSTEM DIAGNOSIS AND REPAIR**  
2 CR. (1.5L/1.75 LBV)  
Focuses on lecture and related laboratory experiences in the diagnosis, service, adjustments and repair of various automotive ignition systems.

ASE 134  
**AUTOMOTIVE EMISSIONS**  
2 CR. (1.5L/.75 LBV)  
Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive emission control systems.

ASE 140  
**SUSPENSION AND STEERING I**  
3 CR. (2L/1.5 LBV)  
Focuses on lecture and related experiences in the diagnosis and service of suspensions and steering systems and their components.

ASE 151  
**AUTOMOTIVE MANUAL TRANSMISSION/TRANSAXLES AND CLUTCHES**  
2 CR. (1L/1.5 LBV)  
Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

ASE 152

**DIFFERENTIALS AND 4WD/AWD SERVICE**

2 CR. (1.5/.75 LBV)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive differentials, four wheel and all wheel drive units.

ASE 160

**AUTOMOTIVE ENGINE REMOVAL AND INSTALLATION**

1 CR. (.5L/.75 LBV)

Focuses on lecture and laboratory experiences in the removal and installation procedures of the automotive engine from and into front wheel and rear wheel drive vehicles.

ASE 161

**ENGINE, DISASSEMBLY DIAGNOSIS AND ASSEMBLY**

5 CR. (1L/6 LBV)

Focuses on lecture and laboratory experiences in the disassembly, diagnosis and reassembly of the automotive engine. Topics include the diagnostic and repair procedures for the engine block and head assemblies.

ASE 163

**AUTOMOTIVE COMPONENT REMOVAL AND REPLACEMENT**

3 CR. (1L/3 LBV)

Practical methods of removal and installation of engines, transmissions, transfer cases, clutch assemblies, bolt, and thread repair.

ASE 165

**AUTOMOTIVE MACHINING**

2 CR. (1L/1.5 LBV)

Offers instruction in machining processes on the automotive engine using up-to-date machines to recondition connecting rods, bore engine blocks, machine heads for replaceable guides and seats. Brake drum and disc machining is also discussed.

ASE 170

**LABORATORY EXPERIENCE I**

1-6 CR. (1.5-9 LBV)

Continues to build upon the principles that are expected to be understood by students.

ASE 171

**LABORATORY EXPERIENCE II**

1-6 CR (1.5-9 LBV)

Continues to build upon the principles that are expected to be understood by students.

ASE 172

**LABORATORY EXPERIENCE III**

1-6 CR. (1.5-9 LBV)

Continues to build upon the principles that are expected to be understood by students.

ASE 210

**BRAKES II**

3 CR. (1L/3 LBV)

Covers the operation and theory of the modern automotive braking systems. Includes operation, diagnosis, service, and repair of the anti-lock braking systems, power assist units and machine operations of today's automobile.

ASE 220

**SPECIALIZED ELECTRONICS TRAINING**

2 CR. (1.5L/.75 LBV)

Provides a systematic approach to automotive electrical systems. Builds from the basic electrical principles and concepts through semiconductors and microprocessors. Features on-bench exercises. Students practice diagnostic procedures that have applications to present and future automotive electronics and electrical systems.

ASE 231

**AUTOMOTIVE COMPUTERS**

2 CR. (1L/1.5 LBV)

Focuses on lecture and laboratory experiences in the inspection and testing of typical computerized engine control systems.

ASE 233

**FUEL INJECTION AND EXHAUST SYSTEMS**

4 CR. (3L/1.5 LBV)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of electronic fuel injection systems and modern exhaust systems.

ASE 234

**ADVANCED AUTOMOTIVE EMISSIONS**

2 CR. (1.5L/.75 LBV)

Provides laboratory experiences with a variety of customer work in the areas that the student received training during previous automotive classes.

ASE 235

**DRIVABILITY DIAGNOSIS**

1 CR. (.5L/.75 LBV)

Emphasizes lecture and related laboratory experience in diagnostic techniques and the use of diagnostic scan tools, oscilloscopes, lab scopes, multi-meters and gas analyzers. Students diagnose live vehicle drivability problems.

ASE 236

**ADVANCED DRIVABILITY DIAGNOSIS/REPAIR**

4 CR. (2L/3 LBV)

Focuses on lecture and laboratory experiences in the inspection, testing and repair of typical computerized engine control systems on customer vehicles.

ASE 240

**SUSPENSION AND STEERING II**

3 CR. (1.5L/2.25 LBV)

Emphasizes lecture and related experiences in the diagnosis and service of electronic suspensions and steering systems and their components.

ASE 250

**AUTOMATIC TRANSMISSION/TRANSAXLE SERVICE**

1 CR. (1L)

Focuses on practical methods of maintaining, servicing, and performing minor adjustments on an automatic transmission and transaxle.

ASE 251

**AUTOMATIC TRANSMISSION/TRANSAXLE DIAGNOSIS AND ASSEMBLIES**

5 CR. (3L/3 LBV)

Covers diagnosis, principles of hydraulics, principles of electronic components, power flow, theory of operation, removal of transmission/transaxle, tear down, replacement of components, measurement and subsequent adjustment of components and replacement of transmission/transaxle.

ASE 252

**ADVANCED AUTOMATIC TRANSMISSIONS/TRANSAXLES**

2 CR. (1L/1.5 LBV)

Provides laboratory experiences with a variety of customer work in the areas that the student received training during previous automotive transmission classes.

ASE 253

**ADVANCED MANUAL TRANSMISSION/TRANSAXLES**

2 CR. (1L/1.5 LBV)

Focuses on lecture and laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles, clutches and their related components on customer vehicles.

ASE 260

**ADVANCED ENGINE DIAGNOSIS**

2 CR. (1L/1.5 LBV)

Focuses on lecture and related laboratory experiences in the diagnosis and necessary corrective actions of automotive engine performance factors related to customer vehicles.

ASE 265

**AUTOMOTIVE HEATING AND AIR CONDITIONING**

5 CR. (4L/1.5 LBV)

Emphasizes lecture and related laboratory experiences in the diagnosis and service of automotive heating and air conditioning systems and their components.

ASE 275-277

**SPECIAL TOPICS**

1-9 CR. (L/LBV)

Provides the student with a vehicle to pursue in depth exploration of special topics of interest.

ASE 277

**SPECIAL TOPICS: AUTOMOTIVE TRANSMISSIONS REBUILDING**

2 CR. (3 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: AUTOMOTIVE MANUAL TRANSMISSIONS/TRANSAXLES AND CLUTCHES**

2 CR. (1L/1.5 LBV)

Focuses on lecture and related laboratory experiences in the diagnosis and repair of automotive manual transmissions, transaxles and clutches and related components.

ASE 277

**SPECIAL TOPICS: AUTOMOTIVE EMISSIONS AND EXHAUST II**

2 CR. (1.5L/.75 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: TRANSMISSIONS DIAGNOSIS AND REBUILD**

7 CR. (4L/4.5 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: DRIVEABILITY DIAGNOSIS II**

4 CR. (6 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: BRAKES**

6 CR. (3L/4.5 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: AUTOMOTIVE COMPONENT REMOVAL/REPLACE**

1 CR. (.5L/.75 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: ENGINE ASSEMBLY**

2 CR. (3 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 277

**SPECIAL TOPICS: ENGINE DISASSEMBLY AND ASSEMBLY**

9 CR. (1L/9 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 280

**INTERNSHIP: BASIC ELECTRICAL AND ENGINE PERFORMANCE**

1 CR. (3 INT)

Focuses on practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or ("F.A.S.T.") Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

ASE 281

**INTERNSHIP: BASIC HEAVY DUTY AND POWER TRAIN**

1 CR. (3 INT)

Focuses on practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or ("F.A.S.T.") Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

ASE 282

**INTERNSHIP: GENERAL (SUMMER)**

1 CR. (3 INT)

Emphasizes practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or ("F.A.S.T.") Fundamental Automotive Systems Training (Chrysler) or others as required by the program track.

ASE 283

**INTERNSHIP: ADVANCED ELECTRICAL AND ENGINE PERFORMANCE**

1 CR. (3 INT)

Emphasizes practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or ("F.A.S.T.") Fundamental Automotive Systems Training (Chrysler) or others as required by the program track. The student registers for and takes the (ASE) Automotive Service Excellence based tests for engine performance and electrical systems.

ASE 284

**INTERNSHIP: ADVANCED HEAVY DUTY AND POWER TRAIN**

1 CR. (3 INT)

Focuses on practical on-the-job, work-related experience that corresponds to the area of study. In this semester, the student takes all related sponsor requirements in (STS) Service Training Standards (General Motors) or ("F.A.S.T.") Fundamental Automotive Systems Training (Chrysler) or others as required by the program track they are enrolled in. The student registers for and takes the ASE-Automotive Service Excellence based test for brake systems and suspension and steering.

ASE 285

**INDEPENDENT STUDY**

1-6 (1.5-9 LBV)

Provides laboratory experiences with a variety of work in the areas that the student received training during previous automotive classes.

ASE 287

**COOPERATIVE EDUCATION**

1-9 CR. (3-27 INT)

Develops practical objectives assigned by an automotive employer providing an on-the-job learning experience at an approved automotive repair facility.

# Automotive Collision Technology

ACT 110

## **SAFETY IN COLLISION REPAIR**

2 CR. (1L/1.5 LBV)

Introduces the student to safety techniques and operation as it relates to shop safety and industry standards. The student is exposed to regulations and collision shop operations. In addition, the student becomes involved with VICA, developing writing and speaking skills.

ACT 111

## **METAL WELDING AND CUTTING I**

3 CR. (1L/3 LBV)

Covers sheet metal oxygen-acetylene welding and MIG welding techniques including safety, materials, equipment and setups. Personal and vehicle protective measures prior to welding procedures is presented.

ACT 122

## **PANEL REPAIR AND REPLACEMENTS**

3 CR. (1L/3 LBV)

Covers straightening techniques including tension pulls/stress relief, metal finishing, metal shrinking and use of fillers. Emphasizes the identification, handling and replacement of parts such as adjustment and alignment of bolt-on parts, fixed parts and accessories. Training covers the use of adhesives, sound deadeners and welding methods performed during repairs.

ACT 123

## **METAL FINISHING AND BODY FILLING**

3 CR. (1L/3 LBV)

Covers metal finishing, metal shrinking and the use of cosmetic fillers. Emphasis is placed on the use of proper tools required to perform these tasks, including use, selection and safety procedures for tools and equipment selected.

ACT 131

## **STRUCTURAL DAMAGE DIAGNOSIS**

3 CR. (1L/3 LBV)

Focuses on methods of frame measurement using dimension charts and service manuals. Includes the use of self-centering gauges and mechanical and electronic measuring. Appropriate terms and definitions of vehicle structures and vehicle diagnosis is covered including identification and analysis of damage. Includes the techniques for basic hook ups and safety procedures used in making corrective pulls.

ACT 132

## **STRUCTURAL DAMAGE REPAIR**

3 CR. (1L/3 LBV)

Continues the study and application of frame measurement and repair. The student applies methods found in dimension charts and service manuals for vehicle diagnosis and straightening. Training includes the replacement of a structural panel with the identification of damaged suspension components replaced according to manufacturer's recommendations.

ACT 141

## **REFINISHING SAFETY**

1 CR. (1L)

Covers correct use of safety procedures used in refinishing. Proper fit and use of various types of protective equipment is emphasized. The identification of tools and equipment, with use and maintenance is covered including national guidelines for proper disposal and handling of hazardous materials.

ACT 142

## **SURFACE PREPARATION I**

2 CR. (1L/1.5 LBV)

Covers surface preparation for refinishing including cleaning, sanding, feather edging, chemical treatment of bare materials and priming. The application of primers, including rationale and use is covered. In addition the student learns skills for proper removal and storage of exterior trim and protection of adjacent panels.

ACT 143

## **SPRAY EQUIPMENT OPERATIONS**

2 CR. (1L/1.5 LBV)

Covers the inspection, cleaning and determination of the condition of spray guns and related equipment. Students learn skills for adjusting spray guns by setting-up and testing spray gun operations.

ACT 144

## **REFINISHING I**

2 CR. (1L/1.5 LBV)

Provides the knowledge needed for application and use of automotive paint systems. Course includes locating color codes, mixing formulas, matching and selections of materials. Proper paint gun use and adjustments is taught for the product being applied. In addition, the student practices correct masking and detailing techniques.

ACT 151

## **PLASTICS AND ADHESIVES I**

1 CR. (.5L/.75 LBV)

Designed to teach the state-of-the-art repair for both rigid and flexible plastic components and choosing adhesives using the latest manufacturer's repair techniques.

ACT 160

## **CUSTOM PAINTING**

3 CR. (1L/3 LBV)

This course provides instruction in basic custom paint application such as pearl paints, candy colors, metal flakes, etc.

ACT 161

## **AUTOMOTIVE GRAPHICS AND DESIGNS**

3 CR. (1L/3 LBV)

This course provides instruction in the application of graphics and designs to an automotive finish. These designs include striping, flames, paint fades, and graphics, etc.

ACT 162

## **AUTOMOTIVE AIR BRUSHING AND MURALS**

3 CR. (1L/3 LBV)

This course provides instruction in the use of airbrush equipment to produce murals. Instruction in mural layout background, foreground, and fine detail will be provided.

ACT 163

## **AUTOMOTIVE SPECIAL EFFECTS AND REFINISHING**

3 CR. (1L/3 LBV)

This course provides instruction in the different types of design effects that can be achieved through special techniques.

ACT 165

## **AUTOMOTIVE BODY CUSTOMIZING I**

3 CR. (1L/3 LBV)

Recommended CORQ: ACT 166 AND ACT 167. Covers tool identification welding (mig and resistance), plasma cutting, metal finishing, metal shrinking and the use of cosmetic fillers. Emphasis is placed on the use of proper tools required to perform body customizing tasks, including use, selection and safety procedures for tools and equipment selected.

ACT 166

## **AUTOMOTIVE BODY CUSTOMIZING II**

3 CR. (1L/3 LBV)

Recommended PRQ: ACT 165. Covers modification of vehicle and vehicle parts such as Chopping, measuring, realigning, fabricating, recessing, shaping etc.

ACT 167

## **AUTOMOTIVE BODY CUSTOMIZING III**

3 CR. (1L/3 LBV)

Recommended PRQ: ACT 165 and ACT 166. Covers the completion of modifications that were started in Automotive Body Customizing II along with the addition of body molding kits.

ACT 175-177

**SPECIAL TOPICS**

1-9 CR. (L/LBV)

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that he/she needs for industry upgrades or special training to enter the workforce. The student may explore current topics, issues or activities related to one or more aspects of the Automotive Collision industry.

ACT 175

**SPECIAL TOPICS: AUTOMOTIVE COLLISION TECHNOLOGY LAB EXPERIENCES I**

7 CR. (2L/7.5 LBV)

Designed to prepare the student to perform basic tasks for a specialized area of plastics and adhesives.

ACT 176

**SPECIAL TOPICS: AUTOMOTIVE COLLISION TECHNOLOGY LAB EXPERIENCES II**

6 CR. (4L/3 LBV)

Designed to prepare the student to perform basic tasks in the specialized area of non-structural damage repair.

ACT 177

**SPECIAL TOPICS: AUTOMOTIVE COLLISION TECHNOLOGY LAB EXPERIENCES III**

6 CR. (4L/3 LBV)

Designed to prepare the student to perform basic tasks in the specialty area of non-structural damage repair.

ACT 180

**AUTOMOTIVE COLLISION REPAIR INTERNSHIP LEVEL I**

1-9 CR (3-27 INT)

Designed to meet the needs of the student in selected specialized area in a work-based environment. Individualized instruction at the job site is coordinated based on student's interest and instructor approval.

ACT 181

**AUTOMOTIVE COLLISION REPAIR LEVEL II INTERNSHIP**

1-9 CR. (3-27 INT)

Course is a continuation of Level I Internship. Student uses the knowledge and skills acquired throughout the ACT program in a job site placement.

ACT 205

**ESTIMATING AND SHOP MANAGEMENT**

3 CR. (2L/1.5 LBV)

Initiates written estimates on damaged vehicles. Students learn shop management including work orders, ordering supplies, operating costs, time cards, shop liabilities, employee's safety and insurance management issues.

ACT 211

**METAL WELDING AND CUTTING II**

2 CR. (3 LBV)

Covers mig welding procedures of seam weld, stitch welds and destructive testing. Resistance spot welding, which includes two-sided spot weld, plasma cutting, safety, materials, and equipment and operating procedures, with emphasis on shop safety are also presented.

ACT 220

**STRUCTURAL REPAIR II**

4 CR. (2L/3 LBV)

Designed as a continuation of ACT 132. Students continue practice in structural damage analysis and measuring procedures on both, unitized and body-over-frame type vehicles. Proper methods for straightening, as well as replacing structural, mechanical, and electronic components are covered.

ACT 221

**MOVEABLE GLASS AND HARDWARE**

2 CR. (1L/1.5 LBV)

Covers door glass, vent windows and glass mechanisms (both electric and mechanical) with emphasis on removal and replacement. In addition, interior trim panels, seats and headliners are removed and replaced. Student learns proper care and treatment of vehicle seat protectors plus the proper use of tools required to perform these tasks.

ACT 231

**ADVANCED STRUCTURAL DAMAGE DIAGNOSIS AND REPAIR**

3 CR. (1L/3 LBV)

Covers major automotive body repair in vehicles with major damage on conventional structures and unibody structures. Student learns the operation of equipment and techniques used to straighten and align damaged frames. Identification and analysis of frames, hot and cold stress relieving, servicing and sectioning of structural frames is also included. Liability issues and the importance of making these corrections according to the manufacturer's recommendations and industry standards are emphasized.

ACT 232

**FIXED GLASS REPAIR**

2 CR. (3 LBV)

Covers the removal and replacement of fixed glass using manufacturer's specifications, proper tools and recommended materials. Application of skills are demonstrated and utilized for the removal and replacement of modular glass using manufacturer's specifications and procedures.

ACT 241

**PAINT DEFECTS**

3 CR. (1L/3 LBV)

Covers paint defects. Emphasizes the causes of paint defects with methods to cure problems during and after refinishing procedures. Students learn to identify the proper surface preparations to apply prior to refinishing. Training includes using paint equipment and determining paint film thickness with proper temperatures for refinishing.

ACT 242

**SURFACE PREPARATION II**

2 CR. (1L/1.5 LBV)

Emphasizes surface preparation for refinishing including cleaning, sanding, feather edging, chemical treatment of bare metals and priming. The application of primers, including why and where to use them is covered.

ACT 243

**REFINISHING II**

2 CR. (1L/1.5 LBV)

In this advanced course students learn the necessary skills used to tint and blend panels working with the latest finishes and paints. Special coatings and procedures are covered in this course.

ACT 244

**FINAL DETAIL**

2 CR. (1L/1.5 LBV)

Focuses on the detailing procedures in paint refinishing of vehicles. Methods and techniques are specialized to enhance painting skills. Transfers and tapes methods with decals etc. are demonstrated.

ACT 251

**PLASTICS AND ADHESIVES II**

1 CR. (.75L/.38 LBV)

Emphasizes advanced plastic and adhesives. The current state-of-the-art repair for both rigid and flexible plastic components using the latest manufacturer's repair techniques are presented. Sheet Molding Compound procedures and the use of proper adhesives is covered.

ACT 266

**RESTRAINT SYSTEMS**

1 CR. (.5L/.75 LBV)

Students learn to inspect, remove and replace active restraint systems, passive restraint systems and supplemental restraint systems. Procedures are demonstrated for disarming and diagnosing restraint systems using electronic equipment and trouble codes. Instruction for passive restraint replacement is also covered in this course.

ACT 275-277

**SPECIAL TOPICS**

1-9 CR. (L/LBV)

Assists students who are interested in individual topics within the normal curriculum. The student identifies and selects objectives that he/she needs for industry upgrades or special training to enter the workforce. The student may explore current topics, issues or activities related to one or more aspects of the Automotive Collision industry.

ACT 275

**SPECIAL TOPICS: REFINISHING**

1-9 CR. (1.5-13.5 LBV)

Designed to prepare the student to perform basic tasks in the specialty area of refinishing.

ACT 275

**SPECIAL TOPICS: SUSPENSION AND DRIVE TRAIN**

9 CR. (3L/9 LBV)

Designed to prepare the student to perform basic tasks in the specialty area of suspensions and drive trains.

ACT 275

**SPECIAL TOPICS: MAJOR BODY REPAIR**

1-9 CR. (1-9L/1.5-13.5 LBV)

Designed to prepare the student to perform basic tasks in the specialty area of major body repair.

ACT 275

**SPECIAL TOPICS: MINOR BODY REPAIR**

1-9 CR. (1-9L/1.5-13.5 LBV)

Designed to prepare the student to perform basic tasks in the specialty area of minor body repair.

ACT 275

**SPECIAL TOPICS: GENERAL BODY REPAIR**

4 CR. (6 LBV)

This course provides an introduction to basic automotive body repair techniques. The student will be able to learn objectives tailored to his/her vocational goals.

ACT 280

**AUTOMOTIVE COLLISION REPAIR LEVEL III INTERNSHIP**

1-9 CR. (3-27 INT)

Individualized instruction at job site continues in this final internship. The student is encouraged to develop skills needed to enter employment in the automotive collision repair field.

ACT 284

**AUTOMOTIVE COLLISION REPAIR INTERNSHIP LEVEL IV**

1-9 CR. (3-27 INT)

Individualized instruction at job site continues in this final internship. The student is encouraged to develop skills needed to enter employment in the automotive collision repair field.

## Aviation Maintenance Technology

AMT 101

**A & P PREPARATION**

4 CR. (3L/1.5 LBV)

Covers basic subjects, such as mathematics, physics and aircraft drawings and provides a foundation for further studies in the A&P program.

AMT 102

**BASIC ELECTRICS**

4 CR. (3L/1.5 LBV)

Covers basic ac and dc electric theory as applied to aircraft systems.

AMT 103

**WEIGHT & BALANCE AND GROUND HANDLING**

2 CR. (1L/1.5 LBV)

Emphasizes aircraft weight and balance theory and the performance of weight and balance calculations. Also covers the requirements for ground handling, servicing, taxiing and towing aircraft.

AMT 104

**REGULATIONS & PUBLICATIONS**

3 CR. (3L)

Focuses on the Federal Aviation Administration and manufacturer's publications pertaining to aircraft operation and maintenance.

AMT 105

**MATERIALS AND PROCESSES**

6 CR. (4L/3 LBV)

Focuses on aircraft structures, materials, and hardware, the use of precision measuring tools, and methods of non-destructive testing.

AMT 106

**CORROSION CONTROL AND FLUID LINES**

2 CR. (1L/1.5 LBV)

Emphasizes the causes of corrosion and methods to prevent and treat corrosion in aircraft structures. Covers construction of rigid and flexible aircraft fluid lines.

AMT 140

**AIRCRAFT SYSTEMS FOR PILOTS – AIRFRAME**

3 CR. (1L/3 LBV)

Covers the study of the basic mechanical systems and structural components of aircraft to supplement instruction received in flight training.

AMT 141

**AIRCRAFT SYSTEMS FOR PILOTS – POWERPLANT**

3 CR. (1L/3 LBV)

Study of the basic operating systems of aircraft powerplants to supplement instruction received in flight training.

## Aviation Technology

AVT 101

**PRIVATE PILOT GROUND SCHOOL**

4 CR. (3L/1.5 LBV)

Prepares student for the Private Pilot Airplane, Single Engine, Land FAA Knowledge Exam.

AVT 102

**PRIVATE PILOT FLIGHT**

4 CR. (6 LBV)

Focuses on flight training in preparation for the Private Pilot Airplane, Single-Engine, Land FAA Practical Test, and completing requirements for the Private Pilot Certificate.

AVT 105

**AVIATION METEOROLOGY**

4 CR. (3L/1.5 LBV)

Focuses on recognition, interpretation and evaluation of atmospheric weather as it relates to and affects aviation.

AVT 111

**INSTRUMENT PILOT GROUND SCHOOL**

4 CR. (3L/1.5 LBV)

Focuses on preparation for the FAA Instrument Rating Knowledge Exam.

AVT 112

**INSTRUMENT PILOT FLIGHT**

4 CR. (6 LBV)

Focuses on flight training in preparation for the Instrument Rating, Single Engine Airplane FAA Practical Test, and completing requirements for the Instrument Rating.

AVT 201

**COMMERCIAL PILOT GROUND SCHOOL**

2 CR. (2L)

Prepares the student for the Commercial Pilot Airplane, Single Engine, Land FAA Knowledge Exam.

AVT 202

**COMMERCIAL FLIGHT I**

3 CR. (4.5 LBV)

This course is the first of a two-part sequence of flight training in preparation for the Commercial Pilot Certificate, Airplane, Single Engine Land FAA Practical Test. Consists of the cross country aeronautical experience required for the Commercial Certificate.

AVT 203

**COMMERCIAL FLIGHT II**

4 CR. (6 LBV)

Continuation of flight training in preparation for the Commercial Pilot, Airplane Single Engine, Land FAA Practical Test, completing requirements for the Commercial Pilot Certificate.

AVT 205

**MOUNTAIN FLYING GROUND SCHOOL**

1 CR. (1L)

Acquaints the student with the unique aspects of flying in mountainous terrain and the additional knowledge and proficiency necessary for safe and efficient operation in mountain and high altitude terrain.

AVT 206

**CREW RESOURCE MANAGEMENT**

1 CR. (1L)

Focuses on classroom instruction coupled with Line Oriented Flight Training (LOFT) in a Flight Training Device. Covers the knowledge, skills, and attitudes necessary to enhance safety and operate effectively as a member of an airplane crew.

AVT 207

**MULTI-ENGINE GROUND SCHOOL**

1 CR. (1L)

Prepares the student for the FAA Practical Test for Private or Commercial Pilot, Airplane Multi-Engine Land.

AVT 208

**MULTI-ENGINE FLIGHT**

1 CR. (1.5 LBV)

Focuses on flight training in preparation for the Airplane, Multi-Engine Rating and completing requirements for this Rating.

AVT 211

**FUNDAMENTALS OF INSTRUCTION**

2 CR. (2L)

Focuses on preparation for the FAA Fundamentals of Instructing Knowledge Exam.

AVT 212

**FLIGHT INSTRUCTOR GROUND SCHOOL**

2 CR. (2L)

Focuses on preparation for the FAA Flight Instructor Airplane Knowledge Exam.

AVT 213

**FLIGHT INSTRUCTOR FLIGHT**

1 CR. (1.5 LBV)

Focuses on flight training in preparation for the Flight Instructor Airplane, Single-Engine Land FAA Practical Test, completing requirements for the Flight Instructor Certificate.

AVT 221

**INSTRUMENT INSTRUCTOR GROUND SCHOOL**

2 CR. (2L)

Focuses on preparation for the FAA Instrument Instructor Knowledge Exam.

## Biology

BIO 105

**SCIENCE OF BIOLOGY**

4 CR. (3L/2 LBA)

PRQ: REA 090, MAT 060, ENG 060, CIS 110, or equivalent assessment test scores. Examines the basis of biology in the modern world and surveys the current knowledge and conceptual framework of the discipline. Explores biology as a science – a process of gaining new knowledge - as is the impact of biological science on society. Includes laboratory experiences. Designed for non-science majors. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

BIO 106

**BASIC ANATOMY AND PHYSIOLOGY**

4 CR. (3L/2 LBA)

PRQ: REA 090, MAT 060, ENG 060, CIS 110, or equivalent assessment test scores. Focuses on basic knowledge of body structures and function, and provides a foundation for understanding deviations from normal and disease conditions. This course is designed for individuals interested in health care and is directly applicable to the Practical Nursing Program, Paramedic Program, and the Medical Office Technology Program.

BIO 111

**GENERAL COLLEGE BIOLOGY I WITH LAB**

5 CR. (4L/2 LBA)

PRQ: BIO 105 or the equivalent, REA 090, MAT 060, ENG 090, CIS 110, or equivalent assessment test scores. Examines the fundamental molecular, cellular and genetic principles characterizing plants and animals. Includes cell structure and function, and the metabolic processes of respiration, and photosynthesis, as well as cell reproduction and basic concepts of heredity. The course includes laboratory experience. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

BIO 112

**GENERAL COLLEGE BIOLOGY II WITH LAB**

5 CR. (4L/2 LBA)

PRQ: BIO 105 or the equivalent, MAT 060, ENG 121, CIS 110, or equivalent assessment test scores. A continuation of Biology I. Includes ecology, evolution, classification, structure, and function in plants and animals. This course includes laboratory experience. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

BIO 143

**ECOLOGY OF COLORADO**

3 CR. (3L)

PRQ: REA 060, MAT 090 or MAT 107, ENG 060, CIS 110, or equivalent assessment test scores. Studies the natural environments in Colorado. Explores the vast natural environments of Colorado and the plants and animals that inhabit the life zones of our majestic plains, mountains, and valleys. Discovers the interrelationships of man and his Colorado environment - past, present, and future. Through an inquiry approach, the student examines the changing needs and roles of our environments. Field trips include Roxborough State Park, Garden of the Gods, Mt. Evans, Pikes Peak, Deer Creek Canyon, Daniels Park, Barr Lake or others.

BIO 175-177

**SPECIAL TOPICS**

1-6 CR (L/LBA)

Covers a specific topic within Biology as determined by the instructor. Topics reflect the special expertise of faculty and/or the special needs of the students.

BIO 176

**SPECIAL TOPICS: CLINICAL NUTRITION**

4 CR. (1L)

PRQ: REA 060 and MAT 060 or equivalent assessment test score, BIO 105 or BIO 106 or equivalent. An understanding of basic nutrients, food requirements for various age groups, food economics, and consumer protection. The role of the nurse in nutritional care is addressed.

BIO 201

**HUMAN ANATOMY AND PHYSIOLOGY I**

4 CR. (3L/2 LBA)

PRQ: BIO 105 or BIO 106, REA 090, ENG 090, MAT 060, CIS 110, or equivalent assessment test scores. Focuses on an integrated study of the human body including the histology, anatomy, and physiology of each system. Examines molecular, cellular, and tissue levels of organization plus integuments, skeletal, articulations, muscular, nervous, and endocrine systems. Includes a mandatory hands-on laboratory experience covering experimentation, microscopy, observations, and dissection. This is the first semester of a two-semester sequence. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

BIO 202

**HUMAN ANATOMY AND PHYSIOLOGY II**

4 CR. (3L/2 LBA)

PRQ: BIO 201, CIS 110, MAT 060, and ENG 121, or equivalent assessment test scores. Recommend PRQ: CHE 101. Focuses on the integrated study of the human body and the histology, anatomy, and physiology of the following systems and topics: cardiovascular, hematology, lymphatic and immune, urinary, fluid and electrolyte control, digestive, nutrition, respiratory, reproductive, and development. Includes a mandatory hands-on laboratory experience involving experimentation, microscopy, observations, and dissection. This is the second semester of a two-semester sequence. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

BIO 204

**MICROBIOLOGY**

4 CR. (3L/2 LBA)

PRQ: BIO 105 or BIO 106, ENG 121, MAT 060, CIS 110 or equivalent assessment test scores. Designed for health science majors. Examines microorganisms with an emphasis on their structure, development, physiology, classification, and identification. The laboratory experience includes culturing, identifying, and controlling microorganisms with an emphasis on their role in infectious disease. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

BIO 216

**PATHOPHYSIOLOGY**

4 CR. (4L)

PRQ: BIOL 201, BIO 202, ENG 121, REA 090, MAT 060, CIS 110, or equivalent assessment test scores. Focuses on the functions of the human body systems with emphasis on their interrelationships and adaptation to stress and disease.

BIO 275-277

**SPECIAL TOPICS**

1-6 CR. (L/LBA)

Covers a specific topic within Biology, as determined by the instructor. Reflects the special expertise of the faculty and/or the special needs of the students.

BIO 275

**SPECIAL TOPICS: HUMAN ANATOMY AND PHYSIOLOGY I SUPPLEMENT FOR MILITARY PERSONNEL**

1 CR. (1L)

This module is a study of human body urinary and endocrine systems to supplement military human anatomy & physiology courses for the occupational therapy assistant program.

## Business

BUS 115

**INTRODUCTION TO BUSINESS**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, or equivalent assessment test score or permission of Department Advisor or Chair. Focuses on the operation of the American business system. Covers fundamentals of the economy, careers and opportunities, marketing, management, production, governmental regulations, tools of business and social responsibilities.

BUS 204

**INTRODUCTION TO E-BUSINESS**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, or equivalent assessment test score or permission of Department Advisor or Chair. Introduces the use of technology in all aspects of a business. Explores the use of technology for customer relations management, accounting and financial applications, purchasing and production tools, sales and marketing functions, and human resources management. Examines use of the Internet, world-wide-web and sophisticated multi-function software tools. Students gain a heightened awareness of emerging technologies and trends in e-business.

BUS 216

**LEGAL ENVIRONMENT OF BUSINESS**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, or equivalent assessment test score or permission of Department Advisor or Chair. Emphasizes public law, regulation of business, ethical considerations, and various relationships existing within society, government, and business. Specific attention is devoted to economic regulation, social regulation, regulation and laws impacting labor-management issues, and environmental concerns. Students develop an understanding of the role of law in social, political, and economic change.

BUS 217

**BUSINESS COMMUNICATION AND REPORT WRITING**

3 CR. (3L)

PRQ: CIS 110, ENG 121, or equivalent assessment test score or permission of Department Advisor or Chair. Emphasizes effective business writing and covers letters, memoranda, reports, application letters, and resumes. Includes the fundamentals of business communication and an introduction to international communication.

BUS 226

**BUSINESS STATISTICS**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 090, MAT 090 or MAT 112, or equivalent assessment test score or permission of Department Advisor or Chair. Focuses on statistical study, descriptive statistics, probability, and the binomial distribution, index numbers, time series, decision theory, confidence intervals, linear regression, and correlation. Intended for the business major.

**BUS 260**  
**BUSINESS PROCESS FOUNDATIONS FOR E-COMMERCE**  
3 CR. (3L)  
PRQ: CIS 110 or equivalent assessment test score, CWB 221, BUS 204, or permission of Department Advisor or Chair. Focuses on business process foundations and a preliminary look at the opportunities and challenges that implementers of e-commerce tools encounter.

**BUS 261**  
**E-COMMERCE BUSINESS VALUE**  
3 CR. (3L)  
PRQ: CIS 110 or equivalent assessment test score, BUS 260, or permission of Department Advisor or Chair. Focuses on how implementation of e-commerce solutions drive changes to the business process.

**BUS 287**  
**COOPERATIVE EDUCATION**  
0.5-6 CR. (1.5-18 INT)  
PRQ: Permission of Department Advisor or Chair. Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work stations related to their program of study. They work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

## Business Technologies

**BTE 100**  
**COMPUTER KEYBOARDING**  
1 CR. (.5L/.75 LBV)  
PRQ/CORQ: CIS 110 or equivalent assessment test score, or Department Chair approval. Designed for students who have minimal or no keyboarding skills. Introduces the touch method of keyboarding, as well as the basic operation and functions of the equipment. Emphasizes learning the alphanumeric keyboard, proper technique, and speed control. S/U

**BTE 102**  
**KEYBOARDING APPLICATIONS I**  
2 CR. (1L/1.5 LBV)  
PRQ: CIS 110 or equivalent assessment test score, BTE 100 or instructor's permission, or Department Chair approval. Designed for students with minimal keyboarding skills. Introduces letters, tables, memos, and manuscripts. Emphasizes speed and accuracy.

**BTE 103**  
**KEYBOARDING APPLICATIONS II**  
3 CR. (2L/1.5 LBV)  
PRQ/CORQ: BTE 102, CIS 135, CIS 110 or equivalent assessment test score, or Department Chair approval. Reinforces basic keyboarding formats and procedures. Productivity and decision-making skills are exercised. Emphasizes speed and accuracy.

**BTE 108**  
**TEN-KEY BY TOUCH**  
1 CR. (1L)  
PRQ: CIS 110 or equivalent assessment test score, or Department Chair approval. Introduces touch control of the ten-key pad. Emphasizes the development of speed and accuracy using proper technique.

**BTE 111**  
**KEYBOARDING SPEEDBUILDING I**  
2 CR. (1.5 LBV)  
PRQ: BTE 100 or instructor permission, CIS 110 or equivalent assessment test score, or Department Chair approval. Designed to increase speed and improve accuracy in keyboarding on the PC through the use of correct techniques and concentrated effort.

**BTE 112**  
**KEYBOARDING SPEEDBUILDING II**  
2 CR. (3 LBV)  
PRQ: BTE 111. Continues the skill building sets from BTE 111. This course is designed to further increase speed and improve accuracy in keyboarding on the PC through the use of correct techniques and concentrated effort.

**BTE 116**  
**FILE MANAGEMENT**  
1 CR. (1L)  
PRQ: REA 060 and ENG 060, or equivalent assessment test scores, or Department Chair approval. Provides instruction principles, organization, and procedures for alphabetic, numeric, subject, chronological and geographic systems of filing.

**BTE 120**  
**ELECTRONIC OFFICE PROCEDURES**  
3 CR. (3L)  
PRQ: REA 060 and ENG 060, or equivalent assessment test scores, or Department Chair approval. Provides instruction in the latest electronic office procedures using business technologies which include: e-mail, FAX, Windows, presentation graphics, telephone techniques, internet, electronic calendaring and appointment scheduling.

**BTE 125**  
**RECORDS MANAGEMENT**  
3 CR. (4.5 LBV)  
PRQ: CIS 110, ENG 060, REA 060, MAT 060, or equivalent assessment test score, or Department Chair, Advisor, or Instructor permission. Instructs on how records are created, stored, and retrieved. Covers the basic filing rules - classifying, indexing, coding, storing, and retrieving as applied to basic methods - alphabetic, chronological, subject, numeric, and geographic. Emphasizes 'hands-on' records management through the use of simulations, which includes manual and/or computer software.

**BTE 128**  
**LEGAL TERMINOLOGY**  
1 CR. (1L)  
PRQ: CIS 110, MAT 060, or equivalent assessment test score, or Department Chair approval. Allows students to develop a basic legal terminology background. Students learn the state, federal, and local court structures.

**BTE 156**  
**BUSINESS MATHEMATICS WITH CALCULATORS**  
4 CR. (3L/1.5 LBV)  
PRQ: CIS 110, MAT 060, or equivalent assessment test score, or Department Chair approval. Covers basic business mathematics using the touch system on electronic calculators to solve business problems.

**BTE 157**  
**BUSINESS LEADERSHIP ACTIVITIES**  
1 CR. (1L)  
PRQ: Enrollment in a business program, CIS 110, ENG 060, REA 060, MAT 060, or equivalent assessment test score, or Department Chair approval. Prepares students to understand and utilize the free enterprise system, parliamentary procedures, and business reporting in relation to a student organization, Phi Beta Lambda, while developing leadership skills. S/U

**BTE 166**  
**BUSINESS EDITING SKILLS**  
3 CR. (3L)  
PRQ: CIS 110 or equivalent assessment test score, ENG 113, or Department Chair approval. Provides proofreading techniques and reviews spelling, punctuation, grammar, and word processing formats on various types of business documents and worksheets.

**BTE 175-177**  
**SPECIAL TOPICS**  
1-6 CR. (L/LBV)  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

BTE 175

**SPECIAL TOPICS: STUDENT LABORATORY FOR KEYBOARDING AND COMPUTER APPLICATIONS**  
2 CR. (3 LBV)

This lab provides teacher assistance, tutoring, and machine availability. It is recommended for students enrolled in BTE keyboarding courses and BTE courses which have computer/machine applications other than word processing; such as, BTE 100, BTE 102, BTE 103, BTE 125, BTE 204, and BTE 156.

BTE 176

**SPECIAL TOPICS: APPLICATIONS LAB**

1-3 CR. (1.5-4.5LBV)

PRQ: CIS 110 or equivalent assessment test score, or Department Chair approval. This lab provides student assistance, tutoring, and machine availability. It is recommended for any student enrolled in an applications class. S/U

BTE 201

**BANK TRAINING I**

3 CR. (3L)

PRQ: By permission. Develops knowledge of bank operations and provides a solid foundation of banking principles, integrity, and ethics.

BTE 204

**KEYBOARDING APPLICATIONS III**  
3 CR. (2L/1.5 LBV)

PRQ: BTE 103, CIS 135, BTE 166 and 45 wpm, CIS 110 or equivalent assessment test score, or Department Chair approval. Produces mailable computer printouts from straight-copy, rough-draft, and simulated office projects and develops the ability to make decisions without direct supervision.

BTE 211

**LEGAL FORMATTING**

3 CR. (3L)

PRQ: REA 060 and ENG 060, or equivalent assessment test scores, or Department Chair approval. Introduces keyboarding and formatting legal correspondence, legal instruments, and court documents and provides an introduction to legal procedures.

BTE 213

**INTRODUCTION TO LEGAL OFFICE PROCEDURES**

3 CR. (3L)

PRQ: REA 060 and ENG 060, or equivalent assessment test scores; or Department Chair approval. Simulates a typical legal office and acquaints students with the tasks and responsibilities performed in a legal office environment and shows how these tasks relate to the court system.

BTE 225

**OFFICE MANAGEMENT**

3 CR. (3L)

PRQ: REA 060 and ENG 060, or equivalent assessment test scores, or Department Chair approval. Emphasis is placed on functions of the office. Includes office organization, work in the office, office layout, equipment and supplies, procurement and control, work flow, forms design, record storage and retrieval systems, personnel administration and problems, and government control.

BTE 229

**LEGAL TRANSCRIPTION**

3 CR. (1L/3 LBV)

PRQ: BTE 128, CIS 135, BTE 103, CIS 110, ENG 090, MAT 090 or MAT 107, or equivalent assessment test scores, or Department Chair approval. Prepares students to work as legal transcriptionists. Students transcribe a variety of legal documents and develop a legal vocabulary.

BTE 238

**LEGAL OFFICE PROCEDURES**

3 CR. (2L/1.5 LBV)

PRQ: 40 wpm, BTE 128, CIS 135. Designed for students who will be working in a legal office either in the private or the public sector. Covers fundamental office procedures found in both general and specialized law offices.

BTE 275-277

**SPECIAL TOPICS**

1-6 CR. (1-6L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest. S/U

BTE 287

**COOPERATIVE EDUCATION/INTERNSHIP**

0.5-6 CR. (.75-9 COP)

PRQ: CIS 110 or equivalent assessment test score, or Department Chair approval. Provides students with the opportunity to supplement course work with practical work experience related to their educational program and occupational objectives. Students are placed at approved work sites that are related to their program of study. They work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor/coordinator.

## Chemistry

CHE 101

**INTRODUCTION TO CHEMISTRY I WITH LAB**

5 CR. (4L/2 LBA)

PRQ: MAT 090, REA 090, ENG 060, CIS 110, or equivalent assessment test score. Includes the study of measurements, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base, gas laws, and condensed states. Laboratory experiments demonstrate the above concepts qualitatively and quantitatively. Designed for non-science majors, students in occupational and health programs, or students with no chemistry background. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

CHE 102

**INTRODUCTION TO CHEMISTRY II WITH LAB**

5 CR. (4L/2 LBA)

PRQ: CHE 101, MAT 090, REA 090, ENG 060, CIS 110, or equivalent assessment test scores. Focuses on introductory organic and biochemistry (sequel to Introduction to Chemistry I). Includes the study of hybridization of atomic orbitals for carbon, nomenclature of both organic and biochemical compounds, physical and chemical properties of various functional groups of organic chemistry, and physical and chemical properties of biochemical compounds along with their biochemical pathways. Incorporates laboratory experiments. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

CHE 104

**CONCEPTS OF CHEMISTRY I**

4 CR. (3L/2 LBA)

PRQ: MAT 090, REA 090, ENG 060, CIS 110, or equivalent assessment test scores. Includes the study of measurements, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base, and gas laws. Designed for non-science majors, students in occupational and health programs, or students with no chemistry background. This course has no lab and may not be transferable. Equivalent of CHE 101 lecture.

CHE 105

**CHEMISTRY IN CONTEXT**

5 CR. (4L/2 LBA)

PRQ: CHE 101, MAT 090, REA 090, ENG 060, CIS 110, or equivalent assessment test scores. Covers the study of measurements, matter, molecules, atoms, chemical bonding, nomenclature, energy, acids, bases, and nutrition. Course work examines chemistry in the modern world and surveys the current knowledge as well as the conceptual framework of the discipline. Chemistry as a science is explored, as is the impact of chemistry on society. This course includes laboratory experience and is designed for non-science majors. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1.

CHE 109

**GENERAL, ORGANIC, AND BIOCHEMISTRY**

4 CR. (4L)

PRQ: CHE 101, MAT 090, REA 090, ENG 060, CIS 110, or equivalent assessment test scores. Focuses on fundamentals of inorganic, organic and biochemistry primarily for students in health science, non-science majors and/or students in the occupational and health related career areas. Includes the study of measurement, atomic theory, chemical bonding, nomenclature, stoichiometry, solutions, acid and base chemistry, gas laws, condensed states of matter and nuclear chemistry, nomenclature of organic compounds, properties of different functional groups, nomenclature of various biological compounds, their properties and biological pathways. This course has no lab and may not be transferable. Equivalent of CHE 102 lecture.

CHE 111

**GENERAL COLLEGE CHEMISTRY I WITH LAB**

5 CR. (4L/2 LBA)

PRQ: CHE 101, MAT 106, REA 090, ENG 090, CIS 110, or equivalent assessment test scores. Focuses on basic chemistry and measurement, matter, chemical formulas, reactions and equations, stoichiometry and thermochemistry. This course covers the development of atomic theory culminating in the use of quantum numbers to determine electron configurations of atoms, and the relationship of electron configuration to chemical bond theory and molecular orbital theory. The course includes gases, liquids, and solids and problem-solving skills are emphasized through laboratory experiments. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 112

**GENERAL COLLEGE CHEMISTRY II WITH LAB**

5 CR. (4L/2 LBA)

PRQ: CHE 111, MAT 121, ENG 121, CIS 110, or equivalent assessment test scores. Presents concepts in the areas of solution properties, chemical kinetics, chemical equilibrium, acid-base and ionic equilibrium, thermodynamics, electrochemistry, nuclear chemistry, and organic chemistry. This course emphasizes problem solving skills and descriptive contents for these topics. Laboratory experiments demonstrate qualitative and quantitative analytical techniques. This course is one of the Statewide Guaranteed Transfer courses. GT-SC1

CHE 175-177

**SPECIAL TOPICS**

1-6 CR. (L/LBA)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

## Communications

COM 262

**COMMUNICATING WITH IMPOSSIBLE PEOPLE**

1 CR. (1L)

PRQ: ENG 060 and REA 060, or equivalent assessment test scores, or Department Chair approval. Introduces participants to the concepts of 'impossible' communicators and the techniques used to deal with them more effectively. Emphasizes active participation in skill building exercises. It is a two day, one unit course.

COM 263

**CONFLICT RESOLUTION**

1 CR. (1L)

PRQ: REA 060 and ENG 060, or equivalent assessment test score, or Department Chair approval. Focuses on handling conflict productively. Enables the student to understand the roots of conflict and how to mediate interpersonal conflict in a variety of settings. Emphasizes conflict prevention techniques.

COM 268

**PROBLEM SOLVING**

1 CR. (1L)

PRQ: REA 060 and ENG 060, or equivalent assessment test score, or Department Chair approval. Focuses on solving problems in our personal and professional lives and developing the ability to think and act creatively in responding to a variety of situations. Introduces several different perspectives for group and individual problem solving and explores real situations and simulations.

## Computer Aided Drafting

CAD 101

**COMPUTER AIDED DRAFTING I**

3 CR. (1L/3 LBV)

PRQ: ENT 131 or Department Chair approval. Focuses on basic computer aided drafting skills using the latest release of CAD software. Includes file management, Cartesian coordinate system, drawing set-ups, drawing aids, layer usage, drawing geometric shapes, editing objects, array, text applications, basic dimensioning, and Help access.

CAD 153

**INTRODUCTION TO PRO ENGINEER/BASICS**

3 CR. (1L/3 LBV)

PRQ: CAD operation experience. Introduces basic Pro/Engineer software operation including part creation, drawing creation, and assembly creation. Pro/Engineer is a 3D solid modeling software from parametric technologies.

CAD 155

**PRO ENGINEER/ADVANCED**

3 CR. (1L/3 LBV)

PRQ: CAD 153. Emphasizes advanced part creation, drawing manipulation, and assembly techniques using Pro/Engineer by parametric technologies.

CAD 202

**COMPUTER AIDED DRAFTING/3D**

3 CR. (1L/3 LBV)

PRQ: CAD 101 or instructor approval. Focuses on construction of three-dimensional objects using the latest release of CAD software. Includes wireframe construction, surface modeling, solid modeling, extrusions, Boolean operations, 3D editing, 3D views, rendering, and 3D to 2D construction.

CAD 219  
**3D STUDIO MAX**  
3 CR. (1L/3 LBV)  
PRQ: CAD 101 or instructor permission.  
Introduces 3D rendering and animation using AUTODESK 3D Studio software. Emphasizes 3D geometry, texture mapping, lighting, camera placement, shading, photo-realistic rendering, animation techniques, and walk through animations.

CAD 220  
**3D STUDIO MAX/ADVANCED**  
3 CR. (1L/3 LBV)  
PRQ: CAD 219. Focuses on advanced rendering and animation techniques using AUTODESK 3D studio software. Emphasizes 3D-geometry manipulation, external processing, and video postproduction of 3D studio animations.

CAD 231  
**LAND DESKTOP/AUTO DESK**  
3 CR. (1L/3 LBV)  
PRQ: CAD 101, ENT 143. Focuses on the basic command structure and applications of civil mapping concepts utilizing a civil software, to include data collection files, symbols libraries, setting attributes, COGO, layer control, surface modules, road calculations, and site design. All course work is completed on a CAD system.

CAD 255  
**SOLIDWORKS/MECHANICAL**  
3 CR. (1L/3 LBV)  
PRQ: Instructor permission. Introduces basic non-parametric 3D concepts to build confidence in 3D thinking and progresses to three-dimensional parameters. The student learns to construct, modify, and manage complex parts in 3D space as well as to produce 2D drawings from the 3D models.

## Computer Information Systems

CIS 101  
**ALTERNATIVE INPUT/OUTPUT FOR COMPUTERS**  
1 CR. (1.5 LBV)  
Focuses on teaching alternative methods for inputting data into a computer. Individualized for each student, the course covers such programs as Dragon NaturallySpeaking, Dragon Dictate, or Job Access with Speech (JAWS). It is designed for students who have little or no previous computer experience.

CIS 102  
**COMPUTER ASSISTIVE TECHNOLOGY**  
3 CR. (4.5 LBV)  
Introduces assistive technology and alternative methods for utilization of computer systems. Depending upon student need or interest, the student selects the AT or method. Options include voice recognition, screen readers, screen enlargement, keyboard modification, word predication, reading enhancement programs and alternative data entry methods.

CIS 104  
**WORD PROCESSING WITH ASSISTIVE TECHNOLOGY**  
3 CR. (4.5 LBV)  
Provides training in the functions, features, and uses of assistive technology and alternative methods. Covers the introduction of standard word processing features needed for proper presentation of college or business papers and the methodology to successfully use the assistive technology/alternative method in continuing educational or employment environments.

CIS 107  
**VOICE RECOGNITION: DRAGON**  
1 CR. (1.5 LBV)  
Teaches the basics of voice recognition software for word processing and other related office applications. Benefits include the reduction of repetitive stress injuries, increasing accuracy, and saving report time preparation.

CIS 110  
**INTRODUCTION TO THE PC**  
1 CR. (1.5 LBV)  
Provides the beginning computer user with hands-on experience in the elementary use of the personal computer. This course introduces the basic feature of and the terminology associated with personal computers, including topics such as database, spreadsheet, and word processing. S/U

CIS 115  
**INTRODUCTION TO COMPUTER INFORMATION SYSTEMS**  
3 CR. (3L)  
Focuses on an overview of the needs for and roles of computer information systems. Emphasizes computer requirements in organizations, history, hardware functions, programming, systems development, and computer operations. Introduces computer applications.

CIS 118  
**INTRO PC APPLICATIONS**  
3 CR. (2L/1.5 LBV)  
PRQ: CIS 110 or equivalent assessment test score. Introduces computer concepts and components, as well as application-suite software and the Internet. Includes descriptions of and hands-on experiences with word processing, spreadsheets, databases, operating environments and other common PC application packages.

CIS 124  
**INTRO TO OPERATING SYSTEMS**  
3 CR. (2L/1.5 LBV)  
CORQ: CIS 110 or equivalent assessment test score. Introduces concepts, terminology and hands-on skills in the use of DOS and Windows. Emphasizes navigation, file manipulation, file creation and troubleshooting.

CIS 128  
**WINDOWS COMPLETE**  
3 CR. (2L/1.5 LBV)  
PRQ: CIS 110 or equivalent assessment test score. Introduces the functions and capabilities of Microsoft Windows. Includes configuring and modifying the operating system environment.

CIS 130  
**INTRODUCTION TO INTERNET**  
1 CR. (1.5LBV)  
Enhances the student's knowledge of the Internet and its resources. Individuals learn terminology in dealing with the Internet. Includes privacy and copyright issues with information retrieved from the Internet. Students experience the use of e-commerce, multimedia and e-mail. Explores searching the Internet and credibility of information obtained with searches. S/U

CIS 131  
**WORD PROCESSING I**  
1 CR. (1L)  
Gives the student an introductory working knowledge of word processing. The student will create, edit, format, save, and print documents. The student will use spell check, grammar check, and thesaurus features. The student will format text, paragraphs, and pages, change margins and use the find and replace feature as well as create envelopes and labels.

CIS 135

**COMPLETE PC WORD PROCESSING**

3 CR. (2L/1.5 LBV)

PRQ: CIS 110 or equivalent assessment test score, 30 wpm. BTE 102 highly recommended. Explores a complete array of word processing skills. The skills needed to create, edit, format, and printing documents are covered. Other topics include character, spelling checkers and thesaurus, hyphenation, tables, mail merge, document design, and graphics.

CIS 140

**MICROSOFT OUTLOOK**

1 CR. (.5L/.75 LBV)

PRQ: CIS 110 or equivalent assessment test score, BTE 102, CIS 128. Introduces the functions used in Microsoft Outlook including e-mail messages, calendar, contacts, tasks, journals, and notes. S/U

CIS 141

**PC DATABASE: EXCEL**

1 CR. (1.5 LBV)

Introduces the student to the functions of a database using selected software. It includes skills such as file creation, searches, sorts, simple editing and indexes.

CIS 145

**COMPLETE PC DATABASE**

3 CR. (2L/1.5 LBV)

PRQ: CIS 128. Explores a complete array of database skills. Includes table, query, form, and report creation and modification. Other topics include application integration and automation of database tasks within the database.

CIS 146

**DATABASE APPLICATION**

**DEVELOPMENT: ACCESS**

3 CR. (2L/1.5 LBV)

PRQ: CIS 145. Covers the PC database concepts necessary to create database applications. Includes programming, shared files, resource locking, and database recovery.

CIS 149

**MICROSOFT OFFICE SPECIALIST**

**CERTIFICATION PREP: ACCESS**

1 CR. (1.5 LBV)

Prepares students for the Microsoft Office Specialist certification examination for Access. Students use software to determine strengths and weaknesses and elect to review and prepare for the Core level Certification exam.

CIS 151

**PC SPREADSHEETS I: EXCEL**

1 CR. (1.5 LBV)

Introduces the student to concepts and applications of an electronic spreadsheet. Topics include creating a worksheet, developing a professional looking worksheet and creating charts.

CIS 155

**PC SPREADSHEET CONCEPTS:**

**EXCEL**

3 CR. (2L/1.5 LBV)

PRQ: CIS 128. Exposes the student to a wide range of uses of the electronic spreadsheet with special emphasis on using it as a business tool. Includes fundamentals and terms, creating and saving workbooks, entering and using formulas, formatting, printing, multiple-page workbooks, creating charts, entering and using functions, managing lists, and simple macros.

CIS 156

**PC SPREADSHEETS APPLICATION**

**DEVELOPMENT: EXCEL**

3 CR. (2L/1.5 LBV)

PRQ: CIS 155. Builds on skills learned in CIS 155 and teaches advanced techniques for spreadsheet design and use. Topics include inserting objects from the form toolbar, recording macros and assigning macros to objects, and using visual basic commands to automate repetitive tasks.

CIS 159

**MICROSOFT OFFICE SPECIALIST**

**CERTIFICATION PREP: EXCEL**

1 CR. (1.5 LBV)

Prepares students for the Microsoft Office Specialist certification examination for Excel. Students use software to determine strengths and weaknesses and elect to review and prepare for either the Core or Expert level Certification exam. The MOS test is not included in this course.

CIS 161

**PRESENTATION GRAPHICS I**

1 CR. (.5L/.75 LBV)

PRQ: CIS 110 or equivalent assessment test score, CIS 128, BTE 102. Introduces the development of presentation graphics materials including graphs, charts, illustrations, and diagrams. Emphasizes effective communication.

CIS 167

**DESKTOP PUBLISHING**

3 CR. (2L/1.5 LBV)

Introduces the concepts and applications for desktop publishing using work processing software. Emphasizes page layout and design with techniques for incorporating text and graphics and final production of printed documents.

CIS 178

**SEMINAR/WORKSHOP**

1-6 CR. (1-6 SEM)

Provides students with an experiential learning experience.

CIS 218

**ADVANCED PC APPLICATIONS**

3 CR. (2L/1.5 LBV)

PRQ: CIS 118 or permission of instructor. Covers the advanced capabilities of a PC software applications suite. Emphasizes solving business problems by integrating data from all of the software applications that facilitate the production of useful information. Printed documents, reports, slides, and forms are produced to communicate information.

CIS 220

**FUNDAMENTALS OF UNIX**

3 CR. (2L/1.5 LBV)

Covers the structure and fundamentals of the UNIX operating system. Includes the files system and file processing, various utility programs, and shell, multi-user operation, text processing and communications.

CIS 222

**UNIX SYSTEM ADMINISTRATION**

3 CR. (2L/1.5 LBV)

Introduces the UNIX/Linux operating system and covers the skills required to install, configure and operate a UNIX/Linux system.

CIS 240

**DATABASE DESIGN AND**

**DEVELOPMENT**

3 CR. (3L)

Introduces the basic concepts of relational databases, data storage, and retrieval. Covers database design, data modeling, transaction processing, and introduces the Structured Query Language for databases.

CIS 241

**ADVANCED DATABASE DESIGN AND**

**DEVELOPMENT**

3 CR. (3L)

PRQ: CIS 240. Continues work started in CIS 240 Database Design and Development. Surveys the two common types of databases - relational and object oriented. Covers transactions and concurrency, database administration and backup and database applications.

CIS 268

**SYSTEMS ANALYSIS AND DESIGN I**

3 CR. (3L)

PRQ: CIS 115 and one programming language course. Introduces the student to the materials, techniques, procedures, and human interrelations involved in developing computer information systems. Includes the systems approach, fact gathering techniques, forms design, input/output, file design, file organization, various charting techniques, system audits on controls, project management, implementation, and evaluation.

CIS 275-277  
**SPECIAL TOPICS**  
1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CIS 276  
**SPECIAL TOPICS: INTRODUCTION TO THE PC II**  
1 CR. (1.5 LBV)

This class will enhance and augment the student's knowledge of personal computer application software by covering advanced techniques of word processing, spreadsheets, and database in an integrated application package. S/U

CIS 287  
**COOPERATIVE EDUCATION**  
1-6 CR. (1-6 INT)

Provides students an opportunity to gain practical experience in applying their occupational skills and/or to develop specific skills in a practical work setting. The instructor works with the student to select an appropriate work site, establish learning objectives and to coordinate learning activities with the employer work site supervisor.

CIS 289  
**CAPSTONE**  
1-6 CR. (3-18 INT)

Serves as the capstone course for CIS majors. Incorporates projects that allow students to develop advanced techniques and assemble information from different courses. Most projects will include the creation of interactive application programs for the non-computer user and require research beyond the classroom to prepare the student for entry level employment in a variety of situations.

## Computer Networking

CNG 101  
**INTRO TO NETWORKING**  
3 CR. (3L)

Focuses on underlying concepts of data communications, telecommunications and networking. Emphasizes the terminology and technologies in current networking environments and provides a general overview of the field of networking as a basis for continued study in the field.

CNG 102  
**LOCAL AREA NETWORKS**  
3 CR. (3L)

Introduces Local Area Networking. Focuses on discussions and demonstrations of planning, installing, and supporting networks.

CNG 103  
**WIDE AREA NETWORKS**  
3 CR. (3L)

Provides the student with conceptual and working knowledge of how Local Area Networks communicate over a wide area. Introduces telephony - the technology of switched voice communications. Provides students with an understanding of how communication channels of the public switched telephone networks are used for data communications and how voice data communications have become integrated.

CNG 104  
**INTRO TO TCP/IP**  
3 CR. (3L)

Outlines four important networking architectures in corporate environments today - TCP/IP, SNA, AppleTalk, and DNA. Focuses on the major components and functions of each of these architectures as well as methods used to connect different architectures. Provides students with concepts that are important to the field of systems integration, as well as a conceptual basis for understanding network architectures.

CNG 105  
**INTERNET TECHNOLOGIES**  
3 CR. (3L)

Outlines the important Internet Technologies in use today. Focuses on the major components and functions of each of these technologies as well as methods used to connect different technologies. Provides the students with concepts that are important to the field of systems integration with the Internet as well as a conceptual basis for understanding Internet Technologies.

CNG 108  
**NETWORK ANALYSIS AND DESIGN**  
3 CR. (3L)

Provides advanced instruction for networking professionals and students who grasp the basic concepts of networking but would like to understand methods used to analyze, design and manage LAN's point-to-point networks. Exercises are geared toward learning techniques used to design and analyze networks.

CNG 123  
**NETWORK SERVER BASICS: SERVER+**  
3 CR. (2L/1.5 LBV)

Provides students who are preparing for roles as network support technicians with skills training in the support of multi-processor computers and high capacity data storage systems typical of servers used in medium to large-scale networks.

CNG 124  
**NETWORKING I: NETWORK +**  
3 CR. (2L/1.5 LBV)

PRQ: CNG 101. Provides students with the knowledge necessary to understand, identify and perform necessary tasks involved in supporting a network. Covers the vendor-independent networking skills and concepts that affect all aspects of networking, such as installing and configuring the TCP/IP. This course also prepares students for the Networking II: Network + course.

CNG 125  
**NETWORKING II: NETWORK +**  
3 CR. (2L/1.5 LBV)

Continues to provide students with the knowledge necessary to implement and support a network. Focuses on the vendor-independent networking skills and concepts that affect all aspects of networking. The Networking I and II: Network + courses prepare students for the Network + certification.

CNG 128  
**IT ESSENTIALS II: NETWORK OPERATING SYSTEMS**  
5 CR. (5L)

PRQ: CNG 101. Introduces multi-user, multi-tasking networking operating systems. Focuses on characteristics of the Linux, Unix, Windows 2000, NT, and XP networking operating systems. Explores a variety of topics including installation procedures, security issues, back up procedures and remote access. The course prepares the student for both the CompTIA Server + certification and the Linux + certification.

CNG 131  
**NETWORK SECURITY FUNDAMENTALS**  
3 CR. (2L/1.5 LBV)

PRQ: CNG 101. Delivers a comprehensive overview of network security, including general security concepts. Communication Security is studied, including remote access, e-mail, the Web, directory and file transfer, and wireless data. Common network attacks are introduced. Cryptography basics are incorporated, and operational/organizational security is discussed as it relates to physical security, disaster recovery, and business continuity. Computer forensics is introduced.

CNG 132  
**PRINCIPLES OF INFORMATION SECURITY**  
3 CR. (2L/1.5 LBV)  
Examines the field of information security to prepare information systems students for their future roles as business decision-makers. The course presents a balance of the managerial and the technical aspects of information security. The concepts covered in this course should be helpful for students working towards the Certified Information Systems Security Professional (CISSP) certification.

CNG 133  
**NETWORK SECURITY: FIRE WALLS, INTRUSION DETECTION AND NETWORK SECURITY**  
3 CR. (2L/1.5 LBV)  
Teaches students the basics of network firewall security. It covers basic installation techniques, discusses how to make an intelligent choice of firewall technology, and presents basic firewall troubleshooting.

CNG 136  
**GUIDE TO DISASTER RECOVERY**  
3 CR. (3L)  
PRQ: REA 090, CIS 115, or department chair approval. Presents methods to identify vulnerabilities and take appropriate countermeasures to prevent and mitigate failure risks for an organization. It will take an enterprise-wide approach to developing a disaster recovery plan.

CNG 160  
**TELECOMMUNICATIONS I**  
3 CR. (3L)  
PRQ: CIS 115 or CIS 124 or CIS 128.  
Introduces the background needed to understand telephony products and services in the telecommunications industry. Includes hardware and devices, transmission characteristics and codes, network configurations, software and protocols.

CNG 212  
**IMPLEMENTING WINDOWS 2000 PROFESSIONAL AND SERVER**  
4 CR. (3L/1.5 LBV)  
Provides students with the knowledge and skills necessary to install and configure Microsoft Windows 2000 Professional on stand-alone and client computers that are part of a workgroup or domain. Focuses on the skills and knowledge necessary to install and configure Windows 2000 Server to create file, print, Web, and Terminal servers. Provides students with the prerequisite knowledge and skills required for course CNG 213 Implementing a Windows 2000 Network Infrastructure.

CNG 224  
**MICROSOFT WINDOWS WIRELESS NETWORK**  
3 CR. (2L/1.5 LBV)  
PRQ: CNG 104 or instructor permission.  
Provides the student with the Microsoft official curriculum from the Microsoft Regional Academy. Offers detailed instruction on the foundation concepts and technologies of wireless data networking. Upon completion of this course, students are prepared to take the Certified Wireless Network Administrator (CWNP) Certification Exam.

CNG 251  
**ANTIVIRUS CONCEPTS**  
3 CR. (3L)  
PRQ: REA 090 or department chair approval. Prepares the student for virus eradication. Focuses on how viruses work, how they are designed and how viruses are written. Emphasizes virus eradication and cleaning.

CNG 254  
**DATA ENCRYPTION**  
3 CR. (3L)  
PRQ: REA 090 or department chair approval. Exposes the student to data encryption models. Examines the differences between data storage including Microsoft, Novell Netware and UNIX. Includes encryption and data transmission. Covers encryption over various networks including the Internet.

CNG 257  
**NETWORK DEFENSE AND COUNTER MEASURE**  
3 CR. (2L/1.5 LBV)  
PRQ: CNG 104 or instructor permission.  
Examines the tools, techniques and technologies used in the technical securing of information assets. This course provides in-depth information of the software and hardware components of Information Security and Assurance. Topics include firewall configurations, hardening Unix and NT servers, Web and distributed systems security and specific implementation of security modes and architectures. The curriculum maps to the Security Certified Network Professional (SCP) Network Defense and Countermeasures exam.

CNG 258  
**COMPUTER FORENSICS**  
4 CR. (3L/1.5 LBV)  
PRQ: CNG 104 or instructor permission.  
Exposes the student to the field of Computer Forensics and investigation. Provides the student with methods to properly conduct a computer forensics investigation beginning with a discussion of ethics. Topics covered include fundamental concepts, history of computer forensics, file structures, data recovery techniques, computer forensic tools and analysis. The curriculum and objectives map to the International Association of Computer Investigative Specialists (IACIS) certification.

CNG 260  
**CISCO NETWORK ASSOCIATE I**  
5 CR. (5L)  
Introduces network fundamentals, the OSI model and industry standards, IP addressing (subnet masks) and basic network design.

CNG 261  
**CISCO NETWORK ASSOCIATE II**  
5 CR. (5L)  
PRQ: CNG 260. Focuses on router theory and technologies, including router configurations, protocols, network management and introductory LAN switching.

CNG 262  
**CISCO NETWORK ASSOCIATE III**  
5 CR. (5 L)  
PRQ: CNG 261. Focuses on advanced routing and switching configurations, LAN switching, network management and advanced network design.

CNG 263  
**CISCO NETWORK ASSOCIATE IV**  
5 CR. (5 L)  
PRQ: CNG 262. Focuses on project-based learning, including advanced network design projects and advanced management projects. This course and CNG 260, 261 and 262 prepare students for the CISCO Certified Network Associate (CCNA) certification exam.

## Computer Science

CSC 116  
**LOGIC AND PROGRAM DESIGN**  
3 CR. (3L)  
Introduces computer program design using concepts of structured programming and logic. Includes pseudocode, flowcharts, and structure charts. Covers variables, data types, control structures, looping, program breaks, and arrays.

CSC 130  
**COBOL PROGRAMMING**  
3 CR. (2L/1.5 LBV)  
PRQ: CSC 116. Involves computer programming in which elements of the COBOL language are taught. Focuses on design, code, debug, and document solutions to a variety of business-oriented problems.

CSC 131  
**ADVANCED COBOL PROGRAMMING**  
3 CR. (2L/1.5 LBV)  
PRQ: CSC 130. Provides continued study of COBOL programming language. Enables the student to develop more sophisticated capabilities of COBOL.

CSC 150  
**VISUAL BASIC PROGRAMMING**  
3 CR. (2L/1.5 LBV)  
PRQ: CSC 116 or permission of instructor. Introduces programming and applications development for the Microsoft Windows Programming environment using Visual Basic for Windows.

CSC 151  
**ADVANCED VISUAL BASIC PROGRAMMING**  
3 CR. (2L/1.5 LBV)  
PRQ: CSC 150 or permission of instructor. Builds on the skills learned in CSC 150. Focuses on more involved applications, work with advanced controls, and deal with additional advanced topics.

CSC 160  
**COMPUTER SCIENCE I: (JAVA)**  
4 CR. (3L/1.5 LBV)  
PRQ: CSC 116 or permission of instructor. Introduces students to the discipline of computer science. Covers algorithm development, data representation, logical expressions, sub-programs and input/output operations using a structured programming language. Requires intensive lab work outside of class time.

CSC 161  
**COMPUTER SCIENCE II: (JAVA)**  
4 CR. (3L/1.5 LBV)  
PRQ: CSC 160 or permission of instructor. Continues the structured algorithm development and problem solving techniques begun in Computer Science I. Enables students to gain experience in the use of data structures and design of larger software projects. Requires intensive computer laboratory experience.

CSC 230  
**C PROGRAMMING**  
3 CR. (3L/1.5 LBV)  
PRQ: CSC 116. Introduces C programming language - a 'mid level' language whose economy of expression and data manipulation features allow a programmer to deal with the computer at a 'low level.'

CSC 231  
**ADVANCED C PROGRAMMING**  
3 CR. (3L/1.5 LBV)  
PRQ: CSC 230. Continues the study of C begun in CSC 230. Includes pointers, arrays, linked lists, stacks and queues, trees and advanced user interfaces such as menus, windows and cursor control.

CSC 233  
**OBJECT ORIENTED PROGRAMMING IN C++**  
3 CR. (2L/1.5 LBV)  
Covers all syntactical components of the C++ language including arrays, structures, pointers, functions and classes. Emphasizes inheritance, overloading, and polymorphism. Focuses on writing clear, properly structured, and well documented programs using the C++ Language and Object-Oriented methodology. It is the advanced course in C++ Programming.

CSC 240  
**JAVA PROGRAMMING**  
3 CR. (2L/1.5 LBV)  
PRQ: CSC 116 or permission of instructor. Introduces the Java programming language and covers basic graphics, events/procedures, user interface, and libraries. Enables the student to write and execute a variety of Java programs. Incorporates Java Applets into HTML.

CSC 241  
**ADVANCED JAVA PROGRAMMING**  
3 CR. (2L/1.5 LBV)  
PRQ: CSC 240 or permission of instructor. Continues the study of the Java programming language. Covers advanced programming topics including multi-threading, network/Internet programming, database programming, and JavaBeans. Enables the student to write advanced, large, and complex programs.

CSC 269  
**PROGRAMMING IN PERL**  
2 CR. (2L)  
Introduces the knowledge and skills necessary to be able to write programs in the Perl programming language. This course will offer a brief introduction of writing CGI programs using Perl.

## Computer Web-Base

CWB 110  
**COMPLETE WEB AUTHORING**  
3 CR. (2L/1.5 LBV)  
Explores the complete set of web authoring skills using HTML and/or other scripting languages. Includes links, backgrounds, controlling text and graphic placement, tables, image maps, frames and forms.

CWB 130  
**COMPLETE WEB EDITING TOOLS**  
3 CR. (2L/1.5 LBV)  
Introduces advanced web editing techniques to control web page layout. Advanced HTML topics such as frames and web forms are introduced. In addition students learn to create and manage web sites using a Graphical Web Design program such as Front Page or DreamWeaver.

CWB 164  
**XML**  
3 CR. (2L/1.5 LBV)  
Provides students with an introduction to the XML language's structure and syntax. Examines supporting tools such as XSL and CSS. This course is not designed to focus on a particular implementation of XML, but examine the possibilities of using XML with popular technologies such as Java SAX, SOAP, RDF, and the DOM.

CWB 175  
**SPECIAL TOPICS**  
1-6 CR. (L/LBV)  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CWB 175  
**SPECIAL TOPICS: WEB GRAPHICS ILLUSTRATION**  
3 CR. (2L/1.5 LBV)  
This course acquaints students with the basic tool and features of a computerized illustration software application (Macromedia Fireworks). Topics covered will include navigation, shapes, painting, drawing, layers, effects, appearance, styles, print processes, and web preparation of graphics.

CWB 175  
**SPECIAL TOPICS: INTERNET FUNDAMENTALS (CIW CERTIFICATION)**  
3 CR. (2L/1.5 LBV)  
Internet Fundamentals is a course designed to guide the student through the Internet and its wide array of useful resources.

CWB 175  
**SPECIAL TOPICS: WEB PAGE AUTHORIZING FUNDAMENTALS (CIW CERTIFICATION)**  
3 CR. (2L/1.5 LBV)  
Web Page Authoring Fundamentals is a course designed to teach the student how to create web pages from both a text editor and a Graphical User Interface (GUI) editor and learn the basic concepts and tools of HTML, XHTML, JavaScript, MHTML and the DOM.

CWB 175  
**SPECIAL TOPICS: NETWORKING FUNDAMENTALS (CIW CERTIFICATION)**  
3 CR. (2L/1.5 LBV)  
Web Page Authoring Fundamentals is a course designed to teach the student how to create web pages from both a text editor and Graphical User Interface (GUI) editor and learn the basic concepts and tools of HTML, XHTML, JavaScript, MHTML and the DOM.

CWB 175  
**SPECIAL TOPICS: DIGITAL LITERACY IC3 - COMPUTING FUNDAMENTALS**  
1 CR. (.5L/.75 LBV)  
Computing Fundamentals for Business and Education IC3 Certification Program, Module 1.

CWB 175  
**SPECIAL TOPICS: DIGITAL LITERACY IC3 - KEY APPLICATIONS**  
1 CR. (.5L/.75 LBV)  
Computing Fundamentals for Business and Education IC3 Certification Program, Module 2.

CWB 175  
**SPECIAL TOPICS: DIGITAL LITERACY IC3 - LIVING ONLINE**  
1 CR. (.5L/.75 LBV)  
Computing Fundamentals for Business and Education IC3 Certification Program, Module 3.

CWB 185  
**INDEPENDENT STUDY**  
1-6 CR. (2-12 IND)  
Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. S/U

CWB 205  
**COMPLETE WEB SCRIPTING**  
3 CR. (2L/1.5 LBV)  
PRQ: CWB 110. Explores the complete set of web scripting skills needed to develop Web Applications. Includes variables, data types, arithmetic operations, logical operations, looping, creating and reading cookies, creating an array, displaying data based on a cookie value, setting flags, working with frames, creating objects in a hidden frame, using the History Object, writing HTML to another window, determining browser and detecting keystrokes.

CWB 206  
**WEB DATA BASE**  
3 CR. (2L/1.5 LBV)  
Emphasizes scripting languages used to create and manage Web databases. Targets to multimedia authors who wish to add database management and search functionality to their web sites. Enables students to build an inexpensive, portable database solution.

CWB 221  
**TECHNOLOGY FOUNDATIONS FOR e-COMMERCE**  
3 CR. (2L/1.5 LBV)  
PRQ: BUS 204. Provides the student with thorough knowledge of e-commerce architecture, relational database management systems, and HTML and Network fundamentals.

CWB 265  
**MACROMEDIA DREAMWEAVER ULTRADEV**  
3 CR. (2L/1.5 LBV)  
Focuses on the basics of UltraDev, client/server concepts and objects. Enables the student to amend and search a database, work with user logins and registrations, as well as creating and adding functionality to a shopping cart. Covers server behaviors and stored procedures.

CWB 275  
**SPECIAL TOPICS**  
1-6 CR. (1-6L)  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

CWB 275  
**SPECIAL TOPICS: e-BUSINESS SEMINAR**  
1 CR. (1L)  
PRQ: BUS 260, CWB 221, BUS 204.  
This course provides an opportunity for students to explore current e-Business topics in depth and to synthesize and apply the knowledge gained in the eBusiness certificate program. Each student will complete an individual or group project and present the outcomes to the other students and instructors for discussion and analysis.

CWB 276  
**SPECIAL TOPICS: ADVANCE e-COMMERCE TECHNOLOGIES**  
3 CR. (2L/1.5 LBV)  
This is a lecture/lab-based course designed to provide the student with an in-depth functional and technical overview of e-commerce architecture, practical skills and knowledge of networks and their technologies, and an overview of an Oracle database. This course specifies how network technologies and architecture integrate in the design of e-commerce applications, and how the database and its tools are utilized to support these applications.

CWB 277  
**SPECIAL TOPICS: WEB SCRIPTING I**  
3 CR. (2L/1.5 LBV)  
This is an introductory course in using a Web programming language for developing Web applications. Topics include variables, data types, arithmetic operations, logical operations, and looping.

CWB 287  
**COOPERATIVE EDUCATION**  
1-6 CR. (3-18 INT)  
Provides a college-to-work based experience that draws on combined efforts of educators and employers to produce outcomes related to student career objectives.

## Criminal Justice

CRJ 101\*  
**BASIC POLICE ACADEMY I**  
6 CR. (6L)  
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning.

CRJ 102\*  
**BASIC POLICE ACADEMY II**  
12 CR. (12L)  
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge to perform the entry level duties of a peace officer. Emphasis will be on simulating actual situations utilizing a lecture and laboratory mode of learning.

CRJ 103\*  
**BASIC LAW ENFORCEMENT ACADEMY III**  
2 CR. (.5 L/2.25 LBV)  
Enhances the standards established by the P.O.S.T. Board and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a Police Officer. Emphasis will be on expanding the P.O.S.T. curriculum to create a unique learning experience.

CRJ 105\*  
**BASIC LAW**  
8 CR. (8L)  
Conforms to POST standards and state certification requirements as well as the basic skills and knowledge necessary to perform the entry level duties of a peace officer. Emphasis will be on United States Constitution, arrest, search and seizure, interrogation and confessions, rules of evidence, Colorado Criminal Code, Colorado Traffic Code, Colorado Children's Code, Liquor Code and controlled substances.

CRJ 106\*  
**ARREST CONTROL TECHNIQUES**  
3 CR. (1L/3 LBV)  
Covers the skills, knowledge and abilities necessary to effectively maintain control of a suspect when making an arrest. Emphasizes the continuum of force and de-escalation of force.

CRJ 107\*  
**LAW ENFORCEMENT DRIVING**  
3 CR. (1L/3 LBV)  
Covers the skills, knowledge and abilities required for operation of a law enforcement vehicle. Emphasizes defensive driving. Enables students to demonstrate skills by driving a vehicle under simulated conditions.

CRJ 108\*  
**FIREARMS**  
3 CR. (1L/3 LBV)  
Discusses the skills, knowledge and abilities necessary to safely use police firearms. Students will demonstrate skills by firing weapons on a firing range. The student will demonstrate basic safety techniques and will explain the firearms role within the continuum of force.

CRJ 110  
**INTRO TO CRIMINAL JUSTICE**  
3 CR. (3L)  
Introduces a study of the agencies and processes involved in the criminal justice system: the legislature, the police, the prosecutor, the public defender, the courts, and corrections. Includes an analysis of the roles and problems of the criminal justice system in a democratic society, with an emphasis upon inter-component relations and checks and balances.

CRJ 111  
**SUBSTANTIVE CRIMINAL LAW**  
3 CR. (3L)  
Teaches legal definitions of crime, purposes and functions of the law, historical foundations, and the limits of the criminal law.

CRJ 112  
**PROCEDURAL CRIMINAL LAW**  
3 CR. (3L)  
Covers constitutional and procedural considerations affecting arrest, search and seizure, post-conviction treatment, origin, development, philosophy, and constitutional basis of evidence. Focuses on degrees of evidence and rules governing admissibility, judicial decisions interpreting individual rights, and an analysis of case studies from arrest through final appeal.

CRJ 118  
**REPORT WRITING**  
3 CR. (3L)  
Identifies the areas of concern in regards to proper documentation of police related activities. Focuses on report writing skills, proper structuring of interviews and chronological documentation of events. Incorporates proper sentence structuring, the use of correct terminology and accuracy in written reports.

CRJ 119  
**LEGAL AND ETHICAL CONCEPTS**  
3 CR. (3L)  
Explores the parameters of professional responsibility for Criminal Justice professionals and related occupations. Examines value systems and clarifications.

CRJ 125  
**LAW ENFORCEMENT OPERATIONS**  
3 CR. (3L)  
Examines the complexity and multi-dimensional aspects of the law enforcement role and career; law enforcement discretion; law enforcement values and culture in modern America. Covers the role and functions of law enforcement in occupational, social, political and organizational context.

CRJ 135  
**JUDICIAL FUNCTION**  
3 CR. (3L)  
Examines the criminal process with an analysis of the major judicial decision-makers, i.e., prosecutors, defense attorneys, judges, and the discretionary aspects of adjudication.

CRJ 145  
**CORRECTIONAL PROCESS**  
3 CR. (3L)  
Focuses on the post-conviction corrections process, the development of a correctional philosophy, theory, and practice, a description of institutional operation, programming and management, and community-based corrections, probation, and parole.

CRJ 146  
**COMMUNITY-BASED CORRECTIONS**  
3 CR. (3L)  
Introduces an analysis of community based correctional programs and procedures. Emphasizes the environment and the relationship to public safety, reintegration and punishment.

CRJ 178  
**SEMINAR**  
1-6 CR. (1-6 SEM)  
Provides students with an experiential learning opportunity.

CRJ 210  
**CONSTITUTIONAL LAW**  
3 CR. (3L)  
PRQ: REA 090, equivalent assessment test scores, or Department Chair approval. Focuses on the powers of government as they are allocated and defined by the United States Constitution. Includes intensive analysis of United States Supreme Court decisions.

CRJ 215  
**CONSTITUTIONAL RIGHTS OF INMATES**  
3 CR. (3L)  
Covers an overview of the criminal justice system as it pertains to the constitutional rights of inmates including civil and criminal liabilities, legal services and disciplinary proceedings.

CRJ 216  
**JUVENILE LAW AND PROCEDURES**  
3 CR. (3L)  
Focuses on an in-depth analysis of the socio-legal operation of the Juvenile Justice System emphasizing the substantive and due process rights of minors. Includes analysis of legal reasoning underlying the juvenile law as it operates all levels of government.

CRJ 220

**HUMAN RELATIONS AND SOCIAL CONFLICT**

3 CR. (3L)

PRQ: REA 090, equivalent assessment test score, or Department Chair approval. Highlights the environmental, organizational and socio-psychological dimensions of social control. Includes the study of individual attitudes, beliefs and behavior involved in role conflicts, community relations and conflict management in the social structure.

CRJ 225

**CRISIS INTERVENTION**

3 CR. (3L)

Provides information and application of crisis theories in working with diverse populations. Examines the interventionist role.

CRJ 230

**CRIMINOLOGY**

3 CR. (3L)

PRQ: REA 090, equivalent assessment test score, or Department Chair approval. Examines the question of crime causation from legal, social, political, psychological and theoretical perspectives. Covers the history and development of criminology.

CRJ 240

**CRIMINAL INVESTIGATIONS**

3 CR. (3L)

Introduces investigation methods and procedures from preliminary through the follow-up stages.

CRJ 249

**PENOLOGY**

3 CR. (3L)

PRQ: REA 090, equivalent assessment test score, or Department Chair approval. Focuses on an historical and theoretical study of incarceration as punishment, deterrence, and incapacitation.

CRJ 287

**COOPERATIVE EDUCATION/INTERNSHIP**

3 CR. (9 INT)

Provides work experience for students to gain practical work experience related to their educational program. \*Individuals desiring this Peace Officers Standard and Training (P.O.S.T.) course of study must file an application with the Police Academy Coordinator before registering. Colorado State law requires that Police Academy students meet specific guidelines prior to admission.

## Culinary Arts

CUA 101

**FOOD SAFETY AND SANITATION**

2 CR. (2L)

Covers the basic rules of sanitation, food-borne illnesses, safe food temperatures, safe food handling techniques, the HACCP Program, pest control procedures, and local/state health rules and regulations for food service operations. At the completion of the course students take a nationally recognized test from the National Restaurant Association Education Foundation. If passed with a score of 75% or more, students receive a Certificate of Completion from the Education Foundation.

CUA 121

**INTRODUCTION TO FOOD PRODUCTION PRINCIPLES AND PRACTICES**

1 CR. (1.5 LBV)

CORQ: CUA 101 or Department Chair approval. Provides students with the fundamental principles of commercial kitchen operations including safety and sanitation applications, use and care of equipment, tools, utensils and knives, recipe use and conversion, organization of work, and basic cooking methods. The class meets a minimum of 22.5 hours.

CUA 122

**INTRODUCTION TO STOCKS, SOUPS, AND SAUCES**

1 CR. (1.5 LBV)

PRQ/CORQ: CUA 101, CUA 121 or Department Chair approval. Focuses on the fundamental principles of stocks, soups, sauces, gravies and thickening agents. Enables students to produce a variety of these products in the commercial kitchen incorporating practice in the use of tools, utensils, equipment and application of safety and sanitation practices. Students apply pre-preparation skills and efficient organization of work techniques. Meets a minimum of 22.5 hours.

CUA 123

**INTRODUCTION TO GARDE MANGER**

1 CR. (1.5 LBV)

CORQ: CUA 101, CUA 121, or Department Chair approval. Provides fundamental principles of cold food and non-alcoholic beverage preparation and production. Enables students to produce a variety of cold food and non-alcoholic beverage products incorporating practice in the use of tools, utensils, equipment and application of safety and sanitation methods. Introduces basic cold food decorative work such as fruit and vegetable garnishes and carvings, terrines, and hors d'oeuvres. Focuses on pre-preparation procedures and efficient organization of work techniques. Meets for a minimum of 22.5 hours.

CUA 124

**VEGETABLE PREPARATION AND BREAKFAST COOKERY**

1 CR. (1.5 LBV)

CORQ: CUA 101, CUA 123, or Department Chair approval. Enables students to describe the characteristics of a variety of vegetable items including preparation procedures. Focuses on the significance of variety of breakfast items and the preparation of vegetable items using a variety of cooking methods. Emphasizes the affects of seasonings and cooking methods on vegetable products. Students prepare, plate and garnish breakfast orders similar to those ordered in restaurants with egg cookery and dairy products emphasized. Meets a minimum of 22.5 hours.

CUA 131

**STARCHES, PASTAS, CASSEROLES AND GRAIN PRODUCTS**

1 CR. (1.5 LBV)

PRQ: CUA 101, CUA 121, CUA 124, MAT 030 or equivalent assessment test score, or Department Chair approval. Provides the basics of preparing and/or cooking potatoes, starches, legumes and pastas. Enables students to prepare and cook a variety of casseroles and grain products using a commercial kitchen for their preparation area. Allows students to apply pre-preparation skills and efficient organization of work techniques. Class meets a minimum of 22.5 hours.

CUA 132

**CENTER OF THE PLATE: MEAT**

1 CR. (1.5 LBV)

PRQ: CUA 101, CUA 121, CUA 124, MAT 030 or equivalent assessment test score, or Department Chair approval. Provides the student with the basics of meat handling, including principles used for selecting meat products, their basic cuts and cooking methods. Focuses on a variety of meat products in the college kitchen. Meets for a minimum of 22.5 hours.

CUA 133  
**CENTER OF THE PLATE: POULTRY, FISH, AND SEAFOOD**  
1 CR. (1.5 LBV)  
PRQ: CUA 101, CUA 121, CUA 124, MAT 030 or equivalent assessment test score, or Department Chair approval. Provides the basics of handling poultry, fish and seafood including principles used for selection and the basic forms these products have and the methods of cooking them. Focuses on preparation of poultry, fish and seafood products and incorporates practice in the use of these principles and methods. Covers pre-preparation skills and efficient organization of work techniques. Meets for a minimum of 22.5 hours.

CUA 134  
**APPLICATION OF FOOD PRODUCTION PRINCIPLES**  
1 CR. (1.5 LBV)  
PRQ: CUA 122, CUA 123, CUA 124, CUA 131, CUA 132, CUA 133, or Department Chair approval. Serves as the practice vehicle for the student to apply food production principles for foods covered in CUA 121, CUA 122, CUA 123, CUA 124, CUA 131, CUA 132, and CUA 133. Enables the student to plan and prepare a variety of complete meals intended for a variety of settings. Meets a minimum of 22.5 hours.

CUA 136  
**BARTENDING**  
2 CR. (3 LBV)  
Presents the preparation and service of alcoholic and non-alcoholic beverages. Focuses on mixology procedures, wine and champagne service, purchasing and storage procedures, cost controls, customer relations, responsible alcohol service, and legal responsibilities of lounge operations. Meets for a minimum of 45 hours per semester.

CUA 141  
**BAKING: PRINCIPLES AND INGREDIENTS**  
1 CR. (1.5 LBV)  
PRQ/CORQ: CUA 101 or Department Chair approval. Provides the student with the fundamentals of baking terminology, principles of baking, and the characteristics and functions of the main ingredients used in bakery production. Meets for a minimum of 22.5 hours.

CUA 142  
**BASIC YEAST-RAISED PRODUCTS AND QUICK BREADS**  
1 CR. (1.5 LBV)  
PRQ/CORQ: CUA 141 or Department Chair approval. Provides the student with the fundamentals of basic yeast-raised production and quick breads. Enables the student to produce white bread, rolls, variety grain breads, specialty breads, sweet yeast-raised products, and quickbreads in a commercial kitchen. Meets for a minimum of 22.5 hours.

CUA 143  
**BAKING: CAKES, PIES, PASTRIES, AND COOKIES**  
1 CR. (1.5 LBV)  
PRQ/CORQ: CUA 141 or Department Chair Approval. Provides the student with the fundamentals of basic cake, pie, pastry, and cookie production. Enables the student to produce a variety of cakes, pies, pastries, cookies and assorted dessert items in a commercial kitchen. Meets for a minimum of 22.5 hours.

CUA 144  
**BAKING APPLICATIONS**  
1 CR. (1.5 LBV)  
PRQ/CORQ: CUA 141, CUA 142, CUA 143 or Department Chair approval. Serves as the practical vehicle for the student to apply basic baking principles and practices to the production of yeast breads, quick breads, cakes, icings, pastries, pies, and cookies. Focuses on the preparation of a variety of baked goods in a commercial kitchen according to a baking production schedule. Enables the student to demonstrate comprehensive knowledge of products as well as speed and efficiency in the production of quality baked goods. Meets a minimum of 22.5 hours.

CUA 156  
**NUTRITION FOR THE HOSPITALITY PROFESSIONAL**  
3 CR. (3L)  
PRQ: REA 030, equivalent assessment test score, or Department Chair approval. Provides students with the fundamentals of human nutrition. Focuses on the nutritional needs of humans throughout their life cycle as well as those with special dietary needs. Students may take a nationally recognized test from the Educational Foundation of the National Restaurant Association.

CUA 157  
**MENU PLANNING**  
3 CR. (3L)  
Introduces the culinary arts student to planning menus and integrating them into foodservice operations. Equips the student with a working knowledge of the function, mechanics, and results achieved by the menu. Provides an overview of the existing and growing foodservice industry as seen through the menu.

CUA 175-177  
**SPECIAL TOPICS**  
.5-6 CR. (L/LBV)  
Explores topics, issues and activities related to one or more aspects of culinary arts and safe food handling.

CUA 181  
**WORK EXPLORATION**  
2 CR. (6 INT)  
PRQ: CUA 101, CUA 134 or HOS 123, ENG 060 or equivalent assessment test score, or Department Chair approval. Places students in actual work situations to observe the operation of foodservice establishments. Encompasses a variety of positions including customer contact, production, purchasing-inventory-planning, and maintenance. Enables the student to participate in a regularly scheduled weekly class session, complete weekly class assignments and maintain a journal of work-site activities, present a report on the work experience to the class at the end of the course, and turn in a written copy of the report to the class coordinator.

CUA 190  
**DINING ROOM MANAGEMENT**  
4 CR. (6 LBV)  
PRQ/CORQ: CUA 101 or Department Chair approval. Focuses on service related skills and knowledge used in the foodservice industry. Enables the student, through a laboratory setting, to practice skills and acquire the knowledge of "front of the house" operations common to dining rooms in the industry. Includes table setting, side work, serving customers, operating a Point-of-Sale system, hosting and supervising dining room personnel. At the completion of the class, students are able to supervise the operation of a sit-down dining operation. Meets a minimum of 90 hours.

CUA 191

**FRONT OF THE HOUSE PLANNING**

1 CR. (1.5 LBV)

PRQ: CUA 190 or Department Chair approval. Teaches how to organize special meal functions, handle reservations and special requests, evaluate dining room personnel, create menu format for the GPA Dining Room and operate the POS manager's menu. Students will meet 22.5 hours during the semester in a scheduled class setting. Assignments and projects will be completed outside of class meetings.

CUA 210

**ADVANCED CUISINE AND GARDE MANGER**

4 CR. (6 LBV)

PRQ: CUA 134, REA 030 or equivalent assessment test score, or Department Chair approval. Focuses on the preparation of food display items for buffets and banquets such as fancy garnishes, fruit and vegetable carvings, canapés, party trays, etc. Includes pates, galantines, terrines, and choud froid items. Incorporates creation of food artistry show pieces meeting competition guidelines developed by the American Culinary Federation. Covers the preparation of a regional, ethnic or cultural culinary presentation based upon personal research.

CUA 233

**ADVANCED LINE PREP AND COOKERY**

4 CR. (6 LBV)

PRQ: CUA 134 or Department Chair approval. Focuses on preparation of complete meals to order. Emphasizes cooking center of the plate items such as meat, fish, seafood, and poultry as well as accompaniment foods such as starches and vegetables. Enables the student to prepare sauces, entrée salads, edible garnishes, and meals determined by the menu prepared for a dining room setting. Emphasizes line supervisor, sauté cook, pantry cook, cooks helper and runner responsibilities.

CUA 234

**ADVANCED LINE PLANNING**

2 CR. (3 LBV)

PRQ: CUA 233 or Department Chair approval. Teaches students to plan a variety of menus to be prepared in CUA 233, Advanced Line Prep and Cookery. They will also perform the duties of a supervisor in charge of line cookery. They will be responsible for thorough knowledge of menu items including all methods of cookery. Students will order, pre-prepare, store and organize food and supply items for students in the Advanced Line Prep class. They will also organize work (learning) stations for students in the Advanced Line Prep Class. They will learn how to substitute menu items if there are difficulties in equipment or shortages of food items or personnel. Examples of other areas of learning include inventory, ordering, storage and issuing. By the conclusion of this class, students will be able to supervise an entire line prep station.

CUA 236

**ADVANCED BAKING**

2 CR. (3 LBV)

PRQ: CUA 144. Provides students the opportunity to refine their baking skills in the areas of desserts, yeast breads, garnishing and presentation of baked products. Enables the student to bake, garnish and present a variety of baked goods. These products are prepared and displayed for the public in various locations in the college.

CUA 255

**SUPERVISION IN THE HOSPITALITY INDUSTRY**

3 CR. (3L)

PRQ: CUA 101, ENG 060, REA 060, or equivalent assessment test scores or Department Chair approval. Provides the current/future foodservice operator, manager, or supervisor with a solid foundation for developing communication skills, planning and decision-making skills, and skills for creating a goal-oriented environment utilizing management principles in the selection, training, evaluating, delegating, motivating, rewarding, and disciplining employees. Stresses skills for success through people development.

CUA 256

**MARKETING IN THE HOSPITALITY INDUSTRY**

3 CR. (3L)

PRQ: ENG 060, REA 060, or equivalent assessment test scores or Department Chair approval. Involves the student in a study of foodservice marketing including marketing planning, use of marketing information in the foodservice operation, marketing research, understanding foodservice customers, advertising and promotion, hospitality group sales, and menu design and pricing strategies. At the conclusion of this course, the student will take a nationally recognized test and receive a certificate from the Education Foundation of the National Restaurant Association.

CUA 261

**COST CONTROLS**

3 CR. (3L)

PRQ: CIS 110, ENG 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Provides students with the opportunity to learn the types of costs usually found in the food service industry. Students will learn to apply control techniques to a variety of costs and sales. They will also learn to interpret a variety of financial reports which reflect the relationship between costs and income. Students may take the national Cost Controls test from the National Restaurant Association Education Foundation. If they pass the test with 75% or higher, they will receive a national certificate for the course.

CUA 262

**PURCHASING FOR THE HOSPITALITY INDUSTRY**

3 CR. (3L)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Emphasizes controlling costs as applied to the selection and procurement of food and supply items. Covers selection and procurement of food and supplies, supplier selection, and distribution systems including the forces affecting them. Students will take a nationally recognized test and may receive a certificate from the Education Foundation, the educational arm of the National Restaurant Association.

CUA 263

**LEGAL ASPECTS OF HOSPITALITY MANAGEMENT**

3 CR. (3L)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Provides the student with an overview of legal subjects relevant to foodservice. Covers Federal, State, and Local regulations, patron civil rights, liability and safety, laws relating to employment, security, contracts, property rights, franchising, bankruptcy and reorganization, court system and out-of-court settlements, and choosing and managing an attorney.

CUA 275-277

**SPECIAL TOPICS**

.5-6 CR. (L/LBV)

Explores topics, issues and activities related to one or more aspects of culinary arts and safe food handling.

CUA 281

**INTERNSHIP**

2-6 CR. (6-18 INT)

PRQ: CIS 110, ENG 090, and MAT 090 or MAT 107, or equivalent assessment test scores; CUA 233, CUA 190, CUA 233, CUA 261 or HOS 106, HOS 123, HOS 207, and CIS 118; or Department Chair approval. Places students in an actual work situation where they participate in the operation of a foodservice establishment. Hours of work are arranged by the site supervisor and the intern. The number of hours required are determined by the number of credits the course carries.

## Dance

DAN 121

**JAZZ I**

1 CR. (2 STA)

Introduces the basic techniques and vocabulary of jazz dance and the basic elements of dance. Focuses on movement oriented dance, comprised of warm-up exercises, center combinations, traveling combinations and cool down. May be repeated for a maximum of three credits.

DAN 129

**INTRODUCTION TO DANCE**

1 CR. (2 STA)

Introduces the art of dance and movement expression from a variety of viewpoints: historical, cultural, aesthetic, critical and creative. Examines the art and craft of dance as an expression of culture and community while exploring personal expression, imagery, dance techniques and performance qualities.

DAN 131

**BALLET I**

1 CR. (2 STA)

Introduces the basic techniques of ballet, which are built upon knowledge of ballet terminology, fundamental exercises, and the basic elements of dance. Focuses on movement-oriented dance, comprised of stretching, barre warm-up exercises, simple terre à terre and jumping steps, and basic extended positions. May be repeated for a maximum of three credits.

DAN 132

**BALLET II**

1 CR. (2 STA)

Continues Ballet I and emphasizes ballet terminology, fundamental exercises and the basic elements of dance. Focuses on an intermediate level within the basic structure of the ballet class. May be repeated for a maximum of three credits.

## Dental Assisting

DEA 102

**PRINCIPLES OF CLINICAL PRACTICE**

3 CR. (1L/3 LBV)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores. CORQ: DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126. Includes techniques used in four handed dentistry, instrument identification, and armamentarium for tray set-ups. Covers sterilization and aseptic procedures.

DEA 104

**SPECIALTIES IN DENTISTRY**

2 CR. (1L/2 CLV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126. CORQ: DEA 111, DEA 124, DEA 127, DEA 131, DEA 132, DEA 134, DEA 175, DEA 176, and DEA 181. Focuses on armamentarium of specific tray set-ups for periodontics, endodontics, and fixed and removable prosthodontics. Examines pediatric dentistry, oral surgery, and implants. Includes diagnosis, treatment, and the dental assistant's role in each specialty.

DEA 111

**DENTAL OFFICE MANAGEMENT**

2 CR. (1L/2 CLV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126. CORQ: DEA 104, DEA 124, DEA 127, DEA 131, DEA 132, DEA 134, DEA 175, DEA 176, and DEA 181. Includes office management and clerical practices, scheduling appointments, completing daily records, insurance and tax forms, bookkeeping and recall systems, and ordering supplies.

DEA 120

**INTRODUCTION TO DENTAL PRACTICES**

1 CR. (1L)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores or Department Chair approval. Includes roles and responsibilities of the dental health team; educational background for the various specialties including general practitioner, hygienist, dental assistant; history, legal implications, ethical responsibilities and the role of professional organizations.

DEA 121

**DENTAL SCIENCE I**

3 CR. (3L)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores. CORQ: DEA 102, DEA 120, DEA 122, DEA 123, DEA 125, and DEA 126. Includes fundamentals of the oral structures as they apply oral histology, embryology, morphology, pathology, dental anatomy, and dental charting.

DEA 122

**DENTAL SCIENCE II**

3 CR. (3L)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores. CORQ: DEA 102, DEA 120, DEA 121, DEA 123, DEA 125, and DEA 126. Includes survey of human anatomy and physiology, the structure of the head and neck as applied to dental assisting, the function of the maxilla and mandible, processes, foramen, sutures, and major nerve and blood supply.

DEA 123

**DENTAL MATERIALS I**

3 CR. (4.5 LBV)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores. CORQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 125, and DEA 126. Includes fundamentals of dental materials as they apply to clinical and laboratory applications.

DEA 124

**DENTAL MATERIALS II**

3 CR. (1L/4 CLV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, DEA 126, or consent of program department chair. CORQ: DEA 104, DEA 111, DEA 127, DEA 131, DEA 132, DEA 134, DEA 175, DEA 176, DEA 181. Includes type, compositions, and uses of elastomeric impression materials and the fabrication of custom impression trays and temporary crowns.

DEA 125

**DENTAL RADIOGRAPHY**

3 CR. (2L/2 CLV)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores.

CORQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 126, and students must be a minimum of 18 years of age to enroll. Focuses on the science of radiography, the application of radiographic techniques, and aseptic techniques.

DEA 126

**INFECTION CONTROL**

3 CR. (2L/2 CLV)

PRQ: REA 090, ENG 090, MAT 060, or equivalent assessment test scores.

CORQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, and DEA 125. Includes basic information concerning infection and disease transmission in the dental office. Emphasizes knowledge of microorganisms, with an emphasis on aseptic techniques, sterilization, and hazardous communication management.

DEA 127

**DENTAL SCIENCE III**

3 CR. (2L/1.5 LBV)

PRQ: Proof of current basic life support (BLS) knowledge and skills-CPR card, recommendation from employer for community dental assistants enrolled, DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, DEA 126, or consent of the program department chair. CORQ: DEA 104, DEA 111, DEA 124, DEA 131, DEA 132, DEA 134, DEA 175, DEA 176, DEA 181, or consent of the program department chair. Includes in depth study of oral defects, microorganisms and their effects on the human body with recognition and identification of pathological condition that most frequently occur orally. Emphasizes pharmacology and the drugs used in the prevention and treatment of pain and conditions of the oral cavity. Focuses on laboratory experiences and the procedures involved with local anesthesia with emphasis on the knowledge and application of nitrous oxide administration in the dental office. Upon completion, the student is eligible to administer Nitrous Oxide and Oxygen having met the requirements of the Colorado State Practice Act Rule XVII. Certificate in Nitrous Oxide Administration is given.

DEA 131

**ADVANCED DENTAL RADIOGRAPHY**

3 CR. (1L/3 LBV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126.

CORQ: DEA 104, DEA 111, DEA 124, DEA 127, DEA 132, DEA 134, DEA 175, DEA 176, DEA 181, or consent of program department chair. Includes theory and techniques of exposing intra-oral and extra-oral radiographs on adults, children, edentulous, and special needs patients. Covers dental anatomy radiographic interpretation and aseptic techniques. Enables the student to expose radiographs on the x-ray mannequin and patients. Students must be a minimum of eighteen years of age.

DEA 132

**MEDICAL EMERGENCIES**

2 CR. (1L/2 CLV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126.

CORQ: DEA 104, DEA 111, DEA 124, DEA 127, DEA 131, DEA 134, DEA 175, DEA 176, and DEA 181. Includes techniques for taking and reading vital signs as well as Cardiopulmonary Resuscitation (CPR) for Health Care Providers. Emphasizes recognition, prevention, and management of medical emergency situations in the dental office. Covers completing and updating patient health history. Addresses pharmacology.

DEA 134

**PREVENTION AND NUTRITION IN DENTISTRY**

2 CR. (1L/2 CLV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126.

CORQ: DEA 104, DEA 111, DEA 124, DEA 127, DEA 131, DEA 132, DEA 175, DEA 176, and DEA 181. Includes techniques in preventive dentistry with an emphasis on fluoride application and oral home care instruction. Includes nutrition as it applies to dental health and diet counseling. Covers techniques for coronal polishing.

DEA 140

**DENTAL ASSISTING NATIONAL BOARD REVIEW (ELECTIVE)**

1 CR. (1L)

PRQ: DEA 102, DEA 104, DEA 111, DEA 120, DEA 121, DEA 122, DEA 123, DEA 124, DEA 125, DEA 126, DEA 131, DEA 132, DEA 134, DEA 181, DEA 182, or two years experience and consent of program coordinator. Focuses on a review for the Dental Assisting National Board (DANB) Examination.

DEA 175-177

**SPECIAL TOPICS**

0.5-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DEA 175

**SPECIAL TOPICS: PRACTICE OF CLINICAL CHAIRSIDE ASSISTING**

2 CR. (3 LBV)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126.

CORQ: DEA 104, DEA 111, DEA 124, DEA 127, DEA 131, DEA 132, DEA 134, DEA 176, and DEA 181. This course covers the concept of dental practice clinical chairside assisting. Emphasis will be placed on chairside assisting in dental restorative procedures, coronal polishing skills, fluoride treatment application, and hands-on manipulation of dental materials in a clinical and laboratory situation. Student learning will center on enhancing student's procedure anticipation, dexterity and skills of chairside assisting, and dental laboratory procedures.

DEA 176

**SPECIAL TOPICS: APPLIED DENTAL PSYCHOLOGY**

1 CR. (1L)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126.

CORQ: DEA 104, DEA 111, DEA 124, DEA 127, DEA 131, DEA 132, DEA 134, DEA 176, and DEA 181. This course provides the student with direction in the study of human behavior and social adjustment as it is related to dentistry. Emphasis will be placed on patient care and psychological needs of the dental patient, as well as the needs of the special patient. Student learning will also focus to enhancing professional skills, goal setting and workforce development skills (interpersonal skills, job-seeking skills, application and interview process).

DEA 181

**CLINICAL INTERNSHIP I**

1 CR. (3 INT)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, and DEA 126.

CORQ: DEA 104, DEA 111, DEA 124, DEA 127, DEA 131, DEA 132, DEA 134, DEA 175, and DEA 176. Includes the opportunity for clinical application of dental assisting techniques in a dental office or clinical setting as part of the American Dental Association's requirement of 300 clinical internship hours.

DEA 182

**CLINICAL INTERNSHIP II AND SEMINAR**

1-6 CR. (3-18 INT)

PRQ: DEA 102, DEA 120, DEA 121, DEA 122, DEA 123, DEA 125, DEA 126, DEA 104, DEA 111, DEA 124, DEA 127, DEA 132, DEA 134, DEA 175, DEA 176, DEA 181. Focuses on clinical practice in private or public dental offices or clinics with clinical work experience in both general dentistry and specialty fields on a rotating basis.

DEA 200

**INTRODUCTION TO EXPANDED FUNCTIONS**

4 CR. (2L/3 LBV)

PRQ: Graduate of an ADA accredited program, certified dental assistant, or 2 years of full time documented chairside experience (3,500 hours). Emphasizes techniques and concepts of expanded functions in dental assisting, including team management, placement and finishing of dental restorative materials, and adjunct procedures necessary to restorative dentistry.

DEA 205

**EXPANDED FUNCTIONS FOR THE DENTAL AUXILIARY**

4 CR. (2L/4 CLV)

PRQ: DEA 200. Focuses on clinical application of expanded functions in dental assisting.

## Dental Hygiene

DEH 101

**PRECLINICAL DENTAL HYGIENE LECTURE**

2 CR. (3 LBV)

PRQ: ENG 121; basic skills courses, if applicable; ACT 20 or higher in Reading; admission to Dental Hygiene program. Explores basic dental hygiene theory and development of basic skills. Focuses on the application of diagnostic, preventative and therapeutic procedures and includes an introduction to dentistry and dental hygiene, dental and medical terminology, infection control, the removal of tooth deposits, patient medical and dental histories, preventive instruction and treatment planning.

DEH 102

**PRECLINICAL DENTAL HYGIENE CARE**

2-3 CR. (6-9 CLV)

PRQ: ENG 121; basic skills courses, if applicable; ACT 20 or higher in Reading; admission to the Dental Hygiene program. Focuses on clinical experiences in basic dental hygiene procedures and techniques including basic instrumentation, infection control, and patient assessment skills. Students participate in a variety of clinical learning experiences.

DEH 103

**DENTAL ANATOMY AND HISTOLOGY**

3 CR. (2L/2 CLV)

PRQ: ENG 121; basic skills courses, if applicable; ACT 20 or higher in Reading; admission to the Dental Hygiene program. Focuses on a study of the anatomical and histological features of the teeth and other oral structures of the oral cavity. Includes terminology, anatomical landmarks, and tooth identification. Introduces histology, the embryology of the face and oral and nasal cavities, development of the teeth, and the histological features of the various components of the teeth and surrounding structures.

DEH 104

**DENTAL RADIOLOGY**

3 CR. (2L/2 CLV)

PRQ: ENG 121; basic skills courses, if applicable; ACT 20 or higher in Reading; admission to Dental Hygiene program. Introduces principles of x-radiation production and safety factors; application and theory of properly exposing, processing, mounting and evaluating radiographs; identification of normal anatomic landmarks and pathologic conditions. Focuses on utilization of the laboratory in performing procedures necessary to produce quality radiographs.

DEH 111

**DENTAL AND MEDICAL EMERGENCIES**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Introduces the management of emergency situations in the dental office setting. Emphasizes reduction of risk for emergencies, identification and management of anxiety, and stress recognition protocol. Provides practical skills applicable to dental hygienists and the scope of responsibility for medical emergency management as dictated by state dental practice law. Covers the basic categories of emergencies, causes and management. Includes content and use of emergency kits and oxygen support systems.

DEH 122

**PERIODONTICS I**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Introduces the principles of periodontics. Focuses on recognition of the tissues in health and disease, macro and microanatomy of the periodontium, and histopathology of periodontal diseases and other related gingival conditions. Provides the theory and discussion of periodontal assessment, etiology, epidemiology, inflammatory process/immune response, and the AAP classification system.

DEH 123

**HEAD AND NECK ANATOMY**

1 CR. (1.5 LBV)

PRQ: BIO 201, BIO 202, current enrollment in Dental Hygiene program. Focuses on the study of head and neck anatomy with emphasis on the muscles of mastication, the lymphatics, the TMJ, the nerve and vascular supply, and the oral cavity.

DEH 126

**DENTAL MATERIALS**

3 CR. (2L/2 CLV)

PRQ: Current enrollment in Dental Hygiene program. Provides the dental hygiene student with a sound knowledge of the science of dental materials. Covers didactic and laboratory experiences and the physical properties, basic chemistry, and the clinical applications of the materials used in the practice of dentistry.

DEH 132

**APPLIED PHARMACOLOGY**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Covers general pharmacology and reviews drugs that may influence the management of dental hygiene patients. Enables the student to develop sufficient knowledge of pharmacology to permit safe and effective medical evaluation of patients for dental hygiene treatment.

DEH 133

**LOCAL ANESTHESIA**

2 CR. (1 L/2 CLV)

PRQ: DEH 111, DEH 123, current enrollment in Dental Hygiene program. Provides a working knowledge of the theory and practice of local anesthesia as applied to the practice of dentistry/dental hygiene. Emphasizes mastery of the armamentarium and techniques of regional anesthesia. Covers the knowledge and skills necessary to administer local anesthetics proficiently and safely.

DEH 134

**ADVANCED CLINICAL SKILLS**

1 CR. (.7 L/.6 CLV)

PRQ: Current enrollment in Dental Hygiene program. Focuses on dental hygiene theory and laboratory experiences with major topics related to advanced clinical skills, including advanced instrumentation fulcrums, root morphology, periodontal files, periodontal file sharpening, mini curettes, after five curettes, nabors probe, universal focus spray ultrasonics, and scaling implants.

DEH 136

**CLINICAL DENTAL ROENTGENOLOGY**

.5 CR. (1 CLV)

PRQ: Current enrollment in Dental Hygiene program. Enhances clinical competence of basic radiographic principles including intra-oral, positioning techniques, exposure factors, bisecting technique, vertical bitewing survey, and management of anatomical deviations. S/U

DEH 138

**NITROUS OXIDE/OXYGEN SEDATION**

1 CR. (.8 L/.4 CLV)

PRQ: BIO 201, BIO 202, current enrollment in Dental Hygiene program. Provides a working knowledge of the latest equipment and methods of nitrous oxide/oxygen sedation administration in the dental office.

DEH 153

**CLINICAL THEORY OF DENTAL HYGIENE I**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Builds on the broad theoretical basis provided in DEH 101 and DEH 102. Focuses on enhancing patient assessment skills, instrumentation and additional information on preventative and prophylactic clinical procedures.

DEH 170

**CLINICAL PRACTICE OF DENTAL HYGIENE I**

1-8 CR. (3-24 CLV)

PRQ: Current enrollment in Dental Hygiene program. Provides clinical experience in patient skills assessment, instrumentation and additional preventative and prophylactic clinical procedures.

DEH 171

**CLINICAL PRACTICE OF DENTAL HYGIENE I-A**

1-8 CR. (3-24 CLV)

PRQ: Current enrollment in Dental Hygiene program. Continues patient care sessions for the performance of traditional dental hygiene treatment. Enables the student to provide treatment to periodontally involved patients utilizing advanced instrumentation and power scaling.

DEH 175-177

**SPECIAL TOPICS**

.5-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DEH 202

**APPLIED NUTRITION IN DENTISTRY**

2 CR. (2L)

PRQ: ENG 121; basic skills courses, if applicable; ACT 20 or higher in Reading; CHE 102 or CHE 109. Gives students a fundamental understanding of general nutrition with an emphasis on the interrelationship between nutrition and dental health. Focuses on recognizing nutritional deficiencies and how to conduct and evaluate nutritional surveys on patients.

DEH 204

**COMMUNITY DENTAL HEALTH I**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Course provides instruction in the concepts, methods and issues of dental public health. Emphasis is placed on evidence-based criteria for effective promotion and prevention of dental disease in the public health setting. Concepts of dental health education and program planning in the community setting are reinforced through case based materials, including methods of assessment, planning, implementation and evaluation of effectiveness. Course activities will reinforce skills in speaking and writing effectively in preparation for the subsequent community dental health field experience course.

DEH 213

**GENERAL AND ORAL PATHOLOGY**

3 CR. (3L)

PRQ: Current enrollment in Dental Hygiene program. Focuses on the fundamentals of general pathology and the disease process. Covers oral pathology with emphasis on recognition and identification of pathologic conditions that most frequently occur around the oral cavity. Helps students identify appropriate referral mechanisms to render a definitive diagnosis.

DEH 221

**ETHICS AND PRACTICE MANAGEMENT**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Focuses on the transition from an educational environment to a working dental business. Enables the student to learn management skills of operating a dental office. Emphasizes opportunities for self-exploration in development of personal and professional goals. Examines professional ethics, legal issues, and the relationship to the licensed practice of dental hygiene.

DEH 225

**COMMUNITY DENTAL HEALTH II: FIELD EXPERIENCE**

1 CR. (2 CLV)

PRQ: DEH 204. Provides practical application of community dental health theory and opportunities to conduct needs assessments on a variety of populations. Emphasizes meeting the educational needs of specific populations through program planning, implementation and evaluation. Incorporates supervised field experiences in low-income, school and other public facilities as well as private health and education oriented organizations.

DEH 242

**PERIODONTICS II**

2 CR. (2L)

PRQ: DEH 122. Continues to explore theoretical/clinical preparations with emphasis on dental hygiene process of care, treatment planning, non-surgical treatment, evaluation of treatment, and maintenance needs of the periodontal patient. Develops research and decision making skills with use of library and Internet resources relating to risk factors, etiologic agents, and treatment modalities. Includes comprehensive periodontal assessment, supplemental diagnostics, periodontal pharmacology, and evidence based treatment planning.

DEH 259

**ADVANCED DENTAL HYGIENE THEORY**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Focuses on the care of patients with special needs (such as physical and mental disabilities and systemic conditions). Emphasizes patient management and treatment considerations.

DEH 266

**NATIONAL BOARDS REVIEW**

2 CR. (2L)

PRQ: Current enrollment in Dental Hygiene program. Provides formal review sessions for second year dental hygiene students preparing to sit for the National Board Examination. S/U

DEH 268

**CLINICAL THEORY OF DENTAL HYGIENE II**

2 CR. (3 LBV)

PRQ: Current enrollment in Dental Hygiene program. Provides the didactic theory for clinical practice of dental hygiene skills at the beginning of the second year of dental hygiene curriculum. Builds on clinic theory from first year curriculum to provide the knowledge base needed for treatment of patients with more advanced periodontal disease and medical/health factors. Focuses on: periodontal charting and documentation, interpretation of periodontal factors on radiographs, use of treatment planning in the dental hygiene process of care, legal parameters of record keeping and informed consent, use of oral photography, application of sealants, treatment of dental hypersensitivity, application of chemotherapeutics and professional oral irrigation, application of ergonomics in dentistry, clinical dental hygiene treatment considerations for patients with history of cardiac complications and diabetes.

DEH 270

**CLINICAL PRACTICE OF DENTAL HYGIENE II**

1-8 CR. (3-24 CLV)

PRQ: Current enrollment in Dental Hygiene program. Covers patient care sessions for the performance of traditional dental hygiene treatment. Continues and expands periodontal patient care and special patient care sessions. Focuses on clinical competence in margination and polishing of restorations, nutrition counseling, oral irrigation, chemotherapeutics and OSHA compliance.

DEH 271

**CLINICAL PRACTICE OF DENTAL HYGIENE III**

1-8 CR. (3-24 CLV)

PRQ: Current enrollment in Dental Hygiene program. Continues patient care session with emphasis on attaining a level of competency and efficiency for successful performance in clinical board exams and private practice. Focuses on clinical skill development in tobacco cessation, product selection, patient communications, curettage and special topics developed patient treatments. Provides elective extra-mural clinical sites for additional practice.

DEH 275-277

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

DEH 282

**PERIODONTICS III**

1 CR. (1.5 LBV)

PRQ: DEH 122. Course provides comprehensive dental hygiene clinical management techniques for periodontal patients supported by application of basic clinical research sciences. Focus is on the "therapy" component of periodontics including instructional sessions covering the general principles of periodontal surgery, the surgical management of soft tissues and osseous defects, wound healing, implants, and the role of occlusion in periodontal therapy.

DEH 285

**CLINICAL THEORY OF DENTAL HYGIENE III**

2 CR. (3 LBV)

PRQ: Current enrollment in Dental Hygiene program. Serves as the capstone course of the final semester of a two-year curriculum. Prepares the student for two major goals: basic competence for transition to provision of dental hygiene services in private practice; and the ability to successfully pass both written National Boards examinations and regional dental hygiene clinical examinations. Emphasizes the application of case based learning. Major topics include: cosmetic bleaching, air powered polishing devices, application of the re-evaluation process in treatment planning for periodontally involved cases, preparation for the CRDTS regional clinical exam process, application of an effective tobacco cessation process, technique and process for gingival curettage, technique and process for amalgam polishing and margination, care of cosmetic dental restorations, and maintenance of implants.

DMS 206

**VASCULAR ULTRASOUND**

2 CR. (1L/2 CLV)

PRQ: DMS 221, DMS 231, DMS 241, DMS 281. CORQ: DMS 205, DMS 282.

Covers basic positioning and scanning protocol of the vascular system. Review of the anatomy, hemodynamics and terminology unique to the vascular system with emphasis on the external carotid system, the upper and lower venous and arterial systems and the abdominal vasculature will be included.

DMS 221

**OB/GYN ULTRASOUND I**

2 CR. (1L/2 CLV)

PRQ: BIO 202, BIO 216, RTE 255.

CORQ: DMS 231, DMS 241, DMS 281.

Provides a systematic study of embryology to include development of the major organ systems, with correlation to sonographic imaging, at all stages of embryonic/fetal development and the surrounding environment and the ultimate mastery of the foundations of obstetric and gynecological sonography.

DMS 222

**OB/GYN ULTRASOUND II**

2 CR. (1L/2 CLV)

PRQ: DMS 221, DMS 231, DMS 241,

DMS 281. CORQ: DMS 232, DMS 242,

DMS 283. Provides a systematic study of

embryology to include development of the major organ systems, with correlation to sonographic imaging, at all stages of embryonic/fetal development and the surrounding environment and the ultimate mastery of the foundations of obstetric and gynecological sonography.

DMS 231

**ABDOMINAL ULTRASOUND I**

2 CR. (1L/2CLV)

PRQ: BIO 202, BIO 216, RTE 255.

CORQ: DMS 221, DMS 241, DMS 281.

Offers a systematic study of the abdomen to include the function and development of the major organ systems with correlation to sonographic imaging and the surrounding environment. The student will master the foundations of sectional anatomy and abdominal sonography.

## Diagnostic Medical Sonography

DMS 205

**SMALL PARTS ULTRASOUND**

2 CR. (1L/2 CLV)

PRQ: DMS 221, DMS 231, DMS 241,

DMS 281. CORQ: DMS 206, DMS 282.

Designed to teach specific knowledge of anatomy of the breast, thyroid, scrotum, prostate and the surrounding structures. The ability to identify pathology or to locate abnormalities is also an intricate part of the class.

DMS 232  
**ABDOMINAL ULTRASOUND II**  
2 CR. (1L/2 CLV)  
PRQ: DMS 221, DMS 232, DMS 241, DMS 281. CORQ: DMS 222, DMS 242, DMS 283. Offers a systematic study of the gastrointestinal tract, pediatric abdomen, neonatal brain, and transplanted organs. The student will review the necessary sterile technique preceding invasive and intraoperative procedures and will learn the applications of contrast agents in ultrasound. Other imaging techniques will be discussed as well as the principles guiding the field of sonography. A mock registry examination will be administered to prepare the student for writing the national registry examination.

DMS 241  
**ULTRASOUND PHYSICS I**  
2 CR. (1L/2 CLV)  
PRQ: BIO 202, BIO 216, RTE 255. CORQ: DMS 221, DMS 231, DMS 281. Presents the theoretical and practical approach to understanding the fundamentals of ultrasound physics, instrumentation, image characteristics, artifacts, and bio-effects. The ergonomics of proper scanning techniques (setting up the cart, chair, and room properly to avoid musculoskeletal injury) will also be presented.

DMS 242  
**ULTRASOUND PHYSICS II**  
2 CR. (1L/2 CLV)  
PRQ: DMS 221, DMS 231, DMS 241, DMS 282. CORQ: DMS 222, DMS 232, DMS 283. Covers a detailed study of ultrasound physics and the application within the clinical setting. Manipulation of technique controls, basic mathematical concepts, various Doppler modalities, equipment artifacts, QC/QA procedures, 3D fundamentals, and bioeffects are covered. Note: The comprehensive final is in a registry review format.

DMS 281  
**CLINICAL INTERNSHIP I**  
10 CR. (30 INT)  
PRQ: BIO 202, BIO 216, RTE 255. CORQ: DMS 221, DMS 231, DMS 241. Offers the initial clinical course wherein the fundamental principles of abdominal, OB/GYN, and ultrasound physics will be applied under the direct supervision of a registered sonographer. The mastery of the foundations of instrumentation, scanning techniques, and image evaluation in sectional planes in abdominal and OB/GYN sonography will be stressed.

DMS 282  
**CLINICAL INTERNSHIP II**  
10 CR. (30 INT)  
PRQ: DMS 281. CORQ: DMS 205, DMS 206. Offers continued clinical experience for the ultrasound student. Application of the small parts didactic lectures will be applied and will include image evaluation and cross-sectional anatomy of the thyroid, breast and scrotum. The foundations of vascular anatomy, instrumentation, scanning techniques and image evaluation will be stressed. The student will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

DMS 283  
**CLINICAL INTERNSHIP III**  
10 CR. (30 INT)  
PRQ: DMS 282. CORQ: DMS 222, DMS 232, DMS 242. Continues clinical experience for the ultrasound student. Application of the topics covered in advanced didactic lectures to include an introduction to invasive procedures using ultrasound guidance. Sterile technique and standard precautions will be reviewed. The student will spend 30 hours per week at the clinical site under the direct supervision of a registered sonographer.

## Early Childhood Education

ECE 101  
**INTRODUCTION TO EARLY CHILDHOOD EDUCATION**  
3 CR. (3L)  
CORQ: ECE 102. Provides an introduction to Early Childhood Education. Includes the eight key areas of professional knowledge: Child Growth and Development; Health, Nutrition and Safety; Developmentally Appropriate Practices; Guidance; Family and Community Relationships; Diversity; Professionalism; Administration and Supervision. Focuses on ages birth through age eight.

ECE 102  
**INTRODUCTION TO EARLY CHILDHOOD LAB TECHNIQUES**  
3 CR. (1L/4 LBA)  
CORQ: ECE 101. Focuses on a classroom seminar and placement in a child care setting. The supervised placement provides the student with the opportunity to observe children, to practice appropriate interactions, and to develop effective guidance and management techniques. Addresses ages birth through age 8.

ECE 103  
**GUIDANCE STRATEGIES FOR CHILDREN**  
3 CR. (3L)  
PRQ: ENG 060, REA 060, or equivalent assessment test score. Explores guidance theories, applications, goals, techniques and factors that influence expectations, classroom management issues, and prosocial skills. Addresses ages birth through age 8.

ECE 111  
**INFANT AND TODDLER THEORY AND PRACTICE**  
3 CR. (3L)  
PRQ: ENG 060, REA 060, or equivalent assessment test scores. Presents an overview of theories, applications (including observations) and issues pertinent to infant and toddler development in group and/or family settings. Includes state requirements for licensing, health, safety and nutrition issues.

ECE 112  
**INTRO TO INFANT/TODDLERS LAB TECHNIQUES**  
3 CR. (1L/4 LBA)  
CORQ: ECE 111. Includes a classroom seminar and placement in an infant and/or toddler setting. The supervised placement provides the student with the opportunity to observe, to practice appropriate interactions and to develop effective guidance and nurturing techniques with infants and/or toddlers. Addresses ages prenatal through age 2.

ECE 178  
**WORKSHOP**  
0.5-6 CR. (0.5-6L)  
PRQ: REA 060 or equivalent assessment test score. Provides students with an experiential learning opportunity. (This course is only offered in the Spring semester.)

ECE 195  
**SCHOOL AGE CHILD IN CHILD CARE**  
2 CR. (2L)  
Explores important issues of before and after school care (school holiday and summer day camp), emphasizing child development, health, safety, and appropriate activities for school-age children in the child care setting.

ECE 205

**NUTRITION, HEALTH AND SAFETY**

3 CR. (3L)

PRQ: ENG 060, REA 060, or equivalent assessment test scores. Focuses on nutrition, health and safety as a key factor for optimal growth and development of young children. Includes nutrient knowledge, menu planning, food program participation, health practices, management and safety, appropriate activities and communication with families. Addresses ages from prenatal through age 8. (This course is only offered in the Spring semester.)

ECE 220

**CURRICULUM DEVELOPMENT: METHODS AND TECHNIQUES**

3 CR. (3L)

PRQ: ECE 101, ECE 102, and CIS 110, ENG 090, REA 090, or equivalent assessment test scores. Provides an overview of early childhood curriculum development. Includes processes for planning and implementing developmentally appropriate environments, materials and experiences, and quality in early childhood programs. (This course is only offered in the Fall semester.)

ECE 225

**LANGUAGE AND COGNITION FOR THE YOUNG CHILD**

3 CR. (3L)

PRQ: ENG 060, REA 060, or equivalent assessment test scores. CORQ: CIS 110 or equivalent assessment test score. Examines theories of cognitive and language development as a framework for conceptualizing the way children acquire thinking skills. Includes observing, planning, facilitating, creative representation, and evaluating strategies within the context of play. Focuses on language, science, math, problem solving and logical thinking. Addresses ages birth through age 8. (This course is only offered in the Spring semester.)

ECE 226

**CREATIVITY AND THE YOUNG CHILD**

3 CR. (3L)

PRQ: ENG 060, REA 060, or equivalent assessment test scores. Provides an emphasis on encouraging and supporting creative self expression and problem solving skills in children. Explores creative learning theories and research. Focuses on developmentally appropriate curriculum strategies in all developmental domains. Addresses ages birth through age 8. (This course is only offered in the Fall semester.)

ECE 228

**LANGUAGE AND LITERACY**

3 CR. (3L)

Presents strategies for optimum language development, literacy, social and emotional development. Supports children's language and literacy in home, classroom, and community settings. Provides appropriate teacher/child verbal interactions, classroom environments, and activities. Addresses ages birth through age 8.

ECE 238

**CHILD GROWTH AND DEVELOPMENT**

4 CR. (4L)

PRQ: CIS 110, ENG 090, REA 090, or equivalent assessment test scores. Covers the growth and development of the child from conception through the elementary school years. Emphasizes physical, cognitive, language, social and emotional domains and the concept of the whole child and how adults can provide a supportive environment. Ages addressed: prenatal through age 12. This course has an early childhood laboratory component.

ECE 240

**ADMINISTRATION OF EARLY CHILDHOOD CARE AND EDUCATION PROGRAMS**

3 CR. (3L)

PRQ: CIS 110 or equivalent assessment test score. ECE 101, ECE 102, ECE 103, ECE 220, ECE 238. CORQ: ENG 121 or equivalent assessment test score, ECE 241. Examines Colorado's minimal licensing requirements, as well as optimal standards pertaining to the operation of programs for young children. Focuses on the director's administrative skills and role as a community advocate for young children. Addresses ages birth through age 12. (This course is only offered in the Spring semester.)

ECE 241

**ADMINISTRATION: HUMAN RELATIONS FOR EARLY CHILDHOOD EDUCATION**

3 CR. (3L)

PRQ: CIS 110 or equivalent assessment test score. CORQ: ENG 121 or equivalent assessment test score. Focuses on the human relations component of an early childhood professional's responsibilities. Includes director-staff relationships, staff development, leadership strategies, parent-professional partnerships, and community interaction. (This course is only offered in the Fall semester.)

ECE 256

**WORKING WITH PARENTS, FAMILIES, AND COMMUNITY SYSTEMS**

3 CR. (3L)

PRQ: REA 090, ENG 090, or equivalent assessment test scores. CORQ: CIS 110 or equivalent assessment test score. Examines attitudes and family values systems and how they affect parent-professional partnerships. Addresses communication, problem-solving and conflict resolution strategies. Plans effective activities and programs for parent involvement. Addresses ages birth through 8. (This course is only offered in the Spring semester.)

ECE 260

**EXCEPTIONAL CHILD**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 090, or equivalent assessment test scores. Presents an overview of typical and atypical developmental progression. Includes planning techniques, learning strategies, legal requirements and accommodations and adaptations that are necessary in order to create an integrated classroom environment for a child with a wide range of exceptionalities. Focuses on ages birth through age 8. (This course is only offered in the Spring semester.)

ECE 288

**PRACTICUM: EARLY CHILDHOOD EDUCATION**

3 CR. (1L/4 PRC)

PRQ: CIS 110, ENG 090, REA 090, or equivalent assessment test score. Provides students with advanced field experience opportunities in early childhood education programs. (This course is only offered in the Fall semester.)

## Economics

ECO 105

**INTRODUCTION TO ECONOMICS**

3 CR. (3L)

This course is a survey of economics. It is designed as a beginning economics class. The course covers economics theories, supply and demand, national income accounting, money and banking, market structures and contemporary economic issues.

ECO 201  
**PRINCIPLES OF MACROECONOMICS**  
3 CR. (3L)  
PRQ: CIS 110, ENG 090, REA 090, MAT 060, or equivalent assessment test scores or Department Chair approval. Focuses on the study of the American economy, stressing the interrelationships among household, business, and government sectors. Explores saving and investment decisions, unemployment, inflation, national income accounting, taxing and spending policies, the limits of the market and government, public choice theory, the Federal Reserve System, money and banking, and international trade. This course is one of the Statewide Guaranteed Transfer courses. GT-SS1

ECO 202  
**PRINCIPLES OF MICROECONOMICS**  
3 CR. (3L)  
PRQ: CIS 110, ENG 090, REA 090, MAT 060, or equivalent assessment test scores or Department Chair approval. Focuses on the consumer, the firm, the nature of cost, and how these relate to the economy as a whole. Analyzes economic models of the consumer, perfect competition, monopoly, oligopoly and monopolistic competition. Explores economic issues including market power, population growth, positive and negative externalities, income distribution, international economic interdependence.

ECO 245  
**ENVIRONMENTAL ECONOMICS**  
3 CR. (3L)  
PRQ: CIS 110, ENG 090, REA 090, and MAT 090. Introduces students to contemporary environmental issues and policies meant to reduce environmental degradation. Includes market failures, analytical tools, government pollution reduction policies for air, water, and natural environments and their effectiveness.

## Education

EDU 110  
**OVERVIEW OF SPECIAL POPULATIONS FOR PARAEducATORS**  
3 CR. (3L)  
Provides students with knowledge in the areas of: laws and history of special education; roles and responsibilities of paraeducators; planning for students with disabilities; typical and non-typical developmental stages of children and youth; basic learning concepts; cognitive, communicative, physical and affective needs of students with disabilities; understanding people with disabilities; transition, job coaching; and how to teach students self-advocacy skills.

EDU 111  
**COMMUNICATION SKILLS WITH SPECIAL POPULATIONS FOR PARAEducATORS**  
3 CR. (3L)  
Provides knowledge in areas of effective communication skills; problem solving techniques; and analyzing self as communicator.

EDU 112  
**HEALTH & SAFETY ISSUES IN SCHOOLS FOR PARAEducATORS**  
3 CR. (3L)  
Provides students with the knowledge in the areas of health and safety issues in schools; basic first aid and CPR procedures; and the feeding and positioning of physically challenged students.

EDU 114  
**STUDENT BEHAVIOR MANAGEMENT FOR PARAEducATORS**  
3 CR. (3L)  
Provides students knowledge in the areas of behavior modification; teaching appropriate behaviors; contingency contracts; observing and recording behavior; lunchroom supervision; and playground supervision.

EDU 131  
**INTRODUCTION TO ADULT EDUCATION**  
3 CR. (3L)  
PRQ: REA 090 or instructor approval. Introduces the student to the basic concepts in the instruction of adults. Emphases will be placed on understanding the adult learner and how their individual backgrounds and experiences can affect the learning process. Additionally, the course will cover applicable federal and state legislation which affects adult learning programs and will offer information on additional resources and associations in the field of Adult Education.

EDU 132  
**PLANNING, ORGANIZING, AND DELIVERING ADULT EDUCATION INSTRUCTION**  
3 CR. (3L)  
PRQ: EDU 131. Covers the basics of planning an adult education program, organizing instruction within the various content areas and delivering the material in a variety of ways, both in groups and individualized instruction. A wide variety of learning principles and theories will be addressed in ways that show their applicability to the adult learner and his/her education.

EDU 133  
**ADULT BASIC EDUCATION (ABE)/ADULT SECONDARY EDUCATION (ASE)**  
3 CR. (3L)  
PRQ: EDU 131. Specifically addresses the different levels within an Adult Education program. Each level will be addressed in terms of appropriate Assessment tools and instructional techniques. Emphasis will be placed on teaching ways that the adult education instructor can encourage the development of cognitive skills at each level, as a springboard to the next higher level.

EDU 134  
**TEACHING ENGLISH AS A SECOND LANGUAGE TO ADULT LEARNERS**  
3 CR. (3L)  
PRQ: EDU 131. Introduces the development and implementation of a program to teach English to adults whose first language is not English. Topics will range widely from assessment and placement to the theories behind language acquisition. Students will also cover a wide variety of methodologies, both group and individualized, that are aimed at teaching the non-English speaker the written and verbal skills, necessary to successfully function in the United States.

EDU 135  
**FAMILY LITERACY IN ADULT EDUCATION**  
3 CR. (3L)  
PRQ: EDU 131. Introduces the students to the philosophy and theory behind family literacy, as well as give practical advice on the development and implementation of a family literacy program. The four-component model of adult education, early childhood education, parent and child together time (PACT), and parenting will be covered, both in theory and practical application.

EDU 141  
**BASIC INSTRUCTIONAL TECHNIQUES FOR PARAEducATORS**  
3 CR. (3L)  
Provides students with knowledge in the areas of delivering instruction; grouping students; reading with students; modifying instructional materials; using technology; and utilizing adaptive equipment.

EDU 221

**INTRODUCTION TO EDUCATION**

3 CR. (3L)

PRQ: REA 090 and ENG 090 or equivalent assessment scores. Focuses on the historical, social, political, philosophical, cultural and economic forces that shape the United States public school system. Includes current issues of educational reform, technology as it relates to education and considerations related to becoming a teacher in the state of Colorado.

EDU 261

**TEACHING, LEARNING AND TECHNOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Prepares students to integrate technology into their teaching curriculum. Enables the student to design educational and training materials incorporating instructional technology. Explores a variety of technologies, including the computer, Internet, multimedia, graphics, audio, and text with an emphasis on increasing learning through their use. Examines combining technology with a variety of instructional methodologies.

## Electronics Technology

ELT 101

**SURVEY OF ELECTRONICS**

3 CR. (1L/3 LBV)

CORQ: CIS 110 or equivalent assessment test score. PRQ: MAT 060, REA 060 or equivalent assessment test scores. Introduces electronics for consumers, individuals working in related fields, and those exploring Electronics Engineering Technology as a career option. Covers fundamental concepts, circuit diagrams, construction of circuits, test instruments, basic troubleshooting, and the operation of common electronic systems and circuits.

ELT 106

**FUNDAMENTALS OF DC/AC**

3 CR. (1L/3 LBV)

PRQ: MAT 090, REA 090, or equivalent assessment test scores; ELT 101; or Department Chair approval. Introduces the basic skills needed for many careers in electronics and related fields. Covers the operations and applications of basic DC and AC circuits consisting of resistors, capacitors, inductors, transformers and diodes. Emphasizes the use of common test instruments in troubleshooting.

ELT 112

**ADVANCED DC-AC**

3 CR. (1L/3 LBV)

PRQ: CIS 110 or equivalent assessment test score, MAT 108. Continues to build on ELT 106 and covers advanced concepts of DC-AC circuits. Includes an expanded treatment of power supplies, dual-supply rectifier circuits, and Zener diode voltage regulators. Emphasizes troubleshooting.

ELT 134

**SOLID STATE DEVICES I**

3 CR. (1L/3 LBV)

PRQ: MAT 090, REA 090, or equivalent assessment test scores; ELT 101; or Department Chair approval. Focuses on diode and transistor studies starting with a review of semiconductor materials. Emphasizes rectifier circuits, R-C and L-C filters, limiters and peak detectors, zener regulators, Schottky diodes, varactors/varistors, LED's bipolar transistors, transistor approximation, load-lines, biasing techniques, saturation, operating point, AC models including small-signal operation, h-parameters, and data sheet understanding and interpolation.

ELT 135

**SOLID STATE DEVICES II**

3 CR. (1L/3 LBV)

PRQ: ELT 134, ELT 112. Continues the study of transistors with an emphasis on application of modern devices to industrial circuits. Includes power amplifiers, Cascaded and Darlington configurations, field-effect devices, JFET's and MOSFET's, depletion and enhancement mode devices, biasing techniques, thyristors, SCR's and variations of the SCR family of devices.

ELT 147

**DIGITAL DEVICES I**

3 CR. (1L/3 LBV)

CORQ: ELT 101, CIS 110 or equivalent assessment test score. PRQ: REA 060, MAT 060, or equivalent assessment test scores. Introduces the operation and application of gates, flip-flops, counters, shift registers, encoders-decoders and LED displays. Covers binary numbers, Boolean algebra and troubleshooting.

ELT 148

**DIGITAL DEVICES II**

3 CR. (1L/3 LBV)

PRQ: ELT 147. Continues ELT 147 with emphasis on the operation and application of programmable logic devices, synchronous counters, multiplexers, liquid crystal displays, ROM and RAM. Includes specifications of ICs, display multiplexing, and design and minimization of circuits. Troubleshooting is emphasized.

ELT 175-177

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

ELT 175

**SPECIAL TOPICS: CAPSTONE I**

3 CR. (6 IND)

PRQ: Instructor approval. This is an independent study course with provides students who have completed at least one semester an opportunity to apply their knowledge and skills in a work situation. Small teams of students will become expert on one or more pieces of equipment which they will then operate, maintain, assemble/disassemble, troubleshoot, modify, etc. Safety, protocol, and compliance with defined practices, procedures, and outcomes will be emphasized.

ELT 202

**INTRODUCTION TO PC SERVICING**

3 CR. (2L/1.5 LBV)

PRQ: CIS 110, REA 060, or equivalent assessment scores. Introduces the physical components of microcomputers, including system components, bus architectures, ports, connectors, and cables. Examines safety issues and procedures pertinent to working with computers. Enables the student to identify proper procedures for installing and configuring system components and devices; to diagnose and troubleshoot system problems and determine whether they are hardware or software related; to identify safety procedures, preventive maintenance techniques; and to identify popular motherboards, types of memory architecture,

ELT 203

**ADVANCED PC SERVICING AND A+ PREP**

3 CR. (2L/1.5 LBV)

PRQ: ELT 202. Builds on the contents of ELT 202 and provides comprehensive knowledge and skills for maintaining, upgrading, troubleshooting, and repairing IBM Computer systems. Includes preparation for CompTIA's newly revised A+ Certification Exams.

ELT 231

**ELECTRONIC INSTRUMENTS**

3 CR. (.6L/4.6 LBV)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores. Enables the student to study the system of standards used for measurement and to demonstrate the principles of electronic measurements by the selection, application, and limitations of common electronic test equipment. 68 contact hours.

**ELT 235**  
**SEMICONDUCTOR MANUFACTURING I**

3 CR. (2L/1.5 LBV)  
PRQ: ELT 134, ELT 147, PHY 105.  
Serves as the first course in a two-course capstone sequence in semiconductor processing. Covers tracing semiconductor processing from raw materials to a finished integrated circuit, and semiconductor device physics. Includes the following manufacturing processes: oxidation, mask design, photolithography, and etch.

**ELT 236**  
**SEMICONDUCTOR MANUFACTURING II**

3 CR. (2L/1.5 LBV)  
PRQ: ELT 235. Serves as the second course in a two-course capstone sequence in semiconductor processing. Covers the following manufacturing processes: doping, chemical vapor deposition, metalizing, and test/sort.

**ELT 237**  
**VACUUM AND POWER RF SYSTEMS**

3 CR. (2L/1.5 LBV)  
PRQ: PHY 105, ELT 106. Covers vacuum systems and RF (radio frequency) energy sources in the manufacture of semiconductor devices. Includes gas laws and gas properties, vacuum pumps, gauges and valves, and leak detection techniques. Addresses plasma physics, RF generators, transmission lines, RF interference, and safety.

**ELT 252**  
**MOTORS AND CONTROLS**

3 CR. (1L/3 LBV)  
PRQ: REA 090 or equivalent assessment test scores; ELT 101; or Department Chair approval. Enables the student to study, construct, test, and evaluate basic industrial control systems, including AC/DC motors, stepper motors, power sources, generators, tachometers, line diagrams and logic functions. Covers safety standards and preventive maintenance.

**ELT 254**  
**INDUSTRIAL WIRING**

3 CR. (2L/1.5 LBV)  
PRQ: REA 090 or equivalent assessment test scores; ELT 101; or Department Chair approval. Focuses on the required and recommended practice for industrial wiring. The National Electrical Code is applied to industrial power and control wiring. Covers specification and installation of wiring, conduit, enclosures, and termination components in lecture and applied during lab.

**ELT 257**  
**SENSORS AND TRANSDUCERS**

3 CR. (1L/3 LBV)  
PRQ: ELT 134. Enables the student to study, construct, test and evaluate methods of testing and controlling common industrial processes. Includes sensing systems, transducers, measurement techniques, systems interfacing, process control, and data acquisition. 68 contact hours

**ELT 258**  
**PROGRAMMABLE LOGIC CONTROLLERS**

3 CR. (1L/3 LBV)  
PRQ: ELT 101, ELT 268. Covers the fundamentals of programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes history, terminology, typical applications, hardware, and software. Incorporates lab and project activities that address operating, monitoring, programming, troubleshooting, and repairing PLC controlled lab trainers as well as actual industrial equipment.

**ELT 259**  
**ADVANCED PROGRAMMABLE LOGIC CONTROLLERS**

3 CR. (1L/3 LBV)  
PRQ: ELT 258. Serves as the second in a two course sequence and covers advanced topics and applications for programmable logic controllers (PLCs) as they are applied in robotics and automation. Includes advanced programming, diagnostics, Human Machine Interfaces (HMIs), introduction to automation networking, and system integration. Incorporates lab and project activities that address designing, operating, monitoring, programming, analyzing, troubleshooting, and repairing PLC controlled lab trainers as well as actual industrial equipment.

**ELT 261**  
**MICROPROCESSORS**

3 CR. (2L/1.5 LBV)  
PRQ: ELT 134. Focuses on basic operation and applications of microprocessors. Enables the student to write machine and assembly language programs, interface microprocessors to various devices, and troubleshoot microprocessor-based systems.

**ELT 268**  
**ROBOTICS TECHNOLOGY**

3 CR. (2L/1.5 LBV)  
PRQ: ELT 101. Introduces industrial robotics as well as a survey of the technologies and equipment used in manufacturing automation and process control. Includes axis configurations, work envelopes, programming, troubleshooting, and maintenance. Incorporates a survey of automation topics including history, computer and hardwired controls, sensors and transducers, motors and actuators, fluid power, etc. and provides a preview of the other ELT classes that cover those subjects.

**ELT 275-277**  
**SPECIAL TOPICS**

1-6 CR. (L/LBV)  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**ELT 275**  
**SPECIAL TOPICS: CAPSTONE II**

3 CR. (6 IND)  
PRQ: Instructor approval. This is the second independent study course which provides students who have nearly completed their degree or certificate an opportunity to apply their knowledge and skills in a work situation. Small teams of students will become expert on one or more pieces of automated industrial equipment which they will then operate, maintain, assemble/disassemble, troubleshoot, modify, etc. Safety, protocol, and compliance with defined practices, procedures, and outcomes will be emphasized.

**ELT 280**  
**INTERNSHIP**

1-12 CR. (3-36 INT)  
Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

# Emergency Medical Services Technology

EMS 115

## **FIRST RESPONDER**

3 CR. (3L)

Provides the student with core knowledge and skills to function in the capacity of a first responder arriving at the scene of an emergency, providing supportive care until advanced EMS help arrives.

EMS 116

## **FIRST RESPONDER REFRESHER**

2 CR. (2L)

Provides the First Responder student with needed updates and review materials to renew and maintain the First Responder certificate.

EMS 125

## **EMT BASIC**

9 CR. (6L/4.5 LBV)

PRQ: REA 060 or equivalent assessment test score. CORQ: HPR 102. Enables the student after successful completion of this course to take the EMT Certification Examination subject to the requirements of the Colorado Department of Health and Environment. Includes written and practical examinations. Student must be at least 18 years of age.

EMS 126

## **EMT BASIC REFRESHER**

3 CR. (2L/1.5 LBV)

PRQ: EMT-Basic certification, or eligible for re-certification. Provides required didactic and skills review for renewing EMT students. Accommodates the needs of the re-entry EMT student.

EMS 130

## **EMT INTRAVENOUS THERAPY**

2 CR. (1L/1.5 LBV)

PRQ: EMS 125. Focuses on cognitive and skill practice as required by Colorado Prehospital Care program for EMT Basic level IV approval. Examines criteria, procedures and techniques for ICV therapy, discusses fluid and electrolyte balance and principles and treatment for shock. S/U

EMS 170

## **EMT BASIC CLINICAL**

1 CR. (1.5 LBV)

Provides the EMT student with the clinical experience required of initial and some renewal processes. S/U

EMS 175

## **SPECIAL TOPICS: BASIC LIFE SUPPORT**

.5-10 CR. (L/LBV/INT)

Provides the student with Continuing Medical Education at the First Responder or EMT Basic Level. Courses may be combined in an entire program to meet Prehospital Care Program requirements for renewal of certificates. S/U

EMS 178

## **EMS SEMINAR**

1 CR. (1L)

Provides the student with the opportunity to explore local interests and needs in a less formal setting. S/U

EMS 180

## **EMT CLINICAL INTERNSHIP**

2 CR. (6 INT)

Provides the Emergency Medical Technician (EMT) with a supervised clinical learning experience that goes beyond the initial EMT requirements for the State of Colorado Department of Health. Enables the student to work with an assigned preceptor for 90 hours of clinical experience to develop an understanding of the role and responsibilities of the EMT-Basic. S/U

EMS 203

## **EMT INTERMEDIATE I**

6 CR. (6L)

PRQ: MAT 060 or equivalent assessment test score, EMS 125. CORQ: EMS 270. Course provides preparatory information and is the first part of the EMT Intermediate program.

EMS 205

## **EMT INTERMEDIATE II**

6 CR. (3L/9 INT)

PRQ: EMS 203, EMS 270. Serves as the second course for EMT Intermediate certification.

EMS 206

## **EMT INTERMEDIATE REFRESHER**

3 CR. (3L)

PRQ: EMT-I Certification or eligible for recertification. Meets or exceeds minimum requirements for renewing EMT Intermediate or EMT Intermediates in the re-entry program. S/U

EMS 207

## **EMT INTERMEDIATE 99 TRANSITION**

2 CR. (2L)

Meets or exceeds the requirements for renewing EMT-Intermediate 85s to upgrade their certification to the Intermediate 99 DOT curriculum.

EMS 213

## **PREHOSPITAL TRAUMA LIFE SUPPORT**

1 CR. (1L)

Provides basic and/or advanced trauma life support information and skill practice. S/U

EMS 220

## **PARAMEDIC REFRESHER**

3 CR. (2L/1.5 LBV)

PRQ: EMT-P certification or eligibility for recertification. Updates the EMT-P in four specific areas of prehospital emergency care. Includes trauma, medical, Advanced Life Support (ALS) and elective topics focused on ancillary issues in EMS. S/U

EMS 225

## **FUNDAMENTALS OF PARAMEDIC PRACTICE**

3 CR. (3L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval. Serves as the first course of the National Standard Paramedic Curriculum as approved by the Colorado State Department of Health and Environment.

EMS 226

## **FUNDAMENTALS OF PARAMEDIC PRACTICE - LAB**

2 CR. (3LBV)

PRQ: Currently enrolled in EMS 225, or have successfully completed EMS 225. Current complete all pre-course screening requirements, including drug test and criminal background check. Instructor approval. Serves as the lab experience to coincide with EMS 225 topics

EMS 227

## **PARAMEDIC SPECIAL CONSIDERATIONS**

3 CR. (3L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 and BIO 202, EMS 228 and EMS 229 Focuses on a comprehensive study of Advanced Life Support Practice.

EMS 228

## **PARAMEDIC SPECIAL CONSIDERATIONS LAB**

2 CR. (3LBV)

PRQ: Currently enrolled in EMS 227. This course is the laboratory experience course for Paramedic students currently enrolled in EMS 227, Paramedic Special Considerations. Serves as the lab experience for those students enrolled in EMS 227.

EMS 229

**PARAMEDIC PHARMACOLOGY**

3 CR. (3L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval. Focuses on a comprehensive study of emergency pharmacology.

EMS 230

**PARAMEDIC PHARMACOLOGY LAB**

2 CR. (3 LBV)

PRQ: Currently enrolled in EMS 229, or have successfully completed EMS 229. Current certification as an EMT-B or EMT-I. Successfully complete all pre-course screening requirements, including drug test and criminal background check. Instructor approval. Serves as the required lab course in the paramedic education program.

EMS 231

**PARAMEDIC CARDIOLOGY**

5 CR. (5L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 and BIO 202, EMS 228 and EMS 229. Addresses cardiology topics as presented in the National Standard Curriculum for paramedics.

EMS 232

**PARAMEDIC CARDIOLOGY LAB**

1 CR. (1.5 LBV)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 & BIO 202, EMS 228 & EMS 229, currently enrolled in EMS 231 or have successfully completed EMS 231, pass drug screening and criminal background check. Incorporates a hands-on application of principles of cardiac care in the hospital environment.

EMS 233

**PARAMEDIC MEDICAL EMERGENCIES**

4 CR. (4L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 and BIO 202, EMS 228 and EMS 229. Focuses on a comprehensive study of adult medical emergencies.

EMS 234

**PARAMEDIC MEDICAL EMERGENCIES LAB**

1 CR. (1.5 LBV)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 & BIO 202, EMS 228 & EMS 229, currently enrolled in or have successfully completed EMS 233. Focuses on a clinical study of adult and pediatric medical emergencies.

EMS 235

**PARAMEDIC TRAUMA EMERGENCIES**

4 CR. (4L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 & BIO 202, EMS 228 & EMS 229. Focuses on a comprehensive study of adult and pediatric trauma emergencies.

EMS 236

**PARAMEDIC TRAUMA EMERGENCIES LAB**

1 CR. (1.5 LBV)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of BIO 201 & BIO 202, EMS 228 & EMS 229, currently enrolled in or have successfully completed EMS 235. Serves as a lab presenting various acute trauma scenarios.

EMS 237

**PARAMEDIC INTERNSHIP PREPARATORY**

2 CR. (2L)

PRQ: Current certification/licensure as an EMT-Basic or EMT-Intermediate, pre-screening examination, acceptance into the EMT-Paramedic training program, instructor approval, successful completion of EMS 231, EMS 233, EMS 234, EMS 235, and EMS 236. Reviews concepts and techniques used in the prehospital setting.

EMS 270

**CLINICAL: EMS INTERMEDIATE**

3 CR. (4.5 LBV)

CORQ: EMS 203. Provides the EMT-I student with the required field experiences as required by the Colorado Department of Health.

EMS 273

**PARAMEDIC CLINICAL**

6 CR. (9 LBV)

Offers laboratory/clinical requirement for students enrolled in EMS 238 and/or EMS 240. Students will participate in clinical rotations at local hospitals where they will apply the Advanced Life Support skills taught in the related didactic courses. Students must be enrolled in EMS 238 and/or EMS 240 when taking this course. Enrollment in this course must be approved by the EMS Program Coordinator and/or the Department Chair.

EMS 275

**SPECIAL TOPICS**

.5-10 CR. (L/LBV/INT)

Provides students with a vehicle to pursue in depth exploration of special topics of interest. S/U

EMS 280

**PARAMEDIC INTERNSHIP I**

6 CR. (18 INT)

PRQ: EMS 237. Serves as the preceptor/internship program for paramedic students.

EMS 281

**PARAMEDIC INTERNSHIP II**

6 CR. (18 INT)

PRQ: 280. Serves as the continuation of EMS 240, preceptor program for paramedic students.

EMS 285

**INDEPENDENT STUDY**

1-6 (3-18 INT)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor. S/U

## Energy Technology

ENY 101

**INTRODUCTION TO ENERGY TECHNOLOGIES**

3 CR. (3L)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores. Introduces the energy technologies in use today and those that are in the research stage as possible alternatives. Presents technologies including active solar heating, passive solar heating, wind energy systems, biomass, photovoltaics, co-generation, low and high head hydro, hydrogen, geothermal, power towers and energy storage systems.

ENY 126

### **SOLAR COLLECTORS**

3 CR. (3L)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores.

Introduces the principles of design and operation of solar panel arrays, material analysis and construction features of flat plate collectors, mounting techniques and construction of a basic air and liquid collector array. Covers distribution from collectors to storage and building, mechanical and plumbing codes as they apply to the solar industry.

ENY 141

### **PASSIVE SOLAR SYSTEM I**

3 CR. (3L)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores.

Presents a state-of-the-art study on the design and installation techniques of passive/natural solar energy systems.

ENY 145

### **PASSIVE SOLAR RETROFIT**

3 CR. (3L)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores.

Explores the principles and primary features behind a wide range of passive solar options for existing homes. Provides instruction concerning the site survey and energy conservation measures prior to installing retrofit design and construction details on various passive retrofit projects. Analyzes performance of each type of retrofit.

ENY 225

### **SOLAR DOMESTIC HOT WATER SYSTEMS**

3 CR. (3L)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores.

Provides a working knowledge of sizing, installation, maintenance of solar domestic hot water systems, residential applications, components, parts and cost efficiency analysis.

ENY 226

### **SOLAR PANEL INSTALLATION**

4 CR. (1.5L/3.75 LBV)

PRQ: MAT 090 and ENG 090, or equivalent assessment test scores.

Focuses on the installation of all types of panels on all types of roofs. Covers vertical wall mounting techniques.

## **Engineering Technology**

ENT 105

### **SAFETY FOR MANUFACTURING ENVIRONMENTS**

1 CR. (1L)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Introduces federal and state regulations, industrial practices, and accident investigation techniques. Covers hazard communication standard, lockout/tagout procedures, eye safety, lifting techniques, electrical safety, stored energy safety, personal protective equipment, safety program development and monitoring, and accident investigation techniques. Serves as the prerequisite for all Advanced Technology Center programs.

ENT 106

### **PRINT READING FOR MANUFACTURING**

3 CR. (1L/3 LBV)

PRQ: REA 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Focuses on blueprint reading techniques related to manufacturing operations. Covers basic drafting standards, sketching, machine shop math, symbol interpretation, tolerancing, and dimensioning standards.

ENT 131

### **MECHANICAL DRAWING I**

4 CR. (2L/3 LBV)

PRQ: MAT 060, equivalent assessment test score, or Department Chair approval. Enables students to manually manipulate drafting tools, computer keyboard, and mouse. Includes basic drafting techniques, use and care of instruments, lettering, line quality, geometric construction, orthographic projection, sectioning, sketching, auxiliary views, techniques. Provides an introduction to CAD.

ENT 133

### **INTRODUCTION TO MECHANICAL DESIGN**

3 CR. (1L/3 LBV)

PRQ: ENT 106 or ENT 131, or Department Chair approval. Focuses on industrial design concepts for mass production. Introduces tolerancing, industrial fasteners, economic considerations, and terminology. Incorporates small design projects.

ENT 134

### **GEOMETRIC DIMENSIONING & TOLERANCING**

2 CR. (1L/1.5 LBV)

PRQ: ENT 131 or ENT 106 or

Department Chair approval. Enables the student to study and apply principles involving tolerance fits between mating parts and techniques involving precision.

ENT 135

### **CONSTRUCTION PLANNING AND ESTIMATING**

2 CR. (2L)

PRQ: REA 090, MAT 060, or equivalent assessment test scores or Department Chair approval. Provides students with a basic knowledge of the construction planning and estimating process. Includes estimating documentation, spreadsheets, monitoring, and control of construction costs.

ENT 137

### **INTRODUCTION TO ENGINEERING TECHNOLOGY**

3 CR. (3L)

CORQ: MAT 090 or equivalent assessment test score, ENT 131 or Department Chair Approval. Prepares students for success in the Engineering Technology program. Focuses on engineering job skills and duties, academic requirements, calculator usage, engineering reference and handbooks, geometry, trigonometry, problem solving skills, and introduction to wordprocessing and spreadsheets.

ENT 141

### **SURVEYING I**

4 CR. (2L/3 LBV)

PRQ: MAT 090, equivalent assessment test score, or Department Chair approval. Serves as a beginning course in plane surveying. It covers horizontal distance measurement by pacing and chaining, care and use of total stations, theodolites, transits and levels, differential leveling, traversing, and basic construction surveying. Various instruction is given in proper survey note taking procedures and surveying terminology. Calculation of bearings, azimuths and slope reduction is also covered in this comprehensive course.

ENT 142

### **SURVEYING II**

4 CR. (2L/3 LBV)

PRQ: ENT 141. Introduces topographic and land surveying. Covers advanced construction surveying techniques including curves, grades, and slope staking. Addresses use and care of theodolites and electronic total station equipment.

ENT 143

**SURVEY DRAFTING**

3 CR. (1L/3 LBV)

CORQ: ENT 131 or permission of the instructor. Enables the student to practice the methods involved in converting surveying information into graphic drawings using inking techniques.

ENT 145

**STRUCTURAL DETAILING**

3 CR. (1L/3 LBV)

PRQ: ENT 131. Focuses on shop and detail drawings used in steel and concrete construction. Covers applications to residential, light commercial, and industrial structures.

ENT 146

**CONSTRUCTION MATERIALS AND METHODS**

3 CR. (3L)

PRQ: REA 090, equivalent assessment test score, or Department Chair approval. Focuses on basic knowledge of construction materials, how they are manufactured, and their applications in light commercial and industrial structures.

ENT 155

**MANUFACTURING TECHNOLOGY I**

3 CR. (1L/3 LBV)

Focuses on contemporary manufacturing organization, methods, and processes involved in converting raw materials into finished products.

ENT 233

**MECHANICAL DESIGN I**

3 CR. (1L/3 LBV)

PRQ: ENT 133, CAD 101. Focuses on the industrial design process from layout to production drawings, jig and fixture design standard part selection from handbooks and catalogs, specification writing, and part ordering.

ENT 234

**MECHANICAL DESIGN II**

3 CR. (1L/3 LBV)

PRQ: ENT 233. Emphasizes the layout and design of mechanical systems, tool selection, standard parts selection, report and specification writing, and part ordering techniques.

ENT 236

**ELECTRONIC DRAFTING**

3 CR. (1L/3 LBV)

PRQ: CAD 101. Schematics, printed circuit board layouts, symbols, and wiring diagrams will be produced on CAD workstation; terminology and the manufacturing process of printed circuit boards will be covered.

ENT 237

**STATICS**

3 CR. (3L)

PRQ: ENT 137, MAT 121, or instructor permission. Focuses on the study of mechanics involving forces and the effects of forces on bodies in equilibrium. Includes force systems, coplanar force systems, structure analysis, friction spatial force systems gravity and centroids.

ENT 238

**INDUSTRIAL FLUID POWER AND CONTROLS**

3 CR. (1L/3 LBV)

PRQ: ENT 131. Introduces fluid power application in industry and various types of industrial control devices used in modern manufacturing equipment and machinery. Enables the student to produce the graphics required to incorporate these items into a mechanical design.

ENT 241

**RESIDENTIAL ARCHITECTURE**

3 CR. (1L/3 LBV)

PRQ: ENT 131 or permission of the instructor. Enables the student to produce a set of residential construction plans based on sketches produced and provided. Emphasizes the current techniques for graphic representation of residential architecture plans.

ENT 242

**COMMERCIAL ARCHITECTURE**

3 CR. (1L/3 LBV)

PRQ: CAD 101, ENT 145, and ENT 241. Covers design and drafting for commercial structures. Emphasizes the requirements for commercial public buildings, steel and timber construction. Enables the student to complete a partial set of drawings from "architect sketches".

ENT 243

**ADVANCED SURVEY DRAFTING**

3 CR. (1L/3 LBV)

PRQ: CAD 101 and ENT 143. Focuses on traverses, legal descriptions, horizontal and vertical curves, land sections, and coordinates. Emphasizes field note interpretation. Graphics for this course are produced on CAD workstations.

ENT 244

**SURVEYING III**

3 CR. (1L/3 LBV)

PRQ: ENT 142, CAD 101. Focuses on advanced electronic surveying techniques. Introduces data collection and processing via computer software.

ENT 245

**CONCRETE AND ASPHALT TECHNOLOGY**

3 CR. (2L/1.5 LBV)

PRQ: CAD 101. Focuses on the study of Portland cement concrete and bituminous pavements. Covers manufacturing, mix design, and placement of these materials.

ENT 247

**STRENGTH OF MATERIALS**

3 CR. (3L)

PRQ: ENT 237. Serves as an extension of Statics and includes the study of mechanical properties of materials and their limitations in engineering design by the study of stresses, strains, torsion forces, shear forces, and deflections placed upon these materials.

ENT 256

**RAPID PRODUCT DEVELOPMENT**

4 CR. (2L/3 LBV)

PRQ: ENT 133. Enables the student to develop 3D solid models for prototype products using CAD technology. Covers various types of prototyping including stereolithography, selective laser sintering, laminated object manufacturing and CNC.

ENT 258

**INDUSTRIAL FLUID POWER AND CONTROLS**

3 CR. (1L/3 LBV)

PRQ: ENT 238. Focuses on the diagnosis of problems that may arise in fluid power systems used in a modern manufacturing environment. Covers the tools and techniques used in installation and component repair/replacement.

ENT 270

**TECHNICAL EXPERIENCE**

3 CR. (9 COP)

PRQ: Permission from instructor. Incorporates professional work experience directly related to the area of training. S/U

## English

ENG 030

**BASIC WRITING SKILLS**

2 CR. (1L/2 LBA)

PRQ: 25 or better on ACCUE language test. Focuses on sentence and basic paragraph structure and development. Enables the student to review and improve grammar, usage, and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

ENG 060

**WRITING FUNDAMENTALS**

3 CR. (3L)

PRQ: 50 or better on ACCUE or grade of "C" or better in ENG 030. Focuses on paragraph structure and development and introduces the formal essay. Enables the student to review and improve grammar, usage, and punctuation skills while employing critical thinking strategies and the writing process to respond to a wide variety of writing situations.

ENG 090

**BASIC COMPOSITION**

3 CR. (3L)

PRQ: 70 or better on the ACCUE test or grade of "C" or better in ENG 060. Emphasizes critical thinking as students explore writing for specific purposes and audiences. Enables the student to develop skills required for college-level writing while reviewing paragraph structure and focusing on essay development.

ENG 113

**BUSINESS ENGLISH**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 060 or equivalent assessment test scores or Department Chair approval. Introduces business English skills that are applicable to business correspondence. This course will review basic principles of grammar, punctuation, capitalization, spelling, and word usage.

ENG 121

**ENGLISH COMPOSITION I**

3 CR. (3L)

PRQ: a grade of C or better in ENG 090 or a score of 95 or better on the ACCUE test. Telecourse students should have received a grade of A or B in English 090 or equivalent. Emphasizes the planning, writing, and revising of compositions, including the development of critical and logical thinking skills. Includes a minimum of five compositions that stress analytical, evaluative, and persuasive/argumentative writing. This course is one of the Statewide Guaranteed Transfer Courses, GT-CO1.

ENG 122

**ENGLISH COMPOSITION II**

3 CR. (3L)

PRQ: a grade of C or better in ENG 121. Expands and refines the objectives of English Composition I. Emphasizes critical/logical thinking and reading, problem definition, research strategies, and writing analytical, evaluative, and/or persuasive papers that incorporate research. This course is one of the Statewide Guaranteed Transfer Courses, GT-CO1.

ENG 131

**TECHNICAL WRITING I**

3 CR. (3L)

PRQ: ENG 090 or ACCUE 95. Develops skills one can apply to a variety of technical documents. Focuses on principles for organizing, writing, and revising clear, readable documents for industry, business, and government.

ENG 132

**TECHNICAL WRITING II**

3 CR. (3L)

PRQ: ENG 131. Expands and refines the objectives of ENG 131, emphasizing formal presentations, both written and oral.

ENG 221

**CREATIVE WRITING I**

3 CR. (3L)

PRQ: ENG 090 or permission of instructor. Teaches techniques for creative writing. Explores imaginative uses of language through creative genres (fiction, poetry, literary nonfiction) with emphasis on the student's own unique style, subject matter and needs.

ENG 222

**CREATIVE WRITING II**

3 CR. (3L)

PRQ: ENG 221 or permission of instructor. Provides continued development of written expression in such forms as poetry, fiction, and/or nonfiction writing.

ENG 230

**CREATIVE NONFICTION**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Teaches students to incorporate literary techniques into factual writing. Enables the student to survey a wide range of readings and analyze form and content. Includes critical review, biographical profiles, travel writing, and memoirs. Provides the opportunity for students to write and review their own nonfiction in a supportive, constructive setting.

ENG 275

**SPECIAL TOPICS**

0-6 CR. (0L-6L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

ENG 275

**SPECIAL TOPICS: CREATIVE WRITING III**

3 CR. (3L)

PRQ: ENG 222. This course emphasizes a special project, such as a collection of poems, several chapters of a novel, a one act play, multiple sections of an autobiography, or a similar activity with instructor's approval. Each student will use an appropriate text, supporting the individual project and including elements appropriate to the genre chosen.

## Ethnic Studies

ETH 224

**INTRODUCTION TO CHICANO STUDIES**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment score. Introduces students to skills development in multicultural education. Covers Chicano history, migration and labor, education, law and Chicano culture.

## Fire Science Technology

FST 100

**FIREFIGHTER I**

9 CR. (6L/4.5 LBV)

PRQ: EMS 125. CORQ: REA 060 or equivalent assessment test score. Addresses the requirements necessary to perform at the first level of progression as identified in National Fire Protection Association (NFPA) 1001, Firefighter Professional Qualifications. This is a lecture and lab course for meeting the NFPA 1001, level I, standard using IFSTA Essentials.

FST 101

**FIREFIGHTER II**

3 CR. (2L/1.5 LBV)

CORQ: REA 060 or equivalent assessment test score. Addresses the requirements necessary to perform at the second level of progression as identified in NFPA 1001, level II Fire Fighter Professional Qualifications.

FST 102

**INTRO TO FIRE SCIENCE & SUPPR**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Introduces the fire service organization and operation from past to present operations. Includes operation and organization of federal, state, local and private protection forces. Emphasizes extinguishing methods and equipment, special extinguishing agents, and special hazard considerations. Serves as a prerequisite for students having no previous fire suppression training or experience.

FST 103

**FIREFIGHTER OCCUPATIONAL HEALTH AND SAFETY**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Focuses on on-scene and on-the-job firefighter health, safety and fitness, the safety officer, mental well-being, stress management, and standards related to health, safety and fitness.

FST 104

**FIRE PROTECTION SYSTEMS**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Addresses principles and functions involved in the installation and use of sprinkler systems, special suppression systems, and fire detection and alarm systems. Covers portable fire extinguishing equipment requirements, sprinkler systems, installation, inspection and maintenance, special protection systems, and residential sprinklers.

FST 105

**BUILDING PLANS AND CONSTRUCTION**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Covers various methods of building construction, the materials used in building construction, and their relationship to methods of fire attack and extinguishments. Includes types of building construction, principles of fire resistance, flame spread, smoke and fire containment, basic knowledge of plan review, and blueprint specifications.

FST 106

**FIRE INSPECTION PRACTICES**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Introduces the organization of the fire prevention agency; inspections, surveying, mapping and company inspections; recognition of fire hazards; engineering a solution to the hazard, enforcement of the solution, and public relations as affected by fire prevention. Fire Inspector I State Certificate available.

FST 107

**HAZARDOUS MATERIALS OPERATIONS (LEVEL I)**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Introduces hazardous materials incidents, recognizing and identifying hazardous materials, planning response, implementing response procedures, decision making, and continued evaluation at the awareness and operation level.

FST 110

**JOB PLACEMENT AND ASSESSMENT**

3 CR. (2L/1.5 LBV)

CORQ: REA 060 or equivalent assessment test score. Addresses all aspects of the Fire Service entrance examination process and especially emphasizes various components of the exam, including the written, physical abilities, and oral interview. The objective of this class is to help increase the entrance firefighter candidate's chance of obtaining a career in the Fire Service.

FST 150

**INTRODUCTION TO FIRE PREVENTION EDUCATION**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Focuses on conducting prevention and education needs assessment, targeting audiences; development and delivery of prevention and education programs. Includes methods of conducting fire prevention and safety inspections.

FST 151

**DRIVER-OPERATOR**

3 CR. (2L/1.5 LBV)

CORQ: REA 060 or equivalent assessment test score. Provides the student with the basic knowledge and skills to safely operate fire apparatus according to the NFPA professional standard. Enables the student to display and demonstrate knowledge of fire apparatus, operation of apparatus, pumps and pumping, hydraulics calculations, maintenance and testing.

FST 160

**CANDIDATE PHYSICAL ABILITIES TEST PREP COURSE**

3 CR. (1L/3 LBV)

CORQ: REA 060 or equivalent assessment test score. Prepares students for the job as firefighters as well as the testing requirements to test for CPAT. The tools for all classes will be fire service tools, such as, sledge hammer, hose, nozzle, ladders, pike pole, power saws, and rescue dummy. The course will include basic fire skills of rescue, hose lay, equipment movement, ladder raise, ladder extend, forcible entry, search, and ceiling breach. The course also includes aerobic and strength training to assist student in passing CPAT.

FST 201

**INSTRUCTIONAL METHODOLOGY**

3 CR. (3L)

CORQ: REA 060 or equivalent assessment test score. Covers the role and responsibility of the fire service instructor. Includes oral communication skills, concepts of learning, planning and development of lesson plans, instructional materials and delivery methods, testing and evaluations, records and reports, and demonstration of instructional abilities. Fire Instructor I State Certificate is available.

FST 202

**FIREFIGHTING STRATEGY AND TACTICS**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Firefighting strategy and tactics, methods of fire attack, fire behavior, building construction, and pre-fire planning.

FST 203

**FIRE SCIENCE HYDRAULICS**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Covers hydraulic calculations that are necessary in water delivery and supply for fire suppression; hydraulic laws and formulas as applied to fire protection requirements, and fire apparatus UL requirements.

FST 204

**FIRE CODES AND ORDINANCES**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Covers familiarization and interpretation of national, state and local codes, ordinances and laws which influence the field of fire prevention. Fire code and life safety code are reviewed and referred to throughout the course.

FST 205

**FIRE CAUSE DETERMINATION**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Covers the proper method(s) of conducting basic fire investigation, determining area and point of origin, cause and methods of fire spread, recognition and preservation of evidence. Includes arson law, Constitutional law, interviewing, court procedures and testimony.

FST 206

**FIRE CO SUPERV AND LEADERSHIP**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Covers fire department organization, management philosophies, leadership traits, time management, group dynamics, communications, motivation counseling, conflict resolution, and employee discipline. Meets components of Fire Officer I State Certificate.

FST 207

**STRATEGY AND TACTICS II**

3 CR. (3L)

PRQ: FST 202. CORQ: REA 090 or equivalent assessment test score. Focuses on tactics and strategies associated with transportation emergencies and fires, high-rise fires, below-ground incidents, confined space emergencies, and special rescue situations.

FST 250

**CHEMISTRY FOR FIRE PROTECTION**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Addresses the actions and reactions of commonly encountered products and chemicals, chemical properties, and field applied chemistry.

FST 252

**FIRE ARSON INVESTIGATION**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Studies cause and origin as related to arson fires; evidence preservation and chain of evidence; interviewing; giving testimony; and laws associated with fire and arson investigation, records and reports.

FST 253

**FIRE GROUND ORGANIZATION AND COMMAND**

3 CR. (3L)

PRQ: FST 202. CORQ: REA 090 or equivalent assessment test score. Focuses on fire ground management, resource availability, management and deployment, Integrated Management System and all related components, communications, problem solving, and table top exercises.

FST 254

**HAZARDOUS MATERIALS TECHNICIAN LEVEL**

3 CR. (3L)

PRQ: FST 107. CORQ: REA 090 or equivalent assessment test score. Focuses on techniques associated with hazardous materials mitigation, the use of monitoring devices, components of a mitigation teams, command and control of hazardous materials incidents.

FST 255

**FIRE SERVICE MANAGEMENT**

3 CR. (3L)

CORQ: REA 090 or equivalent assessment test score. Serves as the basic management course for present and potential members of the fire service, and for students and members of other fire science-related professions. Introduces the student to current management practices and philosophies and real-world applications from the supervisor's point of view. Covers decision making/problem solving, communication skills, conflict resolution, creativity and innovation, as well as the role of the manager in supervising personnel and programs, e.g., motivation, leadership, counseling, ethics, and handling discipline and grievances.

FST 256

**FIRE SERVICE EMS MANAGEMENT**

3 CR. (3L)

PRQ: EMS 125. CORQ: REA 090 or equivalent assessment test score. Addresses budgeting, staffing, training, and equipment issues; transportation, standard of care, and protocols; operations, communications, incident and disaster management, and legal issues associated with EMS operations.

FST 257

**FIRE DEPARTMENT ADMINISTRATION**

3 CR. (3L)

PRQ: FST 206. CORQ: REA 090 or equivalent assessment test score. Focuses on the operations of volunteer and combination fire departments, compliance with standards and ordinances, funding, recruiting, hiring and retaining employees, funding and budgeting, organizational planning and public relations.

## French

FRE 111

**FRENCH LANGUAGE I**

5 CR. (5L)

PRQ: ENG 060, REA 060, or equivalent assessment test scores. Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the French language.

FRE 112

**FRENCH LANGUAGE II**

5 CR. (5L)

PRQ: FRE 111 or instructor's permission; ENG 060 and REA 060, or equivalent assessment test scores. Continues French I in the development of functional proficiency in listening, speaking, reading and writing the French language.

FRE 211

**FRENCH LANGUAGE III**

3 CR. (3L)

PRQ: FRE 112 or instructor's permission; ENG 090; REA 090; or equivalent assessment test scores. Continues French I and II in the development of increased functional proficiency in listening, speaking, reading and writing the French language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

FRE 212

**FRENCH LANGUAGE IV**

3 CR. (3L)

PRQ: FRE 211 or instructor's permission; ENG 090; REA 090; or equivalent assessment test scores. Continues French I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the French language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

## Geography

GEO 105

### **WORLD REGIONAL GEOGRAPHY** 3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Facilitates an understanding of spatial relationships between and among the geographic regions of the world. Includes demographic and cultural (political, economic, and historic) forces related to the physical environments of selected regions. Focuses on analysis of interrelationships between developed and developing regions, and the interactions between human societies and natural environments. This course is one of the Statewide Guaranteed Transfer courses, GT-SS2.

GEO 106

### **HUMAN GEOGRAPHY** 3 CR. (3L)

PRQ: REA: 090 or the equivalent recommended. Introduces geographic perspectives and methods with applications to the study of human activities. Emphasizes the distribution of humans, adjustments to the natural environment, and land use practices. This course is one of the Statewide Guaranteed Transfer courses, GT-SS2.

GEO 111

### **PHYSICAL GEOGRAPHY - LANDFORMS** 4 CR. (4L)

PRQ: REA: 090 or the equivalent recommended. Introduces the principles of landforms as a major aspect of mans natural environment. Incorporates an integrated process of lecture, discussion, and laboratory assignments.

## Geology

GEY 111

### **PHYSICAL GEOLOGY** 4 CR. (3L/2 LBA)

PRQ: MAT 090, REA 090, ENG 090, CIS 110, or equivalent assessment test scores. Studies the materials of the earth, its structure, surface features and the geologic processes involved in its development. This course includes laboratory experience. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

GEY 121

### **HISTORICAL GEOLOGY** 4 CR. (3L/2 LBA)

PRQ: MAT 090, REA 090, ENG 090, GEY 111 or consent of instructor of Geology, CIS 110, or equivalent assessment test scores. Studies the physical and biological development of the earth through the vast span of geologic time. Emphasizes the investigation and interpretation of sedimentary rocks, the record of ancient environments, fossil lifeforms, and physical events, all within the framework of shifting crustal plates. Course includes laboratory experience. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

GEY 135

### **ENVIRONMENTAL GEOLOGY** 3 CR. (3L)

PRQ: REA 090, MAT 090, ENG 090, CIS 110, or equivalent assessment test scores. Introduces geology and its relationship to man's environment. Covers geologic hazards such as floods, landslides, avalanches, earthquakes and volcanoes. Focuses on surface and groundwater resources in terms of exploitation and man's responsibility to protect these resources from contamination. The geologic aspects of land use practices, as well as mineral and energy resource exploitation are reviewed and related to legislation regarding environmental law.

## German

GER 101

### **CONVERSATIONAL GERMAN I** 3 CR. (3L)

PRQ: REA 060 or equivalent assessment test score. Introduces beginning students to conversational German and focuses on understanding and speaking German. Covers basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

GER 111

### **GERMAN LANGUAGE I** 5 CR. (5L)

PRQ: REA 060 and ENG 060, or equivalent assessment test scores. Begins a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

GER 112

### **GERMAN LANGUAGE II** 5 CR. (5L)

PRQ: GER 111 or instructor's permission; REA 060 and ENG 060, or equivalent assessment test scores. Continues German Language I in the development of functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

GER 211

### **GERMAN LANGUAGE III** 3 CR. (3L)

PRQ: GER 112 or instructor's permission; REA 090; ENG 090; or equivalent assessment test scores. Continues German Language I and II in the development of increased functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

GER 212

### **GERMAN LANGUAGE IV** 3 CR. (3L)

PRQ: GER 211 or permission of instructor; ENG 090 and REA 090, or equivalent assessment test scores. Continues German Language I, II and III in the development of increased functional proficiency in listening, speaking, reading and writing the German language. Note: The order of the topics and the methodology will vary according to individual texts and instructors.

## Health and Wellness

HWE 100

### **HUMAN NUTRITION** 3 CR. (3L)

PRQ: REA 090, MAT 060, ENG 060, CIS 110, or equivalent assessment test scores. Introduces basic principles of nutrition with emphasis on personal nutrition. Satisfies nutrition requirement of students entering health care professions.

HWE 103

### **COMMUNITY FIRST AID AND CPR** 1 CR. (1L)

Prepares the student for certification in CPR and Basic First Aid. Skills will include basic life support, airway obstruction, control of bleeding, shock, and patient care for the unconscious. S/U

## Health Professions

HPR 100

### **INTRODUCTION TO HEALTH**

3 CR. (3L)

Provides an exploratory course for students interested in a health career. Basic health skills such as vital signs and CPR will be included.

HPR 102

### **CPR FOR PROFESSIONALS: PROFESSIONAL RESCUER**

.5 CR. (.5L)

Meets the requirement for American Red Cross Professional Rescuer CPR or American Heart Association Basic Life Support for those who work in Emergency Services, Health Care and other professional areas. Material presented in the course is basic patient assessment, basic airway management, rescue breathing, and CPR for infant, children and adult patients. S/U

HPR 103

### **CPR FOR PROFESSIONALS RENEWAL**

.5 CR. (.5L)

Provides opportunity for currently certified CPR providers to renew certificates. S/U

HPR 108

### **DIETARY NUTRITION**

1 CR. (1L)

PRQ: REA 090 or equivalent assessment test score. Studies the basic principles in clinical practice involved in the assistance of health care. The course will cover factors which influence the nutritional status of individuals, methods of nutritional assessment and support, and diet modification for specific disease states.

HPR 112

### **PHLEBOTOMY**

4 CR. (2.5L/1.5 LBV)

PRQ: ENG 090, MAT 060, REA 060. Teaches the duties associated with the practice of venipuncture, capillary puncture, and special collection procedures. Students will have experience with quality control, infection control and safety procedures as well as laboratory computer systems. Students successfully completing this course may apply for a National Phlebotomy Registry Examination.

HPR 113

### **ADVANCED PHLEBOTOMY**

4 CR. (2L/3 LBV)

PRQ: ENG 090, MAT 060, REA 060 or equivalent test scores. Instructs students in advanced phlebotomy techniques to include patients in trauma, neonatal, geriatric, and long term acute care areas. In addition, laboratory procedures taught include specimen processing and course includes a lecture/lab combination that teaches theory and direct application of theoretic content and clinical opportunities for student to master learned skills.

HPR 117

### **ANATOMICAL KINESIOLOGY**

3 CR. (1L/3 LBV)

PRQ: BIO 106. Studies the Anatomical Bases of Human Movement.

HPR 120

### **ACLS**

1 CR. (1L)

Presents the required material for ACLS completion. It will cover arrhythmias, medications, therapeutic modalities for life threatening arrhythmias, airway management, and other treatment modalities used in cardiac and respiratory arrest. S/U

HPR 121

### **ACLS RECERTIFICATION**

.5 CR. (.5L)

Presents the required material for ACLS recertification. It will cover rhythm recognition, cardiac drugs, cardiac monitors, and case based scenarios. S/U

HPR 122

### **ACLS INSTRUCTOR COURSE**

.5 CR. (.5L)

Presents information on how to obtain a complete health history, assessment skills of inspection, palpation, percussion, and auscultation are practiced in class. S/U

HPR 130

### **PEDIATRIC ADVANCED LIFE SUPPORT**

1 CR. (1L)

Provides students the needed information and skills as required by health care agencies for pediatric emergencies. S/U

HPR 131

### **PEDIATRIC ADVANCED LIFE SUPPORT RENEWAL**

.5 CR. (.5L)

Provides students with updates and skill practice to complete renewal requirements for PALS completion card. S/U

HPR 132

### **PEDIATRIC ADVANCED LIFE SUPPORT INSTRUCTOR**

1 CR. (1L)

Provides the current PALS provider the information and practice needed to instruct PALS initial and renewal courses. S/U

HPR 178

### **SEMINAR: MEDICAL TERMINOLOGY**

1-4 CR. (1-4L)

Introduces the student to the structure of medical terms with emphasis on combining and using the most common prefixes, roots and suffixes. Includes terms related to clinical laboratory, diagnostic imaging, nuclear medicine and oncology, as well as major body systems. Classroom structure provides accepted pronunciation of terms and relative use in the healthcare setting. When offered through BTE for 3 credits, course prerequisites are PRQ: CIS 110, REA 060, ENG 060, or equivalent assessment test scores or Department Chair approval.

HPR 190

### **BASIC EKG INTERPRETATION**

2 CR. (2L)

Provides instruction for interpretation of EKG strips, anatomy and physiology of the heart, using three-lead monitoring as a guide. Twelve-lead EKG may be discussed. S/U

HPR 200

### **12 LEAD ECG INTERPRETATIONS**

3 CR. (3L)

Focuses on each wave and interval of the complex, the axis, and the 12-lead presentation of some rhythm disturbances. S/U

HPR 275

### **SPECIAL TOPICS: SKILLS FOR THE HEALTH CARE TECHNICIAN**

5 CR. (3L/3 LBV)

PRQ: ENG 090, MAT 060, REA 060 or equivalent test scores. Provides knowledge and skills acquisition for the health care support technician to deliver quality care to individuals in residential, community, and other health care settings.

HPR 278

### **SEMINAR: MEDICAL TERMINOLOGY**

1-6 CR. (1-6L)

Provides students with an experiential learning opportunity. When offered through BTE for 3 credits, course prerequisites are PRQ: HPR 178 or instructor permission, CIS 110, ENG 060, REA 060 or equivalent assessment test scores or Department Chair approval.

## History

### HIS 101 HISTORY OF WESTERN CIVILIZATION I

3 CR. (3L)  
PRQ: REA 090 or the equivalent recommended. Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from the prehistoric era to 1650. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This course is one of the Statewide Guaranteed Transfer courses, GT-HI1.

### HIS 102 HISTORY OF WESTERN CIVILIZATION II

3 CR. (3L)  
PRQ: REA 090 or the equivalent recommended. Explores a number of events, peoples, groups, ideas, institutions, and trends that have shaped Western Civilization from 1650 to the present. Reflects the multiple perspectives of gender, class, religion, and ethnic groups. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in this discipline. This course is one of the Statewide Guaranteed Transfer courses, GT-HI1.

### HIS 111 WORLD CIVILIZATION I

3 CR. (3L)  
Enables the student to view history up to 1500 CE in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders, to provide a better appreciation for different cultures. This course is one of the Statewide Guaranteed Transfer courses, GT-HI1.

### HIS 112 WORLD CIVILIZATION II

3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Enables students to view history post 1500 CE in a broad global sense. Focuses on the common denominators among all people. This approach goes beyond political borders to provide a better appreciation for different cultures. This course is one of the Statewide Guaranteed Transfer courses, GT-HI1.

### HIS 201 U.S. HISTORY I

3 CR. (3L)  
PRQ: REA 090 or the equivalent recommended. Explores events, trends, peoples, groups, cultures, ideas, and institutions in North America and United States history, including the multiple perspectives of gender, class, and ethnicity, between the period when Native American Indians were the sole inhabitants of North America, and the American Civil War. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline. This course is one of the Statewide Guaranteed Transfer courses, GT-HI1.

### HIS 202 U.S. HISTORY II

3 CR. (3L)  
PRQ: REA 090 or the equivalent recommended. Explores events, trends, peoples, groups, cultures, ideas, and institutions in United States History, including the multiple perspectives of gender, class, and ethnicity, between the period of the American Civil War and the present. Focuses on developing, practicing, and strengthening the skills historians use while constructing knowledge in the discipline. This course is one of the Statewide Guaranteed Transfer courses, GT-HI1.

### HIS 225 COLORADO HISTORY

3 CR. (3L)  
PRQ: REA 090 or the equivalent recommended. Presents the story of the people, society, and cultures of Colorado from its earliest Native Americans, through the Spanish influx, the explorers, the fur traders and mountain men, the gold rush, railroad builders, the cattlemen and farmers, the silver boom, the tourists, and the modern state.

### HIS 244 HISTORY OF LATIN AMERICA

3 CR. (3L)  
PRQ: ENG 060, REA 090, or equivalent assessment test scores. Focuses on the major political, economic, social, and cultural influences that have shaped Latin America from pre-European conquest to the present. Emphasizes the early history of Latin America but connects it to the present.

### HIS 246 HISTORY OF MEXICO

3 CR. (3L)  
PRQ: ENG 060, REA 090, or equivalent assessment test score. Focuses on the major political, economic, social, and cultural developments of Mexico from Pre-Columbian times to the present.

## Holistic Health Professional

### HHP 166 INTRODUCTION TO REFLEXOLOGY

1 CR. (1L)  
Teaches the student foot anatomy, basic hand stroke and foot reflex points.

### HHP 202 AROMATHERAPY

.5 CR. (.5L)  
While much ancient wisdom on the use of essential oils in health maintenance and the healing of disease has been lost, some tantalizing data from the ancient Egyptians exists and has been verified by modern scientific research. Explores the pharmacokinetics and neurophysiology of essential oils, looking into their origins, extraction, storage, and usage. Enables the student to observe a large number of essential oil remedies and their applications.

### HHP 218 ACUPRESSURE

1 CR. (1L)  
PRQ: MST 111. Focuses on acupressure - a light finger pressure in the organ flow and meridians used in traditional Chinese acupuncture. Offers hands-on instruction emphasizing energizing, balancing, and the easing of common aches and discomforts.

## Hospitality Studies

### HOS 105 INTRODUCTION TO MANAGEMENT IN THE HOSPITALITY INDUSTRY

3 CR. (3L)  
Describes the history, development, and operation of the hospitality industry including careers in the industry, management practices, accounting procedures, destinations and lodging.

### HOS 106 CASE STUDIES IN THE HOSPITALITY INDUSTRY

3 CR. (3L)  
PRQ: HOS 105, CIS 110, REA 030, or equivalent assessment test score or Department Chair approval. Analyze and discuss aspects of the hospitality industry including front desk management, marketing, menu planning and tourism using case studies.

HOS 122

**TOURISM GEOGRAPHY I**

3 CR. (3L)

Introduces geography concepts such as time zones, weather patterns, map skills and geology to the students. This in-depth study of the western hemisphere, including North and South America and the Caribbean, will be considered from the perspective of the Hospitality professional.

HOS 123

**TOURISM GEOGRAPHY II**

3 CR. (3L)

Continues HOS 122, Tourism Geography I, and will complete the examination of the world. The eastern hemisphere, including Europe, Asia, the Middle East, Africa, Australia and Oceania, will be studied from the perspective of the Hospitality professional.

HOS 131

**PLANNING FOR SPECIAL EVENTS**

3 CR. (3L)

Provides a basic knowledge of the planning and development of an event or meeting, including the budgeting, arranging of entertainment and catering, and the lodging of participants.

HOS 141

**CONVENTION MANAGEMENT**

3 CR. (3L)

Prepares students for a management position in the convention industry. The course defines the scope and segmentation of the convention and group business market, describes marketing and sales strategies to attract markets with specific needs, and explains techniques to meet those needs as part of meeting and convention service. The class meets for a total of 45 hours. At the conclusion of the course, students will take a nationally recognized test from the Educational Institute of the American Hotel and Lodging Association.

HOS 175-177

**SPECIAL TOPICS**

1-6 CR. (L)

Exploration of current topics, issues and activities related to one or more aspects of the named discipline.

HOS 207

**TOUR MANAGEMENT**

3 CR. (3L)

Develops a basic understanding of the role and function of a tour conductor.

HOS 275-277

**SPECIAL TOPICS**

1-6 CR. (L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

## Humanities

HUM 103

**INTRODUCTION TO FILM ART**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Studies the relationships among film's stylistic systems, narrative systems and audience reception. Students view, discuss and critically analyze a variety of films which represent key historical and aesthetic periods as well as a variety of genres and themes. The course incorporates the vocabulary stylistic systems (for instance, cinematography, editing and art direction) and narrative systems (for instance, story structure and character motivation) as both relate to the kinds of meanings a film conveys.

HUM 110

**INTRODUCTION TO THE FINE ARTS**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces the basic elements and principles of the fine arts (art, music and theater).

HUM 117

**CRITICAL THINKING**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Develops higher order thinking and reasoning skills. Students will apply these skills to a variety of academic disciplines, contemporary issues and their own life experiences.

HUM 121

**HUMANITIES: EARLY CIVILIZATIONS: AH2**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Introduces students to the history of ideas that have defined cultures through a study of the visual arts, literature, drama, music, and philosophy. It emphasizes connections among the arts, values, and diverse cultures, including European and non-European, from the Ancient world to 1000 C.E. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

HUM 122

**HUMANITIES: MEDIEVAL TO MODERN: AH2**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Examines written texts, visual arts and musical compositions to analyze and reflect the evolution and confluence of cultures in Europe, Asia and the Americas from 800 C.E. to 1750 C.E. Any two of the three Survey of Humanities courses equal a sequence. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

HUM 123

**HUMANITIES: MODERN WORLD: AH2**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Examines the cultures of the 17th through the 20th centuries by focusing on the interrelationships of the arts, ideas, and history. Considers the influences of industrialism, scientific development and non-European peoples. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

HUM 131

**THE ARTS AND CULTURES OF MEXICO**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces students, through visual arts, music, and literature to attitudes toward the sacred and toward power (political, economic, social, religious) held by various cultures in Mexico from the Pre-Hispanic era to the mid-twentieth century.

HUM 164

**AMERICAN CINEMA**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces film studies and surveys the American film industry as an art form, as an industry, and as a system of representation and communication. This course explores how Hollywood films work technically, aesthetically, and culturally to re-enforce and challenge America's national self image.

HUM 237

**HISPANIC ARTS OF THE AMERICAN SOUTHWEST**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Examines the history, visual arts and permanency of the Hispanic culture of the American Southwest. Through the study of historical sequences, major artistic expressions dating from 1598 and aspects of literature of the contemporary Hispanic society students will gain an insight into the Hispanic cultural contributions to the Southwest.

HUM 238

**SACRED IMAGES, SACRED SPACES: SOUTHWESTERN US**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Examines the historical, social, geographical and cultural forces that influenced the design and presentation of sacred images in several Southwestern U.S. cultures. Students will study stylistic features of images in various media in relation to the sacred spaces where they are displayed or employed in rituals.

## Italian

ITA 101  
**CONVERSATIONAL ITALIAN I**  
3 CR. (3L)  
PRQ: REA 060 or equivalent assessment test score. Provides the first course in a sequence for beginning students who wish to understand and speak Italian. The material includes basic vocabulary, grammar, and expressions that are used in daily situations and in travel.

ITA 111  
**ITALIAN LANGUAGE I**  
5 CR. (5L)  
PRQ: ENG 060 and REA 060 or equivalent assessment test score. Introduces a sequence dealing with the development of functional proficiency in listening, speaking, reading and writing the Italian language. Note: The order of the topics and methodology will vary according to individual texts and instructors.

## Jewelry Repair and Design

Permission from the Department Chair is required to enroll in these courses.

JRD 101  
**GEMOLOGY**  
3 CR. (3L)  
Introduces the precious and semi-precious stones most commonly used in jewelry.

JRD 102  
**BEGINNING STONE SETTING I**  
3 CR. (1L/3 LBV)  
Introduces basic stone setting procedures and techniques.

JRD 103  
**STONE SETTING II**  
3 CR. (1L/3 LBV)  
Continues basic stone setting techniques with a greater emphasis on advanced stone setting procedures for jewelry work.

JRD 111  
**JEWELRY SHOP I**  
3 CR. (6 STA)  
PRQ: ART 141, ART 142, or permission of instructor. Introduces the student to hand fabrication techniques used in a jewelry and metalsmithing shop.

JRD 112  
**JEWELRY SHOP II**  
3 CR. (6 STA)  
PRQ: JRD 111. Investigates advanced approaches in jewelry techniques emphasizing the merging of hand-fabricated forms with casting in jewelry shop work.

JRD 211  
**INTRODUCTION TO JEWELRY REPAIR**  
3 CR. (3L)  
Introduces Jewelry Repair Shop and the procedures, ethics, and practices necessary to such a business.

JRD 212  
**JEWELRY REPAIR I**  
3 CR. (1L/3 LBV)  
Stresses the fundamentals of jewelry repair techniques and procedures as they pertain to common repair problems.

JRD 213  
**JEWELRY REPAIR II**  
3 CR. (1L/3 LBV)  
Provides an advanced study of jewelry repair problems and the techniques and procedures needed to correct them.

JRD 215  
**JEWELRY DESIGN I**  
3 CR. (6 STA)  
PRQ: ART 141. Introduces custom jewelry design procedures and techniques.

JRD 216  
**JEWELRY DESIGN II**  
3 CR. (6 STA)  
PRQ: JRD 215. Emphasizes advanced jewelry design techniques and practices as they relate to artistic and custom projects.

JRD 217  
**ADVANCED WAX AND MOLD MAKING**  
3 CR. (6 STA)  
PRQ: ART 142. Focuses on the advanced wax and mold making techniques necessary to create multiples of jewelry design work. Emphasis will be given to work designed as production jewelry.

JRD 218  
**JEWELRY PRESENTATION AND PHOTOGRAPHY**  
2 CR. (2L)  
Focuses on basic presentation techniques, display design, and photography procedures for jewelry work.

JRD 221  
**JEWELRY PORTFOLIO**  
1 CR. (1L)  
Emphasizes the jewelry portfolio from the design concept and layout to the finished product.

JRD 280  
**INTERNSHIP**  
3 CR. (9 INT)  
Places the jewelry student in a repair shop for actual repair experience.

## Journalism

JOU 105  
**INTRODUCTION TO MASS MEDIA**  
3 CR. (3L)  
PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Places the mass media in a historical and cultural perspective, considering the validity, integrity and influence of the media in a democracy.

JOU 106  
**FUNDAMENTALS OF REPORTING**  
3 CR. (3L)  
Introduces newswriting, reporting and interviewing with an emphasis on clarity, accuracy, completeness, timeliness and fairness.

JOU 206  
**INTERMEDIATE NEWSWRITING AND EDITING**  
3 CR. (4.5 LBV)  
PRQ: ENG 090, equivalent assessment test score, or Department Chair approval. Presents how to gather information as an investigative reporter through research of local, state and federal government publications, how to cover police beat and city hall, how our courts and regulatory agencies function, and how to cover other challenges such as the environment, religion, science, medical, public safety and business.

## Library Technician

LTN 101  
**INTRODUCTION TO LIBRARY SERVICES**  
2 CR. (2L)  
PRQ: One semester of keyboarding or demonstrated ability to type 30 words per minute. Introduces libraries and their procedures, tools, and techniques for library processes are emphasized.

LTN 110

**SELECTION AND ACQUISITIONS - ONLINE**

3 CR. (3L)

PRQ: One semester of keyboarding or demonstrated ability to type 30 words per minute. Covers tools, vendors, jobbers, approval plans for books, periodicals, and audiovisual material. Includes developing an acquisitions policy; developing a weeding plan, weeding the collection, and identifying new purchases for a library as a volunteer project; and dealing with censorship.

LTN 115

**LIBRARY CIRCULATION**

3 CR. (3L)

PRQ: One semester of keyboarding or demonstrated ability to type 30 words per minute. Discusses customer service and circulation issues and procedures. Students will learn the role of customer service and the effects that automation has had on the circulation function of the library.

LTN 118

**AUDIO VISUAL MANAGEMENT**

2 CR. (2L)

PRQ: One semester of keyboarding or demonstrated ability to type 30 words per minute. Provides tools to help in selecting equipment, writing bid specifications, using standard equipment and in-house maintenance tips. Includes statistics keeping and repair records.

LTN 205

**INTRODUCTION TO CATALOGING AND CLASSIFICATION**

3 CR. (3L)

Introduces the library organization, how to use Dewey and Sears subject headings, elements of cataloging, practice in the use of Dewey and the Library of Congress classification systems, use of cutter tables, subject classification, accession numbers, and bar codes. Basic philosophy, procedures, tools, and techniques for library routines are emphasized.

LTN 210

**REFERENCE MATERIALS**

3 CR. (3L)

Teaches how to select reference materials, how to use at least 100 reference resources, the reference interview, and the role of resource sharing (interlibrary loan) in reference. Students will prepare a bibliography of the 100 titles they would want in their reference collection and 10 online sources they find useful.

LTN 220

**LIBRARY/MEDIA CENTER MANAGEMENT AND PUBLIC RELATIONS**

3 CR. (3L)

PRQ: LTN 101. Includes budget preparation, how to work with staff, the public, and administrators, and the use of statistics.

## Literature

LIT 115

**INTRODUCTION TO LITERATURE I**

3 CR. (3L)

PRQ: A grade of "C" or better in ENG 090 or equivalent assessment test score. Introduces students to fiction, poetry, and drama. Emphasizes active and responsive reading. This course is one of the Statewide Guaranteed Transfer Courses, GT-AH2.

LIT 125

**STUDY OF THE SHORT STORY**

3 CR. (3L)

PRQ: ENG 060 or ACCUE 60 and ACCUR 71. Focuses on careful reading and interpretation of the short story as a distinct genre. It examines formal as well as thematic elements of short fiction. Critical thinking, discussion, and writing about short stories will enhance perceptive reading skills and heighten awareness of the human condition.

LIT 126

**STUDY OF POETRY**

3 CR. (3L)

PRQ: ENG 060 or ACCUE 60 and ACCUR 71. Focuses on careful reading and interpretation of various poems representing types and periods of poetry. It examines formal as well as thematic elements of poetry. Critical thinking, discussion, and writing about poetry will enhance perceptive reading skills and heighten awareness of the human condition.

LIT 175

**SPECIAL TOPICS**

1-3 CR. (L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

LIT 175

**SPECIAL TOPICS: MIDDLE EASTERN LITERATURE**

1 CR. (1L)

PRQ: ACCUR 60 or above. This course focuses on significant texts of Arab, Iranian, and Israeli writers from the Middle East. It emphasizes a careful reading and an understanding of the cultural and literary elements of their texts.

LIT 175

**SPECIAL TOPICS: EAST ASIAN LITERATURE**

1 CR. (1L)

PRQ: ACCUR 60 or above. This course focuses on significant texts of Japanese and Korean, ancient and modern, writers. It emphasizes a careful reading and an understanding of the cultural and literary elements of their texts.

LIT 175

**SPECIAL TOPICS: CENTRAL AND SOUTHERN ASIAN LITERATURE**

1 CR. (1L)

PRQ: ACCUR 60 or above. This course focuses on significant texts of classical and modern China as well as from countries of South Asia. It emphasizes a careful reading and an understanding of the cultural and literary elements of these texts.

LIT 175

**SPECIAL TOPICS: ASIAN AMERICAN LITERATURE**

1 CR. (1L)

PRQ: ACCUR 60 or above. This course focuses on significant texts by Asian American writers. It emphasizes a careful reading and an understanding of the cultural and literary elements of their texts.

LIT 175

**SPECIAL TOPICS: LITERATURE OF THE INDUS PENINSULA**

1 CR. (1L)

PRQ: ACCUR 60 or above. This course focuses on significant texts by writers of India, Pakistan, and Bangladesh, ancient and modern. It emphasizes a careful reading and an understanding of the cultural and literary elements of their texts.

LIT 201

**MASTERPIECES OF LITERATURE I**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Examines significant writings in world literature from the ancients through the Renaissance. Emphasizes careful readings and understanding of the works and their cultural backgrounds. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

LIT 202

**MASTERPIECES OF LITERATURE II**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Examines significant writings in world literature from the seventeenth century to the present. Emphasizes careful reading and understanding of the works and their cultural backgrounds. This course is one of the Statewide Guaranteed Transfer courses. GT-AH2

LIT 205

**ETHNIC LITERATURE**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Focuses on significant texts by ethnic American's including African-American, Native American, Latino/a, and Asian Americans. Emphasizes careful reading and understanding of the cultural and literary elements of the works. This course is one of the Statewide Guaranteed Transfer Courses GT-AHZ.

LIT 211

**SURVEY OF AMERICAN LITERATURE I**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Provides an overview of American literature from the Native American through the nineteenth century Romantics. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. This course is one of the Statewide Guaranteed Transfer Courses GT-AHZ.

LIT 212

**SURVEY OF AMERICAN LITERATURE II**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Provides an overview of American literature from the mid-nineteenth century to the present. It explores ideas, historical and social contexts, themes and literary characteristics of works in various genres by major writers. This course is one of the Statewide Guaranteed Transfer Courses GT-AHZ.

LIT 238

**INTRODUCTION TO MODERN POETRY**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Demonstrates how modern poetry works, what it means, and how history, imagination and language are used in the act of poetic creation.

LIT 246

**LITERATURE OF WOMEN**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Examines the techniques and themes in literature by and about women by examining women's issues form various genres.

LIT 255

**CHILDREN'S LITERATURE**

3 CR. (3L)

PRQ: ENG 090 or equivalent assessment test score. Evaluates the criteria for selecting appropriate literature for children through exploration of genres, age levels, values taught through literature, and the literary and artistic quality of various texts.

LIT 275

**SPECIAL TOPICS**

1-3 CR. (L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

LIT 275

**SPECIAL TOPICS: YOUNG ADULT LITERATURE**

3 CR. (3L)

PRQ: ENG 060 or ACCUE 60 and ACCUR 71. This course examines the criteria for selecting appropriate literature for young adults. Discussion topics explore age levels, values taught through literature, and literary and artistic qualities.

## Machining Technology

MAC 101

**INTRODUCTION TO MACHINE SHOP**

3 CR. (1L/3 LBV)

Covers safety procedures, use of bench tools, layout tools, power saws, drill presses, precision measurement tools, and various hand tools related to the machine shop. Also included are sharpening drill bits and general purpose turning tools for the lathe and determining speeds and feeds for both the lathe and the milling machine.

MAC 105

**INTRODUCTION TO MACHINING TECHNOLOGY**

4 CR. (1.5L/3.75 LBV)

Introduces the student to the changing era of machining technology, emphasizing terminology, referencing and applications related to manufacturing environments. The fundamental use of bench tools, layout procedures, materials, precision measuring tools, machining processes, drilling and cut-off machines and other machining/manufacturing processes will be stressed. Skill competencies and standards will be identified. Use of the Machinery's Handbook will be strictly required and particular competencies may require performance evaluations.

MAC 130

**CONVENTIONAL LATHE OPERATIONS**

4 CR. (1.5L/3.75 LBV)

Covers basic lathe applications which will consist of identifying lathe components and controls, understanding turning safety, calculating speeds and feeds, using various tools and tool holders, identifying basic tool geometry, and the use of common lathe spindle tooling. Students will perform basic lathe operations, which will consist of facing, center-drilling, chuck turning, turning between centers, boring, grooving, tapers, knurling, and single point threading. Students will be required to produce specified parts to a tolerance of +/- .004 in. and perform competencies set by manufacturing standards.

MAC 131

**MILLING MACHINES AND OPERATIONS**

4 CR. (1.5L/3.75 LBV)

Introduces vertical milling machines. The operations and applications will consist of using the machine controls, speeds and feeds, spindles, arbors and adapters cutting tools, tool holders, conventional and climb milling applications simple indexing, fixture alignments, work holding methods. Students will become familiar with set-up applications considering offset boring operations, face milling, plain milling, and precision drilling applications. Students will be required to produce parts to a tolerance of +/- .004in. and perform competencies set by manufacturing standards.

MAC 141

**ADVANCED MACHINING OPERATIONS**

4 CR. (1.5L/3.75 LBV)

Provides the student the use of various conventional machine tools used in a machine shop environment. The use of engine lathes, horizontal and vertical milling machines, surface grinders, drill presses, pedestal grinders, power cut-off saws and other machine tools commonly used to produce quality machined parts in today's manufacturing environments. Machining competencies will be stressed and students will be required to produce parts manufactured by local manufacturing companies with the consideration of ISO quality standards.

MAC 145

**PRODUCTION MANUFACTURING CONCEPTS**

3 CR. (3L)

Familiarizes the student to concepts related to manufacturing environments. Topics will consist of, but not be limited to Material Identification, Shop Floor Management, Just-In Time Manufacturing, Kan-Ban Systems, Statistical Quality Control, Total Quality Management. Various lectures and demonstrations of these processes will be delivered. Students may be required to re-search, explore, and report on particular manufacturing processes or topics.

MAC 146

**ABRASIVE WATERJET MACHINING**

3 CR. (1L/3 LBV)

Provides the student an introduction to manufacturing processes using an abrasive waterjet machine. The student will also become familiar with the care and maintenance of abrasive waterjet machines.

MAC 201

**INTRODUCTION TO CNC TURNING OPERATIONS**

3 CR. (1L/3 LBV)

CORQ: MAT 090, equivalent assessment test score, or Instructor approval. Covers computer numerical control (CNC) lathe operations, control functions, the letter address system, the program format, and machine setup. G & M codes, control functions, the letter address system, and math issues related to CNC are included. This class is NOT offered on an open-entry, open-exit basis.

MAC 205

**INTRODUCTION TO CNC MILLING OPERATIONS**

3 CR. (1L/3 LBV)

CORQ: MAT 090, equivalent assessment test score, or Instructor approval. Provides transitional information between conventional machining applications and the typical applications found in Computer Numerical Control Machining. Topics may consist of Numerical Control Systems, The Cartesian Coordinate System, High Efficiency Tooling Applications, Objectives of Numerical Control, Calculating Speed and Feed Rates, Defining and Calculating Tool Motion, Fixturing Requirements, Basic Program Structure, Programming Codes, and Basic Conversational Programming. Operations of NC machines will be required.

MAC 206

**CNC MILLING OPERATIONS II**

3 CR. (1L/3 LBV)

Exposes the student to the principle operations of both vertical and horizontal CNC milling machines via lecture instruction methods, multi-media instruction methods, and manufacturing hands-on methods. The student will be exposed to the basic CNC machining center, principle operations, manual controls, programming methods, tool-offsets, G54-G59 work offsets, cutter radius compensation and tool selection methods. General operator skills and basic setup skills will be stressed.

MAC 240

**CAD/CAM 2D**

3 CR. (3L)

PRQ: CIS 110, equivalent assessment test score, or Instructor approval. Provides the student with the essential concepts and techniques that are required to successfully create part geometry, generate tool path, verify tool path models, and post process the NC codes. The student will be exposed to a 2-axis machining, 3-axis machining wire frame and surface modeling, lathe programming, and DNC systems. Programming projects and models will be demonstrated in the CNC manufacturing lab.

MAC 241

**CAD CAM 2D LAB**

3 CR. (1L/3 LBV)

Requires students to produce a variety of lab exercises on robotic machinery in conjunction with MAG 240. Aspects of toolpaths for contour, drill and pocket will be covered. Chaining geometry, setting parameters, and managing cutter compensations will be addressed in both multi-tool programs and remachining operations. Coursework will primarily focus on 2D geometry projects.

MAC 245

**CADCAM 3D**

3 CR. (1L/3 LBV)

Covers both the production and surfacing of three-dimensional geometry in a self-paced setting. Issues will be covered related to the production of wire frames, solids, surfaces, the joining of surfaces, joining of solids, managing construction planes, sweeping, rotating, and controlling parameter settings. A familiarity with Mastercam, CNC programming techniques, and CNC operations is recommended.

MAC 246

**CADCAM 3D LAB**

3 CR. (1L/3 LBV)

Requires students to produce a variety of three dimensional lab exercises on robotic machinery in a self-paced format in conjunction with MAG 225. Coursework will focus primarily on advanced geometry to include developing an understanding of CNC codes related to work offsets, cutter compensations, and tool management within CAD/CAM programs on the milling machine.

MAC 250

**ADVANCED INSPECTION TECHNIQUES**

3 CR. (1L/3 LBV)

Exposes the student to the principles of dimensional metrology. Students will learn how to use common measuring instruments relating to state-of-the-art manufacturing environments. Students will also learn the importance of Quality Control, TQM, and SPC processes as they relate to manufacturing environments. Use of a coordinate measuring machine will be delivered.

MAC 254

**LIFTING DEVICES**

1 CR. (.5L/.75 LBV)

Introduces the student to safe rigging procedures as well as calculating maximum load at numerous angles.

MAC 255

**MECHANICAL COMPONENTS I**

5 CR. (2L/4.5 LBV)

Covers common mechanical components used on industrial equipment. It is designed to assist maintenance staff in removal, installation, and maintenance of plant equipment. It includes safety, fits, threads, bearings, fasteners, and hardware, lubrication, assembly, and the use of hand tools.

MAC 256

**INDUSTRIAL COMPONENTS**

3 CR. (2L/1.5 LBV)

Covers common mechanical components used on industrial equipment. It is designed to assist maintenance staff in removal, installation and maintenance of plant equipment. It includes safety, fits, threads, bearings, fasteners, and hardware, lubrication, assembly, and the use of hand.

MAC 265

**MECHANICAL COMPONENTS II**

5 CR. (2L/4.5 LBV)

PRQ: MAC 255. Covers common mechanical components used on industrial equipment. It is designed to assist maintenance staff in removal, installation and maintenance of plant equipment. It includes coupling, vibration, shafting, keys and keyways, belts and chain drives, gears and gear drive, and seals.

MAC 275

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

This course provides students with a vehicle to pursue in depth exploration of special topics of interest.

## Management

MAN 116

**PRINCIPLES OF SUPERVISION**

3 CR. (3L)

PRQ: REA 060 and ENG 060, or equivalent assessment test scores, or Department Chair approval. Studies the principles and techniques of supervising and motivating personnel. This course is designed for students who are interested in supervising others or for those currently in supervision. Course content focuses on the human interaction in supervision.

MAN 117

**TIME MANAGEMENT**

1 CR. (1L)

Provides students with the conceptual knowledge and tools to make better use of their time in the management function.

MAN 125

**TEAM BUILDING**

1 CR. (1L)

Introduces the concept of working as a team member. Activities and assignments will emphasize the ability to negotiate, work together, build consensus, and make quality decisions.

MAN 128

**HUMAN RELATIONS IN ORGANIZATIONS**

3 CR. (3L)

PRQ: CIS 110, ENGO 060, REA 060, or equivalent assessment test scores or Department Chair approval. Explores the importance of effective communication in our personal lives as well as in the world of business. Practical business applications such as employee motivation, handling customer complaints, and effectively resolving conflict in the workplace will be a major part of the curriculum.

MAN 200

**HUMAN RESOURCE MANAGEMENT I**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 090, or equivalent assessment test scores or Department Chair approval. Provides the student with a broad overview of the contemporary issues, theories and principles used to effectively manage human resources. Topics include recruiting, hiring, compensation and benefits, training and development, employee relations and legal issues.

MAN 216

**SMALL BUSINESS MANAGEMENT**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 090 or MAT 107, or equivalent assessment test scores or Department Chair approval. Examines the elements necessary for the successful formation of a new small business. It is also designed to enhance the skills of those already involved in the operation of a small business. The course includes the development of a complete small business plan.

MAN 225

**MANAGERIAL FINANCE**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 090, MAT 090 or MAT 107, or equivalent assessment test scores or Department Chair. Examines the concepts and techniques used to analyze financial accounting information for managerial planning, decision-making and control. The focus of the course is on decision-making relating to the areas of budgets, forecasts, cost volume production, ROI and financial statements.

MAN 226

**PRINCIPLES OF MANAGEMENT**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 090, or equivalent assessment test scores or Department Chair approval. Presents a survey of the principles of management. Emphasis is on the primary functions of planning, organizing, leading and controlling with a balance between the behavioral and operational approach.

MAN 227

**OPERATIONS MANAGEMENT**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Covers the central role and importance of the operations function in both service and product organizations. Strategy, design, scheduling, materials handling, inventory, production, supply chain management and distribution are covered.

MAN 241

**PROJECT MANAGEMENT IN ORGANIZATIONS**

3 CR. (2L/1.5 LBV)

PRQ: CIS 110, ENG 090, REA 090, MAT 090 or MAT 107, or equivalent assessment test score or Department Chair approval. Introduces students to the planning, implementation, and control activities of project management, including project and performance evaluation, quality control and work flow analysis. Emphasis will be on the initiating, planning, executing, controlling and closing activities of project management.

MAN 275

**SPECIAL TOPICS**

1-6 CR. (1-6L)

Provides students with a vehicle to pursue special topics of interest in business. The content of this course is designed on an as needed basis to provide current, up-to-date information.

MAN 275

**SPECIAL TOPICS: WHAT MANAGERS DO**

1 CR. (1L)

This course will illustrate ways to improve the performance of working managers and supervisors in key areas such as planning, organizing, staffing, directing and controlling. Learn to analyze the job, examine its functional components, spot the weaknesses and then take concrete steps to correct them through motivation, delegation and time management.

MAN 275

**SPECIAL TOPICS: COMMUNICATION SKILLS FOR MANAGERS**

1 CR. (1L)

Misunderstandings due to poor communication are all too common in business today. Learn to communicate clearly and precisely, so that something said or written will not be misunderstood. People will respond more positively to the reports, memos, and presentations you produce. Learn to interact more effectively by learning to listen actively and resolving conflicts more constructively.

MAN 275

**SPECIAL TOPICS: A MANAGER'S GUIDE TO HUMAN BEHAVIOR**

1 CR. (1L)

This course is designed to foster critical and innovative thinking and to improve a manager's ability to find workable solutions to unique problems relating to human behavior. Managers and leaders are called upon by their organizations to manage their own behaviors successfully and to affect positively the behaviors of their work group.

MAN 275

**SPECIAL TOPICS: HOW TO MANAGE CONFLICT IN ORGANIZATIONS**

1 CR. (1L)

Learn the strategies, tactics and insights needed to gain control of tough conflict situations. Discover how to spot potential interpersonal conflicts and defuse them before they flare up. Learn to understand how, when, where and why to apply the five favored conflict resolution approaches and develop the insight and intuition needed to make them work.

MAN 275

**SPECIAL TOPICS: HOW TO BUILD HIGH PERFORMANCE TEAMS**

1 CR. (1L)

Focus on the how-to keys of teambuilding, from recruiting the right team members to truly empowering them with authority and responsibility for their decision and performance. Learn to build trust, confidence and group work skills, while balancing and fine-tuning the team process along the way.

MAN 275

**SPECIAL TOPICS: PERFORMANCE MANAGEMENT**

1 CR. (1L)

People constitute the real competitive advantage in business and industries of all types. Enhancement of the performance of employees and ultimately the organization depends on the continuous improvement of staff at all levels. An effective Performance Management system is essential to help employees perform at their best and align their contributions with the goals, values, and initiatives of the organization.

MAN 275

**SPECIAL TOPICS: LEADERSHIP SKILLS FOR MANAGERS**

3 CR. (3L)

The higher echelons of your company gave the title of "manager" to you. But the title of "leader" is something you earn from your co-workers. You can learn to lead by understanding what motivates people. Make the transition from manager to leader by discovering how you can improve the quality of your managerial skills and your relationships with your employees.

MAN 289

**CAPSTONE: MANAGEMENT INFORMATION SYSTEMS**

3 CR. (9 INT)

PRQ: CIS 110, ENG 060, REA 060, MAT 060, or equivalent assessment test score or Department Chair approval. Utilizes seminar and simulation techniques in management information systems. Management concepts and principles are applied to both situational and comprehensive case problems.

## Marketing

MAR 106

**MARKETING YOUR IMAGE**

3 CR. (3L)

Teaches students how to market themselves to prospective employers, clients, professional groups, and audiences of all types. Major emphasis will be placed on skills used to gain employment (resumes, interviewing, and professional appearance) and on skills used to achieve continued personal success (professional behavior and attitude). The course will include at least one simulated interview.

MAR 111

**PRINCIPLES OF SALES**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, or equivalent assessment test scores or Department Chair approval. Enables the student to understand and develop ethical sales techniques and covers the role of selling in the marketing process. Areas of emphasis include behavioral considerations in the buying and selling process and sales techniques.

MAR 117

**PRINCIPLES OF RETAILING**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Emphasizes the study of the basic principles and techniques of merchandising, operations, layout, store organization, site location, and customer service with an emphasis on retailing operations.

MAR 158

**BASIC CUSTOMER SERVICE**

1 CR. (1L)

Focus on basic concepts and techniques needed to effectively serve customers. Specific emphasis given to manage customer expectations by building customer rapport and create positive outcomes.

MAR 216

**PRINCIPLES OF MARKETING**

3 CR. (3L)

PRQ: CIS 110, ENG 060, REA 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Presents the analysis of theoretical marketing processes and the strategies of product development, pricing, promotion and distribution, and their applications to businesses and the individual consumer.

MAR 220

**PRINCIPLES OF ADVERTISING**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Examines the principles and practices of advertising and its relationship to business in order to promote a business or organization. Areas of major emphasis include advertising principles, strategies, media, copy and layout, and ethical considerations.

MAR 222

**IMPLEMENTING e-COMMERCE**

3 CR. (3L)

PRQ: CIS 110, ENG 090, REA 060, MAT 060, or equivalent assessment test scores or Department Chair approval. Provides the student with practical skills and knowledge of e-commerce implementation methodology. Topics include strategic planning for e-commerce, project management, change management, role of technology, implementation planning and assessment. Students use case studies to examine standards and practices of businesses implementing e-commerce applications and solutions.

## Massage Therapy

MST 105

**LIFESTYLE WELLNESS**

2 CR. (2L)

PRQ: REA 090 or equivalent assessment test score. Provides opportunity to learn and apply specific wellness principles to your individual lifestyle. Student completes self-analysis of health behaviors and how lifestyle affects health status.

MST 111

**BASIC MASSAGE THERAPY**

4 CR. (2L/3 LBV)

PRQ: BIO 106. Introduces theory and techniques of therapeutic massage, including understanding of physiological benefits of massage as well as proper body mechanics and appropriate draping. Focuses on basic strokes of Swedish massage. Students also learn techniques of seated massage.

MST 113

**PROFESSIONAL MASSAGE**

3 CR. (1L/3 LBV)

PRQ: MST 111. Continues the study of Integrative Therapeutic Massage techniques with emphasis on assessing and meeting client's needs. Students give massage in supervised in-class clinicals, applying appropriate therapeutic intervention.

MST 184  
**CLINICAL MESSAGE**  
3 CR. (6 CLV)  
PRQ: MST 113, HPR 117. Applies skills in a clinical setting. Focuses on improvement of massage therapy skills, ethics, and communication.

MST 204  
**MST BUSINESS PRACTICES**  
2 CR. (2L)  
PRQ: REA 090 or equivalent assessment test score. Assists the practitioner of massage therapy to envision, market, establish and maintain a professional massage therapy practice.

MST 284  
**CLINICAL MESSAGE**  
3 CR. (6 CLV)  
PRQ: MST 184. Provides an application of massage therapy skills in a clinical setting. This course focuses on improvement of techniques, communication with clients and other health professionals as well as documentation of massage sessions.

## Mathematics

MAT 030  
**FUNDAMENTALS OF MATHEMATICS**  
2 CR. (2L)  
PRQ: ACCUPLACER arithmetic score higher than 23. Includes the vocabulary, operations and applications of whole numbers, decimals and basic fractions and mixed numbers. S/U

MAT 060  
**PRE-ALGEBRA**  
3 CR. (3L)  
PRQ: Successful completion of MAT 030 or equivalent assessment test score. Furthers the study of fractions and mixed numbers. Also included are vocabulary, operations and applications of ratio, proportion, percent, area, perimeter, US and metric measures, integers, and an introduction to algebraic expressions and the solution of basic first-degree equations. S/U

MAT 090  
**INTRODUCTORY ALGEBRA**  
4 CR. (4L)  
PRQ: Successful completion of MAT 060 with a grade of C or better or equivalent assessment test score. Includes first-degree equations, inequalities, formulas, polynomials, algebraic fractions, factoring polynomials, solving quadratic equations by factoring, and applications. Coordinate geometry, graphing linear equations and inequalities, and systems of linear equations may be included. S/A - U/F

MAT 103  
**MATH FOR CLINICAL CALCULATIONS**  
3 CR. (3L)  
PRQ: MAT 090 or equivalent assessment test score. Provides a review of general mathematics, introductory algebra and an opportunity to learn systems of measurement and methods of solving problems related to drug dosage and intravenous fluid administration. It is designed for students in the health disciplines. Topics may include algebra, graphs, measurement and conversion between various systems of measurement.

MAT 106  
**SURVEY OF ALGEBRA**  
4 CR. (4L)  
PRQ: Successful completion of MAT 090 with a grade of C or better or equivalent assessment test score. Emphasizes problem solving with further study of equations, slope, inequalities, systems of equations, polynomials, quadratic equations, rational expressions, rational exponents, radical expressions, graphing and applications. A graphing calculator or equivalent software may be utilized.

MAT 107  
**CAREER MATH**  
3 CR. (3L)  
PRQ: Successful completion of MAT 060 or equivalent assessment test score. Covers material designed for career technical or general studies students who need to study particular mathematical topics. Topics may include measurement, algebra, geometry, trigonometry, graphs, and/or finance. These are presented on an introductory level and the emphasis is on applications.

MAT 108  
**TECHNICAL MATHEMATICS**  
4 CR. (4L)  
PRQ: Successful completion of MAT 090 with a grade of C or better or equivalent assessment test score. Covers material designed for career technical or general studies students who need to study particular mathematical topics. Topics may include measurement, algebra, geometry, trigonometry, graphs, and/or finance. These are presented on an introductory level and the emphasis is on applications.

MAT 112  
**FINANCIAL MATHEMATICS**  
3 CR. (3L)  
PRQ: Successful completion of MAT 060 or equivalent assessment test score. Covers topics including pricing, taxes, insurance, interest, annuities, amortization, investments using financial calculators and spreadsheets.

MAT 120  
**MATHEMATICS FOR THE LIBERAL ARTS**  
4 CR. (4L)  
PRQ: Successful completion of MAT 106 with a grade of C or better or equivalent assessment test score. Develops mathematical and problem-solving skills. Appropriate technological skills are included. Content is selected to highlight connections between mathematics and the society in which we live. Topics include set theory and logic, mathematical modeling, probability and statistical methods, and consumer mathematics. Additional content will include one topic in geometry, numeration systems, decision theory, or management science. This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 121  
**COLLEGE ALGEBRA**  
4 CR. (4L)  
PRQ: Successful completion of MAT 106 with a grade of C or better or equivalent assessment test score. Includes a brief review of intermediate algebra, equations, and inequalities, functions and their graphs, exponential and logarithmic functions, linear and non-linear systems, selection of topics from among graphing of the conic sections, introduction to sequences and series permutations and combinations, the binomial theorem and theory of equations. This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 122  
**COLLEGE TRIGONOMETRY**  
3 CR. (3L)  
PRQ: Successful completion of MAT 121 with a grade of C or better or equivalent assessment test score. Covers topics including trigonometric functions (with graphs and inverse functions), identities and equations, solutions of triangles, complex numbers, and other topics as time permits. This is a traditional prerequisite course to the calculus sequence. This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 125  
**SURVEY OF CALCULUS**  
4 CR. (4L)  
PRQ: Successful completion of MAT 121 with a grade of C or better or equivalent assessment test score. Includes derivatives, integrals, and their applications, with attention restricted to algebraic, exponential, and logarithmic functions for business, life science and/or social science majors. This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 135

**INTRODUCTION TO STATISTICS**

3 CR. (3L)

PRQ: Successful completion of MAT 106 with a grade of C or better or equivalent assessment test score. Includes data presentation and summarization, introduction to probability concepts and distributions, statistical inference — estimation, hypothesis testing, comparison of populations, correlation and regression. This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 155

**INTEGRATED MATH I**

3 CR. (3L)

PRQ: Successful completion of MAT 106 with a grade of C or better or equivalent assessment test score. Engages students in the concepts of school mathematics, the course will include the recognition of numerical and geometric patterns and their application to a variety of mathematical situations; mathematical problem-solving, reasoning, critical thinking, and communication; algebraic thinking, representation, analysis, manipulation, generalizations and extensions. (This course is only offered in the Fall semester.)

MAT 156

**INTEGRATED MATH II**

3 CR. (3L)

PRQ: Successful completion of MAT 155 with a grade of C or better. Continues MAT 155. It includes the study of the fundamentals of probability, statistics, and informal Euclidean geometry suitable for K-8 curriculum, employing laboratory techniques where applicable. (This course is only offered in the Spring semester.) This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 201

**CALCULUS I**

5 CR. (5L)

PRQ: Successful completion of MAT 122 with a grade of C or better or equivalent assessment test score. Introduces single variable calculus and analytic geometry. Includes limits, continuity, derivatives, and applications of derivatives as well as indefinite and definite integrals and some applications. (This course is only offered in the Fall semester.) This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

MAT 202

**CALCULUS II**

5 CR. (5L)

PRQ: Successful completion of MAT 201 with a grade of C or better. Continuation of single variable calculus which will include techniques of integration, polar coordinates, analytic geometry, improper integrals, and infinite series. (This course is only offered in the Spring semester.) This course is one of the Statewide Guaranteed Transfer Courses, GT-MA1.

## Medical Office Technology

MOT 110

**MEDICAL OFFICE ADMINISTRATION**

4 CR. (4L)

PRQ: CIS 110 or equivalent assessment test score, HPR 178, MOT 208, MOT 209 and HPR 278, or Department Chair approval. Introduces the administrative duties specifically used in medical offices.

MOT 132

**MEDICAL TRANSCRIPTION I**

4 CR. (3 L/1.5 LBV)

PRQ: CIS 110 and ENG 121 or equivalent assessment test scores, ENG 113, BTE 103, BTE 166, HPR 278, and minimum of 45 wpm, or Department Chair approval. Provides basic knowledge, understanding, and skills required to transcribe medical dictation with accuracy, clarity, and timeliness, applying the principles of professional and ethical conduct.

MOT 142

**MEDICAL TRANSCRIPTION II**

4 CR. (3L/1.5 LBV)

PRQ: CIS 110 or equivalent assessment test score, MOT 132, BIO 106 and 50 wpm, or Department Chair approval. Uses a simulation approach to build student vocabulary and speed, while providing actual medical transcription of a variety of health care and medical reports at progressively increasing accuracy and productivity standards.

MOT 208

**INTRODUCTION TO CPT-4 CODING**

2 CR. (2L)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. HPR 178 highly recommended. Teaches basic coding concepts using the CPT-4 coding system for insurance claims. The course will introduce student to the HCFA 1500 form, HCPCS codes, and modifiers to be used for insurance claim filing.

MOT 209

**INTRODUCTION TO ICD-9 CODING**

2 CR. (2L)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. HPR 178 highly recommended. Covers how to use the ICD-9-CM coding system for insurance claims. The course will introduce student to using the HCFA 1500 form generated from the physician's office.

MOT 210

**INTERMEDIATE CODING**

3 CR. (3L)

PRQ: CIS 110 or equivalent assessment test score, MOT 208, MOT 209, or Department Chair approval. Covers how to abstract information from medical records and code it for insurance purposes.

MOT 275

**SPECIAL TOPICS**

0-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MOT 275

**SPECIAL TOPICS: ADVANCED CODING**

3 CR. (3L)

PRQ: MOT 210, BIO 106, or permission of instructor. The student will use higher level skills to apply CPT and ICD codes using patient records.

## Meteorology

MET 150

**GENERAL METEOROLOGY**

4 CR. (3L/2 LBA)

PRQ: MAT 090, REA 090, ENG 090, CIS 110, or equivalent assessment test scores. Provides an introduction to general meteorology and atmospheric sciences. It includes the composition and structure of the atmosphere and characteristics that affect the atmosphere, such as temperature, pressure, and moisture. Additionally, the development of weather systems, such as storm systems, hurricanes, weather fronts and cloud development will also be examined. Finally, concepts of climatology will be stressed.

# Multimedia and Graphic Design

MGD 102

## **INTRODUCTION TO MULTIMEDIA**

3 CR. (4.5 LBV)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Introduces the types of equipment and technical considerations used in multimedia productions and the multimedia professions. It focuses on current types of equipment such as scanners, printers, digital cameras and computers. Students gain hands-on experience in how the technology is utilized for input and output in production and design projects. Overview of software and basic design principles will be explored.

MGD 104

## **VIDEOGRAPHY**

3 CR. (1L/3 LBV)

Offers an introduction to the principles and techniques of videotape production, including camera operation, basic script writing, lighting, sound and basic digital editing. Detailed examination of the pre-production, production, and post-production processes, as well as aesthetics, will be included.

MGD 105

## **TYPOGRAPHY & LAYOUT**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score. Covers the creation and production of graphic projects, emphasizing the layout creative design process, problem solving, and research. Provides experience producing thumbnails, roughs and digital layouts emphasizing refined creative typography.

MGD 106

## **CREATIVITY AND VISUAL THINKING**

3 CR. (6 STA)

Introduces the visual and oral skills necessary to analyze works art and design, articulate complex ideas, then present the solution cogently in 2-D and 3-D projects and presentation skill building. The underlying philosophy of what we see, how we see and what we do with it is the major concern of this class.

MGD 107

## **HISTORY OF DESIGN**

2 CR. (2L)

Explores the pivotal events and achievements that have led to the current state of graphic communication. Through lectures, slides, videos, class discussions and research; students discover the creative thinkers, innovations and breakthrough technologies that have shaped the evolution of visual communication, advertising and industrial design today.

MGD 111

## **ADOBE PHOTOSHOP I**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score. Concentrates on the high-end capabilities of a raster photo-editing software as an illustration, design and photo retouching tool. Students explore a wide range of selection and manipulation techniques that can be applied to photos, graphics and videos.

MGD 113

## **QUARK XPRESS**

3 CR. (1L/3 LBV)

PRQ: CIS 110. Introduces students to QuarkXPress, a digital page layout tool. Students learn how to assemble, organize, manipulate and manage text and graphics to produce a high quality publication. Class discussions and independent projects supplement hands-on classroom work.

MGD 114

## **ADOBE INDESIGN**

3 CR. (2L/1.5 LBV)

Introduces students to InDesign, a page layout program which integrates seamlessly with other Adobe design programs. InDesign delivers creative freedom and productivity to DTP. Class discussions and independent projects supplement hands-on classroom work.

MGD 133

## **GRAPHIC DESIGN I**

3 CR. (4.5 LBV)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Focuses upon the study of design layout and conceptual elements concerning graphic design projects such as posters, advertisements, logos, and brochures.

MGD 141

## **WEB DESIGN I**

3 CR. (4.5 LBV)

Introduces the fundamentals of HTML syntax using a simple text editor to create a web page. Web-safe colors and the use of graphic editors will be explored. Students study web aesthetics and intuitive interface design. The course emphasizes file organization and layout including tables and frames.

MGD 143

## **WEB MOTION GRAPHIC DESIGN I**

3 CR. (1L/3 LBV)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Stresses creation of animation and dynamic interactive media for web and multimedia applications. Students will learn how to animate objects, create symbols, and assemble motion tweens.

MGD 163

## **SOUND DESIGN I**

3 CR. (1L/3 LBV)

PRQ: CIS 110. Explores the use of sound in multimedia production and audio storytelling. Students examine the principles of recording. Classes focus on how sound can enhance interactive productions and improve computer presentations. Students learn how to use the computer as a full audio editing studio.

MGD 164

## **DIGITAL VIDEO EDITING I**

3 CR. (1L/3 LBV)

PRQ: CIS 110 or equivalent assessment test score, RTV 102, or Department Chair approval. Introduces to digital non-linear video editing. Students will capture, compress, edit, and manipulate video images using a personal computer. Assembly techniques including media management, editing tools, titles, and motion control; transitions and filters, and special effects are explored.

MGD 167

## **GAME DESIGN I**

3 CR. (1L/3 LBV)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Introduces students to game design from conceptual development and functionality, through production of a virtual world prototype. Students examine such things as character registration, in-betweens, inking and clean up used for creating real-time game environments. Storytelling and visual metaphor development are emphasized.

MGD 175-177

## **SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MGD 175

## **SPECIAL TOPICS: INTRODUCTION TO ELECTRONIC MEDIA**

3 CR. (3L)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Introduces students to the history, background, and technologies of electronic media.

MGD 175

**SPECIAL TOPICS: MEDIA LAB**

1 CR. (1.5 LBV)

CORQ: RTV 100. A complementary lab course for students enrolled in Intro to Telecommunications. Students will study and apply techniques in beginning telecommunications.

MGD 176

**SPECIAL TOPICS: INTERFACE DESIGN**

3 CR. (1L/3 LBV)

Focuses on the structure and design of the multimedia interface as it relates to the Internet, digital imaging and interactive CD including an overview of interactive media systems and computer applications.

MGD 202

**POINT OF PURCHASE PACKAGING DESIGN**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score, MGD 133, MGD 111. Introduces the theories and principles that apply to three-dimensional design graphics for packaging and display; various dimensional marketing solutions to create dynamic visual effects concepts will be developed. Work layout stages and mock-ups will utilize various methods of cutting, folding, and assembly to explore the design concepts and their visual effects.

MGD 207

**ILLUSTRATION I**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score. Addresses methods and techniques used in the profession of illustration for advertising, brochures, books and other forms of printed communications. Course concentrates on developing expertise in producing line and continuous-tone black-and-white art with emphasis on design and the creation of art for reproduction.

MGD 221

**COMPUTER GRAPHICS I**

3 CR. (4.5 LBV)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Introduces the process of generating computer design.

MGD 222

**COMPUTER GRAPHICS II**

3 CR. (6 STA)

PRQ: MGD 221 or instructor's permission. Continues MTD 221 with advanced problems in generating computer design for graphics application, emphasizing production of individual fine art pieces.

MGD 233

**GRAPHIC DESIGN II**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score, MGD 133, or Department Chair approval. Continues instruction in idea development for advanced graphic design.

MGD 241

**WEB DESIGN II**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score, MGD 141, or instructor approval. Expands on previously learned fundamentals of HTML introducing cascading style sheets, DHTML, JavaScripts and CGI forms. Color usage and interface design principles are emphasized in this course. In this course we'll examine Web sites that employ more complex structures, optimal site architecture and navigation necessary for larger and more complex sites.

MGD 243

**WEB MOTION GRAPHIC DESIGN II**

3 CR. (1L/3 LBV)

PRQ: MGD 143. Stresses the complex creation of 2D animated motion graphics concentrating on the prior skills learned and the use of scripting and behaviors. Students will create motion graphics using these skills and apply them to web sites. Web site justification of motion graphics will be stressed, appraised and weighed.

MGD 256

**GRAPHIC DESIGN PRODUCTION**

3 CR. (4.5 LBV)

PRQ: CIS 110 or equivalent assessment test score, MGD 133, MGD 102. Provides an opportunity to combine several draw and paint applications into one design and layout class. Students will explore advanced techniques in creating and designing computer art.

MGD 257

**ANIMATION PRODUCTION**

3 CR. (1L/3 LBV)

PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Examines development of 3D animation from a production standpoint. The process of transforming conceptual designs into actual projects is explored. Students study the management function of those tasks associated with the business end of development. The student will produce a 3D animation project.

MGD 267

**GAME DESIGN II**

3 CR. (1L/3 LBV)

PRQ: MGD 167. Explores more advanced features of game design. Students examine such things as integration of mainline code, subroutines and interrupts into game structure. I/O structure, playtesting and distribution are emphasized.

MGD 268

**COMMERCIAL ART BUSINESS**

2 CR. (3 LBV)

PRQ: Instructor approval. Presents a guide to freelance work and a study of business practices and procedures unique to commercial art including billing rates, client management, business forms, employee management, taxes, licenses, registration, bid processes and self-promotion. Course may include visits by professionals in the field and discussion of career opportunities and professional organizations.

MGD 275-277

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

MGD 275

**SPECIAL TOPICS: MEDIA LAB**

1-6 CR. (1.5-9 LBV)

PRQ: MGD 175, MGD 141 required or permission of instructor. A lab course for students involved in university and campus broadcast and multimedia operations. Provides student with opportunities to gain specific production oriented operations and procedure experience in real production applications.

MGD 276

**SPECIAL TOPICS: DIGITAL MULTIMEDIA**

3 CR. (1L/3LBV)

Introduces students to the principles of digital multimedia with a special emphasis given to animation, digital video and sound as well as interface design.

MGD 277

**SPECIAL TOPICS: PUBLIC RELATIONS**

3 CR. (3L)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Focuses on the historical, theoretical and practical approach to contemporary public relations including the public relations process, communications strategies, public, and organizational distinctions.

MGD 280  
**INTERNSHIP**

1-6 CR. (3-18 INT)

PRQ: Approval from instructor. Provides students with the opportunity to supplement coursework with practical work experience related to their educational program. Students work under the immediate supervision of experienced personnel at the business location and with the direct guidance of the instructor.

MGD 289  
**CAPSTONE**

1-6 CR. (3-18 INT)

A demonstrated culmination of learning within a given program of study.

## Music

MUS 101

**INTRODUCTION TO MUSIC THEORY**

3 CR. (3L)

Presents music fundamentals, diatonic four-part harmony, analysis, and keyboard harmony. For non-music majors.

MUS 120

**MUSIC APPRECIATION**

3 CR. (3L)

PRQ: REA 090, ENG 090, or equivalent assessment test scores. Covers the basic materials of music, musical forms, media, genres and musical periods. Emphasizes the development of tools for intelligent listening and appreciation. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

MUS 121

**MUSIC HISTORY I**

3 CR. (3L)

PRQ: REA 090, ENG 090, or equivalent assessment test scores. Studies the various periods of music history with regard to the composers, esthetics, forms, and genres of each period. Considers music from the Middle Ages through the Classical period. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

MUS 122

**MUSIC HISTORY II**

3 CR. (3L)

PRQ: REA 090, ENG 090, or equivalent assessment test scores. Studies the various periods of music history with regard to the composers, esthetics, forms, and genres of each period. Considers music from the early Romantic period to the present. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

MUS 125

**HISTORY OF JAZZ MUSIC**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Provides an overview of the history of jazz in America, and to provide basic listening skills for the understanding and appreciation of jazz music.

MUS 131

**MUSIC CLASS**

2 CR. (5 STM)

Applies the fundamentals of music to the voice or specific musical instruments.

This course also introduces basic techniques, repertoire, and sight-reading. First year, first term.

MUS 141

**PRIVATE INSTRUCTION**

1-2 CR. (2.5-5 STM)

PRQ: Class instruction or permission of instructor. Additional fee required. Offers private instruction consisting of a thirty or sixty-minute lesson per week.

Participation in a student performance is required at least once each term. First year, first term.

MUS 151

**ENSEMBLE I**

1 CR. (2.5 STM)

PRQ: Instructor's permission. First year, first term. Rehearses and performs various types of musical literature.

MUS 241

**PRIVATE INSTRUCTION**

2 CR. (5 STM)

PRQ: Class instruction or permission of the instructor. Additional fee required. Offers private instruction consisting of a thirty or sixty-minute lesson per week.

Participation in a student performance is required at least once each term. Second year, first term.

## Nursing

NUR 101

**PHARMACOLOGY CALCULATIONS**

1 CR. (3 CLV)

Introduces the nursing student to the concepts and techniques of dosage calculations and medication administration by a variety of routes. Learners will apply basic math concepts to complex conversion of dosages between and among various systems of weights and volumes. Learners will apply critical thinking skills to the calculation and administration of medications by oral and parenteral (including intravenous) routes of administration. (This course is for continuing nursing students only.)

NUR 106

**MEDICAL AND SURGICAL NURSING CONCEPTS**

9 CR. (3.5L/1 LBV/10 CLV))

PRQ: Admission to Nursing program and completion of preceding required program course work or program director permission. Introduces the student to the role of the nurse in assessing and meeting the medical and surgical nursing needs of adults across the life span in various health care settings. The student learns nursing concepts to assist the patient in achieving optimal functioning. Knowledge from foundational nursing, the sciences, pharmacology, and nutrition along with the continued integration of mental health and cultural concepts provides foundations for nursing care planning for medical and surgical clients.

NUR 109

**FUNDAMENTALS OF NURSING**

8 CR. (2L/6 LBV/6 CLV)

PRQ: Admission to Nursing and Psychiatric Technician program.

Introduces theories and skills basic to the role of the nurse as provider of care, manager of care and member of the nursing profession. Emphasis is placed on introduction to critical thinking and the nursing process. Students will demonstrate a beginning level of competence in providing therapeutic nursing care for clients with common health alterations across the health continuum.

NUR 112

**BASIC CONCEPTS OF PHARMACOLOGY**

2 CR (2L)

PRQ: Admission to Nursing or Psychiatric Technician program. Utilizes nursing process to introduce the basic concepts of pharmacology related to the actions, therapeutic and adverse effects, interactions of drugs, drug classification, and the basic pharmacology of commonly used medications. Emphasis is placed on therapeutic interventions and client education. Learners will apply knowledge gained in selected clinical settings situations in caring for a diversity of clients across the lifespan health illness continuum.

NUR 150

**OBSTETRIC & PEDIATRIC NURSING**  
7 CR. (3L/2 LBV/6 CLV)

PRQ: Admission to Nursing program and completion of preceding required program course work or program director permission. Provides a family centered approach to professional nursing practice of the childbearing family and children across the health continuum. Emphasis is placed on the care of the perinatal client and children from birth through adolescence. The impact of psychosocial and cultural values and practices are explored. Legal and ethical accountability are integrated throughout the course.

NUR 169

**TRANSITION INTO PRACTICAL NURSING**  
5 CR. (2L/6 CLV)

PRQ: Admission to Nursing program and completion of preceding required program course work or program director permission. Provides the student with a transition into the practical nurse role. Emphasis is placed on professionalism in nursing, communication, entry into practice, provider and manager of care and nursing management and leadership. The student assumes the role of the practical nurse as they manage patient care.

NUR 172

**CLINICAL III: APPLICATION OF MEDICAL-SURGICAL SKILLS II**  
1 CR. (3 CLV)

PRQ: Completion or co-enrollment in corresponding didactic nursing course. Offers the clinical practicum to apply the related nursing theory. S/U (This course is for continuing nursing students only.)

NUR 199

**TRANSITION FROM LPN TO ADN**  
4 CR. (2L/4 LBV)

PRQ: Current Colorado LPN license. Focuses on assisting the LPN to transition into a new role as an Associate Degree Nursing Student. Emphasis will be placed on roles and responsibilities of the ADN, nursing process, critical thinking, legal and ethical issues and nursing practice issues related to specialized skills and the care of special populations.

NUR 201

**IV THERAPY FOR LPN'S**  
5 CR. (4L/1.5 LBV)

Provides LPNs with an opportunity to expand their nursing roles by learning appropriate procedures for intravenous therapy and venous blood withdrawal. The course includes lecture, laboratory practice and clinical experiences. The course prepares the student for IV certification under State Board of nursing Guidelines.

NUR 206

**ADVANCED CONCEPTS OF MEDICAL-SURGICAL NURSING I**  
8 CR. (3L/1 LBV/9 CLV)

PRQ: Admission to Nursing program and successful completion of preceding Nursing program course work or program director permission. Focuses on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the nursing needs of adults across the life span. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various health care settings.

NUR 211

**NURSING PSYCHIATRIC CLIENTS**  
4 CR. (1L/2 LBV/4 CLV)

PRQ: Admission to Nursing program and successful completion of preceding required program course work or program director permission. Develops concepts of psychosocial integrity and emphasizes the function and responsibility of nursing in promoting and maintaining mental health of individuals and families. This course emphasizes communication and caring through the application of the therapeutic relationship and nursing process in the care and treatment of common clinical conditions/disorders.

NUR 212

**PHARMACOLOGY II**  
2 CR. (2L)

PRQ: Admission to Nursing program and successful completion of preceding required program course work or program director permission. Builds upon the concepts introduced in NUR 112 Pharmacology I regarding the safe administration of medications to clients across the health continuum. Utilizing the nursing process the student demonstrates understanding of the role of the nurse as provider of care, manager of care, and member of the profession. Emphasis is placed upon the therapeutic use of medications in the nursing care of individuals with complex health needs. The student is introduced to the calculation of complex intravenous drip rates.

NUR 216

**ADVANCED CONCEPTS OF MEDICAL-SURGICAL NURSING II**  
6 CR. (2L/8 CLV)

PRQ: Admission to Nursing program and successful completion of preceding program course work or program director permission. Continues to focus on the role of the registered professional nurse as care provider, teacher, manager, professional, and advocate in meeting the complex medical and surgical health care needs of adult clients. Utilizing the nursing process, the student is expected to integrate previous learning to assist the patient and family in achieving optimal functioning in various complex health care situations and settings.

NUR 230

**LEADERSHIP MANAGEMENT TRENDS**  
5 CR. (1.5L/7 CLV)

PRQ: Admission to Nursing program and successful completion of preceding program course work or program director permission. Introduces students to current trends in leadership and management concepts affecting the healthcare continuum and the practice of nursing. The student assumes the role of provider, manager of care and member of the discipline at the entry level into professional nursing. There is a practicum for application which may occur across the healthcare continuum, as the student manages groups of clients and health care personnel. The course will facilitate transition from student to the role of the graduate nurse.

NUR 273

**EXPANDED CLINICAL IV: ADVANCED CONCEPTS OF MEDICAL SURGICAL NURSING II**  
1 CR. (3 CLV)

PRQ: Completion of or co-enrollment in corresponding didactic nursing course. Offers the clinical practicum to apply the related nursing theory. S/U (This course is for continuing nursing students only.)

NUR 274

**EXPANDED CLINICAL V: ADVANCED APPLICATIONS IN PEDIATRIC NURSING**  
1 CR. (3 CLV)

PRQ: Completion of or co-enrollment in corresponding didactic nursing course. Offers the clinical practicum to apply the related nursing theory. (This course is for continuing nursing students only.)

NUR 288  
**PRACTICUM: HEALTH AND PHYSICAL ASSESSMENT FOR NURSING PRACTICE**

1 CR. (2 PRC)

Develops skills of nursing assessment across the life span using effective communication, interview techniques and beginning physical assessment. The course develops critical thinking skills in assessment, data analysis and derivation of actual/potential health needs. (This course is for continuing nursing students only.)

## Nursing Aide

NUA 101  
**CERTIFIED NURSE AIDE HEALTH CARE SKILLS**

4 CR. (2L/3 LBV)

Prepares the student to perform the fundamental skills of the nurse aide. Basic nursing skills, restorative services, personal care skills, safety and emergency care issues are covered in theory and lab. The student will learn skills that address mental health needs as well as patient/resident/client rights.

NUA 170  
**NURSE ASSISTANT CLINICAL EXPERIENCE**

1 CR. (.25L/1.5 LBV)

Applies knowledge gained from NUA 101 in a clinical setting. S/U

NUA 171  
**ADVANCED NURSE AIDE CLINICAL**

1 CR. (1.5 CLV)  
PRQ: ENG 030, REA 030, MAT 030, or equivalent assessment test scores.  
CORQ: NUA 101, NUA 170. Prepare the student to move toward more independent functioning within the nurse aide scope of practice, in applying knowledge and skills gained in NUA 101 and NUA 170. The student will learn skills that enhance communication, cultural competency, end of life care, critical thinking and organizational skills. S/U

## Occupational Therapy Assistant

OTA 100  
**INTRODUCTION TO OCCUPATIONAL THERAPY**

3 CR. (3L)

PRQ: REA 090, ENG 090, or equivalent assessment test scores. Covers through study, discussion, and observation/participation, the investigation of a career choice in Occupational Therapy; description of man's need for self-care, productivity and leisure; description of the history and philosophy of Occupational Therapy; description of the differences between health, illness, and wellness; identification of the roles, responsibilities and relationships of health care professionals; discussion of ethics and the legal implications of health care, and exploration and discussion of basic sociological issues in health care.

OTA 105  
**INTRODUCTION TO DISEASE AND ACTIVITY ANALYSIS**

3 CR. (1L/3 LBV)

PRQ: Admission to the OTA program. Explores the diseases common to OT intervention and an exploration of occupation, various treatment methods and techniques, and an application of activity analysis.

OTA 106  
**BASIC OCCUPATIONAL THERAPY FRAMES OF REFERENCE AND DOCUMENTATION**

2 CR. (2L)

PRQ: Admission to the OTA program. Develops the ability to identify the types of occupational therapy documentation and practice basic documentation skills.

OTA 121  
**ASSESSMENT OF COMPONENT SKILLS IN OCCUPATIONS**

4 CR. (2L/3 LBV)

PRQ: OTA 105, BIO 106. Covers through study, discussion, and observation/participation: 1) Performance of basic manual muscle tests; 2) Performance of range of motion assessments; 3) Safe performance of simulated patient transfers; 4) Safe performance of body mechanics in all activities; and 5) Analysis of occupations in terms that facilitate understanding of assessments and communication with other health professionals, clients and significant others.

OTA 122  
**ORIGINS OF OCCUPATIONAL AND COMPONENT SKILLS**

2 CR. (2L)

Explores the impact of environmental, cultural and community influences on the adolescent and adult individual, focusing on an ever changing occupational status through the influences of component skills.

OTA 125  
**BASIC OCCUPATIONAL THERAPY APPLICATION TO PSYCHIATRY**

4 CR. (3L/1.5 LBV)

PRQ: PSY 101, OTA 106. Identifies commonly seen psychiatric symptoms, methods for screening and assessment for the need for occupational therapy, and psychiatric occupational therapy techniques for the evaluation and treatment within a multicultural context.

OTA 131  
**GERIATRIC ISSUES, DISEASE, AND TREATMENT TECHNIQUES**

3 CR. (2L/1.5 LBV)

PRQ: OTA 105, OTA 106. Explores the impact of environmental, cultural and community influences on the older individual, focusing on an ever changing occupational status through the influences of component skills. Identifies geriatric diseases common to occupational therapy and methods of treatment available to the occupational therapy practitioner within the context of health care and the community.

OTA 181  
**GERIATRIC LEVEL I FIELDWORK EXPERIENCE**

1 CR. (1.5 LBV)

PRQ: OTA 131. Identifies and provides practical experience in commonly seen disabilities, evaluation techniques and methods of treatment for the geriatric population from diverse backgrounds in collaboration with Occupational Therapy and other professionals. Students will demonstrate universal precautions, hand washing techniques, and safety issues.

OTA 182  
**PHYSICAL DISABILITIES LEVEL I FIELDWORK EXPERIENCE**

1 CR. (1.5 LBV)

CORQ: OTA 218. Identifies and provides practical experience in commonly seen disabilities, evaluation techniques, and methods of treatment for these conditions for adult patients with diverse backgrounds in collaboration with the OTR and other professionals.

OTA 183

**PEDIATRIC LEVEL I FIELDWORK EXPERIENCE**

1 CR. (1.5 LBV)

CORQ: OTA 221. Provides the student the practical experience necessary to identify commonly seen disabilities, evaluation techniques and methods of treatment for the pediatric population from diverse backgrounds in collaboration with Occupational Therapy and other professionals.

OTA 216

**PHYSICAL DISABILITIES NEURO-RETRAINING**

3 CR. (2L/1.5 LBV)

PRQ: OTA 121. Provides the student with the skill necessary to utilize the components of the OT treatment planning process, including: age appropriate evaluation, treatment and discharge for the neurodevelopmental and biomechanical frames of references in collaboration with other professionals.

OTA 217

**OCCUPATIONAL THERAPY REHABILITATION TECHNIQUES**

2 CR. (3 LBV)

PRQ: OTA 121, OTA 105. Explores the treatment methods and techniques focusing on adaptive equipment, assistive devices, specialized procedures of treatment such as splinting, activities of daily living, transfer techniques, bed positioning and specialized physical disability assessments.

OTA 218

**OCCUPATIONAL THERAPY APPLICATION TO ADULT PHYSICAL DISABILITIES**

3 CR. (1L/3 LBV)

PRQ: OTA 121. Provides through study, discussion, papers, and lab experiences the students ability to identify commonly seen medical and orthopedic diseases and disabilities and the method for treatment within the appropriate frame of reference.

OTA 221

**PEDIATRIC ISSUES, DISEASES, DISABILITIES AND TREATMENT**

3 CR. (2L/1.5 LBV)

PRQ: OTA 122, OTA 121. Explores the impact of environmental, cultural, and community influences on the child, focusing on an ever changing occupational status through the influences of component skills. Provides the student the skills necessary to identify commonly seen diseases, disabilities and treatment techniques in pediatrics: identify occupational therapy evaluation techniques and methods of treatment within the context of health care and the community.

OTA 235

**PROFESSIONAL AND ACTIVITIES MANAGEMENT**

2 CR. (2L)

PRQ: OTA 100, admission to the OTA program. Provides the student with the basic management skills needed by the occupational therapy assistant and the activity director. Other topics covered will be job seeking skills, the role of the OTA in research, professional responsibilities, and life long learning.

OTA 275-277

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

OTA 278

**O.T. SEMINAR**

1 CR. (1.5 LBV)

PRQ: OTA 280 or OTA 281. Provides for discussion of Level II fieldwork experiences and opportunity to apply logical thinking, critical analysis, problem solving, and creativity to application problems.

OTA 280

**INTERNSHIP IN OCCUPATIONAL THERAPY I**

7 CR. (21 INT)

PRQ: All OTA courses except OTA 278 and OTA 281. Provides an eight-week, full-time or an equal amount of time, part-time, supervised clinical internship to develop professional behaviors consistent with the profession standards and ethics, apply previously learned academic knowledge as an OT team member. The student will gain experience in application of the OT treatment process from admission to discharge for patients from a variety of socio-cultural backgrounds and ages in the practice area of physical disabilities.

OTA 281

**INTERNSHIP IN OCCUPATIONAL THERAPY II**

7 CR. (21 INT)

PRQ: All OTA courses except OA 278 and OTA 280. Provides an eight-week full time or equal amount of time part-time, supervised clinical internship to develop professional behaviors consistent with the professions standards and ethics, apply previously learned academic knowledge as an OT team member. The student will gain experience in application of the OT treatment process from admission to discharging for patients from a variety of socio-cultural backgrounds and ages in the practice area of behavioral, sensorimotor, and/or developmental disabilities.

OTA 285

**INDEPENDENT STUDY**

1-6 CR. (2-12 IND)

Meets the individual needs of students. Students engage in intensive study or research under the direction of a qualified instructor.

## Pharmacy Technician

PHT 105

**ORIENTATION TO PHARMACY**

4 CR. (3L/1.5 LBV)

PRQ: ENG 090, MAT 060, REA 060 or equivalent test scores. Focuses on a general overview of pharmaceutical care in the scheme of health care and the role of the pharmacist and the pharmacy technician in its delivery. Introduces pharmacy practice, standards of practice, certification, pharmacy associations and opportunities available to the pharmacy technician. Includes surveying laws, regulations and standards at the Federal and State level as they govern the practice of pharmacy. Discussion includes legal and ethical responsibilities of the pharmacy technician. Emphasizes pharmacy terminology, symbols and abbreviations. Professionalism and communication skills stressing interactions with patients and health care professionals are discussed.

PHT 207

**DRUG CLASSIFICATION**

3 CR. (3L)

PRQ: ENG 090, MAT 060, REA 060 or equivalent test scores. Emphasizes the drug classes, such as over-the-counter vs. prescription drugs, scheduled drugs, and the laws pertaining to each. Includes the drug development process, the different pregnancy classifications and the degree of potential harm for each class, and the commonly used drugs that can be addictive, abused and potentially lethal. Examines dosage forms, routes of administration, selection and recommendation of OTC drugs and natural products, and memorize trade and generic names.

PHT 235

**PHARMACEUTICAL CALCULATIONS AND COMPOUNDING TECHNIQUES**

4 CR. (4L)

PRQ: ENG 090, MAT 060, REA 060 or equivalent test scores. Develops the skills necessary for performing calculations in pharmacy practice and the compounding of sterile and nonsterile products. Includes a review of basic mathematical skills. Enables the student to solve problems involving calculations pertinent to the preparations of pharmaceuticals. These skills are put to practical use in the compounding portion of this course. Preparation of sterile products, parenteral admixtures, TPN solutions and chemotherapeutics, using proper aseptic techniques is taught. The safe handling of antineoplastics and other hazardous drug products, as well as special drug storage requirements is learned. Emphasizes the importance of accuracy, quality and infection control. Use and maintenance of equipment such as Laminar Flow Hoods, autoinjectors and pumps is discussed.

## Philosophy

PHI 111

**INTRODUCTION TO PHILOSOPHY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Introduces significant human questions and emphasizes understanding the meaning and methods of philosophy. Includes human condition, knowledge, freedom, history, ethics, the future, and religion. This course is one of the Statewide Guaranteed Transfer courses. GT-AH3

PHI 112

**ETHICS**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Examines human life, experience, and thought in order to discover and develop the principles and values for pursuing a more fulfilled existence. Theories designed to justify ethical judgments are applied to a selection of contemporary personal and social issues. This course is one of the Statewide Guaranteed Transfer courses. GT-AH3

PHI 113

**LOGIC**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test scores. Studies effective thinking using language-oriented logic. Provides tools and develops skills for creative and critical thinking. Emphasizes the development of decision-making and problem-solving. This course is one of the Statewide Guaranteed Transfer courses. GT-AH3

PHI 114

**COMPARATIVE RELIGIONS**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces students to the similarities and differences among concepts predominant in the major world religions, comparing sociological, philosophical, and phenomenological similarities between major world faiths. It is designed to transfer to any four-year college philosophy, religious studies or humanities department.

## Physical Education

PED 110

**FITNESS CENTER ACTIVITY**

1 CR. (2 LBA)

This course is designed for individuals interested in improving total fitness via an aerobic circuit training program. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including: flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. Weight machines, stationary bicycles, and computerized cardiovascular equipment will be used to elicit improvements in fitness.

PED 111

**FITNESS CENTER ACTIVITY II**

1 CR. (2 LBA)

PRQ: PED 110. This is an advanced course designed for individuals interested in reaching a higher level of total fitness via an aerobic circuit training program. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including: flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. Weight machines, stationary bicycles, and computerized cardiovascular equipment will be used to elicit improvements in fitness.

PED 112

**CONDITIONING LAB**

1 CR. (3 LBA)

This course offers an independent self-paced format of conditioning exercises to meet individual needs. Emphasis is placed on the value of lifetime fitness and its contribution to achieving personal health and wellness. Students utilize cardiorespiratory, muscular strength and endurance exercises to promote positive changes in health-related fitness components.

PED 113

**FITNESS CONCEPTS**

1 CR. (2 LBA)

This course is designed for individuals who are seeking information and guidelines for moving toward a more healthy lifestyle. The course will include classroom instruction, an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program utilizing the equipment and exercise options available in the Fitness Center.

PED 119

**FITNESS CIRCUIT TRAINING**

1 CR. (2LBA)

Students practice a number of different circuit training programs. Emphasis is placed on the development of cardiovascular endurance, muscular strength and endurance, flexibility and a healthy body composition to meet individual needs.

PED 121

**STEP AEROBICS**

1 CR. (2 LBA)

This course is designed to introduce basic step aerobics, exercise techniques, and improve physical fitness. The primary emphasis is to gain an understanding of the basic principles of step aerobics including the effects upon the cardio-respiratory system and skeletal muscles, various step patterns and choreography.

PED 147

**YOGA**

1 CR. (2 LBA)

This course offers a guided instruction in yoga. Students practice yoga according to their individual fitness levels and abilities. Emphasis is placed on enhancing general health and well-being through the performance of yoga strength, flexibility, balance and relaxation techniques and exercises. S/U

PED 148

**YOGA II**

1 CR. (2 LBA)

PRQ: PED 147. Concepts of basic yoga are carried into additional areas.

Increases awareness of yoga and its physical and mental benefits. S/U

PED 210

**FITNESS CENTER ACTIVITY III**

1 CR. (2 LBA)

PRQ: PED 110, PED 111. This is an advanced exercise course designed for individuals interested in attaining a high level of total fitness. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including: flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. The primary mode of training will be Aerobic Circuit Training. The circuit training will be supplemented with additional work on the specialized weight machines, dumbbells, treadmills, rowers, stair climbers, cross trainers, nordic track, versa climbers, and running track available in the Fitness Center.

PED 211

**FITNESS CENTER ACTIVITY IV**

1 CR. (2 LBA)

PRQ: PED 110, PED 111, PED 210. This is an advanced course designed for individuals interested in attaining a high level of total fitness. The course will include an individual fitness evaluation, computerized analysis of results, and a prescribed exercise program. All of the basic components of fitness including: flexibility, muscular strength, muscular endurance, cardiovascular fitness, and body composition will be addressed. The primary mode of training will be Aerobic Circuit Training. The circuit training will be supplemented with additional work on the specialized weight machines, dumbbells, treadmills, rowers, stair climbers, cross trainers, nordic track, versa climbers, and running track found in the Fitness Center.

## Physical Therapist Assistant

PTA 110

**BASIC PATIENT CARE IN PHYSICAL THERAPY**

5 CR. (2L/4.5 LBV)

PRQ: Admission to the Physical Therapist Assistant program or Department Chair permission. Examines the basic patient care skills for the healthcare practitioner. Enables the student to gain an understanding and demonstrate skills that include positioning, body mechanics, transfers, range of motion, palpation, vital signs, aseptic techniques, bandaging, intermittent venous compression, medical terminology, activities of daily living, wheelchair management, architectural barriers,

PTA 115

**PRINCIPLES AND PRACTICES OF PHYSICAL THERAPY**

2 CR. (2L)

PRQ: REA 090 or equivalent assessment test score. Explores the history of the profession including definition, development and areas of practice. The role of the APTA, the physical therapist assistant and the relationship between the physical therapist, PTA and other health care professionals are investigated. Includes current issues and trends including professionalism, ethics, quality assurance, communications and reimbursement issues such as Medicare, Medicaid, Worker's Compensation and commercial insurance.

PTA 120

**MODALITIES IN PHYSICAL THERAPY**

5 CR. (2L/4.5 LBV)

PRQ: PTA: 110. Examines theory and principles of physical therapy modalities. Course includes therapeutic heat and cold, traction, massage and hydrotherapy.

PTA 131

**PROFESSIONAL COMMUNICATIONS I**

1 CR. (1L)

Introduces students to oral and written professional communication in their field. The course develops skills in verbal and non-verbal communication, conducting self-critiques and peer reviews, research of professional literature, medical documentation, and professional presentations.

PTA 135

**PRINCIPLES OF ELECTRICAL STIMULATION**

2 CR. (1L/1.5 LBV)

PRQ: Program Admission. Investigates the principles and application of electrical stimulation (ES) modalities currently used in physical therapy practice. Enables the student to understand the electrochemical and physiological effects of electrical stimulation and identify the various forms and applications of ES.

PTA 140

**CLINICAL KINESIOLOGY**

5 CR. (5L)

PRQ: PTA 176 or Department Chair permission. Focuses on the science of human motion, theories of biomechanics and muscle/joint structure and function. Emphasizes basic principles of therapeutic exercise and their application to specific body regions. A laboratory experience that includes the application of kinesiology and exercise principles is integrated in the learning experience.

PTA 141

**PROFESSIONAL COMMUNICATIONS II**

1 CR. (1L)

Builds on Professional Communications I and develops skills in writing professional documents to patients and other health care professionals, participating effectively in meetings, and medical documentation skills.

PTA 175-177

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PTA 175

**SPECIAL TOPICS: CLINICAL PATHOPHYSIOLOGY I**

2 CR. (2L)

PRQ: REA 090 and CIS 110 or equivalent assessment test scores; BIO 105 or BIO 106. Investigates the pathophysiological changes resulting from disease processes. Includes the etiology of disease such as trauma, genetic, immunological, inflammatory and degenerative processes. Emphasizes pathology and pharmacology of musculoskeletal and neurological system diagnoses.

PTA 176

**SPECIAL TOPICS: FUNCTIONAL ANATOMY**

4 CR (3L/1.5 LBV)

PRQ: Program admission or Department Chair permission. Focuses on an understanding of anatomical structures of the human body.

Includes the composition and adaptability of tissues and the identification and function of the skeletal, muscular and nervous systems as they relate to physical therapy.

PTA 177

**SPECIAL TOPICS: CLINICAL PATHOPHYSIOLOGY II**

2 CR. (2L)

PRQ: REA 090 and CIS 110, or equivalent assessment test scores; BIO 105 or BIO 106. Investigates the pathophysiological changes resulting from disease processes. Includes the etiology of disease such as trauma, genetic, immunological, inflammatory and degenerative processes. Emphasizes pathology and pharmacology of cardiovascular, respiratory, endocrine and chronic pain diagnoses.

PTA 205

**PSYCHOSOCIAL ISSUES IN HEALTH CARE**

2 CR. (2L)

PRQ: REA 090 or equivalent assessment test score. Explores the psychosocial aspects of the patient/client and health care practitioner. Investigates recognition of and adjustment for psychological, sociological, educational, cultural, economic and political concerns on the delivery of health care services.

Communication skills and social and advocacy responsibilities of the health care practitioner are discussed. Enables the student to develop the skills to meet expectations and needs of members of society receiving health care services.

PTA 230

**ORTHOPEDIC ASSESSMENT AND MANAGEMENT TECHNIQUES**

5 CR. (2L/4.5 LBV)

PRQ: PTA 120, PTA 140. Examines the theory and principles and practices of orthopedic conditions. Includes an understanding of assessment and management techniques pertaining to orthopedic conditions, goniometry, manual muscle testing, gait analysis, and posture analysis

PTA 240

**NEUROLOGIC ASSESSMENT AND MANAGEMENT TECHNIQUES**

5 CR. (2L/4.5 LBV)

PRQ: PTA 120 and PTA 140 or Department Chair permission. Examines the theory and principles of physical therapy with an introduction to assessment, management techniques and advanced physical therapy procedures as they relate to neurologic, cardiac and pulmonary conditions.

PTA 251

**PROFESSIONAL COMMUNICATIONS III**

1 CR. (1L)

Promotes the concepts from Professional Communications II and further develops written and oral communication skills in the professional arena through correct documentation of patient progress based on observations, dictating progress notes, development of resume, job interview skills, portfolios, and an awareness of the national PTA exam.

PTA 278

**PTA SEMINAR**

2 CR. (2L)

PRQ: PTA 230, PTA 280 (Student should be in final semester of degree). Provides a summary of all coursework, internships and prepares the student for transition into the workforce as an entry level PTA. It includes a comprehensive review and mock exam in preparation for the national PTA exam, employment benefits, licensing, state practice act review, professional development, employment opportunities and community service.

PTA 280

**PTA INTERNSHIP I**

4 CR. (12 INT)

PRQ: PTA 120. Focuses on initial clinical exposure providing hands on of various types of patient practicum skills and techniques. Includes application of basic patient care skills including transfers, range of motion, modalities, bandaging, aseptic techniques, and gait training. Students demonstrate professional behavior and communication principles appropriate in the physical therapy setting. A designated clinical instructor in an acute care, geriatric, or outpatient setting will provide supervision.

PTA 281

**PTA INTERNSHIP II**

5 CR. (15 INT)

PRQ: Successful completion of all previous PTA curriculum or permission of program director. Focuses on an intermediate clinical experience providing hands on patient practicum skills and techniques. Includes continued application of physical therapy procedures of Internship I with the addition of therapeutic exercise, goniometry, manual muscle testing, and motor learning techniques. Students demonstrate professional behavior and communication principles appropriate in the physical therapy setting. A designated clinical instructor in an acute care, rehabilitation, outpatient, geriatric, or home health setting provides supervision. During the internship, the student presents an in-service on a physical therapy related topic.

PTA 282

**PTA INTERNSHIP III**

5 CR. (15 INT)

PRQ: Successful completion of all previous PTA curriculum or permission of program director. Incorporates advanced clinical experience providing hands on patient practicum skills and techniques. Students will refine all physical therapy skills in preparation to enter the field as an entry-level physical therapist assistant. This final experience includes independent practice with an assigned caseload under the on-site supervision of a clinical instructor. The student will present an in-service on a physical therapy related topic.

## Physician Assistant

PAP 235

**HUMAN PATHOLOGY**

4 CR. (4L)

PRQ: BIO 106. Focuses on the clinical pathophysiology of human illness. Individual modules examine the cellular and organ-based aspects of disease with attention to how the disease process begins and proceeds. Presentations in Clinical Medicine accompany the material in this course, allowing students to correlate the pathophysiology of specific disease with the medical and surgical management of those conditions.

## Physics

PHY 105

### CONCEPTUAL PHYSICS

4 CR. (3L/2 LBA)

PRQ: REA 060, MAT 060, ENG 060, CIS 110. or equivalent assessment test scores. Strongly recommend MAT 090. Focuses on mechanics, heat, properties of matter, electricity and magnetism, light and modern physics. Incorporates laboratory experience. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

PHY 111

### PHYSICS: ALGEBRA-BASED I WITH LAB

5 CR. (4L/2 LBA)

PRQ: REA 090, MAT 106, ENG 090, CIS 110, or equivalent assessment test scores. PRQ/CORQ: MAT 108 or MAT 122. Enables the student to explore the truth about physical reality through reasoning, mathematics and experimentation. Examines kinematics, force, circular motion, energy, momentum, torque, rotational dynamics, simple harmonic motion, temperature, heat and thermodynamics. The concepts and theories presented are explored through demonstrations and hands-on experiments. It is a general physics course that is recommended for all of the health sciences and all other interested students. Students entering engineering or one of the advance sciences should register for PHY 211. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1.

PHY 112

### PHYSICS: ALGEBRA-BASED II WITH LAB

5 CR. (4L/2 LBA)

PRQ: MAT 106, ENG 121, CIS 110, or equivalent assessment test scores. PRQ/CORQ: MAT 108 or MAT 122. Expands upon PHY 111 and covers sound waves, electric fields, electric circuits, magnetic fields, optics, and modern physics. Explores the concepts and theories presented in class through demonstrations and hands-on experiments. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1

PHY 211

### PHYSICS: CALCULUS BASED I WITH LAB

5 CR. (4L/2 LBA)

PRQ: ENG 121, MAT 121, CIS 110, or equivalent assessment test scores. PRQ/CORQ: MAT 122 and MAT 201. Enables the student to examine the truth about physical reality through reasoning, mathematics and experimentation. Covers kinematics, force, gravity, energy, momentum, torque, rotational dynamics, fluids and waves. The concepts and theories presented in class are explored through demonstrations and hands-on experiments. This first semester calculus-based physics course is recommended for students entering engineering or one of the advance sciences. This course is one of the Statewide Guaranteed Transfer Courses, GT-SC1

PHY 212

### PHYSICS: CALCULUS BASED II WITH LAB

5 CR. (4L/2 LBA)

PRQ: MAT 121, ENG 121, and CIS 110, or equivalent assessment test scores. PRQ/CORQ: MAT 122 and MAT 201. Expands upon PHY 211 and examines thermodynamics, electric fields, electric circuits, magnetic fields, light and optics, and modern physics. The concepts and theories presented in class are explored through demonstrations and hands-on experiments.

## Political Science

POS 105

### INTRODUCTION TO POLITICAL SCIENCE

3 CR. (3L)

PRQ: REA 090 or the equivalent recommended. Survey of the discipline of political science, including political philosophy and ideology, democratic and non-democratic governments, and processes, and international relations. This course is one of the Statewide Guaranteed Transfer courses, GT-SS1.

POS 111

### AMERICAN GOVERNMENT

3 CR. (3L)

PRQ: REA 090 or the equivalent recommended. Includes the background of the U.S. Constitution; the philosophy of American government; general principles of the Constitution; federalism; civil liberties; public opinion and citizen participation; political parties, interest groups, and the electoral process; and the structure and functions of the national government. This course is one of the Statewide Guaranteed Transfer courses, GT-SS1

POS 125

### AMERICAN STATE AND LOCAL GOVERNMENT

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Emphasizes the structure and function of state, county, and municipal governments including their relations with each other and with national government. Includes a study of Colorado government and politics.

## Process Technology

PRO 100

### INTRODUCTION TO PROCESS TECHNOLOGY

3 CR. (3L)

PRQ: REA 090 and MAT 090, or equivalent assessment test scores. Provides an overview or introduction into the field of Process Operations within the process industry. The course will introduce the roles and responsibilities of process technicians, the environment in which they work, and the equipment and systems in which they operate.

## Psychiatric Technician

PTE 110

### INTRODUCTION TO PSYCHIATRIC CARE

5 CR. (3L/3 LBV)

PRQ: REA 090 and ENG 060, or equivalent assessment test scores. Explores basic principles of psychiatric care utilizing therapeutic communication, human development, behavior assessment, and documentation. Enables the student to develop and apply interpersonal and technical skills while working with clients in psychiatric care settings.

PTE 116

### THEORETICAL CONCEPTS OF PSYCHIATRIC CARE I

2 CR. (2L)

PRQ: Admission into the Psychiatric Technician Program, PTE 110. CORQ: PTE 170, NUR 112. Explores basic etiology, symptoms of, and interventions for common psychiatric disorders. Builds on prior knowledge. Provides opportunities to recognize and intervene with clients experiencing typical psychiatric problems.

**PTE 117  
THEORETICAL CONCEPTS OF  
PSYCHIATRIC CARE II**

2 CR. (2L)  
PRQ: Admission into the Psychiatric Technician Program, PTE 116, PTE 170.  
CORQ: PTE 171, NUR 112. Explores psychiatric problems common to four (4) special populations: children/adolescents, developmentally disabled individuals, aging persons, and forensic clients. The student will learn how to recognize and intervene with problems common to these four groups.

**PTE 118  
PSYCHIATRIC MANAGEMENT  
PRINCIPLES**

1 CR. (1L)  
PRQ: Admission into the Psychiatric Technician Program, PTE 117, PTE 171.  
CORQ: PTE 172. Capstone: explores principles of psychiatric unit management and professional behaviors in psychiatric care. Self-care issues and job-seeking skills are also discussed.

**PTE 170  
CLINICAL CONCEPTS OF  
PSYCHIATRIC CARE I**

3 CR. (4.5 LBV)  
PRQ: Admission into the Psychiatric Technician Program, PTE 110: CORQ: PTE 116. Provides clinical application of theory and principles presented in PTE 116 through supervised clinical practice in a psychiatric care setting.

**PTE 171  
CLINICAL CONCEPTS OF  
PSYCHIATRIC CARE II**

3 CR. (4.5 LBV)  
PRQ: Admission into the Psychiatric Technician Program, PTE 116, PTE 170, or permission of instructor. CORQ: PTE 117. Provides clinical application of theory and principles presented in PTE 117 through supervised clinical practice in a psychiatric care setting.

**PTE 172  
PSYCHIATRIC MANAGEMENT  
CLINICAL**

1 CR. (1.5 LBV)  
PRQ: Admission into the Psychiatric Technician Program, PTE 117, PTE 171.  
CORQ: PTE 118. Synthesizes knowledge from prerequisite courses and provides clinical application of theory presented in PTE 118.

## Psychology

**PSY 100  
PSYCHOLOGY OF WORKPLACE  
RELATIONSHIPS**

3 CR. (3L)  
PRQ: REA 090 or equivalent. This course focuses on interactions among people – their conflicts, cooperative efforts, and group relationships. It will examine why beliefs, attitudes, and behaviors cause relationship problems in our personal lives and in work-related situations. It will emphasize the analysis of human behavior, the application of prevention strategies, and resolution of the behavior.

**PSY 101  
GENERAL PSYCHOLOGY I**

3 CR. (3L)  
PRQ: REA 090 or the equivalent. Focuses on the scientific study of behavior including motivation, emotion, physiological psychology, stress and coping, research methods, consciousness, sensation, perception, learning and memory. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

**PSY 102  
GENERAL PSYCHOLOGY II**

3 CR. (3L)  
PRQ: REA 090 or equivalent. Focuses on the scientific study of behavior including cognition, language, intelligence, psychological assessment, personality, abnormal psychology, therapy, life span development, and social psychology. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

**PSY 107  
WORKGROUP PSYCHOLOGY**

3 CR. (3L)  
PRQ: REA 090 or the equivalent recommended. This course is designed as an introduction to the psychology of workgroups in the modern workplace. Emphasis is placed on team dynamics, social diversity issues, team building, interpersonal communication skills, goal setting, time and resource management, and consensus decision making.

**PSY 110  
CAREER DEVELOPMENT**

3 CR. (3L)  
PRQ: CIS 110, equivalent assessment test score, or Department Chair approval. Assists students in recognizing their career potential, and provides tools for making realistic decisions concerning educational and occupational objectives.

**PSY 117  
PARENTING**

1 CR. (1L)  
PRQ: REA 090 or equivalent assessment test score. Focuses on effective techniques for parenting children, with emphasis on setting expectations, consideration of individual differences, satisfactory communication, and effective parent-child relationships.

**PSY 175-177  
SPECIAL TOPICS**

1-6 CR (1-6L)  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

**PSY 175  
SPECIAL TOPICS: STRESS & HEALTH  
– THE MIND, BODY CONNECTION**

1-6 CR. (1-6L)  
A survey of the rapidly developing research regarding the effects of stress on physical and mental health. The inner-connectedness of mind and body will be discussed.

**PSY 200  
RESEARCH METHODOLOGY**

3 CR. (3L)  
PRQ: PSY 101 or PSY 102. A survey of research methods and designs including correlational studies, experimental designs and quasi-experimental designs. Additional topics include evaluations of scientific research, data analysis, report writing and research ethics.

**PSY 204  
RELATIONSHIPS: CHALLENGES &  
CHOICES**

1 CR. (1L)  
PRQ: REA 090 or equivalent. The student will learn how to preserve and enhance couple relationships by understanding the role of gender differences; conflict patterns; communication skills; problem solving; meaning of commitment, fun and friendship.

**PSY 205  
PSYCHOLOGY OF GENDER**

3 CR. (3L)  
PRQ: REA 090 or equivalent. This course examines gender differences in work, courtship, family life, and sexual behavior throughout the life span.

**PSY 215  
PSYCHOLOGY OF ADJUSTMENT**

3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Emphasizes personal growth and the development of interpersonal skills. Focuses on the practical application of psychological principles and theories in achieving self-understanding and personal growth.

PSY 217

**HUMAN SEXUALITY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Surveys physiological, psychological, and psychosocial aspects of human sexuality. Topics include relationships, sexual identity, and sexual health.

PSY 226

**SOCIAL PSYCHOLOGY**

3 CR. (3L)

PRQ: 3 hrs. General PSY, or 3 hrs. General SOC or instructor permission. This course covers behavior of humans in social settings including attitudes, aggression, conformity, cooperation and competition, prejudice, and interpersonal attraction. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

PSY 227

**PSYCHOLOGY OF DEATH AND DYING**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Examines the philosophies of life and death, emphasizing dying, death, mourning, and the consideration of one's own death. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

PSY 235

**HUMAN GROWTH AND DEVELOPMENT**

3 CR. (3L)

PRQ: REA 060 or equivalent assessment test score. Examines human development from conception through death, emphasizing physical, cognitive, emotional, and psychosocial factors. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

PSY 237

**CHILD AND ADOLESCENT PSYCHOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent. This course is a survey of human development from conception through adolescence, emphasizing physical, cognitive, emotional, and psychosocial factors.

PSY 238

**CHILD DEVELOPMENT**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Focuses on the growth and development of the individual, from conception through childhood, emphasizing physical, cognitive, emotional, and psychosocial factors. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

PSY 239

**ADOLESCENT AND ADULT PSYCHOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent. This course covers growth and development of the individual from adolescence to death, emphasizing physical, cognitive, emotional and psychosocial factors.

PSY 245

**EDUCATIONAL PSYCHOLOGY**

3 CR. (3L)

PRQ: ENG 060, REA 090, or equivalent assessment test scores. Focuses on the relationships among theory, research, and practice in the areas of learning, child development, motivation, and educational assessment.

PSY 247

**CHILD ABUSE AND NEGLECT**

3 CR. (3L)

PRQ: REA 090 or equivalent. This course examines the causes and effects of physical, sexual, and psychological abuse and neglect. Intervention and prevention strategies are emphasized.

PSY 249

**ABNORMAL PSYCHOLOGY**

3 CR. (3L)

PRQ: ENG 060 or equivalent assessment test score. Examines abnormal behavior and its classification, causes, treatment, and prevention. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

PSY 250

**DYNAMICS OF RACISM AND PREJUDICE**

3 CR. (3L)

PRQ: REA 090 or equivalent. A survey of early race relations in the USA; the development of prejudicial attitudes and the social impact; strategies for positive change.

PSY 265

**PSYCHOLOGY OF PERSONALITY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Examines the structure, function, and development of personality. Investigates the major contemporary theories of personality. Covers psychodynamic, behavioral, cognitive-social learning, humanistic, trait, and, optionally, neurobiological, existential, and/or Eastern perspectives. The underlying assumptions and research support for these theories are appraised. Enables the student to gain an appreciation of the value of alternative theoretical approaches to this study of psychology.

PSY 267

**STRESS REDUCTION WITH BIOFEEDBACK**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Focuses on the biological and psychological basis of stress and the detrimental effects it may have on health. Emphasizes learning and applying stress reduction skills that are monitored with simple biofeedback instruments.

PSY 268

**ORGANIZATIONAL PSYCHOLOGY**

3 CR. (3L)

PRQ: ENG 060, REA 090, or equivalent assessment test scores. Provides a comprehensive study of psychological principles and theories as applied to organizational behavior. Topics include motivation, job satisfaction, conflict supervision, human relations, and stress management.

PSY 275-277

**SPECIAL TOPICS**

1-6 CR. (1-6L)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

PSY 275

**SPECIAL TOPICS: PSYCHOLOGY OF CREATIVITY**

1-6 CR. (1-6L)

This course examines the research on creativity and explores the creative process through classroom activities, group projects, and the use of technology. This course will assist students in the application of creative processes in the real world setting.

PSY 289

**CAPSTONE**

3 CR. (3L)

PRQ: ENG 060, REA 090, or equivalent assessment test scores. Studies and applies the theories and techniques of leadership and group processes. In addition, introduces leadership skills and experiences with applications in group and community settings.

## Radio TV

RTV 100

**INTRODUCTION TO TELECOMMUNICATIONS**

2 CR. (2L)

CORQ: MGD 175 Special Topics: Media Lab. Focuses on the study of the market demands involving national, local and international uses of telecommunications.

RTV 102

**BEGINNING TELEVISION**

3 CR. (3L)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Focuses on principles and techniques of television production in theory and the approach of studio and production. Emphasizes producing television programs, beginning with a concept through script to actual studio production, preproduction, and post production.

RTV 103

**WRITING FOR TV AND RADIO**

3 CR. (3L)

Explores writing techniques for television and radio emphasizing professional techniques, format and style.

RTV 108

**PRINCIPLES OF AUDIO**

3 CR. (1L/3 LBV)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Focuses on basic audio production techniques to be used in television production. Includes the use of basic audio equipment and mixer to produce audio tracks for radio and television production.

RTV 175

**SPECIAL TOPICS**

0-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

RTV 175

**SPECIAL TOPICS: BASIC VIDEO PRODUCTION**

3 CR. (1L/3 LBV)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Introduces the student to basic videotape production and editing on linear and non linear systems. Covers producing, writing, directing, lighting, editing and shooting techniques. Enables the student to gain experience in paint and character generator graphics, image processing, transitions and techniques using non linear editing.

RTV 217

**ADVANCED TELEVISION STUDIO PRODUCTION**

3 CR. (4.5 LBV)

PRQ: REA 060, equivalent assessment test score, or Department Chair approval. Focuses on principles and techniques of television production and direction in a laboratory setting using commercial television broadcast equipment for broadcast and institutional video productions.

## Radiologic Technology

RTE 100

**RADIATION SAFETY**

.6 CR. (.6L)

Meets the State of Colorado requirements for ISCD certified bone densitometry operators. The requirement is for 9 hours of radiation safety training.

RTE 101

**INTRODUCTION TO RADIOGRAPHY**

2 CR. (2L)

Offers an introduction to radiology including equipment, exposure, positioning and the knowledge necessary for the radiography student to provide safe patient care including communication skills, body mechanics, patient transfer, and radiography as a profession.

RTE 111

**RADIOGRAPHIC PATIENT CARE**

2 CR. (2L)

PRQ: RTE 181. Expands the information presented in RTE 101, and includes lecture and laboratory experience in the patient care areas of asepsis, vital signs, medical emergencies, assistance with drug administration, patient with special needs, EKG, and death and dying.

RTE 121

**RADIOLOGIC PROCEDURES I**

3 CR. (2L/1.5 LBV)

PRQ: Program admission, RTE 101. Introduces fundamentals of radiographic positioning including use of radiographic equipment and safety, positioning, terminology, anatomy, pathology, and skills necessary to perform radiographic procedures of the chest, abdomen, upper extremity, gastrointestinal and urinary systems.

RTE 122

**RADIOLOGIC PROCEDURES II**

3 CR. (2L/1.5 LBV)

PRQ: RTE 121. Introduces additional material covered in RTE 121 including the knowledge of anatomy, pathology, and skills necessary to perform radiographic procedures of the lower extremity, pelvis, spine, and bony thorax.

RTE 131

**RADIOGRAPHIC PATHOLOGY AND IMAGE EVALUATION I**

1.5 CR. (1.5L)

PRQ: RTE 101. Provides a detailed anatomic discussion of the respiratory, digestive, genitourinary systems and related medical terminology. The course will also cover the details of bony anatomy including bone structure, pathology and arthrology

RTE 132

**RADIOGRAPHIC PATHOLOGY AND IMAGE EVALUATION II**

1.5 CR. (1.5L)

PRQ: RTE 131. Provides a detailed anatomic/pathologic discussion of the spine, circulatory system, nervous system, and skull and related medical terminology.

RTE 141

**RADIOGRAPHIC EQUIPMENT/IMAGING I**

3 CR. (3L)

PRQ: Program admission, RTE 101. Introduces the fundamental aspects of radiographic equipment including a basic review of Physics fundamentals pertaining to x-ray production, the x-ray machine, image receptors, and control of scatter radiation.

RTE 142

**RADIOGRAPHIC EQUIPMENT/IMAGING II**

3 CR. (3L)

PRQ: RTE 141. Expands information covered in RTE 141 and provides in depth knowledge of radiographic exposure and the factors that effect radiographic film quality and assurance.

RTE 181

**RADIOGRAPHIC INTERNSHIP I**

5 CR. (15 INT)

PRQ: Program admission, RTE 101. Introduces the clinical education experience at the clinical education center. The student applies knowledge learned in the classroom to the actual practice of radiography.

RTE 182

**RADIOGRAPHIC INTERNSHIP II**

5 CR. (15 INT)

PRQ: RTE 181. Introduces additional concepts and more complex radiographic procedures than those learned in Clinical Internship I.

RTE 183

**RADIOGRAPHIC INTERNSHIP III**

7 CR. (21 INT)

PRQ: RTE 182. Reinforces the basic concepts of Clinical Internship I and II.

RTE 221

**ADVANCED MEDICAL IMAGING**

3 CR. (3L)

PRQ: RTE 122. Introduces advanced imaging techniques including radiography of the cranium, facial bones and special radiographic procedures. These concepts are combined with the basic oral communication techniques necessary for the professional radiographer.

RTE 231

**RADIATION BIOLOGY/PROTECTION**

2 CR. (2L)

PRQ: RTE 142. Provides the basic knowledge and understanding of the biologic effects of ionizing radiation and radiation protection and safety.

RTE 255

**MULTIPLANAR SECTIONAL IMAGING**

2 CR. (2L)

PRQ: Radiologic Technology student or imaging professional or permission of instructor. Offers a course designed to increase knowledge in multi-planar/multi-modality sectional anatomy for imaging professionals, radiologic technology students, and other interested health care professionals. Correlative studies of line drawings, cadaverous photographs, MRI, and CT images are thoroughly studied.

RTE 256

**BONE DENSITOMETRY**

2 CR. (2L)

Offers an in-depth study of Bone Densitometry equipment, scanning, and interpretation that will prepare the student for the American Registry of Radiologic Technologist certification examination in Bone Densitometry.

RTE 281

**RADIOGRAPHIC INTERNSHIP IV**

8 CR. (24 INT)

PRQ: RTE 183. Introduces the student to the radiographic specialty areas of Pediatrics, Geriatrics, the out-patient clinic, as well as increasing proficiency in general radiography.

RTE 282

**RADIOGRAPHIC INTERNSHIP V**

8 CR. (24 INT)

PRQ: RTE 281. Introduces the student to the radiographic specialty areas of portable and trauma radiography as well as increasing proficiency in general radiography.

RTE 289

**CAPSTONE**

3 CR. (3L)

PRQ: All core curriculum or permission of instructor. CORQ: RTE 282. Prepares the radiology technology student to effectively search for a job in radiography and sit for the American Registry of Radiologic Technology examination.

## Reading

REA 030

**BASIC READING SKILLS**

2 CR. (1L/2 LBA)

PRQ: ACCUR score of 25. Focuses on strategies for word attack, vocabulary development, stages of reading, and basic reading comprehension.

REA 060

**FOUNDATIONS OF READING**

3 CR (3L)

PRQ: "C" or better in REA 030 or equivalent assessment test score. PRQ/CORQ: CIS 110 or equivalent assessment test score. Focuses on strategies for vocabulary development, improved reading comprehension, and enrichment.

REA 090

**COLLEGE PREPARATORY READING**

3 CR (3L)

PRQ: "C" or better in REA 060 or equivalent assessment test score. PRQ/CORQ: CIS 110 or equivalent assessment test score. Enables the student to apply strategies for improving comprehension, developing vocabulary, and increasing rate for reading college textbooks.

## Real Estate

REE 103

**REAL ESTATE BROKERS I**

6 CR. (6L)

Enables the student to meet the educational requirements of the Colorado Real Estate Commission for a Colorado Real Estate Brokers license. Includes real estate law and practice, practical application, and current legal issues.

REE 104

**REAL ESTATE BROKERS II**

5 CR. (5L)

Enables the student to meet the educational requirements of the Colorado Real Estate Commission for a Colorado Real Estate Brokers license. This course includes Colorado contracts and regulations, real estate closings, and trust accounts and record keeping.

## Respiratory Care Practitioner

RCA 105

**INTRODUCTION TO RESPIRATORY CARE**

1 CR. (1L)

PRQ: MAT 107, BIO 201, REA 090 and ENG 121 or equivalent assessment test score, consent of instructor. Introduces the profession of respiratory care including history of the profession; current and future role of the respiratory care professional; role, function and interrelationships of the several professional organizations; and medical terminology. This class must be taken prior to admission to the program. This is an Internet course only.

RCA 131

**BASIC TECHNIQUES IN RESPIRATORY CARE**

3 CR. (2L/1.5 LBV)

PRQ: Program admission. Focuses on the study of principles of operation and therapeutic application of basic respiratory care equipment and techniques.

RCA 132

**BASIC TECHNIQUES IN RESPIRATORY CARE II**

5 CR. (3L/3 LBV)

PRQ: RCA 131, RCA 155 or consent of instructor. Continues RCA 131 and focuses on airways, aerosol therapy, chest physiotherapy, and positive pressure breathing.

RCA 133

**RESPIRATORY/EMS MODALITIES**

4 CR. (2L/3 LBV)

PRQ: REA 090 or equivalent assessment test score, EMS 125, program admission or consent of Department Chair. Provides a study of the principles of operation and therapeutic application of basic respiratory and EMS equipment and techniques, including roles and responsibilities of EMT and Respiratory Care Practitioners. Patient Assessment skills, IV insertion, Respiratory Therapeutics, airway management and introduction to Mechanical ventilation will be studied. The students will be involved in didactic, laboratory and clinical sessions to give the student the opportunity to comprehend on a cognitive and tactile level.

RCA 151  
**CARDIOPULMONARY ANATOMY AND PHYSIOLOGY**  
3 CR. (3L)  
PRQ: RCA 105, BIO 201 or consent of instructor. Focuses on the structure of the pulmonary and cardiovascular systems. Addresses independent functional relationships.

RCA 153  
**CARDIOPULMONARY DISEASE**  
3 CR. (3L)  
PRQ: Program admission, RCA 151, RCA 131, or consent of Department Chair. Discusses the clinical manifestations and assessment of cardiopulmonary disease in depth. The course utilizes a problem based-case management approach to the study of cardiopulmonary disease.

RCA 155  
**LOGIC OF RESPIRATORY SCIENCE**  
3 CR. (3L)  
PRQ: Program admission. Focuses on a study of the basic concepts used in respiratory care with a strong emphasis on their interrelationships.

RCA 164  
**ADVANCED CARDIAC CARE**  
3 CR. (2L/1.5 LBV)  
PRQ: RCA 151 or consent of Department Chair. Focuses on an in depth process of the electrophysiology of the heart, as well as the techniques and interpretations of electrocardiograms. The class will also include instruction and certification in ACLS.

RCA 165  
**PHARMACOLOGY OF CARDIOPULMONARY CARE**  
3 CR. (3L)  
PRQ: Program admission, RCA 155, RCA 151, or consent of Department Chair. Focuses on a study of the principles of pharmacology and the pharmacologic properties and application of drugs commonly employed in the treatment of cardiopulmonary disease.

RCA 230  
**CRITICAL CARE I**  
2 CR. (1L/1.5 LBV)  
PRQ: RCA 153 or consent of instructor. Focuses on the care of critically ill patients. Includes advanced pulmonary physiology and pathophysiology, assessment and monitoring of acute and chronic respiratory failure, mechanical ventilation, and emergency respiratory care. Incorporates a laboratory portion that enables the student to develop skills essential for the assessment and treatment of the critically ill.

RCA 251  
**CRITICAL CARE II**  
3 CR. (3L)  
PRQ: RCA 230 or consent of instructor. Focuses on selected topic areas in critical care. Includes both technical and management concerns in the intensive care setting.

RCA 252  
**CARDIOPULMONARY DIAGNOSTICS II**  
1CR. (1L)  
PRQ: RCA 151, RCA 153, or consent of instructor. Explores the procedures used in the diagnosis of pulmonary disease through pulmonary function testing.

RCA 254  
**PULMONARY FUNCTION TESTING**  
1 CR. (1L)  
PRQ: Program admission, RCA 155, RCA 151, RCA 165, or consent of Department Chair. Explores the Indications for Pulmonary Function Testing as well as the testing procedures involved in pulmonary function testing. This will include Spirometry, Lung Volumes and Gas Distribution Tests. Reference values as well as conversion and correction factors will be introduced. This class will also explore how Pulmonary Function testing is used to diagnose disease and evaluate treatment.

RCA 255  
**PREHOSPITAL TRAUMA EMERGENCIES**  
2 CR. (2L)  
PRQ: EMS 125, admission to program or consent of Department Chair. Prerequisites include being currently certified as a Colorado EMT-Basic and/or Nationally Registered at the EMT-Basic level. Enrollment is by Program Coordinator approval. Covers the Advanced Life Support course in emergency trauma care required for Respiratory Care/ EMT-Intermediate students. The course include trauma as a disease in our society, the recognition and emergency medical care of trauma patients, and incorporates the ALS procedures or appropriate treatment and care of these patients in the prehospital environment.

RCA 256  
**PEDIATRIC AND NEONATAL CARE**  
3 CR. (2L/1.5 LBV)  
PRQ: Program admission, RCA 155, RCA 151, RCA 165, RCA 164, RCA 153, or consent of Department Chair. Covers aspects of fetal development, neonatology, and pediatrics. Cardiopulmonary disorders, respiratory therapeutics, special procedures, labor and delivery will be covered. Students enrolled in this class will also be certified in Pediatric Advanced Life Support.

RCA 265  
**PROFESSIONAL DEVELOPMENT**  
2 CR. (2L)  
PRQ: RCA 283 or consent of instructor. Focuses on preparation for national board exams and professional interaction.

RCA 280  
**INTERNSHIP I**  
4.5 CR. (13.5 INT)  
PRQ: RCA 131, RCA 132, RCA 155, or instructor's permission. Focuses on the care and analysis of the noncritical patient. Procedures include those presented in RCA 131 and RCA 132.

RCA 281  
**INTERNSHIP II**  
7.5 CR. (22.5 INT)  
PRQ: RCA 280 or instructor's permission. Focuses on the care and analysis of the critically ill patient. Rotations into specialty areas are carried out as the schedule permits.

RCA 282  
**RCA/EMS INTERNSHIP I**  
3 CR. (9 INT)  
PRQ: EMS 125, RCA 132, RCA 151, RCA 153, RCA 155, or consent of Department Chair. Provides the first internship course for students to complete both Respiratory Care and Emergency Medical Technician-Intermediate training. Course work includes rotations at medical facilities under the supervision of preceptors. Students will have the opportunity to apply principles of patient care as outlined in the course work for Respiratory Therapy and EMT-Intermediate coursework.

RCA 283  
**INTERNSHIP III**  
7.5 CR. (22.5 INT)  
PRQ: RCA 281 or instructor's permission. Continues to address the care and analysis of the critically ill patient and specialty rotations. Attempts to more closely evaluate the student's ability to manifest critical judgments in solving clinical problems and understanding professional/departmental activities.

RCA 284

**RCA/EMS INTERNSHIP II**

6 CR. (18 INT)

PRQ: Admission to program, RCA 282, or consent of Department Chair. Provides the second internship course for students to complete both Respiratory Care and Emergency Medical Technician-Intermediate training. Course work includes rotations at medical facilities under the supervision of preceptors. Students will have the opportunity to apply principles of patient care as outlined in the course work for Respiratory Therapy and EMT-Intermediate coursework.

RCA 286

**RCA/EMS INTERNSHIP III**

6 CR. (18 INT)

PRQ: Program admission, RCA 284 or permission by Department Chair. Presents the third internship course for students to complete both Respiratory Care and Emergency Medical Technician-Intermediate training. Course work includes rotations at medical facilities under the supervision of preceptors. Students will have the opportunity to apply principles of patient care as outlined in the course work for Respiratory Therapy and EMT-Intermediate coursework.

RCA 289

**CAPSTONE**

0.5-6 CR. (L/LBV)

PRQ: Admission to program RCA 284 or consent of Department Chair. A demonstrated culmination of learning within a given program of study.

## Science

SCI 155

**INTEGRATED SCIENCE I**

4 CR. (3L/2 LBA)

PRQ: REA 090, MAT 090, ENG 090, and CIS 110, or equivalent assessment test scores. Examines the nature of energy and matter, their interactions and changes, and the application of fundamental concepts to the study of our natural world. This course is one of the Statewide Guaranteed Transfer courses, GT-SC1.

SCI 156

**INTEGRATED SCIENCE II**

4 CR. (3L/2 LBA)

PRQ: SCI 155, REA 090, ENG 090, MAT 090, CIS 110, or equivalent assessment test scores. Examines earth and biological systems, living and non-living environments, through the application and refinement of fundamental energy and matter concepts. This course is one of the Statewide Guaranteed Transfer courses, GT-SC1.

## Social Sciences and Sociology

SOC 100

**PRINCIPLES OF PRACTICAL SOCIOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces the student to the varied dynamics of human society. We will examine topics such as: The impact of social groups of which we are a part on how we act and think, the historical development of sociology, the way sociologists are taught to think, the interaction between humans and their social organizations, the ways in which we operate in and through our social structures, inequality in society, the meaning of culture, the effects of our social institutions, the ways in which social organizations influence each other, order and power in social organizations, the ever-changing dynamics of human social life, and the study of family structures in our society.

SOC 101

**INTRODUCTION TO SOCIOLOGY I**

3 CR. (3L)

PRQ: REA 090 or the equivalent recommended. Examines the basic concepts, theories, and principles of sociology as well as human culture, social groups, and the social issues of age, gender, class, and race. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

SOC 102

**INTRODUCTION TO SOCIOLOGY II**

3 CR. (3L)

PRQ: REA 090 or the equivalent recommended. Examines social institutions and organizations from the macro perspective. Emphasizes issues of social change, demography, social movements, and conflicts and trends within education, religion, family, political, and economic structures. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

SOC 201

**INTRODUCTION TO GERONTOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Acquaints students with the major issues and concepts pertinent to the field of gerontology. The course introduces various theoretical perspectives on aging, the changing trends in life expectancy and other demographic considerations, and the interrelationship between elders and key social institutions. It provides an overview of physical, cognitive, and socioemotional factors associated with aging.

SOC 203

**URBAN SOCIO-ANTHROPOLOGY**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Examines how cities and city life are shaped by cultural, social, political, and economic forces operating at many different levels. Additionally, SOC 203 examines the history and theoretical roots of urban anthropology and sociology, ethnographic fieldwork in urban environment, and urban social organization in cross-cultural perspectives.

SOC 205

**SOCIOLOGY OF FAMILY DYNAMICS**

3 CR. (3L)

PREQ: REA 090 or equivalent assessment test score. Develops an understanding of marriage, family and kinship. It examines the family as an institution and how social, cultural and personal factors influence family relations. The stability and diversity of the family will be explored, along with current trends and some alternative life styles.

SOC 212

**RESEARCH IN SOCIAL SCIENCES**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Introduces social research methods with an emphasis on the scientific method and the role of empirical inquiry into sociology. This course will include the study of methodologies of data collection and analysis, the logic of research, the role of theory, measurement, sampling and research designs. Field research and the professional norms and ethics of social research will also be covered.

SOC 215  
**CONTEMPORARY SOCIAL PROBLEMS**  
3 CR. (3L)  
PRQ: REA 090 or equivalent recommended. Explores current social issues that result in societal problems. It focuses on such issues as civil liberties, gender discrimination, substance abuse, crime, poverty, and social change. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

SOC 216  
**SOCIOLOGY OF GENDER**  
3 CR. (3L)  
Gives students the theoretical and factual background necessary to understand the phenomenon of gender stratification in American and other cultures. Students will be exposed to a history of gender stratification in human societies, theoretical explanations for this and insights into the consequences of gender differentiation in our world today. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

SOC 218  
**SOCIOLOGY OF DIVERSITY**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Explores the variety of intergroup relations regarding race, nationality, ethnicity, gender, sexual orientation, and other diversity issues. Patterns of prejudice, discrimination and possible solutions to these issues will be addressed.

SOC 223  
**CHICANOS IN A CHANGING SOCIETY**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Explores the lives and roles of Chicanos and Chicanas (Americans of Mexican descent). It introduces students to the Chicano community, its historical, political and social development. It explores the ways in which Chicano communities interrelate with Anglo and multicultural societies as well as its future prospects.

SOC 231  
**THE SOCIOLOGY OF DEVIANT BEHAVIOR**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Examines the nature, identification, and explanation of deviant categories. Theories, and philosophies as well as methods of treatment related to deviancy will also be considered. The course will study society's attempts to control, change, and institutionalize those acts, individuals or groups that a population may deem unacceptable. This course is one of the Statewide Guaranteed Transfer courses, GT-SS3.

SOC 237  
**SOCIOLOGY OF DEATH AND DYING**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Provides an opportunity to familiarize students and professionals with the needs and issues surrounding dying and death. This course will provide sociological, psychological, religious, historical and anthropological perspectives for interpreting contemporary American customs dealing with dying, death and bereavement. We will examine the professions associated with death and dying, such as hospice, funeral and crematory institutions, and medical care.

SOC 265  
**VIOLENCE AND CULTURE**  
3 CR. (3L)  
PRQ: ENG 060, REA 090, or equivalent assessment test scores. Examines the concepts, relationships, organizations, and research as they relate to violence in multiple cultural settings. SOC 265 assists in developing an understanding of societal and institutional causes of violence; explores resources for intervention and treatment; and provides service learning applications in violence assessment, treatment, and victim assistance.

SOC 289  
**CAPSTONE**  
3 CR. (3L)  
PRQ: ENG 060, REA 090, or equivalent assessment test scores. Studies and applies the theories and techniques of leadership and group processes. In addition, PSY 275 introduces leadership skills and experiences with applications in group and community settings.

## Social Work

SWK 100  
**INTRODUCTION TO SOCIAL WORK**  
3 CR. (3L)  
Covers the human services and the challenges and problems of working with people. Intervention strategies and skills are taught and human service systems, the role of the human service worker and attitudinal and ethical issues are covered. (This course is only offered in the Fall semester.)

SWK 106  
**INTRODUCTION TO ALCOHOL AND DRUGS**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Acquaints the beginning student with various issues related to the field of working with substance and alcohol abuse. This course will also introduce the student to the knowledge base, values, ethics, intervention skills and the diverse population groups served by social workers.

SWK 175-177  
**SPECIAL TOPICS**  
1-6 CR. (L)  
Provides students with a vehicle to pursue in depth exploration of special topics of interest.

SWK 201  
**HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT I**  
3 CR. (3L)  
PRQ: PSY 101, SOC 101. PRQ/CORQ: SWK 100. Focuses on the person in environment throughout the life span with an examination of the relationship between biological, psychological, social, spiritual and cultural systems. (This course is only offered in the Fall semester.)

SWK 202  
**HUMAN BEHAVIOR IN THE SOCIAL ENVIRONMENT II**  
3 CR. (3L)  
PRQ: SWK 201. Focus in this course is on an understanding and analysis of larger social systems which include the family, groups, communities and organizations. Emphasis on social systems as an organizing theoretical framework for understanding social functioning and change. (This course is only offered in the Spring semester.)

SWK 205  
**SOCIAL WELFARE IN THE UNITED STATES**  
3 CR. (3L)  
PRQ/CORQ: SWK 100. Introduces students to the profession of Social Work and Social Welfare. Students will be presented with an historical and conceptual overview of the social welfare system in the United States. Attention is given to the milieu within which social, political, economic, racial and cultural forces have interacted in the evolution of social welfare. (This course is only offered in the Fall semester.)

SWK 222  
**INTRODUCTION TO SWK PRACTICE**  
3 CR. (3L)  
PRQ: SWK 100, SWK 201. PRQ/CORQ:  
SWK 202. Application of the foundation of  
generalist practice skills. Requires 15  
clock hours of volunteer work in an  
approved human services agency. (This  
course is only offered in the Spring  
semester.)

SWK 275-277  
**SPECIAL TOPICS**  
1-6 CR. (L)  
Provides students with a vehicle to  
pursue in depth exploration of special  
topics of interest.

## Spanish

SPA 101  
**CONVERSATIONAL SPANISH I**  
3 CR. (3L)  
PRQ: REA 060 or equivalent assessment  
test score. Offers beginning students the  
skills necessary to understand and speak  
Spanish. The material includes basic  
vocabulary, grammar, and expressions  
that are used in daily situations and in  
travel.

SPA 111  
**SPANISH LANGUAGE I**  
5 CR. (5L)  
PRQ: REA 090 or equivalent assessment  
test scores. Deals with the development  
of functional proficiency in listening,  
speaking, reading and writing the  
Spanish language. Note: The order of the  
topics and methodology will vary  
according to individual texts and  
instructors.

SPA 112  
**SPANISH LANGUAGE II**  
5 CR. (5L)  
PRQ: REA 090 or equivalent assessment  
test scores, SPA 111 or permission of the  
instructor. Continues Spanish Language I  
in the development of functional  
proficiency in listening, speaking, reading  
and writing the Spanish language. Note:  
The order of the topics and the  
methodology will vary according to  
individual texts and instructors.

SPA 114  
**FAST-TRACK SPANISH I AND II**  
5 CR. (5L)  
PRQ: REA 060 or equivalent assessment  
test scores. Designed to bridge beginning  
SPA courses with intermediate SPA  
courses. It is designed for students who  
have studied two years of the target  
language in high school and possess  
linguistic and cultural knowledge that true  
beginners do not, but are not ready yet to  
move to the intermediate level because  
they need an in-depth review of essential  
structures.

SPA 115  
**SPANISH FOR THE PROFESSIONAL I**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment  
test scores. Designed as an introduction  
to a working knowledge of the target  
language, cultural behaviors and values  
useful in various professional fields such  
as health care, law enforcement, bilingual  
education, business, and others.

SPA 175  
**SPECIAL TOPICS**  
.5-6 CR. (.5-6L)  
Provides students with a vehicle to  
pursue in depth exploration of special  
topics of interest.

SPA 211  
**SPANISH LANGUAGE III**  
3 CR. (3L)  
PRQ: SPA 112 or permission of the  
instructor; REA 090; ENG 090; or  
equivalent assessment test scores.  
Continues Spanish Language I and II in  
the development of increased functional  
proficiency in listening, speaking, reading  
and writing the Spanish language. Note:  
The order of the topics and the  
methodology will vary according to  
individual texts and instructors.

SPA 212  
**SPANISH LANGUAGE IV**  
3 CR. (3L)  
PRQ: SPA 211 or permission of the  
instructor; ENG 090; REA 090; or  
equivalent assessment test scores.  
Continues Spanish Language I, II and III  
in the development of increased  
functional proficiency in listening,  
speaking, reading and writing the  
Spanish language. Note: The order of the  
topics and the methodology will vary  
according to individual texts and  
instructors.

SPA 275  
**SPECIAL TOPICS**  
.5-6 CR. (.5-6L)  
Provides students with a vehicle to  
pursue in depth exploration of special  
topics of interest.

## Speech Communications

SPE 115  
**PUBLIC SPEAKING**  
3 CR. (3L)  
PRQ: ENG 060 or equivalent assessment  
test score. Combines the basic theory of  
speech communication with public  
speech performance skills. Emphasis is  
on speech delivery, preparation,  
organization, support, and audience  
analysis.

SPE 125  
**INTERPERSONAL COMMUNICATION**  
3 CR. (3L)  
PRQ: ENG 060 or equivalent assessment  
test score. Examines the communication  
involved in interpersonal relationships  
occurring in family, social and career  
situations. Relevant concepts include  
self-concept, perception, listening,  
nonverbal communication, and conflict.

SPE 216  
**PRINCIPLES OF SPEECH  
COMMUNICATION II**  
3 CR. (3L)  
PRQ: ENG 060 or equivalent assessment  
test score. Emphasizes the intensification  
of ideas and styles with a focus on  
persuasive speaking. The course  
includes additional studies in rhetorical  
analysis and oral delivery methods.

SPE 226  
**ORAL INTERPRETATION**  
3 CR. (3L)  
Excites and exposes the student to the  
potential offered in the reading and  
performing of great literature such as is  
found in prose, poetry, and drama.

# Theatre

**THE 105**  
**INTRODUCTION TO THEATRE ARTS**  
3 CR. (3L)  
PRQ: REA 090 or equivalent assessment test score. Includes discussions, workshops, and lectures designed to discover, analyze and evaluate all aspects of the theatre experience: scripts, acting, directing, staging, history, criticism and theory. This course is one of the Statewide Guaranteed Transfer courses. GT-AH1

**THE 111**  
**ACTING I**  
3 CR. (3L)  
Covers basic acting techniques and approaches including scene study, improvisation, and script analysis. It includes practical application through classroom performance.

**THE 112**  
**ACTING II**  
3 CR. (3L)  
PRQ: THE 111 or permission of the instructor. Continues to explore basic acting techniques and approaches including scene study, improvisation, and intermediate script analysis. It includes practical application through classroom performance.

**THE 116**  
**TECHNICAL THEATRE**  
3 CR. (3L)  
Introduces hands-on methods of constructing and painting scenery and properties and operating stage lighting. Students also learn the proper procedures of using shop equipment and serving on stage crews.

**THE 125**  
**INDIVIDUAL SINGING LESSONS FOR MUSICAL THEATRE**  
.5 CR (.5L)  
Focuses on basic vocal technique including breath support, belt technique, diction, body alignment, expressive communication, stage presence and microphone techniques. Various repertoire and styles are explored. The course includes a final performance before an invited audience.

**THE 126**  
**AUDITIONING FOR MUSICAL THEATRE**  
3 CR. (3L)  
Builds a confident, talented and exciting audition. It includes a mock video taped audition, and covers resumes, head shots, repertoire choices, stage fright, 16-bar audition and dressing for success. This course is presented in conjunction with producers from regional theaters providing valuable feedback for the participants.

**THE 131**  
**THEATRE PRODUCTION I**  
3 CR. (3L)  
PRQ: THE 111 and/or THE 112 or permission of instructor. Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

**THE 132**  
**THEATRE PRODUCTION II**  
3 CR. (3L)  
PRQ: THE 111 and/or THE 112 or permission of instructor. Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

**THE 210**  
**SINGING FOR ACTORS**  
3 CR. (3L)  
Allows students to explore and perform Musical Theatre songs. Students utilize a pedagogical approach to evaluate their vocal structure and formulate a systematized series of vocal and whole body exercises to develop and enhance their self-confidence and vocal instrument through in-class performance and variety show presentation.

**THE 211**  
**DEVELOPMENT OF THEATRE I**  
3 CR. (3L)  
PRQ: REA 090 or equivalent. Surveys the history and evolution of drama from Ancient Greece to the Renaissance, emphasizing all aspects of the art from period values to analysis of dramatic literature and performance.

**THE 212**  
**DEVELOPMENT OF THEATRE II**  
3 CR. (3L)  
PRQ: THE 211 or REA 090 or the equivalent recommended as a prerequisite. Surveys the history and evolution of drama from the Renaissance to the present, emphasizing all aspects of the art from period values to the analysis of dramatic literature and performance.

**THE 215**  
**PLAYWRITING**  
3 CR. (3L)  
PRQ: REA 090, ENG 090, or equivalent assessment test scores. Gives students the opportunity to learn and practice playwriting techniques, thereby improving creative writing skills. Elements of dramatic structure, dialogue, styles, and theatrical practices are emphasized.

**THE 220**  
**DIRECTING I**  
3 CR. (3L)  
PRQ: THE 111 and 112. Covers basic techniques for stage directing in contemporary theatre. Topics to be covered include stage composition, script analysis, work with actors, and the collaborative role of the director.

**THE 231**  
**THEATRE PRODUCTION III**  
3 CR. (3L)  
PRQ: THE 111 and/or THE 112 or permission of instructor. Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

**THE 232**  
**THEATRE PRODUCTION IV**  
3 CR. (3L)  
PRQ: THE 111 and/or THE 112 or permission of instructor. Allows students to put into practice theories of theatre production. Participation in set construction, scenic artistry, costuming, lighting, sound, acting, stage managing, and administration is available.

**THE 240**  
**THEATRE VOICE AND DICTION**  
3 CR. (3L)  
Provides students with individual tutorials which define, design and apply specific vocal techniques to abate singing and speech difficulties. Master class performances provide the opportunity to conjure the energy, charisma and stage command necessary for presentations.

**THE 275-277**  
**SPECIAL TOPICS**  
.5-6 CR. (L)  
Explores current topics, issues and activities related to one or more aspects of the named discipline.

THE 275

**SPECIAL TOPICS: SINGING FOR ACTORS II**

3 CR. (3L)

Allows students to explore and perform musical theatre songs, students utilize a pedagogical approach to evaluate their vocal structure and formulated a systematized series of vocal and whole body exercises. A continuation of THE 210 – Singing for Actors I.

THE 283

**INTERNSHIP: SUMMER STOCK THEATRE**

1-3 CR. (1-3L)

Allows students to participate in summer play production that often includes outdoor performances and touring opportunities. Plays by classic authors, such as Shakespeare and Moliere, are frequently performed. Participation in all aspects of theatre production is available.

## Travel and Tourism

TRA 175-177

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Exploration of current topics, issues and activities related to one or more aspects of the named discipline.

TRA 175

**SPECIAL TOPICS: RESERVATIONS AND TICKETING**

3 CR. (3L)

Provides the student with information necessary to prepare itineraries for foreign and domestic travel. They will also learn how to make reservations for transportation arrangements and issue confirming documents.

TRA 275

**SPECIAL TOPICS**

1-6 CR. (L/LBV)

Provides students with a vehicle to pursue in depth exploration of special topics of interest.

TRA 275

**SPECIAL TOPICS: STUDY TOUR**

1-6 CR. (3-18 INT)

After successfully completing this tour, the student will have an in-depth knowledge of tourism structure, history, culture, and tourism sites or the area visited.

## Upholstery

UPH 100

**BASIC UPHOLSTERY TECHNIQUES**

3 CR. (1L/3 LBV)

Covers the upholstery industry: safety, familiarization with tools and materials, sewing, tacking, layout and pattern work.

UPH 101

**AUTO UPHOLSTERY I**

3 CR. (1 L/3 LBV)

CORQ: UPH 100 or department chair approval. Covers auto seat upholstery, including removal and replacement, teardown, correct use of materials, cutting and stretching.

UPH 102

**AUTO UPHOLSTERY II**

3 CR. (1L/3 LBV)

CORQ: UPH 101 or department chair approval. Continues UPH 101, emphasizing skill development. Carpet, trim, convertible tops, tonneau covers and convertible boots are course components.

UPH 103

**AUTO UPHOLSTERY III**

3 CR. (1L/3 LBV)

CORQ: UPH 102 or department chair approval. Introduces repair and/or replacement of armrests, carpet, wind lace, door panels, headliner, convertible tops, tonneau covers and convertible boots.

## Welding

WEL 100

**SAFETY FOR WELDERS**

1 CR. (1L)

Covers the hazards of welding on health and safety, locating essential safety information from a code or other standard, and identifying and applying shop safety procedures.

WEL 102

**OXYACETYLENE JOINING PROCESS**

4 CR. (1L/4.5 LBV)

Introduces safety inspections, minor repairs, operating parameters, oxyacetylene welding equipment, and oxyacetylene welding, brazing, and soldering operations. Blueprint reading skills will be practiced in this course.

WEL 103

**BASIC SHIELDED METAL ARC I**

4 CR. (1L/4.5 LBV)

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-6010 electrodes. Layout procedures and practices will also be introduced.

WEL 104

**BASIC SHIELDED METAL ARC II**

4 CR. (1L/4.5 LBV)

Covers performing safety inspections, making minor repairs, adjusting operating parameters, and operating SMAW equipment utilizing E-7018 electrodes. Layout procedures will be practiced during this course.

WEL 106

**BLUEPRINT READING FOR WELDERS AND FITTERS**

4 CR. (2L/3 LBV)

Covers interpreting weld symbols on blueprints, identifying proper layout methods and tools, and proper joint design necessary for various welding processes.

WEL 124

**INTRODUCTION TO GAS TUNGSTEN ARC WELDING**

4 CR. (1L/4.5 LBV)

Covers welding in all positions and on various joint configurations using the GTAW (tig) welding process on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 125

**INTRODUCTION TO GAS METAL ARC WELDING**

4 CR. (1L/4.5 LBV)

Covers welding in all positions and on various joint configurations using the GMAW (mig) welding process on carbon steel, stainless steel and aluminum. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 224

**ADVANCED GAS TUNGSTEN ARC WELDING**

4 CR. (1L/4.5 LBV)

Covers welding in all positions on carbon steel, stainless steel and aluminum plate and carbon steel pipe with the GTAW process. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 225

**ADVANCED GAS METAL ARC WELDING**

4 CR. (1L/4.5 LBV)

Covers welding in all positions on carbon steel plate with the GMAW process. Student should be familiar with basic metallurgy pertaining to the weldability of metals, structural joints, and safety in the welding industry.

WEL 230

**PIPE WELDING I**

4 CR. (1L/4.5 LBV)

Covers safety inspections, minor repairs, operating parameters, and operation of SMAW, GMAW, and FCAW equipment in a variety of positions on plain carbon steel pipe joints. Also covers evaluating and solving complex welding and fabrication problems and administering hands on training and supervision to other students during assigned fabrication and welding operations.

WEL 250

**LAYOUT AND FABRICATION**

4 CR. (1L/4.5 LBV)

Develops welding and associated skills in the use of drawings and blueprints in planning. Includes designing and layout projects.

WEL 251

**DESIGN, LAYOUT AND FABRICATION**

4 CR. (1L/4.5 LBV)

Develops advanced welding and associated skills in the use of drawings and blueprints in planning. Includes designing and layout projects.

WEL 263

**APPLIED METAL PROPERTIES**

4 CR. (3L/1.5 LBV)

Introduces the study of metal properties, hardness testing, heat treatment, cold working microscopic examination and application of common commercial alloys in industry.



## Women's Studies

WST 200

**INTRODUCTION TO WOMEN'S STUDIES**

3 CR. (3L)

PRQ: REA 090 or equivalent assessment test score. Examines the nature and function of women in society from an interdisciplinary perspective, focusing on the similarity and diversity of women's experience over time and across cultures. The course will examine topics such as sex role, socialization, political, and philosophical perspectives on women's issues, and women's accomplishments in history, art, literature, science, health issues and the family. Students will gain an awareness of the limitations of traditional scholarship on women, and gain a means of practical application of the new scholarship on women's roles and nature.