General Education Electives

The development of competence in critical thinking, writing, speaking, problem-solving, and information literacy is essential to a student's educational and career success. General Education courses provide students with the opportunity to develop these skills (see MCCC policy, page 24).

The following courses approved for the purposes of General Education at Mercer County Community College are regarded as General Education courses at many, but not all, other colleges and universities in New Jersey and other states. The Statewide Transfer Agreement guarantees transfer of all approved courses that meet General Education requirements for graduates from A.A. and A.S. programs transferring to New Jersey's four-year public colleges and universities. Non-graduates may determine whether particular courses will meet requirements at other New Jersey colleges or universities via NJ Transfer (www.njtransfer.org). Students interested in transferring to out-of-state colleges and universities should consult the catalogs, websites, and staff of those institutions.

Students are advised to review the specific General Education requirements in their respective MCCC programs of study.

Written and Oral Communication in English
CMN 111 Speech: Human Communication
CMN 112 Public Speaking
ENG 101 English Composition I
ENG 102 English Composition II
ENG 112 English Composition II with Speech (A.A.S. programs only)

Mathematics
MAT 108 Topics in Mathematics
MAT 110 Elementary Technical Mathematics
MAT 115 Algebra and Trigonometry I
MAT 116 Algebra and Trigonometry II
MAT 120 Mathematics for Liberal Arts
MAT 135 Intermediate Algebra with Applications
MAT 140 Applied College Algebra
MAT 146 Pre-calculus
MAT 149 Calculus for Social Sciences or Business
MAT 151 Calculus I
MAT 152 Calculus II
MAT 200 Statistics for Social and Health Sciences I
MAT 201 Probability and Statistics for Science and Engineering
MAT 205 Statistics for Social and Health Sciences II
MAT 208 Linear Algebra
MAT 251 Calculus III
MAT 252 Differential Equations

Science
BIO 101 General Biology I
BIO 102 General Biology II
BIO 103 Anatomy and Physiology I
BIO 104 Anatomy and Physiology II
BIO 106 Human Anatomy
BIO 113 Biological Science Concepts
* BIO 114 Environmental Science Concepts
* BIO 115 Microbiological Science Concepts
BIO 201 Microbiology
BIO 203 Entomology
BIO 204 Ecology
BIO 208 Genetics
* BIO 215 Principles of Microbiology
CHE 101 General Chemistry I
CHE 102 General Chemistry II
CHE 105 Agricultural Chemistry
CHE 106 Chemical Science Concepts
CHE 107 General and Physiological Chemistry
CHE 201 Organic Chemistry I

Technology
COS 101 Introduction to Computer Science
COS 102 Computer Science I – Algorithms and Programming
DMA 144 Internet Tools and Techniques
IST 101 Computer Concepts with Applications
IST 102 Computer Concepts with Programming
IST 109 Introduction to Programming
IST 140 The Internet and Computer Technology

Social Science
• ANT 101 Anthropology
ECO 103 Basic Economics
ECO 111 Macroeconomics
ECO 112 Microeconomics
• GEO 101 Geography
• GEO 102 Cultural Geography
POL 101 The American Political System
POL 102 State and Local Government
POL 201 International Relations
PSY 101 Introduction to Psychology
PSY 206 Child Development
PSY 207 Developmental Psychology: Across the Life Span
SOC 101 Introduction to Sociology
SOC 107 Social Problems

* does not satisfy Laboratory Science general education requirement
• course is also a Diversity and Global Perspective general education elective

Look for this indicator of approved General Education courses throughout the course descriptions on pages 135-189.
**Humanities**

**Literature**
- ENG 201 Introduction to Literature: Drama
- ENG 202 Introduction to Literature: Novel
- ENG 203 World Literature I
- ENG 204 World Literature II
- ENG 205 American Literature I
- ENG 206 American Literature II
- ENG 208 Modern American Novel
- ENG 211 Shakespeare
- ENG 212 Introduction to Literature: Poetry
- ENG 213 African American Literature
- ENG 216 Literature Into Film
- ENG 221 Women in Literature
- ENG 227 English Literature I
- ENG 228 English Literature II
- ENG 238 American History and Literature

**Aesthetic Appreciation**
- ART 101 Art and Culture
- ART 121 History of Art I
- ART 122 History of Art II
- ART 123 History of Modern Art
- ART 124 History of Non-Western Art
- ART 125 Topics in Contemporary Art
- CMN 107 Cinema
- DAN 101 Introduction to Dance and Culture
- MUS 103 Introduction to Music
- MUS 155 History of Jazz and Blues
- MUS 156 History of American Pop Music
- MUS 224 Music History and Literature I
- MUS 225 Music History and Literature II
- PHO 110 History of Photography
- THR 101 Introduction to Theatre
- THR 210 Theatre History – Classical to Elizabethan
- THR 212 Central Voices in World Drama

**Philosophy**
- PHI 102 Introduction to Philosophy
- PHI 113 Logic
- PHI 204 Ethics
- PHI 205 Moral Choices
- PHI 210 Eastern Philosophy

**Religious Studies**
- REL 101 Introduction to Religious Studies
- REL 102 Living World Religions

**Foreign Language**
- ASL all American Sign Language courses
- ARB all Arabic courses
- CHI all Chinese courses
- FRE all French courses
- GER all German courses
- ITA all Italian courses
- JPN all Japanese courses
- LAT all Latin courses
- SPA all Spanish courses

**Misc. Humanities**
- SPA 110 Hispanic Culture

**History**

*All courses in the Historical Perspective list additionally qualify as Humanities general education.*

**Historical Perspective**
- HIS 101 History of Western Civilization to 1648
- HIS 102 History of Western Civilization Since 1648
- HIS 105 United States History to 1865
- HIS 106 United States History Since 1865
- HIS 109 African American History
- HIS 112 World History to 1500
- HIS 113 World History Since 1500
- HIS 213 Twentieth-Century World History
- HIS 214 The United States Since 1945
- HIS 218 History of Latin America
- HIS 221 History of American Women
- HIS 231 Women in Antiquity

**Diversity and Global Perspective**
- ANT 101 Anthropology
- ARC 141 Architecture and Culture: International
- ART 124 History of Non-Western Art
- ART 126 African American Art
- BUS 230 Global Environment of Business
- CMN 214 Issues in Intercultural Communication in the United States
- CMN 215 Gender and Communication
- DAN 101 Introduction to Dance and Culture
- ENG 203 World Literature I
- ENG 204 World Literature II
- ENG 213 African American Literature
- ENG 221 Women in Literature
- ENG 222 Children’s Literature
- ENG 232 Post-Colonial Women Writers
- GEO 101 Geography
- GEO 102 Cultural Geography
- HIS 109 African American History
- HIS 112 World History to 1500
- HIS 113 World History Since 1500
- HIS 213 Twentieth-Century World History
- HIS 215 The Holocaust and Other Genocides
- HIS 218 History of Latin America
- HIS 221 History of American Women
- HIS 231 Women in Antiquity
- HIS 232 Women in Europe Since 1500
- HOS 115 Food and Culture
- MUS 155 History of Jazz and Blues
- MUS 156 History of American Pop Music
- PHI 210 Eastern Philosophy
- POL 201 International Relations
- PSY 215 Human Sexuality
- PSY 221 The Psychology of Women
- REL 102 Living World Religions
- SOC 132 Introduction to Women’s and Gender Studies
- SOC 201 Marriage and the Family
- SOC 209 Racial, Ethnic, and Minority Groups
- SPA 110 Hispanic Culture
- THR 212 Central Voices in World Drama
- WGS 132 Introduction to Women’s and Gender Studies
- WGS 221 Seminar in Women’s and Gender Studies
Course Descriptions

Course descriptions appear on the following pages alphabetically by course prefix. The three-letter prefix identifies subject area; the three digits that follow identify the particular course. Generally, courses numbered 100 or lower are academic foundation courses; courses numbered from 101 to 199 are first-year offerings; and 200-level courses are second-year offerings.

Each description specifies the course’s credit value, which determines the tuition charge and the extent to which the course contributes toward the credit requirements for a degree.

Throughout the course descriptions, the indicator at left identifies approved General Education courses. (See page 132 for details.)

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All courses require college-level competence in reading, writing, and basic mathematics unless otherwise specified. Minimum proficiency is determined by one of the following: college skills placement test; completion of required academic foundations courses in reading, writing, and computation; or evidence of equivalent academic preparation. Specific skill requirements and additional course prerequisites are noted in individual course descriptions.

Prerequisites and Corequisites

Some courses require specific prerequisites or corequisites.

• A prerequisite is a course that must be completed before a student is permitted to register for the more advanced course.

• A corequisite is a course that a student must take either prior to or while enrolled in the related course.

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**ACC—Accounting**

**ACC 106 Office Accounting I** 3 credits
Basic accounting course designed for non-transfer students. Emphasizes the techniques of double-entry bookkeeping: journalizing; posting; adjusting and closing entries; and financial statement preparation. 3 lecture hours

**ACC 108 Hospitality Accounting** 3 credits
Introductory accounting course integrating the special accounting requirements of the hospitality industry with generally accepted accounting principles. 3 lecture hours

**ACC 109 Food, Beverage, and Labor Cost Control** 3 credits
*Prerequisite: ACC 108 with a minimum C grade*
Principles and theories underlying cost control as it applies to the hospitality industry. Problem-solving using spreadsheet software is integral component of instruction. 3 lecture hours

**ACC 111 Principles of Financial Accounting** 4 credits
*Prerequisite: ACC 106 with a minimum C grade*
Study of the accounting cycle and how accounting data impacts business decisions. Emphasis on understanding the "why" of accounting as well as the "how." 4 lecture hours

**ACC 112 Principles of Managerial Accounting** 4 credits
*Prerequisite: ACC 111 with a minimum C grade*
Study of the uses of accounting information for managerial decision-making. Areas covered include manufacturing, merchandising, and service cost systems; cost-volume-profit analysis; and budgeting and capital investment decision-making. 4 lecture hours

**ACC 201 Intermediate Accounting I** 3 credits
*Prerequisite: ACC 111 with a minimum C grade*
Detailed study of accounting theory and practice as they relate to cash; receivables; inventories; investments; property, plant and equipment; and intangible assets. 3 lecture/1 laboratory hours

**ACC 202 Intermediate Accounting II** 3 credits
*Prerequisite: ACC 201 with a minimum C grade*
Continuation of ACC 201. Topics in the study of accounting theory and practice include liabilities, stockholder equity, cash flows, and leases. 3 lecture/1 laboratory hours

**ACC 203 Federal Income Taxation** 3 credits
*Prerequisite: ACC 111 with a minimum C grade*
Study of income taxation as it applies to small businesses and individual taxpayers. Topics include gross income, exclusions, deductions, credits, exemptions, and capital gains. Computer software is used to prepare tax returns. [Fall offering] 3 lecture hours

**ACC 204 Auditing** 3 credits
*Prerequisite: ACC 201 with a minimum C grade*
Investigation into and application of the objectives and procedures governing auditing requirements, standards, and examinations. [Spring offering] 3 lecture/1 laboratory hours

**ACC 205 Office Accounting II** 3 credits
*Prerequisite: ACC 106 with a minimum C grade*
Continuation of ACC 106. Topics include receivables and payables; merchandise inventory; plant and equipment; corporations; partnerships; and internal control. 3 lecture hours

**ACC 207 Computerized Accounting** 3 credits
*Prerequisite: ACC 111 with a minimum C grade*
Introduction to general ledger accounting on PCs. Students acquire a working knowledge of software packages currently used in industry. 2 lecture/2 laboratory hours

**ACC 214 Accounting for Non-Profit Organizations** 3 credits
*Prerequisite: ACC 111 with a minimum C grade*
Study of generally accepted accounting principles as they apply to non-profit organizations, with emphasis on governmental agencies. Additional focus includes accounting for colleges and universities as well as hospitals and health organizations. 3 lecture hours

**ACC 215 Cost Accounting** 3 credits
*Prerequisite: ACC 112 with a minimum C grade*
Examination of the accounting practices to record and control material, labor, and overhead costs. Study includes job-order, process cost and standard cost systems for manufacturing and service firms. 3 lecture/1 laboratory hours

**ADV—Advertising + Graphic Design**

**ADV 101 Advertising Design I** 3 credits
*Prerequisite: DMA 105 or divisional permission*
Study of the principles and concepts of layout and design as applied to a variety of advertising and graphic design assignments: ads, brochures, logos, posters, book jackets, and sales promotion material. Promotes familiarity with advertising agency and studio procedures as well as professional techniques for producing layouts, comprehensive, and finished art. [Spring and Summer offering] 1 lecture/4 studio hours

**ADV 110 Typography I: Basics of Graphic Design** 3 credits
Introduction to basic layout and typography as the fundamental language to graphic communication. No previous knowledge of layout and typography is presumed. Addresses the use of different typefaces to communicate visually desired effects, type forms, type indication and basic graphic design with type for layouts. 1 lecture/4 studio hours

**ADV 201 Advertising Design II** 3 credits
*Prerequisites: ADV 101, DMA 105 or divisional permission*
Study of the advanced concepts and design principles used in planning visualizations and layouts for advertising and editorial presentations using art, photography, type, and illustrations. Survey of methods for developing ideas into graphic presentations and the intangibles that provide originality and variety in a creative field using the Macintosh computer. [Fall offering] 1 lecture/4 studio hours

**ADV 102 Advertising Design III: Portfolio** 3 credits
*Prerequisites: ADV 101, ADV 201, DMA 105 or divisional permission*
Investigation into and application of the objectives and procedures governing auditing requirements, standards, and examinations. [Spring offering] 3 lecture/1 laboratory hours

**ADV 202 Typography II: Publication Design** 3 credits
Advanced study of the use of type as it relates to page layout, graphic communication and publication design using Macintosh electronic publishing technology. Students use page layout and body copy software that integrates text and graphics for a variety of projects. 1 lecture/4 studio hours
COURSES

ADV 220 Illustration I 3 credits
Prerequisites: ART 102 and ART 104 with a minimum C grade or divisional permission
Introduction to the concepts, techniques, and skills of the contemporary illustrator, emphasizing that good illustration – product or journalistic – is a means of communication. Assignments involve book and magazine illustration, visualization, and exercises in rendering light and shadow, plus production of comprehensive art in various media. 1 lecture/4 studio hours

ADV 222 Illustration II: Digital Drawing 3 credits
Prerequisites: ART 102, ART 104, DMA 105
Interdisciplinary course combining illustration with other fine art and advertising design skills to create a professional commercial art portfolio. 1 lecture/4 studio hours

ADV 230 History of Graphic Design 3 credits
Prerequisites: ENG 101 or permission of instructor; Internet access for Web-based instruction
A survey of the history of graphic design from its origins to present day. This overview of graphic design develops visual vocabulary, provides a cultural and historical context, and instructs students in researching areas of interest to broaden their knowledge of contemporary graphic design. 3 lecture hours

ANT—Anthropology

Social Science / Diversity and Global Perspective
ANT 101 Anthropology 3 credits
Corequisite: ENG 101 or college-level eligibility
Explores anthropology – the study of humankind in all places at all times – in its “four fields”: physical anthropology (the systematic study of humans as biological organisms); archaeology (the study of human cultures through the recovery and analysis of material remains and environmental data); linguistic anthropology (the study of human language); and cultural anthropology. 3 lecture hours

ANT 222 The Anthropology of Myths, Magic and Witchcraft 3 credits
Prerequisite: ENG 101 or college-level eligibility
Examines the supernatural belief systems and practices of various cultures. Myths, rituals, animism, witchcraft, magic, shamanism, and syncretic religions are critically analyzed to understand the integrative effects of the sacred world. From that foundation, study progresses with a cross-cultural, anthropological comparison of religion and the supernatural. 3 lecture hours

ARB—Arabic

Note: Students who have taken two or more years of a foreign language, and have done so in the last two years, should begin that language at the 200 level or switch to a new language. If there is doubt, placement will be determined by testing or consultation with the academic division.

ARB 102 Beginning Arabic I 3 credits
The first in a sequence of courses designed for students with little or no prior knowledge of Arabic. Spoken communication in Arabic is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

ARB 101 Beginning Arabic I 3 credits
Prerequisite: ARB 102 with a minimum C grade, placement by exam, or permission of instructor
The second in a sequence of courses designed for students with little or no prior knowledge of Arabic. Spoken communication in Arabic is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

ARC—Architecture

ARC 123 Graphic Communication for Architecture 3 credits
Corequisite: ARC 121
A lecture/studio course aimed at developing architecture students’ graphic communication skills. Analytic and descriptive drawings of buildings, everyday objects, trees, plantings, and people are rendered using pencil, pen and ink, as well as through an introduction to digital imaging and computer-aided design software. 1 lecture/4 laboratory hours

ARC 102 Graphic Communication for Architecture 3 credits
Corequisite: ARC 121
Corequisite: ARC 123
Introduction to the use of the computer in architecture as a three-dimensional design/drawing tool. Students build 3-D models using parametric modeling software and manipulate three-dimensional forms, scenes, colors, textures, lighting and cameras to design effective compositions. Applicable to Windows-based computers. 1 lecture/4 laboratory hours

ARC 121 Architecture Basic Design I 5 credits
Corequisite: ARC 102 or divisional permission
Explores fundamental principles and elements of design: form, space, composition, systems, context, imagery, as well as functional and structural organizations. Solutions to architectonic design projects explored through presentation drawings and study models. Simple presentation graphics and model-building are introduced. [Fall offering] 1 lecture/8 studio hours

ARC 122 History of Architecture 3 credits
Survey of the development of architecture from ancient civilizations to 1860. Social, religious, economic, technological, and aesthetic factors are explored to understand fully their influence on the development of buildings and cities. 3 lecture hours

ARC 123 Architecture Basic Design II 5 credits
Prerequisite: ARC 121 with a minimum C grade
Further study of the fundamental principles and elements of architectural design through a series of projects having increased complexity and depth of expression using more advanced presentation graphic techniques. Emphasis continues on the development of process drawing and model-building skills to explore design ideas. [Spring offering] 1 lecture/8 studio hours

Humanities

ARB 201 Intermediate Arabic I 3 credits
Prerequisite: ARB 102 with a minimum C grade, placement by exam, or permission of instructor
The first in a sequence of courses designed for students with a mid to high novice level of competency in Arabic. Spoken communication in Arabic continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving Arab culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

ARC 124 History and Theory of Modern Architecture 3 credits
Explores the social conditions and major personalities that influenced architectural developments from the Industrial Revolution to the present. 3 lecture hours

ARC 125 Architecture and the Environment 3 credits
Introductory course exploring the various relationships between the man-made world and the natural world. Human perceptions of the physical environment are studied relative to their effects on architectural design and human behavior. Analysis of the urban environment reveals the impact of architecture on quality of life. 3 lecture hours

ARC 134 Building Construction Systems 3 credits
Corequisites: ARC 227, sophomore standing in Architecture or divisional permission
Introductory survey of general concepts of sustainable design as they relate to building construction. Includes site, structural, environmental, envelope systems, materials and building systems. Focus is primarily on low-rise wood and steel structures. 3 lecture hours

ARC 140 Field Studies in Architecture and Urban Planning: America 3 credits
Prerequisite: ENG 101 and approval of instructor
Investigation of architectural characteristics and urban planning patterns in select regions. Extended travel in groups creates an “immersion experience.” Students study/draw buildings, analyze physical characteristics of different environments, and consider the built environment's impact on quality of life. [Occasional offering]

ARC 127 Architecture Design I 5 credits
Prerequisite: ARC 123 with a minimum C grade
Sophomore-level design course emphasizing the exploration and development of architectural design concepts and their translation into physical form. Three to four major design problems challenge the student's preconceptions about architecture and stimulate the growth of an architectural vocabulary. [Fall offering] 1 lecture/8 studio hours

ARC 128 Architecture Design II 5 credits
Prerequisite: ARC 227 with a minimum C grade
Corequisite: ARC 124
Builds on the foundation of ARC 227. More advanced design challenges help the student to sharpen design skills and to continue expanding an architectural vocabulary. [Spring offering] 1 lecture/8 studio hours

ARC 285 Special Studies in Architecture Design 3 credits
Prerequisites: ARC 228 with a minimum C grade and divisional permission
Opportunity for students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offering] 3 lecture hours

ART—Fine Arts, Art History

ART 101 Art and Culture 3 credits
Introduction to major movements of Western art as they relate to cultural influences, expanding knowledge, technological change, and effects on modern society. Through studio work, students investigate the intellectual aspects of traditional drawing, painting and mixed media techniques. 2 lecture/2 studio hours

ART 102 Basic Drawing 3 credits
Examines the fundamentals of seeing line and value through studies of nature, still-life arrangements, the human figure, and concepts of perspective. Various media are used including ink, charcoal, and graphite. 1 lecture/4 studio hours

ART 103 Freehand Drawing for Architects 3 credits
A lecture/studio course for developing the architecture student’s freehand drawing skills, with emphasis on analytic and descriptive drawings of buildings, everyday objects, trees, plantings and people. Media used are pencil, pen and ink, and felt tip pen. 1 lecture/4 studio hours

ART 104 Life Drawing 3 credits
Prerequisite: ART 102
Experience in drawing the human figure and developing an understanding of form, volume, structure, and anatomy. Exercises include gesture drawing and sustained poses. Various media are used. 1 lecture/4 studio hours

ART 105 Two-Dimensional Design 3 credits
Intensive investigation of such essential principles as form, line, space, color, balance, and unity in two-dimensional design. Projects are assigned in sequence leading to specific visual solutions. Various media, techniques, and equipment are introduced. 1 lecture/4 studio hours

ART 106 Three-Dimensional Design 3 credits
An intensive investigation of the use of the formal elements of art and design according to the principles of organization in three-dimensional composition. Various media, techniques, and equipment are introduced. 1 lecture/4 studio hours

ART 121 History of Art I 3 credits
Focus on the aesthetic and historical evaluation of artists, styles, and cultures from the prehistoric period through Gothic art. Color slides are analyzed and discussed. 3 lecture hours

ART 122 History of Art II 3 credits
Survey of artists, styles, and cultures from the Renaissance through mid-19th century European and American art. Investigates the aesthetics of various movements. Color slides are analyzed and discussed. 3 lecture hours

ART 123 History of Modern Art 3 credits
Comprehensive survey of the modern period in art beginning with Manet and continuing through the varied styles, schools, and movements of the 20th century. Color slides are analyzed and discussed. 3 lecture hours

ART 124 History of Non-Western Art 3 credits
Focus on the aesthetic and historical evaluation of artists, styles, and cultures from India, China, Japan, Indonesia, Thailand, Cambodia, and pre-Columbian America. Color slides are analyzed and discussed. 3 lecture hours

www.mccc.edu
ART 125 Topics in Contemporary Art 3 credits
Prerequisite: ENG 101 or divisional permission
Exploration of trends and topics in contemporary art from 1945 to the present, involving a diverse range of artists who challenge preconceived notions of the role of art in today's society. Students learn to identify, analyze, and write about art through multi-media presentations, discussions, artists' talks, and a field trip. 3 lecture hours

Diversity and Global Perspective
ART 126 African American Art 3 credits
Comprehensive survey of the aesthetic and historical evaluation of African American art, artists and culture from colonial times to the present. Includes slide analysis, discussion, and museum visits. 3 lecture hours

ART 130 Painting I 3 credits
Prerequisite: ART 102 or ART 105 or divisional permission
Examination of the relationships of materials, media, and techniques in both figurative and abstract art. The elements of color and composition are introduced and explored. At the discretion of the instructor, students are advised to work in either acrylic or oil color. 1 lecture/4 studio hours

ART 141 Sculpture I 3 credits
Introduction to modeling the human figure. Develops basic understanding of vocabulary of form while mastering technical skills, plus acquaintance with several media and with organizing form and space. 1 lecture/4 studio hours

ART 145 Beginning Ceramics: Handbuilding 3 credits
Introduction to basic clay experience, devoted to the handbuilding techniques of pinch, drape, press, slab, and coil to produce functional and sculptural ceramic objects. Introduces the technical aspects of colored slips and glazing. Stresses development of a personal appreciation of form. 1 lecture/4 studio hours

ART 146 Beginning Ceramics: Wheel-Throwing 3 credits
Introduction to basic clay experience, devoted to clay-forming techniques on the potter's wheel to produce functional and sculptural ceramic objects. Introduces the technical aspects of colored slips and glazing. Stresses development of a personal appreciation of form and function. 1 lecture/4 studio hours

ART 150 Printmaking I 3 credits
Study of the basic concepts, techniques, tools, and materials required to work in the production of surface, relief, and intaglio prints. Paper selection, preparation of ink, and operation of the presses are discussed and demonstrated. 1 lecture/4 studio hours

ART 230 Painting II 3 credits
Prerequisite: ART 130 with a minimum C grade
Training and experience in the observation and application of painting media, acrylic or oil. Involves guidance in transforming what is observed or conceived into graphic and plastic forms, including traditional challenges of painting and composition, working with light, color, weight, and dimension. 1 lecture/4 studio hours

ART 232 Advanced Painting and Drawing 3 credits
Prerequisites: ART 104, ART 230 with a minimum C grade
Intensive course designed for the advanced student, making drawing and painting a unique and personal experience. Through instructor guidance, the student develops a personalized approach to composition, color, and technique. Includes classroom critiques, outside assignments, and possible field trips. [Spring offering] 1 lecture/4 studio hours

ART 233 Watercolor Painting 3 credits
Prerequisite: ART 102 with a minimum C grade or permission of instructor
Combining technical knowledge with practice, introduces the beginning watercolor painter to the materials and techniques of the past and present. The student studies various approaches to painting with watercolor, tempura, and wash and acquires a basic understanding of the proper selection of paper, brushes, paints and equipment. 1 lecture/4 studio hours

ART 240 Raku Workshop 3 credits
Prerequisite: previous ceramics experience
Introduction to the Raku process. Students spend an intensive six-week period creating, glazing, and firing functional and sculptural ceramic objects. 1 lecture/4 studio hours

ART 241 Sculpture II 3 credits
Prerequisite: ART 141 with a minimum C grade
Continuation of ART 141 with refinement of presentation or where, when, and how the object is viewed. Concentration on a complete statement of form and space. Further exploration of several media, including clay figure and portrait modeling. 1 lecture/4 studio hours

ART 250 Printmaking II 3 credits
Prerequisite: ART 150 with a minimum C grade
Continued exploration and development of surface, relief, and intaglio techniques. 1 lecture/4 studio hours

ART 260 Special Studies in Drawing 3 credits
Prerequisites: ART 102, ART 104 with a minimum 3.0 GPA and/or divisional permission
Special courses in specific art forms allow students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offerings]

ART 281 Special Studies in Printmaking 3 credits
Prerequisites: ART 283 and divisional permission
Special courses in specific art forms allow students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offerings]

ART 285 Special Studies in Sculpture 3 credits
Prerequisites: ART 281 and divisional permission
Special courses in specific art forms allow students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offerings]

ART 286 Special Studies in Printmaking 3 credits
Prerequisites: ART 250 and divisional permission
Special courses in specific art forms allow students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offerings]

ART 287 Special Studies in Painting 3 credits
Prerequisites: ART 284 and divisional permission
Special courses in specific art forms allow students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offerings]

ART 289 Special Studies in Architecture History with minimum 3.0 GPA, sophomore status and divisional permission
Special course in museum/gallery work for art history students who have completed regular course offerings and desire a supervised apprenticeship. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offering]

ART 291 Cooperative Education

Visual Arts 3 credits
Integration of classroom study and lab work with specific planned period of learning through job experience. Based on an individualized learning contract, designed for Advertising Design and Digital Media Arts majors who have demonstrated advanced skill levels and for those who have potential to perform professionally in a work environment. 270 work experience hours
**ASK—Academic Skills**

See also COL—College Success. Applicability of these credits toward degree requirements is limited. Consult an academic advisor.

**ASK 003 Study Skills 1 credit**

Introduces basic study techniques including understanding and identifying learning styles and applying time management principles for study success. Course activities are designed to help students improve concentration, memorization and listening skills, lecture and textbook note-taking ability, critical reading strategies, and test-taking strategies using SQ3R and other study methods. 1 lecture hour

**ASL—American Sign Language**

<table>
<thead>
<tr>
<th>ASL 101 American Sign Language I</th>
<th>3 credits</th>
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<tbody>
<tr>
<td>The first in a sequence of courses designed for students with little or no prior knowledge of ASL. Voiceless communication in ASL is both the end goal and the means of instruction. Communicative skills and basic grammar are introduced in a culturally authentic context. [satisfies foreign language requirement]</td>
<td>3 lecture hours</td>
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<table>
<thead>
<tr>
<th>ASL 102 American Sign Language II</th>
<th>3 credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prerequisite: ASL 101 with a minimum C grade or permission of instructor</td>
<td>3 lecture hours</td>
</tr>
<tr>
<td>The second in a sequence of courses designed for students with little or no prior knowledge of ASL. Voiceless communication in ASL is both the end goal and the means of instruction. Communicative skills and basic grammar are introduced in a culturally authentic context. [satisfies foreign language requirement]</td>
<td>3 lecture hours</td>
</tr>
</tbody>
</table>

**AUT—Automotive Technology**

**AUT 110 Introduction to Automotive Electronics 3 credits**

Prerequisite: MAT 037 (or MAT 037A and 037B) or equivalent proficiency

Corequisite: AUT 111

An introduction to voltage, current and resistance, series and parallel circuits, batteries, and electronic components. Also covers wiring schematics, wire repair, and circuit troubleshooting. For automotive students. 3 lecture/1 laboratory hours

**AUT 111 Automotive Service Fundamentals 5 credits**

Corequisite: AUT 110

Introduction to the automobile and its operating systems. Emphasizes theories of operation, service facility practices and current servicing procedures, with detailed attention to each individual system including diagnosis and repair. Personal safety policies in the work environment are stressed in detail. 2 lecture/6 laboratory hours

**AUT 112 Automotive Fuel Systems 3 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

Examines automotive fuel systems in use today. Coverage includes fuel basics, electronic fuel injection (EFI), sequential port fuel injection, on-board diagnostics II (OBD II), and diesel fuel injection with focus on theory of operation, driveability diagnostic procedures, and use of computerized diagnostic equipment. 2 lecture/2 laboratory hours

**AUT 113 Suspension, Steering and Alignment 4 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

Theory of operation and steering systems, with emphasis on component inspection and replacement. Addresses four-wheel alignment with lab activities using a drive-on alignment rack and computer alignment machine. 2 lecture/4 laboratory hours

**AUT 114 Automotive Electricity and Electronics 3 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

How electrical/electronics principles are used in current automotive systems. Subjects include vehicle communications, starting and charging systems, wiring diagrams and manuals, chassis wiring service, passive restraints and other automotive accessories. Major emphasis is on diagnostic skills, testing procedures, and proper service and repair of components. 2 lecture/2 laboratory hours

**AUT 115 Automotive Brake Systems 4 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

The principles and servicing of both disc and drum brake systems used on today's automobiles, including computer-controlled anti-lock braking systems. Emphasis on malfunction diagnosis, use of road testing techniques and visual brake inspection procedures, repair integrity, plus hydraulic theory and component machining operations. 2 lecture/4 laboratory hours

**AUT 121 Automotive Emissions and Driveability 3 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

Examines the relationship of automotive emissions with engine driveability concerns. Utilizing information presented in AUT 111 and AUT 112, proper diagnosis of driveability concerns and recommended repair procedures are explored to achieve the best performance and reduced emissions. Emission control devices are examined with an emphasis on operation and emission standards. 2 lecture/2 laboratory hours

**AUT 122 Internship in Automotive Technology I 1 credit**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

Corequisites: AUT 211, AUT 212

Application of knowledge acquired from lecture and laboratory instruction to gain relevant on-the-job experience in repairing customer vehicles in an actual automotive service facility. The apprentice is supervised by an experienced service employee who works with the program coordinator in developing goals and evaluating performance. 300 work experience hours

**AUT 123 Internship in Automotive Technology II 1 credit**

Corequisites: AUT 114, AUT 115

**AUT 211 Automotive Emissions and Driveability 3 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

Examines the relationship of automotive emissions with engine driveability concerns. Utilizing information presented in AUT 111 and AUT 112, proper diagnosis of driveability concerns and recommended repair procedures are explored to achieve the best performance and reduced emissions. Emission control devices are examined with an emphasis on operation and emission standards. 2 lecture/2 laboratory hours

**AUT 212 Automotive Air Conditioning 3 credits**

Prerequisites: AUT 110, AUT 111 with a minimum C grade

Examines automotive air conditioning/heating systems in use today, with topics ranging from fundamentals of refrigeration to automatic temperature control (ATC) system operation. Addresses proper diagnosis and repair of systems and components as well as environmental obligations. 2 lecture/2 laboratory hours
AVI—Aviation Technology

All flight training courses involving the use of an aircraft are taught in conjunction with Royal Karina Air Service at Trenton-Mercer Airport.

AVI 101 Aerospace Development 3 credits
Historical approach to U.S. and international aviation development including man's first efforts to fly, the development of aircraft, modern growth of the aerospace industry and the impact of aviation and flight on mankind.

AVI 102 Aviation Transportation 3 credits
Study of transportation systems and the aviation industry as they exist today, including applicable government organizations, controls, and regulations as well as career opportunities in aerospace.

AVI 105 Aviation Weather 3 credits
Study of the structure of the atmosphere and weather patterns. Examines weather hazards encountered by commercial pilots, including thunderstorms, turbulence, wind shear, visibility restrictions, icing, and hydroplaning. Coded weather reports, forecasts, weather charts and prognostic charts are utilized in class for flight planning and in-flight decision-making.

AVI 111 Flight Concepts 2 credits
Principles of flight and air navigation, evolution of modern aviation (civil and military), and the basic physiological difficulties experienced in flight. [occasional offering]

AVI 113 Flight I 2 credits
Prerequisites: FAA medical, proof of U.S. citizenship or TSA approval
Corequisite: AVI 131
Flight training required to complete the private pilot program by acquiring the aeronautical skills necessary to meet the requirements for the private pilot certificate. Consists of approximately 50 hours of flight training. Special fee required.

AVI 114 Flight II 2 credits
Prerequisites: AVI 113 with a minimum C grade, proof of U.S. citizenship or TSA approval
Corequisite: AVI 132
Required flight training for the commercial pilot certificate, for the student who has met the requirements for the private pilot certificate in Flight I. Special fee required.

AVI 131 Commercial Pilot I 3 credits
Essentials to pass the Federal Aviation Administration private pilot examination. Subjects include introduction to airplane systems, airports, communications and air traffic control, weight and balance, meteorology, Federal Aviation Regulations, aeronautical charts, radio navigation, Aeronautical Information Manual, flight computer, medical factors of flight and cross-country flying.

AVI 132 Commercial Pilot II 3 credits
Prerequisites: AVI 131, successful grade on FAA private pilot computer exam – airplanes
Corequisite: AVI 113 or AVI 114
Basic knowledge to pass the Federal Aviation Administration commercial pilot examination. Includes multi-engine advanced performance control, advanced meteorology, advanced multi-engine airplane systems, advanced radio navigation, commercial pilot FARs, physiology of flight, environmental systems, flight planning and commercial flight maneuvers.

AVI 203 Aircraft Components 3 credits
Explores basic components and systems of the aircraft including air frames, power plants, wings and empennage, plus elementary concepts of engine operating theory and construction.

AVI 208 Aviation Seminar 1 credit
Guest speakers explain their role in the industry and share insights concerning prerequisite experience, the interview process, and prospects for employment.

AVI 213 Flight III 3 credits
Prerequisite: AVI 114 with a minimum C grade
Corequisite: AVI 231 or MAT 115
Continuation of flight training to obtain the commercial flight certificate, and beginning of instrument flight training. Student completes the solo cross-country requirements and develops a high degree of proficiency in commercial and primary maneuvers. Special fee required.

AVI 214 Flight IV 3 credits
Prerequisite: AVI 213 with a minimum C grade
Students develop a high degree of proficiency in single-engine commercial maneuvers and instrument flying. All flight requirements for the single-engine commercial and instrument rating are completed, and performance meets or exceeds the current FAA instrument and commercial Practical Test Standards. Special fee required.
**AVI 215**  Aeroynamics  3 credits
Corequisite: MAT 115
Analysis of the fundamental theory and elements of applied aerodynamics provides the knowledge and background for safe and effective flying. Lab explores the basic concepts of airfoil angle of attack and lift/drag characteristics. 2 lecture/2 laboratory hours

**AVI 216**  Flight V  4 credits
Prerequisites: Rotary Helicopter Commercial Certificate with an Instrument Rating and proof of U.S. citizenship or TSA approval
Prepares students to meet and/or exceed requirements for the Single Engine Land FAA Commercial Pilot Certificate and an Instrument Rating. Subjects include advanced topics in aircraft performance, preflight procedures, operating procedures, maneuvers, aircraft systems, radio navigation, FAR’s physiology of flight, environmental systems, air traffic systems and procedures, Aeronautical Information Manual, IFR Navigation systems, and IFR Charts and Approach Procedures. 2 lecture/4 laboratory hours

**AVI 231**  Commercial Pilot III  3 credits
Prerequisite: AVI 132
Corequisite: MAT 115
Complements Flight III and Flight IV courses, with basic information to pass the Federal Aviation Administration Instrument Pilot Examination. Subject areas include altitude instrument flying, instrument flight charts, IFR clearances, and IFR regulations. 3 lecture hours

**AVI 233**  Flight Instructor / Airplane  3 credits
Prerequisites: must have passed the FAA Commercial Pilot and Instrument Rating written tests and possess FAA Private Pilot Certificate, or permission of Instructor
Corequisite: AVI 214
Prepares students to pass the Federal Aviation Administration FOI (Fundamentals of Instruction) and FIA (Flight Instructor / Airplane) computer examinations. Includes basic theory of learning and human behavior pertaining to flight instruction, flight instructor's responsibilities, flight training maneuvers, plus review of FARs flight planning and performance. 3 lecture hours

**BCT—Building Construction Technology**

**BCT 104**  Codes for Construction and Design  3 credits
Prerequisites: BCT 110, BCT 120
An overview of regulations for design and/or construction of residences and small buildings, including their applicability and intent subject to the interpretations imposed by the State of New Jersey. 2 lecture/2 laboratory hours

**BCT 110**  Building Construction Materials and Methods I  3 credits
A survey of materials and methods in building construction, emphasizing common construction systems primarily on low-rise light wood and steel structures. Addresses the fundamental processes, organization, and constraints of the construction industry. The building envelope, enclosure systems for thermal insulation, vapor retarders, air barriers, and moisture control are explored with an introduction to the general concepts of sustainable design. 3 lecture hours

**BCT 112**  Building Construction Materials and Methods II  3 credits
Prerequisites: BCT 110, BCT 120
Continued study of materials and methods in building construction with emphasis on concrete and steel frame structures and masonry load-bearing walls. Exterior wall cladding and curtain wall systems are examined relative to concepts of sustainable design. 3 lecture hours

**BCT 120**  Construction Graphics with CAD  4 credits
Prerequisites: BCT 110 or divisional permission
Introduction to the interpretation of construction drawings for residential and light commercial projects, cultivating an understanding of how plans, elevations, sections, and details relate to each other. Students render basic architectural drawings by hand as well as with CAD software, and consistently practice and apply informal sketching techniques. 2 lecture/4 laboratory hours

**BCT 232**  Construction Estimating  3 credits
Prerequisites: BCT 104, BCT 110, BCT 120, ENG 101 or divisional permission
Examination of the role of construction documents for producing construction job estimates, as well as the roles and responsibilities of the construction cost estimator for both residential and light commercial applications. Along with contracts and various bid types, computer estimating software applications are introduced. 3 lecture hours

**BCT 234**  Construction Contracts and Specifications  3 credits
Prerequisites: BCT 104, BCT 110, BCT 120, ENG 101 with a minimum C grade, or divisional permission
A detailed examination of construction documents along with methods for producing general, special, and technical sections of construction specifications. Case studies and class discussions contribute toward analysis of construction contracts and practices with regard to business law and liability, as well as contractor, architect, and engineer responsibilities. Students prepare several technical sections for a small commercial building. 3 lecture hours

**BCT 236**  Construction Project Administration and Management  3 credits
Prerequisites: BCT 232, BCT 234, or divisional permission
Introduction to the design/construction process, contract documents, organization of the construction firm, subcontractor relationships, records and reports, construction safety, and quality control. Bar chart and critical path method scheduling are introduced along with several commonly used computer applications for construction administration and management. 3 lecture hours

**BIO—Biology**

**BIO 100**  Introductory Biology  3 credits
Prerequisite: ENG 034
Corequisite: MAT 037 or MAT 042 or proficiency in basic algebra
Selected fundamental principles of biology for students who have not had high school biology or who need a review before taking other courses in biology, horticulture and the life sciences. Topics include scientific inquiry, chemistry of living organisms, techniques of observation, data gathering and analysis. [Does not fulfill any requirements for the Biology A.S. degree.] 3 lecture hours
### BIO 101 General Biology I 4 credits

**Prerequisites:** high school biology or BIO 100; high school chemistry or CHE 100; MAT 135 or equivalent

Corequisite: ENG 101

Introduces fundamental concepts and principles of biology. Topics include biological chemistry, cell biology, metabolism and energy, cell reproduction, molecular biology, and inheritance. Investigative laboratory exercises develop skills in basic techniques and reinforce lecture material. Required for biology majors.

3 lecture/3 laboratory hours

### BIO 102 General Biology II 4 credits

**Prerequisite:** BIO 101 with a minimum C grade

Introduces fundamental concepts, principles, and applications of biology. Topics include photosynthesis; plant structure, growth and reproduction; animal diversity, form and function; evolution; population ecology; community ecology; and ecosystem dynamics. Investigative laboratory exercises develop skills in basic techniques and reinforce lecture material. Required for biology majors.

3 lecture/3 laboratory hours

### BIO 103 Anatomy and Physiology I 4 credits

**Prerequisite:** proficiency in basic algebra

Corequisite: ENG 101

Systematic approach to the structure and function of the human body; general terminology and organization; cells and tissues; integumentary, muscular, skeletal, and nervous systems. Lab involves microscopy, the study of human anatomy via computer software and preserved specimens, and studies of physiological processes. [Does not fulfill any requirements for the Biology A.S. degree.]

3 lecture/3 laboratory hours

### BIO 104 Anatomy and Physiology II 4 credits

**Prerequisite:** BIO 103 with a minimum C grade or permission of course coordinator

Continuation of BIO 103, covering digestive, circulatory, urinary, reproductive, respiratory, and endocrine systems. Lab includes cat dissection, human anatomy study via computer software and preserved specimens, and studies of physiological processes. [Does not fulfill any requirements for the Biology A.S. degree.]

3 lecture/3 laboratory hours

### BIO 106 Human Anatomy 4 credits

**Prerequisite:** MAT 037 (or MAT 037A and 037B)

Introduction to the human body with emphasis on terminology and body organization from the cellular level to organs systems. Topics include histology and skeletal, muscular, nervous, integumentary, digestive, respiratory, urinary, reproductive, circulatory and endocrine systems. (Designed for programs requiring a one-semester human anatomy course; does not satisfy requirements in biology or health programs.)

3 lecture/2 laboratory hours

### BIO 107 Biological Science Concepts 3 credits

**Prerequisite:** MAT 037 (or MAT 037A and 037B)

Survey of fundamental concepts, principles, and phenomena in biology. Provides a solid scientific basis on which opinions relating to issues in biology can be developed. Topics include diversity of life, cell biology, inheritance, biotechnology, and body processes. Lab exercises employ the scientific method and reinforce lecture concepts. Designed for the non-science major or as a foundational course.

2 lecture/2 laboratory hours

### BIO 114 Environmental Science Concepts 3 credits

**Prerequisite:** ENG 024 or equivalent proficiency

Exploration of the fundamental concepts of our local, regional, and global environment for the non-science major. Topics include aquatic and terrestrial ecosystems, biological and chemical principles relating to current environmental issues, basic ecological relationships which include plants and animals, ecological and technological concerns and advances as well as scientific analysis and solutions to current and future environmental problems.

3 lecture hours

### BIO 115 Microbiological Science Concepts 3 credits

**Prerequisite:** ENG 101 or permission of instructor

Based on the Unseen Life on Earth series developed in conjunction with the American Society of Microbiology. Topics include microbial cell biology, biotechnological uses of microbes, and microbial evolution and ecosystems. Also explores the control of microorganisms and relationships between microbes and higher organisms. [Meets science and technology general education requirement.]

3 lecture hours

### BIO 201 Microbiology 4 credits

**Prerequisite:** BIO 101 or BIO 103 with a minimum C grade or permission of course coordinator

Explores morphology, taxonomy, and metabolism of microbes with emphasis on fungi, protozoa, helminths, viruses and bacteria. Covers the role of microbes in nature, including biotechnology applications and medical importance; human defense mechanisms; and immunology. The lab develops techniques, reinforces certain lecture content, and introduces new material.

3 lecture/3 laboratory hours

### BIO 202 Woody Plants 4 credits

**Prerequisite:** BIO 101 or OHT 101 or permission of course coordinator

Designed for ornamental horticulture, plant science, and biology majors. The lab consists of field studies stressing identification of both native and ornamental species. Covers the use of keys, as time permits. [Spring offering]

3 lecture/3 laboratory hours

### BIO 203 Entomology 4 credits

**Prerequisite:** BIO 101 or BIO 102 or permission of course coordinator

Intensive survey of the orders of insects, covering comparative anatomy, life cycles, physiology and economic importance. Includes management, preservation and identification methods. [Fall offering]

3 lecture/3 laboratory hours

### BIO 204 Ecology 4 credits

**Prerequisite:** BIO 101 with a minimum C grade

Corequisite: BIO 102

Fundamental concepts, theoretical principles, and practical applications of modern ecology: the study of the interactions of organisms with each other and their environment. Laboratory classes of this introductory course involve field work and research projects geared towards ecological application.

3 lecture/3 laboratory hours
**BIO 208** Genetics 4 credits
*Prerequisite: BIO 101 with a minimum C grade or permission of course coordinator*
Explores gene activity at the molecular and organismal levels. Topics include inheritance, chromosome structure and function, gene mapping, genomics, prokaryotic and eukaryotic gene expression, molecular biology, and population genetics. Includes lab exercises in biotechnology, bioinformatics, and classical genetics. 3 lecture/3 laboratory hours

**BIO 215** Principles of Microbiology 3 credits
*Prerequisites: CHE 100 and BIO 103, BIO 104 or BIO 106*
Designed for funeral education students, an introduction to the morphology, taxonomy, physiology, and control of microbes. Emphasizes those microbes which cause disease in humans and presents elements of organic chemistry and biochemistry. 3 lecture hours

**BIO 217** Pathophysiology 3 credits
*Prerequisites: RN licensure or BIO 103 and BIO 104 or permission of course coordinator*
Study of the fundamental changes in body physiology due to disease. Covers the basics of cell biology, inflammation, mechanisms of body defense, specific body systems, and common disorders, with emphasis on disease processes, manifestations, and treatment. 3 lecture hours

**BIO 293** Honors Research in Biology I 2 credits
*Prerequisites: BIO 102 and CHE 102, minimum 3.0 GPA in biology and chemistry courses, and faculty approval*
Under the guidance of an area sponsor in an industrial or academic environment, students participate in a biology research project. Requires a written report and oral presentation to students and faculty at the conclusion of the project period. [Fulfills a technical elective requirement in the Biology and Chemistry programs.] 6 laboratory hours per week

**BUS—Business**

**BUS 101** Introduction to Business 3 credits
*Corequisite: ENG 101*
Survey course of the American business system. Topics include forms of business ownership, financing, economic impacts, human resource management, marketing, management, accounting, the role of government, international issues, workplace ethics, legal concerns, and social responsibility. 3 lecture hours

**BUS 102** Introduction to Sports Management 3 credits
*Prerequisite: ENG 101*
Examination of issues impacting the world of sports and management. Topics include the complexity of leadership, group dynamics, strategic and master planning, risk management, current social issues, Title IX and their effects on professional, intercollegiate, youth and other areas of sport. 3 lecture hours

**BUS 103** Business Mathematics 3 credits
*Prerequisite: proficiency in basic algebra*
Emphasizes the application of mathematics to selected business topics and problems through use of a variety of mathematical concepts including linear equations and descriptive statistics. Topics include formulas and ratios, elementary statistics, percentages, simple interest and discount, and compound interest in addition to marketing and retail mathematics. 3 lecture hours

**BUS 105** Business Writing 3 credits
Intense coverage of grammar, punctuation, and word usage skills. Emphasizes realistic application of current usage and style in today's work world. 3 lecture hours

**BUS 107** Business Law I 3 credits
*Prerequisite: BUS 107 with a minimum C grade*
The law of agency and employment and labor-management relations. Regulation of business organizations: sole proprietorships, partnerships, and corporations. Addresses property law, bailments, personal property, intellectual property, real property, landlord-tenant relationships, wills, estates and trusts, and the evolving role/impact of the global business environment. 3 lecture hours

**BUS 109** Personal Finance 3 credits
*Prerequisite: MAT 108*
Basics of budgeting, buying, income tax, investments, home ownership, and insurance along with emphasis on wills and trusts. 3 lecture hours

**BUS 128** Team Building and Business Management 3 credits
Explores the value of teamwork in a total quality environment, both to identify and solve organizational problems. Analysis of various applications of teamwork within work units, departments, entire companies, as well as in customer and vendor relationships. Opportunities to practice team-building techniques in a simulated work group. 3 lecture hours

**BUS 202** Customer Orientation 3 credits
Explores the fundamentals of customer service, with focus on the “human” side of business and the importance of understanding and supporting those who depend on your business. Students develop core competencies necessary for providing excellent customer service, including an appreciation of diversity, developing loyalty, and dealing with customers. 3 lecture hours

**BUS 205** Business Statistics I 3 credits
*Prerequisite: MAT 135 or MAT 140 with a minimum C grade*
Emphasis on the application of statistical inference in business and economics, with attention to descriptive statistics, probability theory, sampling distribution and inference statistics. Additionally includes testing of hypotheses and confidence intervals. 3 lecture hours

**BUS 206** Business Statistics II 3 credits
*Prerequisite: BUS 205 with a minimum C grade*
Further testing of hypotheses and confidence intervals, plus coverage of regression analysis, chi-square, analysis of variance, and non-parametric measurements with use of several computer-based statistical packages. 3 lecture hours
BUS 209 Business Communications 3 credits
*Prerequisite: ENG 101 or equivalent background*
Practical strategies for developing a clear writing style: organizing ideas, choosing effective words and composing concise paragraphs that make writing clear and persuasive. Includes letters of inquiry, claim, collection, and adjustment as well as resumes and cover letters. Requires oral and written business report.

BUS 210 Principles of Management 3 credits
*Prerequisite: ENG 101*
Provides a framework for managing an organization, including discussion of the key management functions of planning, organizing, staffing, influencing and controlling, with emphasis on ethics and international management issues.

BUS 211 Funeral Service Internship I 2 credits
*Prerequisite: eligibility determined by Director of Funeral Service Programs and is limited to students who are registered as interns with the New Jersey State Board of Mortuary Science or student trainees with the Pennsylvania State Board of Funeral Directors. These sequential courses in the Funeral Service Preparatory program combine business cooperative education (75 percent) and professional work (25 percent) in a cooperating funeral home, where students work under the direction of a licensed funeral director for 16 hours each week. Courses are supervised by the Director of Funeral Service Programs, a field supervisor, and the sponsoring funeral director.

16 work experience/1 seminar hour per week

BUS 218 Principles of Financial Management 3 credits
*Prerequisites: ACC 111; ECO 103 or ECO 111; BUS 205 or divisional permission*
Principles of financial management as applied to the firm, including the role of the finance manager; analysis of financial statements and the firm’s performance; raising capital in the financial markets; the financing mix; valuation of financial assets; long term capital budgeting; working capital management; and international business finance. [occasional offering]

BUS 220 Business Communications 3 credits
*Prerequisite: ENG 101 or equivalent background*
Practical strategies for developing a clear writing style: organizing ideas, choosing effective words and composing concise paragraphs that make writing clear and persuasive. Includes letters of inquiry, claim, collection, and adjustment as well as resumes and cover letters. Requires oral and written business report.

BUS 225 Employee Motivation and Leadership 3 credits
*Prerequisites: ACC 111, ECO 103 or ECO 111, BUS 205 or divisional permission. Principles of financial management as applied to the firm, including the role of the finance manager; analysis of financial statements and the firm’s performance; raising capital in the financial markets; the financing mix; valuation of financial assets; long term capital budgeting; working capital management; and international business finance. [occasional offering]*

BUS 230 Global Environment of Business 3 credits
*Prerequisite: ENG 101*
A survey course introducing the challenges confronting global business due to socio-political, economic, and cultural environments, including a discussion of ethics as it relates to these factors. Students are expected to read about topics such as political economy, cultural variation, trade theory, the international monetary system, foreign investment, and foreign exchange markets.

BUS 239 Entrepreneurship 3 credits
*Prerequisites: ACC 106 or ACC 111 or permission of instructor; ENG 101*
Exposes students to the skills and resources necessary to become a successful entrepreneur. Topics include feasibility studies, cash management, business plans, pricing strategies, ethical issues, financing strategies, and financial statements.

BUS 240 Human Resource Management 3 credits
*Prerequisite: ENG 101*
Examination of human resource management including determination of manpower requirements, the employment process, wage and salary administration, insurance, safety, discipline, and employee relations. Related topics include morale, research, and preparation for collective bargaining.

BUS 244 Introduction to Supply Chain Management 3 credits
*Prerequisites: ACC 106 or ACC 111; ACC 205 or ACC 112; ENG 101; IST 101, IST 102, or CIS 175; MAT 108 or advisor approved equivalent*
A survey course designed to introduce students to the integrated activities of the supply chain, with emphasis on the flow of products, information, cash, and demand. Special topics include the global dimension, the role of technology, and strategic challenges.

BUS 262 International Dimensions of Management 3 credits
*Prerequisite: BUS 230*
Study of how management activities in a global enterprise differ from those in a purely domestic company. Emphasis on cross-cultural interaction and its effects on planning, organizing, staffing and controlling the operations of a multinational company. [occasional offering]

BUS 273 Real Estate Investment 3 credits
*Prerequisite: BUS 276 or equivalent, or permission of instructor*
Study of the changing nature of the real estate market from the perspective of the individual or corporate investor. Covers the government's role in investments, income tax features, mathematics of investments, feasibility studies, and all types of analyses. [occasional offering]

BUS 274 Real Estate Brokerage 6 credits
*Prerequisite: Real Estate license*
Review of property interests and rights, mortgages, leases, business opportunity sales, municipal and state regulations, law of agency. Also covers terminology, mortgage brokerage, real estate investments, zoning subdivision and development, tax appeals, appraisals and evaluations, urban renewal, management, civil rights law, license law, and real estate commission rules and regulations. [occasional offering]

BUS 275 Introduction to Real Estate Appraisal 3 credits
*Prerequisite: Real Estate license*
Practical guide to real estate appraising covers basic principles, the mathematical and technical requirements of data collection, market data, and cost and income approaches to professional appraising. Utilizes both classical and modern methods of reporting. Students prepare several classroom appraisals as well as field projects. [occasional offering]
BUS 276  Real Estate Principles  5 credits
Meets the requirements of the New Jersey Real Estate Commission for salesperson licensing for residential, commercial, or industrial properties. Covers contracts, leasing, mortgages, property management, real estate valuation, the license act, and the laws of agency.  

BUS 296  International Business Practice Firm  3 credits
Prerequisites: sophomore standing and computer literacy
International business model in a simulated business firm provides opportunity to perform business functions (purchasing, accounting, marketing, human resources, etc.) and transact business with other simulated companies throughout the world. Includes decision-making, critical thinking, and team activities.  

BUS 299  Business Cooperative Work Experience  3 credits
Prerequisites: sophomore standing and permission of coordinator
Integration of classroom study with specific planned periods of learning through job experience, designed for all business students. Seminars teach job-specific skills which can be practiced on the job. Course includes employer evaluation.  

CHE—Chemistry

CHE 100  Introductory Chemistry  3 credits
Prerequisite: proficiency in basic algebra
Selected fundamental principles of general chemistry for students who have not had high school chemistry and for those who need a review before taking other chemistry courses. [Does not include laboratory instruction and does not fulfill any requirements in the Chemistry program.]  

CHE 101  General Chemistry I  4 credits
Prerequisite: MAT 135
Corequisite: ENG 101
Basic concepts and theoretical principles of modern chemistry. Topics include stoichiometry; atomic theory and the structure of matter; periodic table; chemical bonding; kinetic-molecular theory and the states of matter; gas laws; solutions; oxidation-reduction; and acid-base systems. Lab work introduces the use of computers for data collection and analysis.  

CHE 102  General Chemistry II  4 credits
Prerequisite: CHE 101 with a minimum C grade or permission Corequisite: MAT 146 or approved equivalent
Theoretical and practical aspects of kinetics; simple and ionic chemical equilibria; thermodynamics; spectrophotometry; electrochemistry; nuclear chemistry; and the major families of chemical elements with emphasis on the transition elements. Lab work includes qualitative cation and anion analysis plus additional computer applications for data collection and analysis.  

CHE 105  Agricultural Chemistry  3 credits
Corequisite: MAT 037 (or MAT 037A and 037B) or proficiency in basic algebra
Introductory course with emphasis on topics needed for an understanding of the basic chemistry of agriculture. [Fall offering]  

CHE 106  Chemical Science Concepts  3 credits
Prerequisite: MAT 037 (or MAT 037A and 037B) or proficiency in basic algebra
Corequisite: ENG 101
Fundamental topics in chemistry and biology are introduced utilizing forensics to explore basic science concepts. Topics include general, organic, and biochemistry, and general and molecular biology. Lab experiments integrate case-study analyses and modern instrumentation with techniques in enzymology, chromatography, microscopy, fingerprinting, DNA analysis, and serology. Prepares the student for informed engagement in society by providing scientific knowledge on which attitudes and opinions can be developed.  

CHE 107  General and Physiological Chemistry  4 credits
Prerequisites: high school chemistry recommended; MAT 037 (or MAT 037A and 037B) or equivalent
Introduction to basic chemical and physical principles and their applications to life processes. Lab exercises illustrate these principles and the behavior of physiologically significant materials.  

CHE 108  Computational Chemistry  1 credit
Prerequisite: MAT 135
Designed primarily for students interested in investigating the relationships between mathematics and science, combines the quantitative and analytical aspects of general chemistry. The analysis, interpretation, and presentation of experimental data are integral to the topics explored.  

CHE 201  Organic Chemistry I  5 credits
Prerequisite: CHE 102 with a minimum C grade
Theoretical principles of reaction mechanisms and the synthesis of important classes of organic compounds. Topics include stereoisomerism; alcohols; ethers; nucleophilic substitution; elimination reactions; and instrumental methods. Lab work introduces the synthesis, purification, separation and identification of organic compounds.  

CHE 202  Organic Chemistry II  5 credits
Prerequisite: CHE 201 with a minimum C grade
Follows CHE 201 with increased emphasis on spectroscopy and mechanisms. Topics include aromatic compounds; electrophilic substitution reactions; carbonyl chemistry; carboxylic acid derivatives; amines, carbohydrates and proteins. Lab work includes methods of synthesis, purification, and spectroscopic identification of organic compounds.  

CHE 205  Analytical Chemistry  4 credits
Prerequisite: CHE 102 with a minimum C grade, MAT 146
Theory and methods of quantitative chemical analysis including gravimetric, volumetric, and certain instrumental approaches. Topics considered include ionic equilibria, oxidation and reduction, precipitation and complex formation, and optical analysis techniques.
Science
CHE 210 Instrumental Analysis 4 credits
Prerequisites: MAT 146 or approved equivalent, CHE 102 with a minimum C grade
Principles and application of some instrumental methods of chemical analysis including potentiometric titrations, conductance, electrodeposition, polarography, amperometric titrations, spectrophotometry, nuclear magnetic resonance, atomic absorption, and gas and liquid chromatography. 3 lecture/3 laboratory hours

CIS 182 PC Applications: Presentations 3 credits
Prerequisite: IST 101 or equivalent proficiency
Students learn how to create effective presentations, including animation and slide show effects. 3 lecture hours

CHE—Chemical Laboratory Technology 3 credits
CHE 281 Cooperative Education II 1 credit
Prerequisite: CHE 280
Continuation of CHE 280 with the exception that there will be no one-hour seminar each week and the student will earn one credit for a total of 90 hours of work for each course.

CHE 293 Honors Research in Chemistry I 2 credits
Prerequisites: BIO 102 and CHE 102, minimum 3.0 GPA in biology and chemistry courses, and faculty approval
Supervised work in a scientific research or testing laboratory, where students learn how the technician contributes to the overall project and how the project team collaborates to fulfill its objectives. Emphasizes the development of lab skills and safety procedures. 1 lecture/180 work experience hours

CHI—Chinese

Note: Students who have taken two or more years of a foreign language, and have done so in the last two years, should begin that language at the 200 level or switch to a new language. If there is doubt, placement will be determined by testing or consultation with the academic division.

CHE 294 Honors Research in Chemistry II 2 credits
Prerequisite: CHE 293

CHE 295 Honors Research in Chemistry III 2 credits
Prerequisite: CHE 294

CHE 296 Honors Research in Chemistry IV 2 credits
Prerequisite: CHE 295

Under the guidance of an area sponsor in an industrial or academic environment, students participate in a chemistry research project. Requires a written report and oral presentation to students and faculty at the conclusion of the project period. [Fulfills a technical elective requirement in the Biology and Chemistry programs.] 6 laboratory hours per week

CHI 102 Beginning Chinese II 3 credits
Prerequisite: CHI 101 with a minimum C grade or permission of instructor
The second in a sequence of courses designed for students with little or no prior knowledge of Mandarin Chinese. Spoken communication in Chinese is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing in both Pinyin and Chinese characters are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

CIS—Computer Information Systems

CIS 112 Introduction to PC Business Applications 3 credits
Prerequisite: OST 111 or equivalent proficiency
Students become proficient in use of Microsoft Office – including Word, Excel, Access, and PowerPoint – to complete practical business projects. 2 lecture/2 laboratory hours

CIS 173 PC Applications: Database 3 credits
Prerequisite: IST 101 or equivalent proficiency
Students acquire a working knowledge of Access, a relational database, with emphasis on creating tables, queries, reports, and forms. 2 lecture/2 laboratory hours

CIS 175 PC Applications: Spreadsheets 3 credits
Prerequisite: IST 101 or equivalent proficiency
Students acquire a working knowledge of Excel with emphasis on formulas, charts, and managing worksheets and lists. 2 lecture/2 laboratory hours

CIS 182 PC Applications: Presentations 3 credits
Prerequisite: IST 101 or equivalent proficiency
Students use Microsoft PowerPoint software to create and customize presentations, including insertion of tables, flow-charts and organization charts. Students work with objects, lines, fills and colors, text manipulation, drawing techniques, animation and slide show effects. 2 lecture/2 laboratory hours
CIV 280 PC Applications: Project Management 3 credits
Prerequisite: IST 209
Explores frequently used tools for project management. Addresses usage of a major software package to build project plans complete with tasks and resources, to format project reports, to track actual work against the plan, and to take corrective action when things get off track. 2 lecture/2 laboratory hours

CIV—Civil Engineering Technology

CIV 101 Surveying I 3 credits
Corequisites: MAT 115 or MAT 110 or approved equivalent; ENT 116 or prior drafting experience; DRA 190
Introduces the three basic surveying tools – the tape, level, and transit/theodolite – along with proper field procedures for basic surveying. These include taking field notes, tapping and EDM, leveling, bearings and azimuths, topography, and mapping – the latter including an introduction to computer-aided design. 2 lecture/3 laboratory hours

CIV 102 Surveying II 3 credits
Prerequisite: CIV 101 or permission of instructor
Application of the fundamentals and techniques achieved in elementary surveying to solve additional problems in vertical curves, horizontal curves, traversing computations and profiles. Computations include bearings and azimuths, latitudes and departures, areas, and use of the planimeter. Applies AutoCAD and land development software, plus "Total Station" survey equipment for traversing, radial stakeout, and layout of horizontal curves. 2 lecture/3 laboratory hours

CIV 103 Statics 3 credits
Prerequisites: MAT 146 with a minimum C grade; one semester of high school or college physics
Corequisite: MAT 151
Calculus-based introduction to the basic principles of engineering statics, including terminology and types of force systems, for engineering science students. Topics include the resultant force of a force system; distributed and concentrated forces; force systems in equilibrium, trusses, frames and machines; friction; centroids; and moments of inertia. 3 lecture hours

CIV 104 Applied Mechanics 3 credits
Prerequisite: MAT 110 or divisional permission
Introduction to the basic principles of engineering mechanics for study of applied technology. Topics include terminology, types of force systems, determination of the resultant force of force systems, analysis of coplanar force systems in equilibrium, centroids, and moments of inertia and friction. 3 lecture hours

CIV 106 Mechanics 3 credits
Prerequisite: MAT 115 or MAT 110 or divisional permission
Introduction to the basic principles of engineering mechanics, including terminology and types of force systems, for engineering technology students. Topics include the resultant force of a force system, distributed and concentrated forces, force systems in equilibrium, trusses, frames and machines, friction, centroids, and moments of inertia. 3 lecture hours

CIV 216 Highway Engineering 3 credits
Prerequisites: MAT 115 and ENT 116
Corequisites: CIV 102, DRA 190, or divisional permission
Explores the planning, design, construction, and characteristics of highways and city streets, including layout, traffic requirements, safety and control, drainage, subgrade structure, base courses, and surface pavements. Problems to be solved include geometric design, traffic volume, channelization, and hydrology. Lab projects involve roadway design. [Spring offering] 2 lecture/2 laboratory hours
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
<th>Prerequisites</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>CMN 101</td>
<td>Mass Media</td>
<td>3</td>
<td>ENG 101</td>
<td>Survey of the growth and development of books, newspapers, magazines,</td>
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<td>film, radio, television, cable, the Internet, and new media delivery systems.</td>
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<tr>
<td>CMN 102</td>
<td>Media Issues and Ethics</td>
<td>3</td>
<td>ENG 101</td>
<td>An examination of current issues and ethical dilemmas in mass media such as</td>
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<td>sensationalism, press censorship, violence, political coverage, rights of</td>
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<td>privacy, and photo manipulation. The implications of recent developments in</td>
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<td>CIV 230</td>
<td>Mechanics of Solids</td>
<td>4</td>
<td>CIV 103 and MAT 151 with a minimum C grade</td>
<td>Calculus-based introduction to engineering materials and their mechanical</td>
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<td>properties, examining strains that occur in elastic bodies subjected to</td>
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<td>direct and combined stresses, shear and bending moment diagrams, deflections</td>
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<td>of beams, and stresses due to torsion. Lab testing involves various</td>
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<td>materials such as cast iron, steel, brass, aluminum, and wood to determine</td>
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<td>their physical properties and demonstrate various testing techniques.</td>
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<td>CIV 237</td>
<td>Mechanics of Materials Fundamentals</td>
<td>4</td>
<td>CIV 104 with a minimum C grade</td>
<td>Study of the fundamental concepts of stress and strain of elastic bodies</td>
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<td>when subjected to axial or bending loads. Analyzes shear and bending</td>
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<td>moment diagrams, considers compression members, and introduces principles of</td>
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<td>torsion. The lab introduces various testing procedures to determine the</td>
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<td>physical properties of such materials as steel, aluminum, brass, cast iron,</td>
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<td>and wood. [Fall offering]</td>
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<td>CIV 281</td>
<td>Cooperative Education I – Civil Engineering Technology</td>
<td>2</td>
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<td>Relevant experiences to complement classroom instruction with practical</td>
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<td>on-the-job application of engineering practices in local industry for</td>
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<td>constructional/civil engineering students. Additional expenses for travel,</td>
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<td>clothing, and equipment may be incurred.</td>
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<td>CIV 282</td>
<td>Cooperative Education II – Civil Engineering Technology</td>
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<td>Continuation of CIV 281. Students may also enroll in CIV 281 concurrently.</td>
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<td>90 work experience hours</td>
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<tr>
<td>CMN 111</td>
<td>Speech: Human Communication</td>
<td>3</td>
<td>ENG 101</td>
<td>Exploration of the fundamental elements, characteristics, and processes of</td>
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<td>communication, including communicating in a multicultural society,</td>
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<td>interpersonal, intrapersonal, as well as small group contexts. Oral</td>
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<td>presentation experiences are heavily integrated throughout the course with</td>
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<td>a focus on public speaking design and delivery.</td>
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<tr>
<td>CMN 112</td>
<td>Public Speaking</td>
<td>3</td>
<td>ENG 101</td>
<td>Theory and practice of strategic, confident, and credible public speaking.</td>
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<td>Involves a variety of oral presentation experiences, including special</td>
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<td>occasion, personal experience, panel/group discussion, impromptu,</td>
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<td>informative and persuasive speaking. Focus on anxiety management, speech</td>
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<td>design, communication ethics, diverse audiences, and dynamic delivery.</td>
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<tr>
<td>CMN 122</td>
<td>Organizational Communication</td>
<td>3</td>
<td>ENG 101</td>
<td>Study of the knowledge, skills, sensitivity, and values associated with the</td>
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<td>variety of communications within and between organizations. An exploration</td>
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<td>of various methods, channels, and audiences of organizational communication</td>
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<td>in the corporate world.</td>
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<tr>
<td>CMN 131</td>
<td>Journalism I</td>
<td>3</td>
<td>ENG 101</td>
<td>Introduction to the news media with particular emphasis on the newspaper</td>
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<td>and newswriting, the history of the press, and controversial issues facing</td>
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<td>the press. Active participation with the student paper, The College Voice,</td>
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<td>is integral.</td>
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<tr>
<td>CMN 141</td>
<td>Introduction to TV Production</td>
<td>3</td>
<td>CMN 141 with a minimum C grade</td>
<td>Basic theory and operation of TV production equipment including camera,</td>
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<td>switcher, character generator, prompter, audio console, and lighting.</td>
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<td>Following study of studio procedure, students plan, produce, write, and</td>
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<td>direct several short video productions.</td>
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<tr>
<td>CMN 142</td>
<td>Intermediate TV Production</td>
<td>3</td>
<td>CMN 141 with a minimum C grade</td>
<td>Production of programming with complete formats such as news, interview,</td>
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<td>music, drama, and fashion. Students plan, produce, write, and direct</td>
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<td>15-minute interview/demonstration programs.</td>
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<tr>
<td>CMN 143</td>
<td>Graphics and Effects for Video</td>
<td>3</td>
<td>CMN 141 with a minimum C grade</td>
<td>Techniques for using graphics and visual effects to enhance video productions</td>
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<td>through the use of digital imaging and compositing software. A variety of</td>
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<td>multimedia production projects reinforces proper file management and image</td>
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<td>compression techniques.</td>
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Special: Humanities
CMN 107 | Cinema | 3 credits | ENG 101 | Introduction to the news media with particular emphasis on the newspaper and newswriting, the history of the press, and controversial issues facing the press. Active participation with the student paper, The College Voice, is integral. 3 lecture hours

Special: Communication
CMN 122 | Organizational Communication | 3 credits | ENG 101 | Study of the knowledge, skills, sensitivity, and values associated with the variety of communications within and between organizations. An exploration of various methods, channels, and audiences of organizational communication in the corporate world. 3 lecture hours

Special: Communication
CMN 111 | Speech: Human Communication | 3 credits | ENG 101 | Exploration of the fundamental elements, characteristics, and processes of communication, including communicating in a multicultural society, interpersonal, intrapersonal, as well as small group contexts. Oral presentation experiences are heavily integrated throughout the course with a focus on public speaking design and delivery. 3 lecture hours

Special: Communication
CMN 112 | Public Speaking | 3 credits | ENG 101 | Theory and practice of strategic, confident, and credible public speaking. Involves a variety of oral presentation experiences, including special occasion, personal experience, panel/group discussion, impromptu, informative and persuasive speaking. Focus on anxiety management, speech design, communication ethics, diverse audiences, and dynamic delivery. 3 lecture hours

Special: Communication
CMN 122 | Organizational Communication | 3 credits | ENG 101 | Study of the knowledge, skills, sensitivity, and values associated with the variety of communications within and between organizations. An exploration of various methods, channels, and audiences of organizational communication in the corporate world. 3 lecture hours

Special: Communication
CMN 131 | Journalism I | 3 credits | ENG 101 | Introduction to the news media with particular emphasis on the newspaper and newswriting, the history of the press, and controversial issues facing the press. Active participation with the student paper, The College Voice, is integral. 3 lecture hours

Special: Communication
CMN 141 | Introduction to TV Production | 3 credits | CMN 141 with a minimum C grade | Basic theory and operation of TV production equipment including camera, switcher, character generator, prompter, audio console, and lighting. Following study of studio procedure, students plan, produce, write, and direct several short video productions. 2 lecture/2 studio hours

Special: Communication
CMN 142 | Intermediate TV Production | 3 credits | CMN 141 with a minimum C grade | Production of programming with complete formats such as news, interview, music, drama, and fashion. Students plan, produce, write, and direct 15-minute interview/demonstration programs. 2 lecture/2 studio hours

Special: Communication
CMN 143 | Graphics and Effects for Video | 3 credits | CMN 141 with a minimum C grade | Techniques for using graphics and visual effects to enhance video productions through the use of digital imaging and compositing software. A variety of multimedia production projects reinforces proper file management and image compression techniques. 2 lecture/2 laboratory hours

Special: Communication
CMN 122 | Organizational Communication | 3 credits | ENG 101 | Study of the knowledge, skills, sensitivity, and values associated with the variety of communications within and between organizations. An exploration of various methods, channels, and audiences of organizational communication in the corporate world. 3 lecture hours

Special: Communication
CMN 131 | Journalism I | 3 credits | ENG 101 | Introduction to the news media with particular emphasis on the newspaper and newswriting, the history of the press, and controversial issues facing the press. Active participation with the student paper, The College Voice, is integral. 3 lecture hours

Special: Communication
CMN 141 | Introduction to TV Production | 3 credits | CMN 141 with a minimum C grade | Basic theory and operation of TV production equipment including camera, switcher, character generator, prompter, audio console, and lighting. Following study of studio procedure, students plan, produce, write, and direct several short video productions. 2 lecture/2 studio hours

Special: Communication
CMN 142 | Intermediate TV Production | 3 credits | CMN 141 with a minimum C grade | Production of programming with complete formats such as news, interview, music, drama, and fashion. Students plan, produce, write, and direct 15-minute interview/demonstration programs. 2 lecture/2 studio hours

Special: Communication
CMN 143 | Graphics and Effects for Video | 3 credits | CMN 141 with a minimum C grade | Techniques for using graphics and visual effects to enhance video productions through the use of digital imaging and compositing software. A variety of multimedia production projects reinforces proper file management and image compression techniques. 2 lecture/2 laboratory hours
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<th>Course Code</th>
<th>Title</th>
<th>Credits</th>
<th>Prerequisites or Corequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>CMN 144</td>
<td>Screenwriting</td>
<td>3</td>
<td>Prerequisites or Corequisites: ENG 101, ENG 102</td>
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<tr>
<td></td>
<td>Aimed at the conception, planning and writing of screenplays. Through a series of writing exercises, scenes, short scripts and treatments, the student is expected to complete a 20-page short film script. The basics of character development, narrative, structure, texture, genre, and the ability to visualize in writing are explored. 2 lecture/2 laboratory hours</td>
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<td>CMN 145</td>
<td>Acting/Directing for the Camera</td>
<td>3</td>
<td>Corequisite: ENG 101</td>
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<td>Focuses on the application of acting and directing actors for single-camera film production. This hands-on course addresses the aesthetics, theory and practice of camera placement, shot execution, and the many aspects of directing the actor. 2 lecture/2 laboratory hours</td>
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<tr>
<td>CMN 146</td>
<td>Social Media Technologies</td>
<td>3</td>
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<td>Extensive exploration of current social media technologies, utilizing the Mac platform, for storytelling and narrative purposes. With emphasis on usability, management and distribution, topics include multimedia development and design; the media elements of text, graphics, sound and video; and trends in emerging hardware and software. Multimedia projects demonstrate technical understanding and coherent narratives. 2 lecture/2 laboratory hours</td>
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<tr>
<td>CMN 151</td>
<td>Introduction to Radio</td>
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<td>Orientation to commercial radio in the United States. Topics include historical development, ownership, management, programming, music, sales, promotion, radio journalism, commercial copy writing, audience measurement, the ethics of broadcasting, and government regulation. Students learn the hands-on technical skills necessary to operate both analog and digital consoles and audio editing software. Production projects include newscasts, commercials, and music programs. 2 lecture/2 studio hours</td>
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<tr>
<td>CMN 153</td>
<td>Digital Audio Production I</td>
<td>3</td>
<td>Prerequisite: CMN 151 with a minimum C grade</td>
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<td>Students practice and develop audio production techniques used in broadcasting and other commercial applications. Theory of audio fundamentals combines with lab exploration of digital editing, digital multi-tracking, digital music creation, synchronizing audio with video. Students write and/or produce commercials, documentaries and short soundtracks for video and other entertainment venues. 2 lecture/2 studio hours</td>
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<tr>
<td>CMN 161</td>
<td>Writing for Media</td>
<td>3</td>
<td>Prerequisite: ENG 101</td>
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<td></td>
<td>Overview of written formats commonly used in radio and television. Writing assignments include 30- and 60-second radio and television program announcements, broadcast news copy, interviews, public service announcements, and dramatic teleplays. 3 lecture hours</td>
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<tr>
<td>CMN 201</td>
<td>Persuasion and Propaganda</td>
<td>3</td>
<td>Prerequisite: CMN 111 or CMN 112</td>
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<td>Inquiry into the forces of persuasion and propaganda as they exist in a technological society and how they influence beliefs, attitudes and actions. 3 lecture hours</td>
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<tr>
<td>CMN 211</td>
<td>Interpersonal Communication in Human Relations</td>
<td>3</td>
<td>Prerequisite: CMN 111 or CMN 112</td>
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<td>Combining theory and practice, examines the nature and skills of interpersonal communication. Emphasizes the uniqueness of interpersonal communication as opposed to other forms of human communication. 3 lecture hours</td>
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<tr>
<td>CMN 212</td>
<td>Oral Interpretation</td>
<td>3</td>
<td>Prerequisite: CMN 111 or CMN 112</td>
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<td>Corequisite: ENG 102</td>
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<td>Introduction to the process of illustrating the relationship between literature, interpreter, and audience through performance production. Students analyze, interpret and value the contextual, structural, historical and cultural intent of traditional and non-traditional literary forms and design a variety of related individual and collaborative performances. Additional focus on communicative competence, audience analysis, anxiety management tools, group work, constructive critique, and vocal variety technique. 3 lecture hours</td>
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<tr>
<td>CMN 214</td>
<td>Issues in Intercultural Communication in the U.S.</td>
<td>3</td>
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<td></td>
<td>Examines communication that bridges diverse cultures, values and realities. Explores racial, sexual, and class identities and the impact of privilege on the ability to relate to others. Develops effective communication skills for addressing obstacles to global citizenship. 3 lecture hours</td>
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<tr>
<td>CMN 215</td>
<td>Communication and Gender</td>
<td>3</td>
<td>Prerequisite: ENG 101 or equivalent English skills</td>
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<td></td>
<td>Critically analyzes issues of gender and communication. Examines theoretical perspectives used to explain gender phenomena, gender socialization, male and female interactions and stereotypes, with an emphasis on improving communication skills. 3 lecture hours</td>
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<tr>
<td>CMN 231</td>
<td>Journalism II</td>
<td>3</td>
<td>Prerequisite: ENG 101</td>
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<td>Addresses the various kinds of newswriting (straight news, features, interpretative, editorial), editing, and the techniques of reporting (interviewing; surveys; coverage of events, meetings, speeches). Actual newspaper production aspects including layout, photojournalism, and graphics are experienced through practical work on the student paper, The College Voice. 3 lecture hours</td>
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<tr>
<td>CMN 241</td>
<td>Applied Field Production for Video</td>
<td>3</td>
<td>Prerequisites: CMN 141, CMN 142, CMN 143 with a minimum C grade</td>
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<td>Develops practical skills and knowledge of video production while executing a project for a community client in a professional atmosphere. Pre-production, production, and post-production activities center around the realities of client expectations, professional deadlines, and working together as one production unit. Advanced post-production techniques are implemented utilizing professional-level software and applications. 2 lecture/2 laboratory hours</td>
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<tr>
<td>CMN 242</td>
<td>Advanced Film Production</td>
<td>3</td>
<td>Prerequisites: CMN 141, CMN 142, CMN 143, CMN 241</td>
</tr>
<tr>
<td></td>
<td>Advanced television students enhance knowledge and skills while writing, editing, producing and marketing a short film or documentary. Students apply pre-production, production, and post-production skills with the goal of competing in a television program film festival. 2 lecture/2 studio hours</td>
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<tr>
<td>CMN 243</td>
<td>Cinematography</td>
<td>3</td>
<td>Prerequisites: CMN 141, CMN 142</td>
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<td></td>
<td>Covers directing, lighting, and camera work through lecture and text materials. Includes an overview of cinematic production with attention to the art of lighting and cinematography. Additionally introduces steadicam camera technique, camera lens systems, cinema lighting techniques, and hi-definition image acquisition. 2 lecture/2 studio hours</td>
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</tbody>
</table>
CMN 250 Announcing for Radio and Electronic Media 3 credits
Prerequisite: CMN 151 with a minimum C grade or permission of course coordinator
Students explore, practice and develop announcing techniques used in broadcasting and other commercial applications. Practical assignments provide training for a variety of professional roles such as radio disc jockeys, broadcast journalists, voice-over announcers, and voice actors. Students produce commercials, public service announcements, interview programs, and corporate/industrial voice-overs and simulate the on-air sound of various radio station formats. 2 lecture/2 laboratory hours

CMN 252 Applied Radio Programming and Production 3 credits
Prerequisites: CMN 153 and CMN 250 with a minimum C grade
Study of the development and nature of current radio formats, programming philosophies, and group ownership. Students analyze and critique current radio formats and create a commercially-viable format of their own. Students apply advanced production techniques to produce station “ imagers,” format demos, and an audition CD suitable for entry-level positions. 2 lecture/2 studio hours

CMN 253 Digital Audio Production II 3 credits
Prerequisite: CMN 153
An overview of multitrack recording techniques using state-of-the-art digital audio workstations. Topics include mastering techniques, digital signal processing, auto-tune, session management, and techniques for real-time and processed audio plug-ins including reverb, delay, sampling, automation, MIDI sequencing, and virtual instruments. Students produce multi-layered recordings using live talent in a studio environment. 2 lecture/2 laboratory hours

CMN 254 Live Sound Reinforcement 3 credits
Prerequisite: ETT 102 or permission of coordinator
Basic principles of the behavior of sound in various environments, with emphasis on signal flow, acoustics, sound reinforcement setups and installation, signal processing, as well as microphone selection and placement. Includes setting up sound systems and mixing live music. Topics include microphones, recording equipment, control consoles, reproduction techniques, amplification, distribution, loudspeaker systems, frequency response, decibels, and dynamic range. 2 lecture/2 laboratory hours

CMN 255 Sound Design for the Entertainment Industry 3 credits
Prerequisites: CMN 153, CMN 254
Examines audio production techniques, technologies, and aesthetics related to the development of a compelling soundtrack for theatre, television, radio or the Internet. Through training in all phases of digital sound recording, editing and mixing, students work with location and field recording equipment and use advanced editing and mixing techniques associated with digital audio workstations. 1 lecture/4 laboratory hours

CMN 260 Convergence Newsroom 3 credits
Prerequisite: CMN 131
A multimedia capstone course in convergence media. Students complete all elements of online and print news including writing a variety of journalistic articles, taking photographs, making and editing video footage, designing info graphics, learning the fundamentals of marketing and preparing all content for both online and print formats. 2 lecture/2 laboratory hours

CMN 274 Radio/TV Management 3 credits
Prerequisites: CMN 101, CMN 141, CMN 151 with a minimum C grade
Study of the functions of middle and upper managers of radio, television, and cable operations. As individuals and as members of a management team, students solve case studies of typical problems faced by general managers, program directors, news directors, promotions directors, and sales managers in broadcast and cable companies. [Spring offering] 3 lecture hours

CMN 285 Special Studies in Television Production 3 credits
Prerequisites: CMN 242, CMN 290, minimum 3.0 GPA, and divisional permission
Opportunity for students who have completed all regular television writing and production courses to continue their studies at an advanced level. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offering]

CMN 286 Special Studies in Radio Production 3 credits
Prerequisites: CMN 161, CMN 252, minimum 3.0 GPA, and divisional permission
Opportunity for students who have completed all regular radio writing and production courses to continue their studies at an advanced level. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Occasional offering]

CMN 287 Special Studies in Communication 3 credits
Prerequisites: second-year standing as a Communications major at MCCC and permission of the program coordinator; minimum 3.0 GPA
Opportunity for students who have completed all regular communication and communication writing courses to continue their studies at an advanced level. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines.

CMN 290 Internship: Communications 3 credits
Prerequisites: second-year standing and coordinator approval
Work experience at a radio station, TV station, cable system, industrial or instructional TV facility, or other allied business. 1 lecture/180 work experience hours

CMN 294 Summer Film Program 3 credits
Advanced film students, working within teams of six, write, produce and edit a short film. Students apply pre-production, production, and post-production skills with the goal of competing in local film festivals. 2 lecture/2 laboratory hours

COL—College Success
See also ASK—Academic Skills. Applicability of these credits toward degree requirements is limited. Consult an academic advisor.

COL 100 Strategies for Academic Success 3 credits
Develops the skills necessary for academic success in college. Lecture topics are reinforced during computer laboratory hours, with attention to critical thinking, information literacy, communication, and technology skills woven throughout. Designed primarily for first semester students but open to all. 3 lecture hours
### COS—Computer Science

<table>
<thead>
<tr>
<th>COURSE</th>
<th>TITLE</th>
<th>CREDITS</th>
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</tr>
</thead>
<tbody>
<tr>
<td>COS 101</td>
<td>Introduction to Computer Science</td>
<td>4 credits</td>
<td>Introduces both majors and non-majors to programming and to the concepts and topics of computer science, including computer architecture, algorithm analysis, operating systems, and programming languages. Students develop algorithmic thinking and abstraction through problem design and language structures using a 3-D animation programming language.</td>
</tr>
<tr>
<td>COS 102</td>
<td>Computer Science I – Algorithms and Programming</td>
<td>4 credits</td>
<td>Algorithm design and object-oriented programming in the Java language. Topics include data representation, input/output, control structures, exception handling, classes, methods, inheritance, polymorphism, encapsulation, overloading and dynamic memory. [Spring offering] 3 lecture/2 laboratory hours</td>
</tr>
<tr>
<td>COS 204</td>
<td>Discrete Mathematical Structures</td>
<td>4 credits</td>
<td>Primarily intended for Computer Science majors, covers wide variety of topics serving as the mathematical framework for the design and analysis of algorithms. Topics include induction and recursion, relations, functions, sets, propositional logic, Boolean algebra, grammars, permutations and combinations, and finite state machines. [Spring offering] 3 lecture/2 laboratory hours</td>
</tr>
<tr>
<td>COS 210</td>
<td>Computer Science II – Data Structures</td>
<td>4 credits</td>
<td>Study of advanced programming topics focused on logical structures of data as well as the design, implementation and analysis of algorithms operating on these structures. Topics include linked lists, stacks, trees, queues, graphs and analysis of efficiency. Also covers searching, sorting and hashing techniques. [Spring offering] 3 lecture/2 laboratory hours</td>
</tr>
<tr>
<td>COS 231</td>
<td>Fundamentals of Computer Architecture</td>
<td>4 credits</td>
<td>Explores the levels of organization in digital computers: logic circuit design, integrated circuits, and assembly language coding.</td>
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</table>

### CRJ—Criminal Justice

<table>
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<th>DESCRIPTION</th>
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</thead>
<tbody>
<tr>
<td>CRJ 101</td>
<td>Introduction to the Criminal Justice System</td>
<td>3 credits</td>
<td>Overview of the systems of criminal justice in the United States, including a survey of the agencies for the administration of justice and the relationships among them.</td>
</tr>
<tr>
<td>CRJ 102</td>
<td>Police in the Community</td>
<td>3 credits</td>
<td>Study of the relationship between the police and the public they serve with particular emphasis on ethical standards, human relations, civil rights, and community service.</td>
</tr>
<tr>
<td>CRJ 103</td>
<td>Introduction to Corrections</td>
<td>3 credits</td>
<td>Study of the relationship between the correction officer and the prisoner including the history of corrections, the rights of the confined, parole and work release, and the philosophies of rehabilitation and punishment.</td>
</tr>
<tr>
<td>CRJ 104</td>
<td>Introduction to Security</td>
<td>3 credits</td>
<td>Introduction to the historical, philosophical, and legal bases of the security field. Examines all aspects of private security systems and functions, including the technology of security and the role of security in different organizational settings. [Occasional offering] 3 lecture hours</td>
</tr>
<tr>
<td>CRJ 105</td>
<td>Criminology</td>
<td>3 credits</td>
<td>In-depth analysis and evaluation of criminal behavior including street crime, organized crime, and occupational crime. Students learn to investigate, categorize, and describe the theories of criminality and social control. 3 lecture hours</td>
</tr>
<tr>
<td>CRJ 202</td>
<td>Criminal Law</td>
<td>3 credits</td>
<td>Examines the evolution and development of criminal laws as well as the nature of crime, basic principles of criminal law, plus defenses and court presentations.</td>
</tr>
<tr>
<td>CRJ 206</td>
<td>Police Administration</td>
<td>3 credits</td>
<td>Examines the contemporary law enforcement agency and its functions, structure, and operational techniques; implications of specialized and generalized units; development of resources by time and area of function; analysis of line, staff, and auxiliary functions; and current issues facing today's police agencies. 3 lecture hours</td>
</tr>
<tr>
<td>CRJ 207</td>
<td>Criminal Investigation</td>
<td>3 credits</td>
<td>The strategies, techniques, and methods employed in criminal investigations – at the crime scene, follow-up investigation, modus operandi, sources of information, and interrogation.</td>
</tr>
<tr>
<td>CRJ 211</td>
<td>Community Corrections</td>
<td>3 credits</td>
<td>Examines the major types of community-based correctional alternatives such as fines, community service, drug courts, probation, day reporting centers, halfway houses, parole, and other intermediate sanctions. Covers correctional law and management, controversies, political pressures, and emerging trends. 3 lecture hours</td>
</tr>
<tr>
<td>CRJ 212</td>
<td>Juvenile Justice</td>
<td>3 credits</td>
<td>Overview of the major issues in the field of juvenile justice, including causes of delinquency and the development of modern treatment methods. Emphasis on the delinquent's relationships with family, school, peers, and the juvenile justice system. 3 lecture hours</td>
</tr>
<tr>
<td>CRJ 299</td>
<td>Cooperative Education – Criminal Justice</td>
<td>3 credits</td>
<td>Exposure to the philosophy, goals, and daily operations of a criminal justice agency. Through supervised work, the student experiences the roles of criminal justice employees and evaluates their responsibilities. Designed for the student interested in the realistic application of criminal justice theory to the justice system. [Occasional offering] 1 lecture/180 work experience hours</td>
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### DAN—Dance

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</tr>
</thead>
<tbody>
<tr>
<td>DAN 101</td>
<td>Introduction to Dance and Culture</td>
<td>3 credits</td>
<td>Introductory study of dance as an art form, investigating the impact of gender, politics, religion, and culture on how dance is perceived. Develops a fuller appreciation of how dance has been used over the course of human history in western and non-western cultures to communicate human needs and to express what words cannot communicate. [Fall and Spring offering] 3 lecture hours</td>
</tr>
</tbody>
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### COURSES

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>DAN 102</td>
<td>Ballet I</td>
<td>2</td>
<td>Introduces traditional or classic ballet terminology, forms, and techniques. Emphasizes body alignment and physical skill needed for proper classical ballet movements. [Spring offering] 3 studio hours</td>
</tr>
<tr>
<td>DAN 103</td>
<td>Modern Dance I</td>
<td>2</td>
<td>Introduces the techniques and motor skills of modern dance, including basic body skills, placement, alignment, and continuity. [Fall offering] 3 studio hours</td>
</tr>
<tr>
<td>DAN 105</td>
<td>Jazz Dance I</td>
<td>2</td>
<td>Fundamentals of jazz dance techniques with emphasis on syncopated rhythms and isolation of the body. [Fall and Spring offering] 3 studio hours</td>
</tr>
<tr>
<td>DAN 112</td>
<td>Ballet II</td>
<td>2</td>
<td>Study of ballet technique on an intermediate level. [Spring offering] 3 studio hours</td>
</tr>
<tr>
<td>DAN 113</td>
<td>Modern Dance II</td>
<td>2</td>
<td>Study of modern dance techniques on an intermediate level, and an introduction to repertory. [Fall offering] 3 studio hours</td>
</tr>
<tr>
<td>DAN 115</td>
<td>Jazz Dance II</td>
<td>2</td>
<td>Study of jazz dance techniques on an intermediate level, with emphasis on syncopated rhythms and isolation of the body. [Fall and Spring offering] 3 studio hours</td>
</tr>
<tr>
<td>DAN 116</td>
<td>Studio Dance Technique I</td>
<td>3</td>
<td>3 studio hours</td>
</tr>
<tr>
<td>DAN 117</td>
<td>Studio Dance Technique II</td>
<td>3</td>
<td>3 studio hours</td>
</tr>
<tr>
<td>DAN 118</td>
<td>Studio Dance Technique III</td>
<td>3</td>
<td>3 studio hours</td>
</tr>
<tr>
<td>DAN 119</td>
<td>Studio Dance Technique IV</td>
<td>3</td>
<td>3 studio hours</td>
</tr>
<tr>
<td>DAN 120</td>
<td>Choreography I</td>
<td>3</td>
<td>Introduces several choreographic strategies used to develop an idea into a dance structured for the stage. Students are exposed to the tools of choreography beginning with basics – time, space, and force – and then move on to more complex issues faced by intermediate choreographers: form, style, abstraction, compositional structures, and choreographic devices. [Spring offering] 2 lecture/2 studio hours</td>
</tr>
<tr>
<td>DAN 205</td>
<td>Special Studies in Dance</td>
<td>3</td>
<td>Opportunity for students who have completed regular course offerings to continue their studies at an advanced level. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [Fall offering] 6 studio hours</td>
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### DMA—Digital Media Arts

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<tr>
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<tbody>
<tr>
<td>DMA 105</td>
<td>Introduction to Computer Art</td>
<td>3</td>
<td>Introduction to the use of the computer as an art and design tool. Emphasizes fundamental color computer graphics skills through practical experience with two-dimensional drawing, timeline, image editing, and 3D spatial programs currently used by art and design professionals. Hardware used includes Macintosh or PC computers, scanners, and black-and-white and color printers. 1 lecture/4 studio hours</td>
</tr>
<tr>
<td>DMA 110</td>
<td>Digital Imaging</td>
<td>3</td>
<td>Designed to meet the needs of artists and designers in diverse fields, involves the leading professional paint and photo retouching software. Addresses the practical and creative aspects of producing art and illustrations and manipulating photographs and other images through a series of hands-on assignments. 1 lecture/4 laboratory hours</td>
</tr>
<tr>
<td>DMA 120</td>
<td>3-D Modeling I</td>
<td>3</td>
<td>Develops visual problem-solving abilities using computers as art and design tools. Students create and manipulate three-dimensional forms and scenes, their colors, surface textures, lighting and cameras to design effective compositions in virtual 3-D space. Useful for graphic arts, communications, interior design and architectural professions. Windows-based PC computers, scanners, and current professional software are used. 1 lecture/4 studio hours</td>
</tr>
<tr>
<td>DMA 125</td>
<td>Pre-Production Design</td>
<td>3</td>
<td>Pre-production planning and design for animation and interactive media. Without use of computers, students learn to apply creative thinking, design principles and production processes essential to the creation of successful animations and multimedia programs. Practical experience in concept generation, concept drawing, storyboarding, and project organization. 1 lecture/4 studio hours</td>
</tr>
<tr>
<td>DMA 135</td>
<td>Digital Narrative</td>
<td>3</td>
<td>Exploration of narrative art, its structure and approaches as it applies to time-based graphics. Students investigate narrative in a variety of formats – from comics to animation to film editing and various “artistic” permutations in between – with emphasis on current digital practices. 1 lecture/4 studio hours</td>
</tr>
<tr>
<td>DMA 140</td>
<td>Interactive Web Animation</td>
<td>3</td>
<td>Introduction to two-dimensional animation using the professional software application Flash to create short animations for the Web or television and simple Web games and interfaces. Specific instruction includes how to draw and animate vector graphics, import audio, create buttons and symbols, and use Actionscripting to create nonlinear interactivity and animation. 1 lecture/4 studio hours</td>
</tr>
<tr>
<td>DMA 144</td>
<td>Internet Tools and Techniques</td>
<td>3</td>
<td>Introduction to the tools and techniques used to create blogs, commercial websites and Internet applications. Topics include the history of the Internet, Internet software and hardware, ethical issues surrounding privacy, accessibility and ownership on the Internet, information architecture and content strategies, and the tools used for blogging, creating Web pages and rich Web applications. Students research, analyze, diagram, and create Internet applications and websites. 1 lecture/4 studio hours</td>
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**GenEd Technology**
DMA 145  Web Design I  3 credits
Introduction to Web design using a professional software application. Focuses on principles of design and interactivity. Students learn how to create images for the Web, manage files, organize imagery using tables, style text using cascading style sheets, create animated gifs, and add interactivity using basic JavaScript behaviors.  1 lecture/4 studio hours

DMA 210  Motion Graphics  3 credits
Prerequisite: CMN 141 or DMA 135 with a minimum C grade or divisional permission
Digital art in motion: concepts and techniques of visual storytelling emphasizing issues of pacing, continuity and dramatic structure. 2-D graphics, video and sound are combined using new media tools to explore the possibilities of new media art. Course content is applicable to the fields of 3-D animation, film and television title sequences, commercials, multimedia design and music videos. [Spring offering]  1 lecture/4 studio hours

DMA 220  3-D Modeling II  3 credits
Prerequisite: DMA 120 with a minimum C grade or divisional permission
Covers advanced concepts and materials of 3-D modeling and virtual scene creation for those who wish to explore 3-D modeling and illustration in depth. Topics include environment creation, 3-D paint, modeling for games, character models, modeling with nurbs/patches and compositing. [Fall offering]  1 lecture/4 studio hours

DMA 224  Rigging for Animation and Games  3 credits
Prerequisite: DMA 120 with a minimum C grade or divisional permission
Corequisite: DMA 225
Character rigging and design techniques for gaming, broadcast and feature film industries. Topics include node-based hierarchies, forward and inverse kinematics, constraints, user interfaces, skinning, and mel scripting. Utilizing both PC and Mac computers with professional digital content creation software, students design and construct armatures for different object types.  1 lecture/4 studio hours

DMA 225  Computer Animation I  3 credits
Prerequisites: DMA 120 and DMA 135 with a minimum C grade or divisional permission
Using 3-D animation software and video interface, students produce special effects and character animations from storyboard to output. Windows-based personal computers and current professional software are used. [Fall offering]  1 lecture/4 studio hours

DMA 226  Computer Animation II  3 credits
Prerequisite: DMA 225 with a minimum C grade or divisional permission
Advanced 3-D character animation and special effects involving character animation, inverse kinematics, and particle systems. Students produce a recording of their work and develop presentation skills. Windows-based personal computers and current professional software are used. [Spring offering]  1 lecture/4 studio hours

DMA 245  Web Design II  3 credits
Prerequisite: DMA 145 with a minimum C grade or divisional permission
Intermediate skills in Web design using a professional software application. Focuses on principles of organization, interface design and usability. Students learn how to create a site map, design navigational systems, integrate Flash and video content, batch process images, create templates, insert forms, design pages using XHTML cascading style sheets, and add advanced interactivity using JavaScript.  1 lecture/4 studio hours

DMA 246  Web Design III: Advanced Project  3 credits
Prerequisites: DMA 245 and DMA 110 with a minimum C grade or divisional permission
Develops practical skills and knowledge of Web design while executing a project for a community client in a professional atmosphere. Visual design, information architecture, and Web production are all based on client goals, messages, and deadlines outlined during the project definition phase. Advanced Web design techniques are implemented utilizing professional-level software and applications.  [Spring offering]  1 lecture/4 studio hours

DMA 247  Web Application Development  3 credits
Prerequisite: DMA 245
Builds upon previous Web development knowledge by introducing concepts of server-side programming and database integration. Emphasizes use of server space and client-side processing to enhance the collation and delivery of information to the viewer. Programming languages covered include PHP, MySQL and JavaScript (jQuery library).  1 lecture/4 studio hours

DMA 250  Digital Portfolio Seminar  3 credits
Prerequisites: DMA 245 or DMA 211 or DMA 225 or PHO 203 or CMN 241 or CMN 250 with a minimum C grade or divisional permission
Introduction to the culture, technologies, history, and theories of new media. Advanced digital media arts students explore topics in digital media while developing a digital portfolio to present their work.  1 lecture/4 studio hours

DMA 275  Interdisciplinary Studio  3 credits
Prerequisites: ART 105, DMA 105 with a minimum C grade or divisional permission
Students explore the possibilities and implications of combining digital and traditional tools and techniques in the service of personal expression as fine art. Focuses on exploring each individual’s aesthetic expression and the development of individual style. A variety of techniques, software, and theoretical issues are presented. Students are expected to create a series of pieces for exhibition, with emphasis on the printed output. [occasional offering]  1 lecture/4 studio hours

DMA 285  Special Studies in Digital Media Arts  3 credits
Prerequisites: DMA 226 or DMA 245 and divisional permission
Special courses in specific art forms allow students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [occasional offering]  1 lecture/4 studio hours

DMA 290  Digital Media Arts Internship  3 credits
Prerequisite: coordinator approval
Work experience at participating animation studios, advertising agencies, design firms, and film and video effects houses.  1 lecture/180 work experience hours

DRA—Drafting /
Computer-Aided Design

DRA 132  Architectural Computer Drafting  3 credits
Prerequisites: BCT 110, BCT 120, DRA 190 or divisional permission
Using architectural software, students produce professional drawings; compile contract documents; and date, store and retrieve information on both two- and three-dimensional projects. Involves creation of walls, doors, windows and roofs as well as implementation of symbols for structural, electrical, mechanical, plumbing, furnishing, and site work.  2 lecture/2 laboratory hours
DRA 190 Introduction to Computer-Aided Drafting 2 credits
Introduction to the use of the computer as a drafting tool. Includes concepts, terminology, and basic commands necessary to prepare drawings using CAD software. Requires basic knowledge of the computer keyboard. 1 lecture/2 laboratory hours

DRA 191 Introduction to Building Information Modeling 2 credits
Introduction to the use of the computer using building information modeling software. Topics include basic terminology and concepts of modeling, geometry, and the basic commands necessary to prepare a building model and several drawings. 1 lecture/2 laboratory hours

DRA 191 Introduction to Building Information Modeling 3 credits
Prerequisites: ABT 120, DRA 190
Corequisite: CIV 237
Examines the problems common to structural design of steel and similar materials relative to the architectural frame of a structure. Relies heavily on the principles of mechanics and mechanics of materials fundamentals. Requires familiarity with general steel design codes and the preparation of structural drawings. 2 lecture/3 laboratory hours

DRA 238 Advanced Computer-Aided Design 3 credits
Prerequisite: DRA 190
Advanced computer drafting course using CAD software. Includes a review of basic command options, display options, hatching and sectioning, text, and dimensioning. Introduces 3-D drawing and surface modeling. 2 lecture/2 laboratory hours

DRA 248 Advanced Building Information Modeling 3 credits
Prerequisite: DRA 191 with a minimum C grade
Advanced computer-aided design and drafting using BIM software. Students build intelligent 3-D models of designs using parametric, feature-based modeling software. After refinement, 2-D drawings are created from the 3-D model. 2 lecture/2 laboratory hours

DRA 251 Solids Modeling 3 credits
Prerequisite: DRA 238 with a minimum C grade
An introduction to solids modeling and rendering software. Students explore the capabilities and potentials of computer software to construct solids models then render the resulting image. 2 lecture/2 laboratory hours

ECO—Economics

ECO 103 Basic Economics 3 credits
Prerequisites: ENG 101 and MAT 037 (or MAT 037A and 037B) with a minimum C grade or placement in college-level mathematics
Basic economics concepts enable students to better understand, analyze, and discuss current economic events and problems. Includes demand, supply and prices, measures of gross domestic product, the circular flow of income, market structures, government fiscal policy, monetary policy, the national banking system, and international trade. 3 lecture hours

EDU—Education

EDU 102 Introduction to Exceptional Children 3 credits
Introduction to the field of special education and to exceptionality. Inclusion, an approach to teaching students with special needs in general education, is emphasized. Topics include historical overview, legislation, consideration of specific disabilities, instructional techniques and equipment, as well as teaching gifted students and non-native speakers. 3 lecture hours

Introduction to American education and the teaching/learning process for future educators. Topics include history and philosophy of education, curriculum, teaching strategies, school law, diversity, technology and recent trends. Students are involved in creative activities, research, and analysis of current literature. Requires 25 hours of field observation in an educational setting. 3 lecture hours

EDU 120 Introduction to Early Childhood Education 3 credits
Introduces the needs of young children in conjunction with appropriate care and educational programs. Topics include environment, developmentally appropriate practices, emerging literacy, cognitive development, learning through play, and school/home relationships. Observation and/or participation in a childcare setting are required. 3 lecture hours

EDU 130 Infant/Toddler Social and Emotional Well-Being 3 credits
Designed for students interested in a career in a childcare or nursery school environment. A component of the New Jersey Infant/Toddler Credential, the course supports practitioners working with infants and toddlers to strengthen their capacity as caregivers of the very young. 3 lecture hours

EDU 131 Supervised Field Experience in Infant/Toddler Settings 3 credits
Prerequisite or Corequisite: EDU 130
A companion course to EDU 130, designed for students interested in a career in a childcare or nursery school environment. Student field experiences critically evaluated by both students and teachers serve as a forum for discussion. A component of the New Jersey Infant/Toddler Credential, the course supports practitioners working with infants and toddlers to strengthen their capacity as caregivers of the very young. 2 lecture/60 practicum hours
EET 210 Education Field Experience
6 credits
Prerequisites: minimum C grade in EDU 109 and SOC 104, or minimum C grade in EDU 102 and EDU 201, or divisional permission
Corequisite: EDU 211
Internship of 15-20 hours per week in a New Jersey school approved by the coordinator of the Education / Special Education Assistant program. The student performs the duties of an education assistant under the supervision of cooperating teachers. Assignments to schools are made on the basis of the student's interests and occupational goals; arrangements must be made during the preceding semester. [Spring offering] 4 days per week

EET 211 Education Seminar
3 credits
Prerequisites: minimum C grade in EDU 109 and SOC 104, or minimum C grade in EDU 102 and EDU 201, or divisional permission
Corequisite: EDU 210
Examines the correlation between educational theory and practice. Students engage in research with professional journals, demonstration classes illustrating varied methods and materials, teaching units, and observation visits to area schools. [Spring offering] 3 lecture hours

EET—Electronics Engineering Technology

EET 130 Fundamentals of Electronics
3 credits
Prerequisite or Corequisite: MAT 037 (or MAT 037A and 037B)
Introduction to DC and AC circuits, electromagnetic devices, electronic components, and analog and digital circuits. For non-electronics majors. 2 lecture/2 laboratory hours

EET 138 Introduction to Electronics I
4 credits
Prerequisite or Corequisite: MAT 135
Focuses on direct current (DC) devices and circuits. Progresses from the fundamentals of electricity, Ohm's Law, Kirchoff's Law, series and parallel circuits to the study of resistors, capacitors, inductors, batteries, transistors, and diodes as they pertain to DC circuits. 3 lecture/3 laboratory hours

EET 139 Introduction to Electronics II
4 credits
Prerequisite: EET 138 or equivalent
Continuation of EET 138. Covers the basics of AC circuits and devices including resistors, capacitors, inductors and semiconductors. Introduces fundamental waveforms such as sine waves and pulses and their behavior in solid state circuits. 3 lecture/3 laboratory hours

EET 140 Electronic Construction
2 credits
Prerequisite or Corequisite: EET 130 or EET 138
Teaches the use of hand tools, drilling and other metalworking methods as well as correct soldering and repair techniques. Students apply these skills to chassis construction and wiring, and also gain experience in working with printed circuit boards. 1 lecture/3 laboratory hours

EET 214 Communications Electronics
4 credits
Prerequisite: EET 219
Study of information transmission and reception involving both digital and analog systems. Topics include AM, FM, noise, spectra, receivers, transmitters, lines and cables, and antennas. 3 lecture/3 laboratory hours

EET 215 Fiber Optics
4 credits
Prerequisite: EET 130 or EET 138; MAT 135 or equivalent
A study of fiber optics as it pertains to the communications process. Topics include the physics and behavior of light in a fiber. Skills learned include connectorization of fiber and the use of the special tools and test equipment required. Successful completion of this course can lead to FOA certification. 3 lecture/2 laboratory hours

EET 219 Electronic Networks
4 credits
Prerequisite: EET 139
Analysis and design considerations for electronic circuits, including power supplies using semiconductor diodes and zener diodes, and Class A amplifiers using bipolar and FET transistors. 3 lecture/3 laboratory hours

EET 230 Linear Integrated Circuits
4 credits
Prerequisite: EET 138
Covers the basic building blocks of linear systems, such as inverting and non-inverting amplifiers, comparators, and filters. 3 lecture/3 laboratory hours

EET 251 Digital Circuit Fundamentals
4 credits
Prerequisite: EET 139
Introduces the basic theory, concepts and devices behind digital circuitry and computers, including gates, registers, flip-flops, counters, decoders and encoders, half- and full-adders, and clocks. The electrical characteristics, limitations, and connections of digital integrated circuit packages are explored. Corresponding labs reinforce lecture materials through practical examples. 3 lecture/3 laboratory hours

EET 253 Digital Technology – Introduction to Microprocessors and Assembly Language
4 credits
Prerequisite: EET 251
Introduces the operation of a simple computer at the physical (electrical) level using gates, registers, and other basic circuits introduced in the prerequisite course. Students gain experience building and programming a simple computer. Covers memory, basic microprocessor architecture, assembly language programming, and analog-to-digital as well as digital-to-analog converters. 3 lecture/3 laboratory hours

ENG—English

ENG 023 Introduction to College Composition I
4 credits
First-level developmental course designed to help students write 400- to 650-word essays on topics in various academic disciplines. Students are guided in developing a writing process that improves essay development, coherence, grammar, and punctuation. Prepares students for Introduction to College Composition II, a second-level foundation course. 4 lecture hours
ENG 024 Introduction to College Composition II 4 credits
**Prerequisite:** ENG 023 or placement test
Second-level developmental course. Students write 400- to 750 word essays about concepts in various academic disciplines. Focus is on developing a writing process that helps student writers to form positions and analyze and evaluate their own and other writers' ideas. Students also improve their sentence and essay structure, tone, and overall coherence. 4 lecture hours

ENG 033 Introduction to College Reading I 4 credits
**Prerequisite:** placement test
Intended to help students become better readers and thinkers who take ownership of their learning. Students read, analyze, discuss, and write on the material presented in the course. Introduction to intermediate college-level readings (both fiction and non-fiction) builds comprehension and study skills to succeed in college-level courses. 4 lecture hours

ENG 034 Introduction to College Reading II 4 credits
**Prerequisite:** ENG 033 or placement test
Intended to help students become better readers and thinkers who take ownership of their learning. Exposed to the beginning principles of critical reading and thinking, students analyze text to identify facts, fallacies, claims, premises, and arguments. Students are expected to take notes, improve vocabulary, and independently interpret text. 4 lecture hours

ENG 036 Composition and Reading Brush-Up 2 credits
**Prerequisites:** Accuplacer scores of 61-87 Sentence Sense, 61-82 Reading, 5 Writeplacer; or instructor recommendation
Intended for students who narrowly miss the ENG 101 Accuplacer cut scores. Students who narrowly miss passing ENG 024 or 034 may also be recommended by their instructor. With intensive focus on core skills necessary for ENG 101 and other 100-level courses, students read, analyze, and write argument-based essays. 2 lecture hours

ENG 101 English Composition I 3 credits
**Prerequisite:** placement test or minimum C grade in ENG 024 or ENG 034
College-level composition course designed to assist students in writing 750- to 1500-word essays on topics in various academic disciplines. Focuses on development and support of ideas, essay structure, critical thinking, analysis of readings, and other aspects of writing. Students are introduced to research techniques and documentation. 3 lecture hours

ENG 102 English Composition II 3 credits
**Prerequisite:** ENG 101 with a minimum C grade
Second-level composition course designed to assist students in writing 1500- to 3000-word essays, including a formally documented research paper. Readings introduce students to literature and the analysis of concepts, language, and formal elements. 3 lecture hours

ENG 112 English Composition II with Speech 3 credits
**Prerequisite:** ENG 101 with a minimum C grade
A variation on standard ENG 102, differing with its focus on the interpretation, analysis and creation of a broad spectrum of workplace documents rather than on literature. Construction of a lengthy, well-supported research paper and accompanying PowerPoint presentation is central. Speech component is fulfilled through multiple in-class presentations. 3 lecture hours

ENG 201 Introduction to Literature: Drama 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
Examines the evolution of staged presentations from religious ritual to secular theater, covering works from the classical Greek period to the present day. Focuses on Elizabethan theater, Restoration comedy, 19th century realism, and contemporary theater. 3 lecture hours

ENG 202 Introduction to Literature: Novel 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
Study of novels from various periods selected for their intrinsic value and as representative types of fiction. 3 lecture hours

ENG 203 World Literature I 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
A survey of important literary works from cultures around the world dating from ancient times through the 17th century. 3 lecture hours

ENG 204 World Literature II 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
A survey of important literary works from cultures around the world from the 17th century through the present day. 3 lecture hours

ENG 205 American Literature I 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
Introduction to and selective study of authors representing the enduring traditions and styles of American literature from the Puritan period through the Civil War. 3 lecture hours

ENG 206 American Literature II 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
Survey of American literature from 1865 to the present, including authors whose work represents the traditions and styles of American literature. Short stories, novels, poetry, and essays cover topics such as regionalism, realism, naturalism, modernism, and postmodernism. 3 lecture hours

ENG 208 Modern American Novel 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
Traces the triumph of prose Realism over Naturalism and the recurrent forms and techniques of the contemporary novel in the American idiom. Emphasizes the novel as the dominant modern American literary art form, as a social document, and as a portrait of time and place. 3 lecture hours

ENG 211 Shakespeare 3 credits
**Prerequisite:** minimum C grade in ENG 102 or divisional permission
A survey of Shakespeare's tragedies, comedies, and histories -- a body of work whose characters, themes, and language influence and permeate literature worldwide, and is essential to cultural literacy. 3 lecture hours


**ENG 212 Introduction to Literature: Poetry** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Explores poetry as imagery, figurative language, allusion, tone, rhythm, meter, rhyme and stanza form. Students read major English and American poetry as well as verse from a variety of cultures to provide background for reading poems more incisively.  

**ENG 213 African American Literature** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

A survey of literary works by writers of the African Diaspora produced in the Americas from the 18th century to the present. Proceeds chronologically, starting with African-born producers of the literature, oral and written, continuing with the folk tradition, moving through the slave narratives, the Harlem Renaissance, the Black Arts Movement and ending with contemporary works and the immigrant experiences.

**ENG 215 Creative Writing I** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Develops writing skills in various genres, such as fiction, poetry, and essay. Recognized models in literary modes are analyzed for craftsmanship. Through workshop framework, students benefit from peer and instructor criticism and are encouraged to find individual voice under instructor guidance. [not a Literature elective]  

**ENG 216 Literature Into Film** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Focuses on the marriage of two art forms — literature and film — and pays particular attention to how the medium affects the writer and the medium. Examines selected novels, short stories, plays, essays and/or memoirs as original works and as each evolves into film.

**ENG 218 Creative Writing II** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Promotes continuing development of creative writing skills; analyzes recognized models by major modern writers. Through workshop framework, peers and instructor critique student work. Students are encouraged to hone their writing voices under instructor guidance. [not a Literature elective]  

**ENG 220 Science Fiction Literature** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Explores science fiction through a study of genre elements and the challenges these genres present. By examining a diverse selection of speculative literature, participants better appreciate and interpret such works and how they both reflect and change our culture.

**ENG 221 Women in Literature** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

A discussion-based course that explores literature by women writers. Texts cover a variety of authors and genres as well as themes, issues and theories concerning the production of gender in literary works. Further develops the literary analysis and academic writing skills acquired in ENG 102.

**ENG 222 Children’s Literature** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Critical evaluation of the various genres of literature written for children. Examines ancient folk tales like Aesop's Fables, modern picture books such as those by Maurice Sendak, and classic fiction such as the masterpieces of Lewis Carroll and Mark Twain.

**ENG 227 English Literature I** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Survey of representative English literature from the Middle English period through the Neoclassical period. Particular attention to the works of Chaucer, Shakespeare, Milton, Donne, Dryden and Pope.

**ENG 228 English Literature II** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Survey of representative English literature from the Romantic and Victorian periods up to the present.

**ENG 231 Literature of AIDS: Confronting Catastrophe** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Close readings of the stories and poems emerging from AIDS-affected writers, with widely representative writing emphasizing the work of gay authors. Examines divergent responses to the widespread societal denial of AIDS.

**ENG 232 Post-Colonial Women Writers** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Examines works written in English by women of color in Asia, Africa, the Americas, and Australia. Explores contributions of the writer to the body of modern world literature — poetry, fiction, drama — along with aspects of the writers' politics and the social milieus that form their work.

**ENG 238 American History and Literature** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*  
[also offered as HIS 238] An interdisciplinary examination of American literature and society with special emphasis on contemporary perspectives and the historical context in which these texts were written. Focuses on American history and literature since 1865, covering such topics as gender, race, ethnicity and immigration, social class, the West, war, and popular culture.

**ENG 239 Literature of War and Conflict** 3 credits  
*Prerequisite: minimum C grade in ENG 102 or divisional permission*

Surveys literary responses to war and conflict with particular focus on the psychological effects of warfare. Examines multiple genres, cultures, eras, and viewpoints, but primary focus may rest on a particular era or conflict. May include texts by Homer, Sun Tzu, Stephen Ambrose, Oppenheimer, Hemingway, Tim O’Brien, and Elie Wiesel.
**ESL—English as a Second Language**

*Note: Initial selection of an ESL course is determined by results of ESL placement testing (see page 8).*

### ESL 009 Introduction to ESL
- **Prerequisite:** score of 55 or lower on ESL Accuplacer
- Introduces students to basic grammar connected in an American cultural context. Provides learners with useful and meaningful skills to apply beginning grammar necessary to communicate verbally and in writing. 4 lecture hours

### ESL 010 ESL Grammar, Reading, and Speech
- **Prerequisite:** score of 56-75 on ESL Accuplacer or successful completion of ESL 009
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 011 ESL Speech Concepts I
- **Prerequisite:** score of 56-75 on ESL Accuplacer or successful completion of ESL 009
- Develops speaking and listening skills for high-beginner students. Emphasis on expanding vocabulary, accent reduction, and gaining fluency and confidence using English spontaneously. Idioms, grammatical forms, morphology, phonology and etymology stressed. 4 lecture hours

### ESL 012 ESL Speech Concepts II
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 011
- Spontaneous oral English for intermediate-level students. Reinforces ability to speak and listen effectively in a second language with stress on building fluency and vocabulary, accent reduction, word syntax, idioms, grammatical forms, morphology, phonology, and etymology. 4 lecture hours

### ESL 013 ESL Reading and Critical Thinking I
- **Prerequisite:** score of 56-75 on ESL Accuplacer or successful completion of ESL 090
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 014 ESL Reading and Critical Thinking II
- **Prerequisite:** score of 56-75 on ESL Accuplacer or successful completion of ESL 090
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 015 ESL Reading and Critical Thinking III
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 016 ESL Reading and Critical Thinking IV
- **Prerequisite:** score of 100-110 on ESL Accuplacer or successful completion of ESL 015
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 017 ESL Reading and Critical Thinking V
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 011
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 018 ESL Reading and Critical Thinking VI
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 011
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 019 ESL Reading and Critical Thinking VII
- **Prerequisite:** score of 76-99 on ESL Accuplaser or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 020 ESL Reading and Critical Thinking VIII
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 021 ESL Reading and Critical Thinking IX
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 011
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 022 ESL Reading and Critical Thinking X
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 023 ESL Reading and Critical Thinking XI
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 024 ESL Reading and Critical Thinking XII
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 025 ESL Reading and Critical Thinking XIII
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ESL 026 ESL Reading and Critical Thinking XIV
- **Prerequisite:** score of 76-99 on ESL Accuplacer or successful completion of ESL 014
- Emphasis on increasing reading fluency and comprehension, improving vocabulary, and relying on context clues to understand texts. 4 lecture hours

### ENG 256 Fantasy Literature
- **3 credits**
- Explores fantasy literature through a study of genre elements and the challenge this genre presents to readers of mainstream literature. By examining works written in and translated to English, participants better appreciate and interpret such works and how they represent an increasingly important sub-section of literary expression. 3 lecture hours

### ENG 257 Fantasy Literature
- **3 credits**
- Explores fantasy literature through a study of genre elements and the challenge this genre presents to readers of mainstream literature. By examining works written in and translated to English, participants better appreciate and interpret such works and how they represent an increasingly important sub-section of literary expression. 3 lecture hours

### ENG 356 Fantasy Literature
- **3 credits**
- Explores fantasy literature through a study of genre elements and the challenge this genre presents to readers of mainstream literature. By examining works written in and translated to English, participants better appreciate and interpret such works and how they represent an increasingly important sub-section of literary expression. 3 lecture hours
ESL 034  ESL Writing Concepts III  4 credits
Prerequisite: score of 100-110 on ESL Accuplacer
or successful completion of ESL 023
Stresses spontaneous, fluent, and idiomatic writing. Includes practice in various forms of writing, from personal to more formal, using various source materials ranging from magazines to works of fiction. Students who successfully complete this course qualify to enroll in ENG 101, English Composition I.  4 lecture hours

ETT—Entertainment Technology

ETT 102  Introduction to the Entertainment Industry  3 credits
Prerequisite: eligibility for placement in ENG 101
An introduction to terminology, working methods, processes, equipment, and facilities for various entertainment industry venues with a particular emphasis on theatre and music technology and production. Laboratory work includes an introduction to various lighting programs and digital audio production software. Related current events and career opportunities are discussed. Attendance at several applicable events is required.  2 lecture/2 laboratory hours

ETT 200  Technical Production Management  1 credit
Prerequisites: ETT 102, THR 102, and prior advisor approval
Supervised laboratory in the technical areas of production including planning, construction, and running of productions. Emphasizes careful pre-planning and appropriate safety procedures along with follow-up critiques and evaluation of the work done. Graded on pass/fail basis.  90 hours minimum

ETT 205  Arts and Entertainment Management  3 credits
Prerequisite: ETT 102 with a minimum C grade
An introduction to common issues and best practices in the management of arts and entertainment organizations. Students gain a basic understanding of business requirements and challenges in producing entertainment. Topics include common management structures in not-for-profit and for-profit arts and entertainment organizations, marketing, public relations, fundraising, budgeting, and human resources. Legal concerns addressed include contracts, copyright, licensing, and royalties.  3 lecture hours

ETT 290  Entertainment Technology Internship  2 credits
Prerequisites: ETT 200 and prior advisor approval
Work experience at a professional scenery fabrication shop, rental/supply house, off-Broadway theater, or any entertainment-related organization. Serves to bridge the student’s academic and commercial careers by cultivating professional work experience and industry contacts. Each student, supervised by faculty and a manager at the internship site, creates a portfolio and keeps a log/journal to be shared in group seminars. Graded on pass/fail basis. 1 class hour every other week.  190 internship hours

FAS—Fashion

FAS 105  Fashion: The Global Marketplace  3 credits
Prerequisite: placement in college-level English
An overview of the fashion industry beginning with a historical perspective that covers both domestic and international influences. Integrates creative fashion concepts with business concepts commonly used in general marketing. Topics include international sourcing and trade, and retailing.  3 lecture hours

FAS 110  Introduction to Fashion Drawing  3 credits
Prerequisite: ART 102
Coordinated with Fashion Design I, develops techniques, skills, and knowledge needed to produce fashion drawings that are clear, accurate, realistic and attractive. Vocabulary of various clothing styles and details are introduced.  1 lecture/4 laboratory hours

FAS 120  Introduction to Fashion Design I  3 credits
Corequisite: FAS 130
Coordinated with Introduction to Fashion Drawing, emphasizes development of color stories, concepts and fabrications. Study includes exploration of visual sensitivity, mastering fashion terminology, developing original design concepts, as well as storyboard compiling and design research.  1 lecture/4 laboratory hours

FAS 130  Introduction to Textiles for Fashion  3 credits
Prerequisite or Corequisite: ENG 101
Explores how textiles are produced and how appropriate performance characteristics are incorporated into materials and products. Students make informed decisions regarding materials and products to communicate effectively with team members in the workplace, suppliers, contractors and buyers. Careers in the global textile industry are discussed.  3 lecture hours

FAS 140  Computerized Fashion Drawing  3 credits
Corequisite: FAS 110
Covers two computer software applications used in the fashion design industry to design and create apparel and accessories. Projects explore a range of fashion designing and related drawings in both vector and pixel-based applications.  1 lecture/4 laboratory hours

FAS 150  Technical Skills for Apparel Production I  3 credits
Prerequisite: FAS 105, FAS 205
Introduces simple draping techniques on the dress form, flat pattern making, and garment construction on the sewing machine. Based on the scope of a student’s project or level of study, additional costs for materials and supplies are required.  1 lecture/4 laboratory hours

FAS 200  Fashion Merchandising  3 credits
Prerequisites: BUS 101, ENG 101, MKT 101, MKT 230
An integrated and customer-centered approach to merchandising. Covers strategic planning, product objectives and categories, industry zones, and product life cycles. Topics include pricing, positioning, placement, market research, environments, demographics, geographics, and psychographics. Emphasizes fashion forecasting with the buying-selling cycle for retail buyers.  3 lecture hours

FAS 220  History of Costume Design  3 credits
Prerequisite: FAS 105
Comprehensive overview of fashion history and its development as a globalized industry. A survey of chronological, geographic and cultural trends that have influenced modern fashion addresses men’s and women’s clothing and accessories.  3 lecture hours

FAS 230  Fundamentals of Fashion Buying  3 credits
Prerequisites: FAS 105, FAS 205
Covers methods of analyzing customer demand, assisting retailers with merchandising activities, product sourcing, logistics related to importing, and techniques to maximize profits. Students produce reports to evaluate sales and profitability performance as well as management strategies.  3 lecture hours
FAS 250 Technical Skills for Apparel Production II 3 credits
Advanced sewing/draping skills are developed to produce finished garments from individually designed fashion and apparel pieces. Based on the scope of a student’s project or level of study, additional costs for materials and supplies are required. 1 lecture/4 laboratory hours

FAS 260 Fashion Design II: Portfolio 3 credits
**Prerequisites:** FAS 110, FAS 120
Enables students to finalize an original, professional portfolio showcasing individual abilities and skills. Students select a target market as well as a product focus which best display their proficiencies and prepare them for further study or careers in the fashion industry. 1 lecture/4 laboratory hours

FAS 265 Fashion Internship 3 credits
**Prerequisite:** coordinator approval
Provides students with the unique opportunity to gain industry experience while earning college credit. Students complete a predetermined number of hours at an approved host location offering experience not found in the traditional classroom. 180 work experience hours

FIR—Fire Science

FIR 101 Introduction to Fire Science 3 credits
History and philosophy of fire protection and prevention involves a survey of equipment, tactics, building construction, extinguishing agents, hazardous materials, and fire department organization. 3 lecture hours

FIR 104 Building Construction 3 credits
Examination of building design and construction with emphasis on fire protection and life safety. Review of pertinent standards and codes. 3 lecture hours

FIR 107 Fire Prevention and Code Enforcement I 5 credits
History, theory, and practice of fire prevention and code enforcement. Covers relevant codes, recognition of fire hazards, and implementation of an inspection program. Meets 90-hour requirement to sit for the Fire Inspector Prevention I examination leading to certification as a Fire Inspector in New Jersey. 4 lecture/2 laboratory hours

FIR 201 Hazardous Materials 3 credits
**Prerequisite:** CHE 100 or equivalent background
Study of basic fire chemistry relating to the categories of hazardous materials including problems of recognition, reactivity, and health encountered by firefighters. 3 lecture hours

FIR 202 Water Supply for Fire Protection 3 credits
Explores water supply storage and distribution as well as efficient use of water at the fire scene. 3 lecture hours

FIR 203 Fire Protection Systems 3 credits
Study of various automatic detection and signaling devices and systems, automatic sprinklers, standpipes, and special extinguishing installations. 3 lecture hours

FIR 204 Fire Fighting Tactics 3 credits
Examines pre-fire planning, fire ground organization and problem-solving, and proper utilization of manpower and equipment. 3 lecture hours

FIR 205 Fire Department Organization 3 credits
Study of the history, methods, types, and principles of fire department organization and management. Emphasizes supervisory responsibilities and functions. 3 lecture hours

FIR 206 Fire Investigation 3 credits
Provides the fundamental and technical knowledge needed for proper fire scene interpretations, including recognizing and conducting origin and cause, preservation of evidence and documentation, scene security, motives of the firesetter, and types of fire causes. 3 lecture hours

FIR 208 Fire Department Safety and Health Administration 3 credits
Develops an understanding of fire service safety and risk management programs including fire service requirements, compliance with OSHA regulations, national consensus standards, and NFPA 1500. 3 lecture hours

FIR 209 Fire Prevention and Code Enforcement II 3 credits
**Prerequisite:** FIR 107
Examines duties of the fire official, legal aspects, and coordination with other governmental agencies. Topics include fire code administration, principles of personnel management, records management, variances, penalties, and enforcement procedures. Approved by the New Jersey Bureau of Fire Safety toward Fire Official certification pursuant to the Uniform Fire Safety Act. 3 lecture hours

FIR 211 Fire Investigation II 3 credits
**Prerequisite:** FIR 206
Provides advanced technical knowledge on rule of law, fire scene analysis, fire behavior, evidence collection and preservation, scene documentation, case preparation and courtroom testimony. 3 lecture hours

FRE—French

**GenEd** Humanities

FRE 101 Beginning French I 3 credits
The first in a sequence of courses designed for students with little or no prior knowledge of French. Spoken communication in French is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

FRE 102 Beginning French II 3 credits
**Prerequisite:** FRE 101 with a minimum C grade, placement by exam, or permission of instructor
The second in a sequence of courses designed for students with little or no prior knowledge of French. Spoken communication in French is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours
**FUN—Funeral Service**

**FUN 203  Funeral Service Principles** 3 credits  
**Prerequisites:** ENG 101 and enrollment in Funeral Service Program  
Introduction to the basic services performed by the funeral director from first call to final disposition. Includes religious practices, Veterans Administration and Social Security, transportation and funeral merchandise. Emphasizes vocabulary, ethical practices and professional attitudes. 3 lecture hours

**FUN 206  Introduction to Funeral Service** 3 credits  
**Prerequisites:** ENG 101 and enrollment in Funeral Service Program  
Focus on terminology, the impact of grief on society, the history of funeral service, and various professional organizations. Includes variations in funeral practices due to cultural differences, reactions to death, grief and bereavement, and the impact of family structures. 3 lecture hours

**FUN 215  Funeral Service Law** 3 credits  
**Prerequisites:** BUS 107 and enrollment in Funeral Service Program  
Basic principles of law impacting the funeral service profession, with emphasis on common law, New Jersey statutes, rules and regulations and FTC compliance. Includes cemetery law, burial standards, rights and wrongs concerning the body and burial, and zoning restrictions. 3 lecture hours

**FUN 217  Funeral Service Management** 3 credits  
**Prerequisites:** ACC 106, FUN 203, FUN 215  
Business and management practices pertinent to funeral service with emphasis on small business. Particular consideration to staff organization, employer/employee relations, funeral home budget, funeral service merchandising, insurance, price determination and quotation, advertising, OSHA, and applicable federal regulations. 3 lecture hours

**FUN 220  Funeral Service Laws, Rules and Regulations** 1 credit  
**Prerequisite:** FUN 215 or permission of Director of Funeral Service Programs  
Laws, rules and regulations that specifically influence funeral service practice in New Jersey. Covers general licensure and intern requirements, rules for operating a funeral home, embalming procedures, general and specific rules of practice, advertising and continuing education. Compares and contrasts practices in New Jersey and Pennsylvania. 1 lecture hour

**FUN 222  Funeral Service Pathology** 3 credits  
**Prerequisites:** BIO 106 (or BIO 103 and BIO 104) or permission of Director of Funeral Service Programs  
Survey of the major diseases, including pathological changes related to disease processes and the effects of physical and chemical trauma on the human body. Facilitates understanding of medical terminology relevant to funeral service. 3 lecture hours

**FUN 224  Principles of Embalming I** 3 credits  
**Prerequisites:** BIO 106 (or BIO 103 and BIO 104), ENG 101 and enrollment in Funeral Service Program  
Includes review of historical background, ethical and sanitary considerations, signs and tests of death, postmortem changes and basic procedures, instruments and equipment employed in embalming with emphasis on procedures for handling infectious/contagious disease. 3 lecture hours

**FUN 225  Embalming Lab and Practicum** 3 credits  
**Prerequisites:** permission of Director of Funeral Service Programs; students must be registered interns  
Develops practical embalming skills, combining work experience in a funeral home (16-20 hours per week) and at the MCCC embalming facility with discussion of applications. Topics include OSHA, embalming procedures, embalming products, cavity treatment, infant embalming and special cases. 3 lecture hours laboratory and/or discussion plus 224 hours of work experience

**FUN 227  Restorative Art** 3 credits  
**Prerequisites:** BIO 106 (or BIO 103 and BIO 104); FUN 247 or permission of Director of Funeral Service Programs  
Examines facial anatomy including underlying structures and facial features, restoration, color and cosmetics. Lab work develops proficiency in anatomical modeling and the practical application of cosmetics. 2 lecture/2 laboratory hours

**FUN 228  Funeral Service Counseling** 3 credits  
**Prerequisites:** FUN 206 and PSY 101 or permission of Director of Funeral Service Programs  
Promotes an appreciation of care-giving roles in relation to grieving persons and addresses the background material, skills and procedures needed for helping situations. Situations requiring professional therapy are differentiated from those requiring referrals for more specialized counseling. 3 lecture hours

**FUN 229  Funeral Service Counseling** 3 credits  
**Prerequisites:** FUN 206 and PSY 101 or permission of Director of Funeral Service Programs  
Promotes an appreciation of care-giving roles in relation to grieving persons and addresses the background material, skills and procedures needed for helping situations. Situations requiring professional therapy are differentiated from those requiring referrals for more specialized counseling. 3 lecture hours

**FUN 232  Principles of Embalming II** 2 credits  
**Prerequisite:** FUN 247 with a minimum C grade  
Continuation of FUN 247. Topics include cavity treatment, types of embalming chemicals and their uses, causes of embalming failure, discolorations, vascular difficulties, decomposition, dehydration, edema, deformities and malformations, and radiation. 2 lecture hours

**FUN 235  Fundamentals of Embalming** 3 credits  
**Prerequisites:** permission of Director of Funeral Service Programs; students must be registered interns  
Develops practical embalming skills, combining work experience in a funeral home (16-20 hours per week) and at the MCCC embalming facility with discussion of applications. Topics include OSHA, embalming procedures, embalming products, cavity treatment, infant embalming and special cases. 3 lecture hours laboratory and/or discussion plus 224 hours of work experience

**FRE 201  Intermediate French I** 3 credits  
**Prerequisite:** FRE 102 with a minimum C grade, placement by exam, or permission of instructor  
The first in a sequence of courses designed for students with a mid to high novice level of competency in French. Spoken communication in French continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving Francophone culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

**FRE 202  Intermediate French II** 3 credits  
**Prerequisite:** FRE 201 with a minimum C grade, placement by exam, or permission of instructor  
The second in a sequence of courses designed for students with a mid to high novice level of competency in French. Spoken communication in French continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving Francophone culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

**FRE 201 with a minimum C grade, placement by exam, or permission of instructor**

**FRE 202 with a minimum C grade, placement by exam, or permission of instructor**
GEO—Geography

GEO 101 Geography 3 credits
Surveys the main concepts of geography, including types of climate, topography, transportation and mapping. The current issues of environmental protection and city planning are studied with emphasis on the United States and political and economic factors. 3 lecture hours

GEO 102 Cultural Geography 3 credits
Surveys the cultural geography of people living in significant regions such as India, China, Japan, Europe, Canada, Africa, and Latin America. A study of the geography, history, art, and way of life of people in various nations leads to an appreciation of their cultural heritage and achievements. 3 lecture hours

GER—German

GER 101 Beginning German I 3 credits
The first in a sequence of courses designed for students with little or no prior knowledge of German. Spoken communication in German is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

GER 102 Beginning German II 3 credits
Prerequisite: GER 101 with a minimum C grade, placement by exam, or permission of instructor
The second in a sequence of courses designed for students with little or no prior knowledge of German. Spoken communication in German is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

GER 201 Intermediate German I 3 credits
Prerequisite: GER 102 with a minimum C grade, placement by exam, or permission of instructor
The first in a sequence of courses designed for students with a mid to high novice level of competency in German. Spoken communication in German continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving German culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

GER 202 Intermediate German II 3 credits
Prerequisite: GER 201 with a minimum C grade, placement by exam, or permission of instructor
The second in a sequence of courses designed for students with a mid to high novice level of competency in German. Spoken communication in German continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving German culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

GER 240 Game Design I 3 credits
Prerequisite: GER 140
Students explore the historical and cultural significance of play through human history to include today's video game phenomenon by examining many game models across several genres. Conceptual and production processes involved in current industry game design and development are introduced, with particular emphasis on the design of creative models expressing gaming concepts. 1 lecture/4 laboratory hours

GER 245 Game Programming I 3 credits
Prerequisite: COS 101
Students apply emerging technologies and software that is needed in the industry and the design and production of their game projects. 1 lecture/4 laboratory hours

GER 250 Game Design II 3 credits
Prerequisite: GER 240
In this capstone course, students work in interdisciplinary production teams to develop computer games and modules utilizing industry-standard game engines. Coursework centers on producing scripted real-time modules, play testing, and documentation to specify game design concepts. 1 lecture/4 laboratory hours

GER 255 Game Programming II 3 credits
Prerequisite: GER 245
The second in a sequence of courses designed for students with little or no prior knowledge of German. Spoken communication in German is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

GER 260 Game Development 3 credits
Prerequisite: GER 240
In this capstone course, students work in interdisciplinary production teams to develop computer games and modules utilizing industry-standard game engines. Coursework centers on producing scripted real-time modules, play testing, and documentation to specify game design concepts. 1 lecture/4 laboratory hours

GER 265 Game Programming II 3 credits
Prerequisite: GER 255
The second in a sequence of courses designed for students with little or no prior knowledge of German. Spoken communication in German is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

GER 301 Beginning German I 3 credits
Prerequisite: GER 101 with a minimum C grade, placement by exam, or permission of instructor
The first in a sequence of courses designed for students with little or no prior knowledge of German. Spoken communication in German is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

GER 302 Beginning German II 3 credits
Prerequisite: GER 102 with a minimum C grade, placement by exam, or permission of instructor
The second in a sequence of courses designed for students with little or no prior knowledge of German. Spoken communication in German is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours
HIS—History

GER 202 Intermediate German II 3 credits
Prerequisite: GER 201 with a minimum C grade, placement by exam, or permission of instructor
The second in a sequence of courses designed for students with a mid to high novice level of competency in German. Spoken communication in German continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving German culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

HIS 101 History of Western Civilization to 1648 3 credits
[not recommended for students who have taken HIS 112] Introduction to the political, social, cultural, and economic events that distinguished Western civilization to 1648. Major topics include ancient Near Eastern civilizations, Greece and Rome, the Middle Ages, and the Renaissance and Reformation. Examination of highlight works, including literary and visual sources. 3 lecture hours

HIS 102 History of Western Civilization Since 1648 3 credits
[not recommended for students who have taken HIS 113] Introduction to the political, social, cultural, and economic events that have distinguished Western civilization since 1648. Major topics include Absolutism, the Scientific Revolution, the Enlightenment, the French Revolution, Industrialization, Nationalism, World Wars I and II, and recent trends. Examination of highlight works, including literary and visual sources. 3 lecture hours

HIS 103 United States History to 1865 3 credits
Surveys American history to 1865 with emphasis on general concepts and processes. Examines colonial settlement and society, revolution and nation building, the market revolution and Jacksonian democracy, gender, slavery, and the Civil War. 3 lecture hours

HIS 105 United States History to 1865 3 credits
Survey of American history since 1865 with emphasis on general concepts and processes. Examines Reconstruction, the Gilded Age, Progressivism, World Wars, the New Deal, the Cold War, civil rights, gender, social class, and 21st century issues. 3 lecture hours

HIS 107 The Civil War 3 credits
Examines slavery, sectionalism, the meaning of Union, racism, and the triumph of Industrial Capitalism. Assesses these issues from social, cultural, economic, and political perspectives to determine the causes, course, and effects of the American Civil War. 3 lecture hours

HIS 109 African American History 3 credits
Studies the history of the African American from the beginnings in the 15th century to the present. Special emphasis on the investigation and analysis of the historic sources of the problems that African Americans confront in America today. 3 lecture hours

HIS 1010 Film and History 3 credits
An analytical and topical study of 20th century American social, cultural, economic, and political history as represented in film. 3 lecture hours

HIS 110 Film and History 3 credits
An analytical and topical study of 20th century American social, cultural, economic, and political history as represented in film. 3 lecture hours

HIS 111 World History Since 1500 3 credits
[not recommended for students who have taken HIS 102] Survey of world history from 1500 to the present, examining the development of societies in Asia, Africa, Europe, and Oceania. Examines interactions among peoples of different societies including ancient Egypt and Nubia, India, classical Greece and Rome, the Islamic states, Han China, early Korea and Japan, and Andean and Mesoamerican societies. 3 lecture hours

HIS 112 World History Since 1500 3 credits
[not recommended for students who have taken HIS 102] Survey of world history from 1500 to the present, examining the development of societies in Asia, Africa, Europe, and Oceania. Examines interactions among diverse cultures and the driving forces of changes such as industrialization/technology, nationalism and colonization/de-colonization. 3 lecture hours

HIS 113 World History to 1500 3 credits
[not recommended for students who have taken HIS 101] Survey of world history from pre-history to 1500, examining the development of ancient societies in Asia, Europe, Africa, the Americas, and Oceania. Charts the development of individual societies in the Modern Age by focusing on interactions among diverse cultures and the driving forces of changes such as industrialization/technology, nationalism and colonialization/de-colonization. 3 lecture hours

HIS 114 World History to 1500 3 credits
[not recommended for students who have taken HIS 101] Survey of world history from pre-history to 1500, examining the development of ancient societies in Asia, Europe, Africa, the Americas, and Oceania. Charts the development of individual societies in the Modern Age by focusing on interactions among diverse cultures and the driving forces of changes such as industrialization/technology, nationalism and colonialization/de-colonization. 3 lecture hours

HIS 207 American Constitutional History 3 credits
Study of the Constitution’s place in American history with emphasis on presidential authority, judicial interpretation, constitutional crises, the evolution of Federalism, and the status of civil liberty, past and present. 3 lecture hours

HIS 210 History of American Popular Culture 3 credits
Explores social, economic, and political contexts through examination of the films, sports, television, music, print media, literature, and fads that shape, influence, and respond to cultural trends. 3 lecture hours

HIS 213 Twentieth-Century World History 3 credits
Corequisite: ENG 101
Study of world history from the age of imperialism through the modern era. Focuses on the World Wars, the Cold War, colonization and decolonization, political ideologies, genocides, gender, race and ethnicity, religion, class, technology, poverty, terrorism, cultural history, and other global issues. 3 lecture hours

HIS 214 The United States Since 1945 3 credits
Intensive study of American history since World War II examines World War II, the Cold War at home and abroad, the Civil Rights movement, Vietnam, social upheavals and new forms of cultural expression during the 1960s, gender and class, technology, and 21st century issues. 3 lecture hours
HIS 215 The Holocaust and Other Genocides 3 credits

Prerequisite: HIS 102 or HIS 113 recommended

Analyzes the Holocaust and other genocides of the 20th and 21st centuries from an historical perspective. Specific topics include anti-Semitism in Europe, Nazism, the Final Solution, Armenian nationalism, the Khmer Rouge, and African genocides. Texts, testimonies, films, and other resources contribute to understanding events and responses. Particular attention is given to universal themes including prejudice, racism, evil, and moral responsibility. 3 lecture hours

HIS 218 History of Latin America 3 credits

Survey of Latin America from pre-Columbian origins to current times. Topics include Indian civilizations, discovery and conquest, colonial rule, independence movements, as well as 19th century and current issues and events. 3 lecture hours

HIS 220 History of Daily Life in the Modern Western World 3 credits

Examines the continuities and changes in daily life among ordinary people from the 17th century to the present. Although seemingly powerless for much of this period, certain social categories such as peasants, slaves, poor workers, and women played significant roles in the development of the modern world. This course explores those roles by studying the social and cultural aspects of daily life as revealed through a variety of primary sources and secondary studies. 3 lecture hours

HIS 221 History of American Women 3 credits

Studies the role and lives of outstanding women in selected historical periods, focusing on composite historical forces that shaped their lives. Current research in anthropology, psychology, and sociology supplements the historical content. [occasional offering] 3 lecture hours

HIS 225 History of England 3 credits

Survey from the earliest period to the present with emphasis on significant aspects of the Celtic, Roman, and Anglo-Saxon heritage, medieval and renaissance England, and English achievements in recent centuries in government, social reform, and culture. [occasional offering] 3 lecture hours

HIS 226 History of New Jersey 3 credits

Surveys New Jersey history from the pre-colonial era to the present, with special emphasis on race, gender, ethnicity, social class, and the state's meaningful place in the larger story of American history. [occasional offering] 3 lecture hours

HIS 230 Special Topics in History 3 credits

Prerequisite: ENG 101 or permission of instructor

In-depth and specialized variable studies of some of the major individuals and cultural forces in U.S. and world history. Content may vary each time the course is offered. [occasional offering] 3 lecture hours

HIS 232 Women in Europe Since 1500 3 credits

Examines, through a variety of sources, the history of women in Western society since 1500. Through close readings and critical discussion of literature, legal and economic texts, art, as well as scholarly commentary, a deeper appreciation of the legal, social, and cultural roles and status of women in Europe from the Reformation to the present is developed. While focusing mostly on the historical conditions of women, this course also explores the history of gender and sexuality. 3 lecture hours

HIS 238 American History and Literature 3 credits

Prerequisite: ENG 102 with a minimum C grade [also offered as ENG 238] An interdisciplinary examination of American literature and society with special emphasis on contemporary perspectives and the historical context in which texts were written. Focuses on American history and literature since 1865, covering such topics as gender, race, ethnicity and immigration, social class, the West, war, and popular culture. 3 lecture hours

HOS—Hospitality

HOS 100 Hospitality Success Skills 1 credit

Introduces skills necessary to be successful in the hospitality program and the hospitality industry. Emphasizes career options and how to make the most of the educational experience through self management, internship opportunities, and effective study habits. Additional topics include customer service, history and trends of the hospitality industry, and the role of cultural diversity. 1 lecture hour

HOS 101 Food Preparation I 3 credits

Corequisite: HOS 111

Introduction to the principles, skills, and techniques associated with the culinary arts, involving various cooking methods including classic and modern techniques. Identification of various kitchen staples, food products, and equipment used within the commercial food operation. Hands-on activities require the preparation of a wide variety of recipes. Chef whites required. 1 lecture hour/4 laboratory hours

HOS 102 Food Preparation II 3 credits

Prerequisites: HOS 101 and HOS 118 or equivalent proficiency

Refines culinary skills in quantity food preparation through operation of a student-run restaurant. Includes kitchen and dining room organization and operations; menu development and design; management of service and culinary personnel; service standards; serving the general public; merchandising and sales promotion; and banquet management. Chef whites required. 1 lecture hour/4 laboratory hours

HOS 103 Protocol for International Travel 3 credits

Develops awareness of other cultures as needed for international travel. Covers itinerary preparation, currency exchange, passports and visas, health and safety hazards, plus proper use of English and cultural interpretations of gestures. 3 lecture hours

HOS 104 Hotel Management and Lodging Operations 3 credits

Preliminary study of operations and management in the lodging industry with special emphasis on front desk operations and management, housekeeping, corporate structure, staffing, sales, security, and accounting. 3 lecture hours
HOS 109  Advanced Culinary Arts  3 credits
Prerequisites: HOS 101 and HOS 118 or equivalent proficiency
Comprehensive review of current culinary arts practices, including advanced professional culinary skills, recipes, techniques, and use of ingredients. Involves practice of a wide variety of classical and modern cooking techniques as well as basic and advanced sanitation measures in kitchen operations. 1 lecture/4 laboratory hours

HOS 110  Breakfast / Pantry  2 credits
Prerequisites: HOS 101, HOS 118, HOS 217
Covers basic breakfast preparation, presentation, and merchandising techniques for some basic baked goods, breakfast proteins, as well as garnishes. Practical laboratory experience involves preparing and serving meals. Use, safety, care, and storage of hand tools – including cook's and vegetable knives – are emphasized. 1 lecture/3 laboratory hours

HOS 111  Culinary Math  1 credit
Prerequisite: MAT 037 (or MAT 037A and 037B)
Focus on key mathematic concepts related to culinary arts. Students demonstrate a working knowledge of topics including calculating yield percent, determining portion costs, periodic food costs, 'selling price' determinations, weights and measures, changing recipe yields, and converting between metric and U.S. measurements. 1 lecture hour

HOS 113  Dining Room I  1 credit
Prerequisite: HOS 102
An introduction to table settings, customer interaction, table service, and the point of sale system, with students serving meals in the on-site dining room. 2 laboratory hours

HOS 115  Food and Culture  3 credits
Applying a global perspective of the symbolic, social, political, and economic role of food in different cultures, examines the geographical and historical conditions that give rise to various regional cuisines. Lectures, demonstrations, and hands-on participation reveal how institutions and organizations influence food habits and beliefs. 2 lecture/2 laboratory hours

HOS 116  Techniques of Healthy Cooking  3 credits
Prerequisites: HOS 101, HOS 118
Study of nutritional guidelines for selecting, preparing and cooking a wide variety of food products, including desserts. Cooking techniques include sautéing, roasting, steaming and grilling. Healthful menu planning applies “tricks of the trade” techniques to trim calories and fats. Chef whites required. 1 lecture/4 laboratory hours

HOS 118  Sanitation and Safety in Food Service Operations  2 credits
Laws and principles governing safe food service, from purchasing, receiving, preparing, serving, and storing to re-heating food products. Prepares students to take the National Restaurant Association Education Foundation certification exam as part of the course. 2 lecture hours

HOS 120  Introduction to the Hospitality Industry  3 credits
Close-up view of the lodging, food service, travel and tourism fields, with introduction to hospitality management, marketing, guest services, hospitality law, human relations and allied hospitality fields. 3 lecture hours

HOS 123  Introduction to Travel and Tourism  3 credits
Prerequisite: computer literacy
Develops skills in constructing itineraries; domestic and international ticketing; handling hotel, motel, and resort reservations; arranging cruises, tours, and car rentals; addressing customer and immigration issues. Emphasizes the responsibilities, professional behavior and ethics required for success. 3 lecture hours

HOS 124  Computerized Reservations  3 credits
Prerequisite: computer literacy
Provides an understanding of the various facets of travel/tourism reservations with an emphasis on developing skills in utilizing automated reservation systems. Students work with simulated system software widely used in the industry. 3 lecture hours

HOS 203  Hospitality Purchasing  3 credits
Prerequisite: HOS 111
Accepted practices for receiving, storing and issuing food and nonfood products within the hospitality industry. Covers purchasing major equipment, small wares, tableware, textiles, and vendor services. 3 lecture hours

HOS 204  Hospitality Marketing  3 credits
Prerequisite: HOS 111
Addresses marketing plans, market research, market segmentation, positioning, consumer behavior, advertising, promotion, pricing theory, and hospitality group sales. 3 lecture hours

HOS 205  Menu Planning/Costing and Design  2 credits
Prerequisite: HOS 111
Applicable to a wide variety of food service operations, covers pricing strategies and support systems, ordering, conversion of recipes from small to large quantities, physical types of menus, marketing strategies, and food preferences of the public. Special emphasis on the planning of nutritional menus. 2 lecture hours

HOS 207  Grilling, Barbecuing, and Smoking  3 credits
Introduction to the principles, techniques and skills necessary to prepare outdoor meals. Students prepare a wide variety of foods using grilling, barbecuing, and smoking cooking techniques. 1 lecture/4 laboratory hours

HOS 208  Hospitality Law  3 credits
Introduction to hospitality law, its effect on hospitality management, and the legal principles that govern the hospitality industry. 3 lecture hours

HOS 209  Garde Manger  3 credits
Prerequisites: HOS 101 and HOS 118 with a minimum C grade
Addresses basic and advanced garde manger and charcuterie techniques such as the preparation and serving of hot and cold hors d'oeuvres, aspics, pates, mousses, terrines, and cold dishes along with advanced techniques for the planning and arrangement of buffets. Covers table arrangement and planning, creation of model nonedible food displays, as well as manipulation of specialized tools to produce decorative buffet items and showpieces such as ice sculptures, pastillage, marzipan, and fondant. 1 lecture/4 laboratory hours

HOS 210  Applied Kitchen Skills – Cafe  3 credits
Prerequisites: HOS 102, HOS 217
An advanced course in pantry and deli preparation and organization. Developing speed skills with quantity production while following industry guidelines for sanitation and safety, students demonstrate proper plate presentation, including seasonal production, in a dining room pantry. 1 lecture/4 laboratory hours
## COURSES

### HOS 213 Dining Room II 2 credits
**Prerequisite:** HOS 113
A continuation of HOS 113. Topics include beverage service, sales techniques, advanced point of sale functions, and French table service. Serving formal meals in the on-site dining room reinforces and expands knowledge of fine dining to include executing the order of service, wine and food affinities, and merchandising the menu. 1 lecture/2 laboratory hours

### HOS 217 Professional Baking I 3 credits
**Prerequisite:** MAT 037 (or MAT 037A and 037B)
**Corequisite:** HOS 111
Fundamental principles and procedures for preparing baked goods, pastries, and desserts. Promotes the understanding of baking formulas in bakeshop production planning and ability to produce high-quality items through the development of manual skills. Stresses the use of equipment and supplies in a safe and sanitary manner. Chef whites required. 1 lecture/4 laboratory hours

### HOS 218 Professional Baking II 3 credits
**Prerequisites:** HOS 111, HOS 118, HOS 217
Intermediate principles and procedures for preparing baked goods, specialty cakes, pastries and pies. Emphasizes producing quality items through the development of manual skills, knowledge of ingredients and proper use of advanced bakery formulas. Stresses use of high-quality ingredients, equipment, advanced manual skills, and safe and sanitary bakeshop practices. 1 lecture/3 laboratory hours

### HOS 219 Professional Baking III 2 credits
**Prerequisites:** HOS 118, HOS 217
Advanced principles and procedures for preparing baked goods, specialty cakes, pastries and pies, and other specialty desserts. Emphasizes producing high-quality items. 1 lecture/4 laboratory hours

### HOS 230 Experimental Kitchen 2 credits
**Prerequisites:** HOS 101, HOS 111, HOS 118; MAT 108 or higher
Covers tastes and flavors (sweet, salt, bitter, sour, and umami). Students explore culinary herbs and spices, salts, peppers, oils, vinegars, essences, fragrances, oleoresins, concentrates, freeze dried fruit and vegetable products, and other flavor carriers used in cooking and culinary research and development. Includes a hands-on lab application of techniques learned. 1 lecture/3 laboratory hours

### HOS 231 Meat, Poultry and Fish Fabrication 1 credit
**Prerequisites:** HOS 101, HOS 118
Addresses the fundamentals of purchasing specifications; receiving, handling, and storing meat and seafood; plus techniques for fabricating cuts for professional kitchens. 2 laboratory hours

### HOS 235 American Regional Cuisine 2 credits
**Prerequisites:** HOS 102, HOS 109
Prepare, taste, serve, and evaluate traditional regional dishes of America. Study and practices emphasize ingredients, flavor profiles, preparations, and techniques representative of cuisines of the United States. 1 lecture/3 laboratory hours

### HOS 240 Classical Cuisine / Advanced International 2 credits
**Prerequisites:** HOS 102, HOS 115
Students will demonstrate a working knowledge in their approach to flavor profiles by applying cooking methods practiced by each ethnic group visited. Traditional preparation and plate presentation is emphasized utilizing both classic and modern approaches. 1 lecture/3 laboratory hours

### HOS 245 Chocolates and Confections / Retail Bakeshop 3 credits
**Prerequisites:** HOS 218, HOS 219
The essentials for creating sculptures, forming simple centerpieces, and preparing chocolates and other confections with soft, hard, and liquid centers. Along with merchandising concepts, traditional and contemporary production practices are explored for products including pastillage, nougatine, and assorted sugar and chocolate decorative pieces. 1 lecture/4 laboratory hours

### HOS 246 Artisanal Breads 2 credits
**Prerequisites:** HOS 218, HOS 219
An in-depth study and practice of Artisan bread baking. Old World techniques are applied with an emphasis on levians, poolish, and sponge bread methods. 1 lecture/3 laboratory hours

### HOS 247 Restaurant Desserts 3 credits
**Prerequisites:** HOS 218, HOS 219
How to produce and merchandise restaurant-style desserts. Along with an emphasis on dessert menu planning, production techniques are practiced involving plate-up, garnish, and component style desserts. 1 lecture/4 laboratory hours

### HOS 248 Advanced Pastry 3 credits
**Prerequisite:** HOS 218, HOS 219
Integrates training in baking and pastry arts, academic studies, and field experience using fundamental baking and pastry techniques, topics of contemporary significance, food science, aesthetics, and sensory perception as frameworks. Building on previous baking and pastry classes, students research recipes, produce them for consumption, evaluate them, and cost them. Additional assignments include short essays, a detailed project, menu development, and service demonstrations. 1 lecture/4 laboratory hours

### HOS 290 Internship in Hotel, Restaurant, and Institution Management 2 credits
**Prerequisites:** minimum GPA of 2.0 or permission of program coordinator; eligibility usually limited to students in final semester before graduation
Supervised field experience in the operation and management of various departments or functional areas at selected hotels, restaurants, and institutions. Focus on leadership skills, human relations development, service in the hospitality industry, and reducing turnover with teamwork. 1 lecture/240 internship hours

### HOS 291 Culinary Internship 2 credits
**Prerequisites:** HOS 109 or HOS 219, sophomore status, and permission of program coordinator; eligibility generally limited to students who have completed 30 credits
Consists of two components: a supervised field experience working in various kitchen or pastry positions in a commercial kitchen and classroom exercises and activities involving development of human relations, teamwork, and leadership skills. Service in the hospitality industry as well as culinary career opportunities are additionally addressed. 1 lecture/400 internship hours

### HPE—Health / Physical Education

### HPE 091 Introduction to Health Careers 2 credits
**Prerequisite:** ENG 034
Designed for any student interested in a career in the health professions. Provides an introduction to the educational pathways, roles, and responsibilities of health care providers, and an overview of a variety of health professions, plus opportunities to actually observe additional career options in the health care field. 2 lecture hours

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2014 - 2015
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COURSES

HPE 101 Basic Concepts of Nutrition 3 credits
Prerequisites: MAT 033 and ENG 024 or equivalent
Study of the fundamental concepts of nutrition with emphasis on the relationships of nutrients to health. Topics include basic diet constituents, principles of body function, considerations for various age groups, dietary regulations, myths, food patterns, weight control, and food safety. 3 lecture hours

HPE 105 First Aid, CPR and AED 3 credits
Prepares rescuers and lay responders with the knowledge and hands-on skills necessary to safely minimize the consequences of injury and illness and help sustain life in an emergency until medical help arrives. Successful candidates earn Basic Life Saving Healthcare Provider CPR/AED and Heartsaver First Aid Certifications through the American Heart Association. 2 lecture/2 laboratory hours

HPE 110 Concepts of Health and Fitness 2 credits
Prerequisite: ENG 033 or equivalent
Through lectures and laboratories, essential knowledge and skills in health and all dimensions of wellness are explored. Through self-assessments, students develop a wellness profile and program designed to achieve and/or maintain optimal lifelong health and wellness. Physical activity is required. 1 lecture/2 laboratory hours

HPE 111 Living with Health 3 credits
Prerequisite: ENG 034 or college-level proficiency in reading
Through self-assessments and critical thinking, students optimize their physical, psychological, social, intellectual and environmental well-being. Topics include health determinants, disease, disability, consumer education, health literacy, infectious and chronic diseases, aging, diversity, immediate and long-term effects of lifestyle choices including fitness, diet, stress management, destructive behaviors, dependency, and sexuality. 3 lecture hours

HPE 113 Medical Terminology 3 credits
Prerequisite: ENG 101 placement
Basic medical terms with an emphasis on general organizational principles. Topics include the use of prefixes, suffixes, and roots to convey meaning. Exercises provide practice with vocabulary, pronunciation, and report writing. Appropriate for students in nursing, allied health, and medical office assistant programs. 3 lecture hours

HPE 115 Introduction to Public Health 3 credits
Prerequisites: ENG 024, ENG 034, MAT 037
Introduces current issues in public health from the local and global perspective. Topics include community health problems, communicable disease control, epidemiology, public health response to bioterrorism, biomedical research, individual and group behavior, public health nursing, and indicators in the population/community. 3 lecture hours

HPE 134 Prevention, Assessment and Care of Athletic Injuries 3 credits
Prerequisites: BIO 103, ENG 101 and HPE 110 or HPE 111
The art and science of athletic training with emphasis on relating theory and practice. Topics include terminology; injury prevention; and the causes, symptoms, and care of common sports injuries. 3 lecture hours

HPE 151 Introduction to Exercise Science 1 credit
A series of lectures, guest presentations, and student-initiated field interviews introduces the history and future of exercise science; the wide range of related careers; current issues in health, wellness, and fitness; and various professional and certifying organizations. 1 lecture hour

HPE 163 Principles of Coaching 2 credits
How to plan, organize, and direct a team sports program. Includes facilities, regulations, legal issues, safety, equipment, staffing, strategy, and public relations. Suitable for volunteers working in youth programs and students contemplating further study in sports and leisure services. 2 lecture hours

HPE 171 Personal Fitness 1 credit
Assists in the development of a personal fitness program including weight and cardiovascular fitness equipment. Emphasizes strength, flexibility, cardiovascular, and weight control. A medical history is required; a physical exam may be required. Full-time students who complete this course may use the Fitness Center free of charge. 1 lecture hour

HPE 175 Health Through Stress Management 1 credit
Examines the nature of stress, factors that predispose one to stress, reactions to stress, and positive techniques to help control stress. 1 lecture hour

HPE 211 Swimming (Co-Ed) 1 credit
Provides basic instruction in swimming skills, with opportunity to obtain both American Red Cross Beginners and Intermediate certifications. 2 laboratory hours

HPE 220 Team Sports I 1 credit
Fundamental skills, basic strategies, and knowledge of rules and playing courtesies developed for selected team sports including basketball, football, soccer, softball, and volleyball. 2 laboratory hours

HPE 225 Beginning Tennis 1 credit
Introduces new players to the following strokes and grips: forehand, backhand, serve, volley, lob, and overhead smash. Additionally addresses rules, scoring, tennis etiquette, and tennis vocabulary. Utilization of videotapes, practice drills, and game situations develop skills. 2 laboratory hours

HPE 226 Intermediate and Advanced Tennis 1 credit
Prerequisite: HPE 225 or permission of instructor
For students who have received formal instruction (such as HPE 225), have played competitively, or who have been playing for two or three years and can rally consistently with an opponent. Skills presented include the slice, drop shot, half volley, drop volley, offensive lob, defensive lob, and slice serves. Additionally covers footwork and strategy. 2 laboratory hours

HPE 241 Applied Exercise Physiology 3 credits
Prerequisites: BIO 103, ENG 101
Addresses anatomical, biomechanical, and physiological effects of physical activity on the human body as well as methods of assessment and how to design and implement exercise programs for individuals and groups. Lab activities include practical applications of theoretical concepts. 2 lecture/2 laboratory hours

HPE 242 Exercise Measurement and Prescription 3 credits
Prerequisites: BIO 103, BIO 104, HPE 241
Emphasizes development of the protocol knowledge and skills necessary for appropriate assessments and exercise prescriptions which cater to the physical fitness needs of generally healthy populations, those with medical protocol considerations, and athletic populations. 2 lecture/3 laboratory hours
COURSES

HRA—Heating, Refrigeration and Air Conditioning

HRA 101 Principles of Refrigeration / Air Conditioning I 2 credits
Corequisite: MAT 037 (or MAT 037A and 037B) or equivalent proficiency
Fundamental principles of pressure and temperature relationships, heat transfer, and cooling concepts. Specific topics include leak detection, types of refrigerants, piping materials, and connections. [Fall offering] 1 lecture/2 laboratory hours

HRA 102 Principles of Refrigeration / Air Conditioning II 2 credits
Prerequisite: HRA 101
Corequisite: EET 130 or equivalent
Fundamental operating principles of compressors, condensers, and evaporators. Specific topics include types of metering devices, general accessory configuration, and procedures for charging and evaluating systems. [Fall offering] 1 lecture/2 laboratory hours

HRA 103 Refrigeration / Air Conditioning Electrical Controls 4 credits
Prerequisites: EET 130, HRA 102
Examines types and application of various electromechanical devices such as motors, contractors, overload devices, thermostats, controls, and relays as well as various types of test and metering equipment. 2 lecture/4 laboratory hours

HRA 104 Domestic Heating and Air Conditioning Systems 4 credits
Prerequisite: HRA 103
Operating fundamentals for the diagnosis and repair of various domestic heating and cooling units including window and central units, refrigerators, freezers, gas furnaces, and heat pumps. 2 lecture/4 laboratory hours

HRA 201 Concepts of Heating and Cooling 4 credits
Prerequisites: MAT 037 (or MAT 037A and 037B) or equivalent proficiency, HRA 102
Addresses computations involving the use and size of various heating and cooling systems, principles of heating, flow and energy, heat pump systems, and air distribution. [Fall offering] 3 lecture/3 laboratory hours

HRA 202 Light Commercial Systems I 2 credits
Prerequisites: EET 130, HRA 103, HRA 104
Corequisite: HRA 203
Explores electrical and mechanical component configurations, including wiring and controls, for light commercial systems. 1 lecture/2 laboratory hours

HRA 203 Light Commercial Systems II 2 credits
Prerequisites: EET 130, HRA 104
Corequisite: HRA 202
Study of electromechanical light commercial system operation, diagnosis and repair, including piping configurations, defrost systems, pressure switches, and pressure regulators. 1 lecture/2 laboratory hours

HRA 205 Heavy Commercial Systems 4 credits
Prerequisite: HRA 104
Operation, maintenance, diagnosis, and repair of heavy commercial systems including electrical controls, mechanical components, and electrical circuitry. [Fall offering] 1 lecture/4 laboratory hours

HRA 227 Cost Estimating 3 credits
Prerequisites: ENT 116, MAT 110
Detailed study of the materials, labor, equipment, overhead, and profit in the field of heating, refrigeration and air conditioning. Intended primarily for students in the Heating, Refrigeration and Air Conditioning program, but also suitable for the Mechanical Engineering Technology program. [Occasional offering] 3 lecture hours

IST—Information Systems Technology

Note: Students should consult their academic advisor and the college or university to which they intend to transfer regarding information technology course requirements. The receiving institution always makes the final decision concerning transferability of credits.

IST 033 Tech Studio 2 credits
Prerequisite: instructor or advisor permission
An introductory computer technology course for students who have had little or no exposure to computers. Topics include the basics of Windows, the Internet, word processing, multimedia, and e-mail. Students create a Web-based ePortfolio to showcase their coursework. 1 lecture/2 laboratory hours

IST 101 Computer Concepts with Applications 3 credits
Prerequisite: reading proficiency
Corequisite: MAT 037 (or MAT 037A and 037B)
A computer literacy course that addresses hardware, software, networking, databases, information literacy, and ethics issues. Lab time includes exposure to a popular PC operating system, Web searching, as well as word processing, database, spreadsheet, and presentation software applications. 2 lecture/2 laboratory hours

IST 102 Computer Concepts with Programming 3 credits
Prerequisites: ENG 034; MAT 037 (or MAT 037A and 037B) or equivalent proficiency
An introduction to computer literacy including a programming laboratory. Lectures cover the Internet; software; system components; peripherals; communications; databases; security, ethics, and privacy; programming languages; and enterprise computing. The laboratory covers forms, menus, decisions, loops, arrays, searching, the user interface, and database programming with Java. 2 lecture/2 laboratory hours

HPE 243 Exercise Science Field Experience 3 credits
Prerequisites: BIO 103, BIO 104, ENG 101, HPE 242
Provides essential experiences and networking opportunities in an exercise science setting suitable to student interests. Emphasizes career planning and the application of anatomy and physiology, basic nutrition, exercise measurements and prescription, exercise physiology, program management and promotion, and safety. Upon approval of their supervised setting, each student functions and contributes as a staff member for 225 hours.

HPE 250 First Aid 2 credits
Designed to present a basic study of safety and accidents, and instruction in the application of emergency first aid. This course meets the certification requirements for standard First Aid and CPR as offered by the American Red Cross. 2 lecture hours

HPE 253 CPR for the Professional 1 credit
American Red Cross CPR for police, fire personnel, health care providers, safety officers, lifeguards, EMTs, paramedics, and other rescue personnel. Successful completion earns the American Red Cross CPR For The Professional Rescuer certification. 1 lecture hour

HPE 242 Computer Concepts with Applications 3 credits
Prerequisite: MAT 037 (or MAT 037A and 037B) or equivalent proficiency
A computer literacy course that addresses hardware, software, networking, databases, information literacy, and ethics issues. Lab time includes exposure to a popular PC operating system, Web searching, as well as word processing, database, spreadsheet, and presentation software applications. 2 lecture/2 laboratory hours

HPE 243 Exercise Science Field Experience 3 credits
Prerequisites: BIO 103, BIO 104, ENG 101, HPE 242
Provides essential experiences and networking opportunities in an exercise science setting suitable to student interests. Emphasizes career planning and the application of anatomy and physiology, basic nutrition, exercise measurements and prescription, exercise physiology, program management and promotion, and safety. Upon approval of their supervised setting, each student functions and contributes as a staff member for 225 hours.
IST 107  Introduction to C/C++ Programming  3 credits
Prerequisites: proficiency in basic algebra, MAT 037 (or MAT 037A and 037B)
By programming to solve problems in C/C++, students gain an appreciation for the role that computers and programs play in today's society. Topics include programming in a traditional environment, variables, methods, decisions, repetition, arrays, and object-oriented programming. Extensive laboratory exercises reinforce lecture concepts. 3 lecture/4 laboratory hours

IST 108  Introduction to Programming with Mobile Application Development  4 credits
Prerequisite: MAT 037 or 042, or proficiency in basic algebra
Overview of various mobile platforms and development environments. Students learn how to create Android mobile applications using App Inventor, a visual programming language. Fundamental programming concepts and structures introduced include variables, selection, iteration, functions, lists, and event-driven programming. 3 lecture/2 laboratory hours

IST 109  Introduction to Programming  3 credits
Prerequisites: proficiency in basic algebra, MAT 037 (or MAT 037A and 037B)
Introduces fundamental programming structure, tools and documentation, including how to design interfaces and develop Task Object Event (TOE) and Object Properties and Settings charts, hierarchy charts, pseudocode, and flow-charts. Problem-solving techniques and program design using logic control structures of sequence, selection, iteration, arrays, and sequential files are emphasized in laboratory exercises using VB.NET. 2 lecture/2 laboratory hours

IST 123  Programming in Visual Basic.NET  3 credits
Prerequisite: IST 109
Overview of Visual Basic.NET language to create event-driven programming applications to be run in a Windows environment. Develops object-oriented solutions for a variety of problems in personal and business computing. 2 lecture/2 laboratory hours

IST 140  The Internet and Computer Technology  3 credits
Prerequisite: computer literacy
Introduction to Internet technology and the use of the World Wide Web as a tool. Topics include Internet and Web history, client-server networks, Web browsers, search engines and queries, multimedia, electronic commerce, social networking utilities, electronic mail, and computer security. Students design a Web page using HTML. 2 lecture/2 laboratory hours

IST 143  XHTML, CSS, and Website Hosting  4 credits
Prerequisite: IST 101 or equivalent computer proficiency
Students install software and applications to establish a Microsoft operating system based server using IIS and a Linux operating system using Apache Web Server. Following an introduction to HTML, students develop Web pages and websites using xhtml, CSS, and JavaScript. Requires a PC and Internet access outside of class. 2 lecture/2 laboratory hours

IST 208  Android Application Development  4 credits
Prerequisite: COS 102 or equivalent
Introduces how to develop applications for Android devices using Java programming language along with the Android SDK. By doing real projects within the Eclipse integrated development environment, students learn key programming concepts - including properties and variables, control structures, lists and arrays, and event handling - to apply Java and object-oriented technology to mobile application development. 3 lecture/2 laboratory hours

IST 209  Project Management Concepts  3 credits
Cultivates strategies to orchestrate carefully designed action plans to complete projects successfully, often incorporating complex, dynamic and changing requirements. Explores the management of technology, people, and change to achieve goals, reach targets, and deliver the project on time and within budget. 2 lecture/2 laboratory hours

IST 223  Topics in Advanced Programming  3 credits
Prerequisite: IST 123
Incorporates programming, problem solving, programming logic, and design techniques. Students acquire advanced programming skills such as accessing and updating data in a relational database and developing applications using PL/SQL. 2 lecture/2 laboratory hours

IST 243  Scripting and MySQL for the World Wide Web  3 credits
Prerequisites: IST 143, MAT 140 or higher
Reviewing skills from IST 143, students establish individual Linux/Apache servers, then proceed to develop static and dynamic Web pages using Perl and several Perl variants, PHP, and Python. Includes an introduction to MySQL and the development of Web pages that update, read, and display information in a database. 2 lecture/2 laboratory hours

IST 251  Management of Computer Technology  3 credits
Prerequisite: completion of 30 credits toward Information Systems or Information Technology degree program
Explores solutions to the challenges facing a typical computer technology manager, including project life-cycles, security, access, end-user computing, project planning, scheduling, staffing, employee development, and external threats to private computers. 2 lecture/2 laboratory hours

IST 253  Database Concepts  3 credits
Prerequisite: IST 102 or IST 109
Covers relational database technology and how to apply it in solving basic and advanced database problems and cases. Provides the foundation for the advanced study of individual database management systems, electronic commerce, and enterprise computing. 2 lecture/2 laboratory hours

IST 256  Systems Analysis  3 credits
An introduction to systems analysis and design, including analyzing the business case, requirements modeling, and development strategies. Additionally covers output and user interface design, data design, systems architecture and implementation, and systems operation, support, and security. 2 lecture/2 laboratory hours

IST 259  Project Management  4 credits
How to select, initiate, operate, and control all types of projects, including how to manage risks and uncertainties. Equips students with the quantitative skills, knowledge of organizational issues, and insights into human behavior that are needed for effective project management. 3 lecture/2 laboratory hours

IST 260  SQL Server Database Design  4 credits
Covers user-defined functions and constraints, database methodologies including OLAP (Online Analytical Processing) and OLTP (Online Transaction Processing) issues, and SQL Server. Additionally covers the relational database model, normalization issues, and ensuring data integrity through the use of views, triggers, and stored procedures. 3 lecture/2 laboratory hours
**COURSES**

**IST 261** SQL Server System Administration 4 credits
*Prerequisite: IST 260*
Covers the concepts and skills required for support of SQL Server and Microsoft Certified Database Administration (MCDBA) certification: backing up and restoring databases, setting up and managing users, managing database security, managing the replication environment, tuning the database system, and troubleshooting any problems that arise. 3 lecture/2 laboratory hours

**IST 262** Oracle SQL 4 credits
*Prerequisite: IST 109*
Introduces Oracle services, including writing SQL statements, creating databases, manipulating data and tables, working with log files, and performing general database administration. Assists students with preparing for series of examinations leading to the Oracle Certified Associate (OCA) Certificate. 3 lecture/2 laboratory hours

**IST 263** Database Administration I 4 credits
*Prerequisite: IST 262*
Addresses Oracle Database software installation along with new database creation and administration. Students configure the database to support an application, create users, define storage structures, set up security, design a backup and recovery strategy, and monitor the database to ensure its smooth operation. 3 lecture/2 laboratory hours

**IST 264** Database Administration II 4 credits
*Prerequisite: IST 263*
Combines training, experience, and testing to ensure a strong foundation and expertise in the industry's most advanced database management system. Focus includes Oracle database configuration for multilingual applications, the Oracle Recovery Management and Flashback technology, and database performance monitoring tools. 3 lecture hours

**IST 298** Information Systems
Cooperative Education 2 credits
*Prerequisite: final course for degree in Information Technology Integration of classroom study with specific planned period of learning through job experience. Based on individualized learning contract.* 180 work experience hours

**IST 281** Information Systems
Cooperative Education I 1 credit

**IST 282** Information Systems
Cooperative Education II 1 credit

**IST 283** Information Systems
Cooperative Education III 1 credit
*Prerequisite: IST 298*
Continuation of IST 298. The student earns one credit for a minimum of 90 hours of work experience for each course. 90 work experience hours

**ITA—Italian**

*Note: Students who have taken two or more years of a foreign language, and have done so in the last two years, should begin that language at the 200 level or switch to a new language. If there is doubt, placement will be determined by testing or consultation with the academic division.*

**ITA 101** Beginning Italian I 3 credits
*Prerequisite: ITA 101 with a minimum C grade or permission of instructor*
The first in a sequence of courses designed for students with little or no prior knowledge of Italian. Spoken communication in Italian is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours

**ITA 201** Intermediate Italian I 3 credits
*Prerequisite: ITA 101 with a minimum C grade or permission of instructor*
The first in a sequence of courses designed for students with a mid to high novice level of competency in Italian. Spoken communication in Italian continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving Italian culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

**ITA 202** Intermediate Italian II 3 credits
*Prerequisite: ITA 201 with a minimum C grade or permission of instructor*
The second in a sequence of courses designed for students with a mid to high novice level of competency in Italian. Spoken communication in Italian continues to be the end goal and the means of instruction. The four communicative skills of reading, writing, listening and speaking are applied to discussions and debates involving Italian culture, politics, and history. Fundamental grammar points are reviewed. 3 lecture hours

**JPN—Japanese**

*Note: Students who have taken two or more years of a foreign language, and have done so in the last two years, should begin that language at the 200 level or switch to a new language. If there is doubt, placement will be determined by testing or consultation with the academic division.*

**JPN 101** Beginning Japanese I 3 credits
The first in a sequence of courses designed for students with little or no prior knowledge of Japanese. Spoken communication in Japanese is both the end goal and the means of instruction. Emphasizes the four communicative skills in a culturally authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced. 3 lecture hours
LAT—Latin

Note: Students who have taken two or more years of a foreign language, and have done so in the last two years, should begin that language at the 200 level or switch to a new language. If there is doubt, placement will be determined by testing or consultation with the academic division.

LAT 101 Beginning Latin I 3 credits
Prerequisite: LAT 101 with a minimum C grade or permission of instructor
The first in a sequence of courses designed for students with little or no prior knowledge of Latin. Reading comprehension of literary and scholarly texts in Latin being the end goal, emphasizes the communicative skills of reading and writing based on culturally authentic texts. Grammar is thoroughly introduced and analyzed. Some spoken communication in Latin is practiced. 3 lecture hours

LAT 102 Beginning Latin II 3 credits
Prerequisite: LAT 101 with a minimum C grade or permission of instructor
The second in a sequence of courses designed for students with little or no prior knowledge of Latin. Reading comprehension of literary and scholarly texts in Latin being the end goal, emphasizes the communicative skills of reading and writing based on culturally authentic texts. Grammar is thoroughly introduced and analyzed. Some spoken communication in Latin is practiced. 3 lecture hours

LAT 201 Intermediate Latin I 3 credits
Prerequisite: LAT 102 with a minimum C grade or permission of instructor
Designed for students with a mid to high novice level of reading competency in classical Latin. Reading comprehension of literary and scholarly texts in Latin continues to be the end goal. With Latin being the language of instruction for at least half of class time, some conversation is practiced. 3 lecture hours

LEG—Legal Studies

LEG 129 Role of the Paralegal 3 credits
Study of the relationship among paralegals, attorneys, and clients particularly as it relates to law office economics, legal ethics, and confidentiality. Stages in a civil lawsuit and a criminal prosecution are examined; legal interviewing, investigation, and an orientation to legal research are stressed. 3 lecture hours

LEG 130 Civil Litigation I 3 credits
Study of the law of torts designed to acquaint the paralegal with the various forms of tort actions encountered in the law office. 3 lecture hours

LEG 132 Civil Litigation II 3 credits
Prerequisite: ENG 101 with a minimum C grade
Overview of the litigation process covering the pleadings of cases from initial complaint through ultimate judgment, with emphasis on tasks performed by paralegals. Addresses medical terminology and rules of evidence. 3 lecture hours

LEG 133 Legal Research and Writing 3 credits
Prerequisite: ENG 101
Study of basic skills often required in the general practice of law. Utilizing computer-assisted legal research, includes an introduction to several common kinds of legal writing with an emphasis on that which the paralegal encounters on a day-to-day basis in a law office. 3 lecture hours

LEG 143 Family Law 3 credits
Prerequisite: BUS 107
Explores the basics of New Jersey collection practices and the major types of federal bankruptcy filings. 3 lecture hours

LEG 201 Commercial Law 3 credits
Prerequisite: BUS 107
Examines the mechanics of real estate transactions in New Jersey, including deed and mortgage preparation, closing statements, R.E.S.P.A. forms, plus title policies and searches. [Fall offering] 3 lecture hours

LEG 206 New Jersey Real Estate Transactions 3 credits
Survey of procedures and pleadings in domestic relations including the preparation of divorce complaints, answers, counterclaims, motions, disclosure statements, and property settlement agreements. Includes issues of custody, visitation rights, child support and maintenance, adoptions and name changes. [Spring offering] 3 lecture hours

LEG 208 Wills and Probate 3 credits
Survey of basic wills and basic probate practice, including interviewing for and preparation of a will, procedures involved in probate, New Jersey state inheritance tax, and federal estate tax. [Fall offering] 3 lecture hours

LEG 212 Field Experience – Paralegal 3 credits
Prerequisites: sophomore status and permission of instructor; eligibility generally limited to students in final semester prior to graduation
Students work in a New Jersey law office or other approved legal site, supervised by practicing attorneys and graded on ability to apply learning in practical situations. Includes seminar meeting one day per week. 1 lecture/210 work experience hours

LEG 232 Civil Litigation III 3 credits
Prerequisite: LEG 132 with a minimum C grade
Advanced litigation course stressing the preparation of a wide range of pleadings involved in a civil lawsuit. One-third of class time involves extensive practical litigation exercises and applications in a lab setting. 2 lecture/2 laboratory hours

LIB—Library Technology

LIB 101 The Library / Media Center: an Introduction 3 credits
Prerequisite: ENG 101
Explores the range of materials and services available in libraries for lifelong learning along with the operation and organization of libraries and information centers. Provides practical experience in using basic resources and new technologies. 3 lecture hours
MAT—Mathematics

Note: Students should check mathematics course recommendations with the college or university to which they intend to transfer. The receiving institution always makes the final decision concerning transferability of credits. Information about mathematics course equivalencies among New Jersey institutions is available at www.njtransfer.org.

MAT 032 Beginning Algebra – Accelerated 2 credits
Prerequisite: placement test score
Foundation mathematics course designed for students with experience in algebra but who need to strengthen their mastery of the fundamentals. Topics include exponents, polynomials, factoring, linear and quadratic equations, rational and algebraic expressions, and graphing linear equations. [Foundation course does not fulfill mathematics elective requirement.] 2 lecture hours

MAT 033 Pre-Algebra 4 credits
Developmental mathematics course designed for students needing a review of basic arithmetic, including an introduction to algebra. Topics include operations with whole numbers, decimals, fractions, percents, ratio and proportion, signed numbers, and an introduction to algebraic equations. [Foundation course does not fulfill mathematics elective requirement.] 4 lecture hours

MAT 037 Beginning Algebra 4 credits
Prerequisite: MAT 033 with a minimum B- grade or placement test score
Foundation mathematics course designed for students with experience in algebra but who need to strengthen their mastery of the fundamentals. Topics include exponents, polynomials, factoring, graphing first-degree equations, quadratic equations, rational expressions, and radical expressions. [Foundation course does not fulfill mathematics elective requirement.] 4 lecture hours

MAT 041 Foundation Math I 3 credits
Developmental mathematics course designed for students needing a review of basic arithmetic, including an introduction to algebra. Topics include whole numbers, fractions, decimals, percentages, and integer operations. Students work through the material in self-paced mastery-based modules in a lab setting. [Foundation course does not fulfill mathematics elective requirement.] 6 laboratory hours

MAT 042 Foundation Math II 3 credits
Prerequisite: MAT 041
Developmental mathematics course designed for students needing an introduction to algebra. Topics include inequalities, linear models and graphing, exponents, and polynomials. Students work through the material in mastery-based modules in a lab setting. Those who complete this course may register for MAT 108, MAT 110, MAT 115, or MAT 120. [Foundation course does not fulfill mathematics elective requirement.] 6 laboratory hours

MAT 043 Foundation Math III 1 credit
Prerequisite: MAT 042
Developmental mathematics course designed for students needing additional topics in algebra. Students work through the material – operations on rational and radical expressions, systems of equations, and linear models – in mastery-based modules in a lab setting. Those who complete this course may register for MAT 135 or MAT 140. [Foundation course does not fulfill mathematics elective requirement.] 2 laboratory hours

LIB 103 Library Skills 1 credit
Survey course on library and information services and resources, both in print and non-print format. Emphasizes research strategies to locate and access information for class discussions, projects, reports, term papers, and lifelong information needs. Topics include the online catalog, reference sources, Web-based and micro-formatted resources, print indexes, and library equipment. 2 lecture/2 laboratory hours (5 weeks)

MAT 108 Topics in Mathematics 3 credits
Prerequisite: MAT 037 (or MAT 037A and 037B) or MAT 042 or appropriate placement test score
Designed to give liberal arts and other non-scientific/non-technical majors an overview and basic working knowledge of three mathematics topics/applications encountered on a daily basis: probability, data analysis, and consumer math. 3 lecture hours

MAT 110 Elementary Technical Mathematics 3 credits
Prerequisite: MAT 037 (or MAT 037A and 037B) or MAT 042 or appropriate placement test score
Designed for specific technology programs. Topics in arithmetic, geometry, algebra, and elementary trigonometry are covered with emphasis on their application to technology. 3 lecture hours

MAT 115 Algebra and Trigonometry I 3 credits
Prerequisite: MAT 037 (or MAT 037A and 037B) or MAT 042 or appropriate placement test score
Primarily for students majoring in engineering technology related programs. Algebraic topics discussed include systems of linear equations, determinants, factoring, trigonometric functions and their graphs, radian measure, solutions of triangles, and application problems. 3 lecture hours

MAT 116 Algebra and Trigonometry II 3 credits
Prerequisite: MAT 115 with a minimum C grade or permission of the Mathematics Department
Continuation of MAT 115. Topics include complex numbers, logarithmic and exponential functions, solving systems of non-linear equations, trigonometric identities and equations, inverse trigonometric functions, and analytic geometry. 3 lecture hours

MAT 120 Mathematics for Liberal Arts 3 credits
Prerequisite: MAT 037 (or MAT 037A and 037B) or MAT 042 or appropriate placement test score
Primarily for students in non-scientific/non-technical majors, emphasizes mathematical systems, reasoning, and mathematical structures. Includes sets, symbolic logic, numeration systems, number systems in other bases, growth models, and geometric structures. 3 lecture hours
### MAT 153 Intermediate Algebra with Applications 4 credits
**Prerequisite:** MAT 037 (or MAT 037A and 037B) or MAT 043 with a minimum C grade or appropriate placement test score
Topics include function notation; linear, quadratic, and absolute value functions and equations; rational expressions and equations; rational exponents and equations; radicals and radical equations; graphing of linear, quadratic, and polynomial functions; and inequalities. [grade of B- or better is strongly recommended to proceed to MAT 146] 4 lecture hours

### MAT 140 Applied College Algebra 4 credits
**Prerequisite:** MAT 037 (or MAT 037A and 037B) or MAT 043 with a minimum C grade or appropriate placement test score
Designed for students majoring in disciplines involving less intensive math, for which a more conceptual understanding of college algebra is appropriate. Employing extensive examples from a variety of fields, topics include the study of linear, exponential, logarithmic, polynomial and rational functions. Not intended as preparation for Pre-Calculus or Calculus. 3 lecture/1 laboratory hours

### MAT 146 Pre-Calculus 4 credits
**Prerequisite:** MAT 135 with a minimum C grade or appropriate College Level Math placement test score
In-depth study of polynomial, rational, exponential, logarithmic, trigonometric and inverse trigonometric functions, equations, and identities; systems of equations including matrices; extensive use of graphing calculators. [grade of B- or better is strongly recommended to proceed to MAT 151] 4 lecture hours

### MAT 149 Calculus for Social Sciences or Business 4 credits
**Prerequisite:** MAT 146 with a minimum C grade or appropriate College Level Math placement test score
Designed for students of business and the social sciences. Application-based topics include the fundamental techniques of differentiation and integration of algebraic, exponential and logarithmic functions, elementary differential equations, maxima-minima, functions of several variables, Lagrange multipliers, and double integration. 4 lecture hours

### MAT 151 Calculus I for the Mathematical and Physical Sciences 4 credits
**Prerequisite:** MAT 146 with a minimum C grade or appropriate College Level Math placement test score
First course in the standard integrated calculus sequence. Topics include differentiation of algebraic, exponential, logarithmic, trigonometric, hyperbolic, and inverse trigonometric functions. Applications include curve sketching, related rates, maxima, minima, and approximations as well as integration and applications of the definite integral. 4 lecture hours

### MAT 152 Calculus II for the Mathematical and Physical Sciences 4 credits
**Prerequisite:** MAT 151 with a minimum C grade and consultation with mathematics faculty member
Continuation of MAT 151. Topics include techniques of integration, areas, volumes, arc length, surface area, improper integrals, Simpson’s Rule, infinite sequences, MacLaurin and Taylor series, differentiation of polar and parametric equations, conic sections in rectangular and polar form, and rotation of axes. 4 lecture hours

### MAT 200 Statistics for Social and Health Sciences I 3 credits
**Prerequisite:** MAT 135 with a minimum C grade or appropriate College Level Math placement test score or permission of department
An applied statistics course for the social sciences, nursing, etc. Topics include data production and access, one-variable data analysis, correlation and regression, normal and binomial distributions, sampling distributions, estimation and tests of hypotheses for a single sample. MINITAB statistical software is used to calculate statistics and generate graphs. 3 lecture hours

### MAT 201 Probability and Statistics for Science and Engineering 4 credits
**Prerequisite:** MAT 151 or MAT 149 with a minimum C grade or permission of department
Calculus-based course designed for engineers, computer scientists and science majors. Topics include one variable data analysis, sample regression analysis, probability, discrete and continuous distributions, random samples, confidence intervals and hypothesis testing, contingency tables, as well as one factor and factorial experimental design. 4 lecture hours

### MAT 205 Statistics for Social and Health Sciences II 3 credits
**Prerequisites:** MAT 200 with a minimum C grade or permission of department
Second-semester course in an academic year sequence for social sciences, humanities, nursing and related fields. Emphasizes statistical software for studies of probability, inference for two parameters, inference for regression and correlation, analysis of variance, analysis of categorical data, and non-parametric statistics. [Spring offering] 3 lecture hours

### MAT 208 Linear Algebra 4 credits
**Prerequisite:** MAT 151 or MAT 149 with a minimum C grade and consultation with mathematics faculty member
An introduction to linear algebra topics including linear equations and matrices, determinants, independence and dimension, vector spaces and subspaces, the four fundamental subspaces, orthogonality, linear transformations and eigenvalues and eigenvectors. Applications of linear algebra are included. 4 lecture hours

### MAT 251 Calculus III 4 credits
**Prerequisite:** MAT 152 with a minimum C grade and consultation with mathematics faculty member
Continuation of MAT 152. Includes parametric equations, vectors, solid analytic geometry, partial derivatives, multiple integrals, and topics in vector calculus including Green’s theorem and Stoke’s theorem. 4 lecture hours

### MAT 252 Differential Equations 4 credits
**Prerequisite:** MAT 152 with a minimum C grade and consultation with mathematics faculty member
Topics include solutions of ordinary differential equations, solving linear differential equations of higher order using differential operators, methods of undetermined coefficients and variation of parameters. Strong emphasis on solving differential equations using the Laplace transform, Cauchy-Euler equation, infinite series, and matrix methods. Applications to geometry and physical science are discussed. 4 lecture hours

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MKT—Marketing

MKT 101 Principles of Marketing 3 credits
Prerequisite: ENG 101
A study of the process of planning and executing the conception, pricing, promotion, and distribution of ideas, goods, and services that satisfy individual and organizational objectives. 3 lecture hours

MKT 106 Introduction to Sports Marketing 3 credits
Prerequisite: ENG 101
Exploration of the comprehensive nature of sports marketing from a strategic marketing perspective. Examination of basic and detailed concepts covers such areas as sponsorships, branding, promotions, public relations, licensing, and consumer research and behavior, including their effects on professional, intercollegiate and other areas of sport. 3 lecture hours

MKT 230 Principles of Retailing 3 credits
Prerequisite: MKT 101
Introduction to the field of retailing. Issues include establishment of a store, store location, layout, organization and planning, buying, merchandising, promotion, credit, control and personnel. 3 lecture hours

MLT—Medical Laboratory Technology

The minimum passing grade for all MLT courses is C.

MLT 112 Introduction to Medical Laboratory Technology 3 credits
Prerequisite: BIO 102 or BIO 104 or permission of instructor
Basic principles, techniques and vocabulary applicable to medical laboratory technology. Emphasizes specimen collection and preservation; urinalysis and clinical microscopy; phlebotomy; introduction to serology; and lab information systems. The lab component develops laboratory skills related to lecture topics. 2 lecture/3 laboratory hours

MLT 200 Clinical Chemistry 4 credits
Prerequisite: MLT 112 or permission of instructor
Basic principles and theory of biochemical and analytical tests and procedures used in the analysis of clinical specimens. Emphasizes the correlation of specimen processing as well as analysis of test results and quality control data in routine manual and automated clinical chemistry procedures. 4 lecture hours

MLT 207 Clinical Immunohematology 4 credits
Prerequisite: MLT 112 or permission of instructor
Basic theory and concepts of antigen-antibody reactions. Covers relationship of infection and immunity; theory of blood group antigens and their inheritance; and methods of performing donor selection, blood groupings, compatibility tests, and antibody screening. 3 lecture/3 laboratory hours

MLT 212 Clinical Hematology 4 credits
Prerequisite: MLT 112 or permission of instructor
Examines hematology and blood coagulation, including blood cell maturation, physiology, and morphology; hemostasis theory and procedures. Laboratory component develops skills used in the performance of hematology and coagulation lab analysis. 3 lecture/3 laboratory hours

MLT 214 Clinical Microbiology 6 credits
Prerequisite: MLT 200 or permission of instructor
Principles and methods used in clinical microbiology including isolation, identification, and antibiotic susceptibility testing of pathogenic bacteria. Introduction to medical parasitology, mycology and virology. Laboratory component develops the technical and critical thinking skills used to evaluate clinical microbiology specimens. 5 lecture/3 laboratory hours

MLT 215 Clinical Practice 10 credits
Prerequisite: MLT 214 or permission of instructor
Clinical practice in an affiliated facility under the direction and supervision of laboratory educators. Students conduct routine analytical procedures, develop their laboratory skills, apply knowledge gained in the program, and demonstrate entry-level career competencies. 720 clinical hours

MUS—Music

Appreciation and History

Humanities

MUS 103 Introduction to Music 3 credits
Enhances the student's knowledge and enjoyment of a variety of music styles and historical contexts through listening and discussion. Requires attendance at live concerts. No prior musical training necessary. 3 lecture hours

Humanities/Diversity and Global Perspective

MUS 155 History of Jazz and Blues 3 credits
Study of the evolution of jazz and blues from their origins in West African music and dance to their development as major 20th century art forms. Examines the significant stylistic phases of jazz from early blues and ragtime through swing and be-bop to avant garde and fusion. Also explores the impact of the African American tradition on contemporary rock and pop music. 3 lecture hours

Humanities/Diversity and Global Perspective

MUS 156 History of American Pop Music 3 credits
Analytical and historical survey of American popular music with an emphasis on the period from 1950 to the present. Students develop an understanding of the cultural, social, technological, and musical forces shaping each decade covered. Students apply critical analysis to musical styles, instrumentation, and song structure in addition to issues of race, ethnicity, social class, and gender as formative factors influencing its evolution. 3 lecture hours

Humanities

MUS 224 Music History and Literature I – Antiquity Through Baroque 3 credits
Prerequisites: MUS 103 and MUS 105 or equivalent experience
Study of the evolution of Western European music from its ideological and practical origins in ancient Greece and Rome through the Medieval, Renaissance, and Baroque periods, in the context of sociohistorical forces and events affecting its development. Basic music theory background desirable. 3 lecture hours

Humanities

MUS 225 Music History and Literature II – Baroque Through Modern 3 credits
Prerequisites: MUS 103 and MUS 105 or equivalent experience
Continued study of the evolution of Western European music from the classical period, with its roots in the Enlightenment and culmination in Romanticism, through its varied manifestations in the 20th century. Basic music theory background desirable. 3 lecture hours
Music Theory

MUS 105  Fundamentals of Music Theory  3 credits
Offers the student with no prior musical training an introduction to the basics of music theory. Topics include notation of pitch and rhythm, scale structure, key signatures in major and minor keys, plus chord construction and voice leading. [Fall offering]  2 lecture/2 laboratory hours

MUS 127  Music Theory I  3 credits
Prerequisite: MUS 105 or permission of department
Corequisite: MUS 167
Topics include more advanced chord construction, figured bass, harmonic analysis, the principles and procedures of four-part writing emphasizing the primary triads and their inversions, as well as non-harmonic tones. Reinforced through ear training and sight singing. [Spring offering]  2 lecture/2 laboratory hours

MUS 128  Music Theory II  3 credits
Prerequisite: MUS 127
Corequisite: MUS 168
Completion of the diatonic system. Harmonic principles and procedures introduced in MUS 127 are expanded to include application to the supertonic, leading tone, mediant and submediant harmonies in both triad and seventh chord form. Introduces more advanced part-writing, as well as harmonic and structural analysis of 18th and 19th century repertoire. Reinforced through aural skills training and keyboard harmony. [Fall offering]  2 lecture/2 laboratory hours

MUS 167  Musicianship I  1 credit
Corequisite: MUS 127
Progressive exercises in sight singing, ear training in the form of melodic, rhythmic and harmonic dictation, as well as the practice of keyboard harmony. Emphasis on diatonic materials and the primary triads. Coordinated with conceptual materials presented in MUS 127.  2 laboratory hours

MUS 168  Musicianship II  1 credit
Prerequisites: MUS 127, MUS 167
Corequisite: MUS 128
Continuation of studies begun in MUS 167 with more advanced exercises in sight singing, ear training and keyboard harmony as well as expanded use of the diatonic system including all diatonic triads. Coordinated with conceptual materials presented in MUS 128.  2 laboratory hours

MUS 227  Music Theory III  3 credits
Prerequisite: MUS 128
Corequisite: MUS 267
Study of chromatic harmony especially as used in modulation. Students recognize and compose harmonic progressions involving secondary dominants, diminished seventh chords, as well as altered and borrowed chords, correlated with exercises in ear training, sight-singing, and keyboard harmony. Also includes harmonic and formal analysis of 18th and 19th century repertoire. [Spring offering]  2 lecture/2 laboratory hours

MUS 267  Musicianship III  1 credit
Prerequisites: MUS 128, MUS 168
Corequisite: MUS 227
Further studies in sight singing, ear training, and keyboard harmony building upon skills acquired in MUS 167 and MUS 168. Introduces chromatic materials including modulation to the dominant and to the relative major and minor. Coordinated with conceptual materials presented in MUS 227.  2 laboratory hours

Piano Class

MUS 121  Piano Class I  1 credit
Fundamentals of piano playing, covers music reading, chords, various accompaniment styles, coordination of both hands, and sight-reading skills. Group instruction is given via an electro-piano lab. College pianos are available for practice. No prior piano instruction necessary.  2 laboratory hours

MUS 122  Piano Class II  1 credit
Prerequisite: MUS 121
Continuation of playing skills and activities initiated in MUS 121.  2 laboratory hours

MUS 221  Piano Class III  1 credit
Prerequisite: MUS 122
Continuation of MUS 121. Explores various periods of keyboard literature as well as increasingly difficult technical skills, sight reading, and transposing.  2 laboratory hours

MUS 222  Piano Class IV  1 credit
Prerequisite: MUS 221
Continuation of MUS 221.  2 laboratory hours

Guitar Class

MUS 142  Guitar Class I  1 credit
Opportunity to learn to play the guitar; no previous experience necessary. Covers basic chords, song accompaniment, music reading, and pertinent music forms. Some acoustic guitars are available for student use in class.  1 lecture/1 laboratory hour

College Chorus

MUS 101  Chorus I  2 credits
MUS 102  Chorus II  2 credits
MUS 201  Chorus III  2 credits
MUS 202  Chorus IV  2 credits
Opportunity to sing choral repertoire in a variety of genres from all periods of music history. Rehearsals culminate in one or two public performances each semester. Some prior singing experience required.  3 class hours

Chamber Ensemble

MUS 111  Chamber Ensemble I  2 credits
MUS 112  Chamber Ensemble II  2 credits
MUS 211  Chamber Ensemble III  2 credits
MUS 212  Chamber Ensemble IV  2 credits
Opportunity to explore, through rehearsal and performance, traditional chamber music repertoire drawn from a variety of historical periods. The student is trained in the proper phrasing, articulation, and dynamics specific to each style. Open to players of all appropriate instruments.  3 class hours

Individual Instruction

MUS 109  Applied Music I  1 credit
MUS 110  Applied Music II  1 credit
MUS 209  Applied Music III  1 credit
MUS 210  Applied Music IV  1 credit
Private lessons on keyboard, voice, or band/orchestral instrument with a member of the artist-teacher staff. Special fee required.  one-half hour per week
MUS 119 Jazz Band I 2 credits
Prerequisites: ability to play a jazz instrument and to read musical notation

MUS 120 Jazz Band II 2 credits
MUS 219 Jazz Band III 2 credits
Prerequisite: MUS 120 with a minimum C grade

MUS 220 Jazz Band IV 2 credits
Prerequisite: MUS 219 with a minimum C grade
Opportunity to explore classic jazz literature through rehearsal and performance. Repertoire is selected from standards of the swing era, to be-bop, to contemporary funk and fusion with an emphasis on proper articulation, groove, and dynamics specific to each style. 3 class hours

MUS 151 Jazz Improvisation I – Blues 2 credits
Prerequisites: ability to play an instrument and to read musical notation
(MUS 151 and MUS 152 need not be taken in sequence.) Introductory-level course emphasizing use of the Mixolydian mode and the blues scale as applied to the dominant 7th family chords. Explores the twelve-bar blues and related forms as vehicles for improvisation with an emphasis on swing and funk rhythms. 1 lecture/2 laboratory hours

MUS 152 Jazz Improvisation II – Modal 2 credits
Prerequisites: ability to play an instrument and to read musical notation
(MUS 152 may be taken before MUS 151.) Introductory-level course presenting the conceptual and practical rudiments of the jazz language by focusing on two modes, Ionian and Dorian, as they apply to the major and minor families of chords, respectively. Emphasizes Latino idioms and rhythms. 1 lecture/2 laboratory hours

MUS 223 Jazz Keyboard Harmony and Improvisation 1 credit
Prerequisite: MUS 221
Introductory course presenting the fundamentals of jazz harmony, chord progressions, scales, and tools for improvisation at the keyboard. 2 laboratory hours

MUS 128 Special Studies in Instrumental Music 3 credits
Prerequisites: MUS 120 and MUS 204
Prerequisite: MUS 128 and MUS 204
Opportunity for students who have completed regular course offerings to continue their studies at advanced levels. Individual students and faculty develop a project contract that sets forth objectives, standards of quality, evaluation guidelines, and deadlines. [occasional offering] 3 lecture hours

NET—Networking Technology

Note: Students should consult their academic advisor and the college or university to which they intend to transfer regarding networking technology course requirements. The receiving institution always makes the final decision concerning transferability of credits.

NET 102 Introduction to PC Hardware and Software 3 credits
Corequisite: NET 103 recommended
Students learn to install, configure, diagnose, and troubleshoot microcomputer hardware components and various operating systems. Includes an introduction to local area networks, the identification and installation of memory, preventative maintenance, plus coverage of terminology and concepts that will assist students preparing for the A+ Certification exams. 2 lecture/3 laboratory hours

NET 103 IT Essentials 3 credits
Prerequisite: basic computer literacy
A continuation of NET 102. Students learn advanced concepts regarding the installation, configuration, diagnosis, and troubleshooting of microcomputer hardware components and operating systems. Includes coverage of terminology and concepts that will assist students preparing for the Server+ Certification exam. 2 lecture/3 laboratory hours

NET 104 Fundamentals of Computer Networks 3 credits
Prerequisite: basic computer literacy
Fundamentals of data communications theory, network management, connectivity, the OSI model, and internetworking protocols and standards. Covers topologies, architectures, operating systems, security, LAN/WAN components, modern implementation, LAN troubleshooting and support resources, fault tolerance, network adapters, and client-server environments. Assists students preparing for the Network+ Certification exam. 2 lecture/2 laboratory hours

NET 120 Windows Desktop Operating System Administration 3 credits
Prerequisite: basic computer literacy
Students learn to install the Windows desktop OS; create users/groups; administer file/print resources; manage hardware; optimize performance and reliability; configure desktops using control panel, registry, system policies; and configure network protocols and services. Covers resource auditing, data storage management, network monitoring, and security, plus introduction to DNS and Active Directory. Hands-on exercises reinforce Microsoft certification exam objectives. 2 lecture/2 laboratory hours
NET 122 Windows Server Operating System Administration 3 credits
Prerequisites: NET 102 or A+ Certification; NET 120 or permission of program coordinator
Students learn to install and configure the Windows server network OS, including overall administration, advanced file system concerns, and active directory services. Covers routing, remote access, network security, fault tolerance, and server and network resource optimization. Introduces application servers and troubleshooting in a network environment. Hands-on exercises reinforce Microsoft certification exam objectives. 2 lecture/2 laboratory hours

NET 124 Network Infrastructure Administration 3 credits
Prerequisite: NET 122
Windows-based focus includes implementing TCP/IP for cross-platform and Internet connectivity, WINS and DNS to resolve hosts on local and remote networks, DHCP to manage address configuration, RAS including dial-up connectivity and virtual private networks, and Internet connection sharing with NAT. Covers securing network communications with certificates, IP security, authentication, and encryption. Hands-on exercises reinforce Microsoft certification exam objectives. 2 lecture/2 laboratory hours

NET 126 Network Directory Services Administration 3 credits
Prerequisite: NET 122
Students plan, configure, and administer a directory services infrastructure. Includes DNS configuration, administering user environments with group policy, remote OS deployment using RIS, and centrally managing users, groups, shared folders, and network resources. Covers implementing and troubleshooting security as well as monitoring and optimizing directory services performance. Hands-on exercises reinforce Microsoft certification exam objectives. 2 lecture/2 laboratory hours

NET 130 Routing and Switching Essentials 3 credits
Prerequisite: NET 104 or Network+ Certification
Study of the concepts and commands required to configure switches and routers in multiprotocol internetworks. Identifies solutions for small to medium-sized businesses, with procedures to configure multirouter, multigroup internetworks using LAN/WAN interfaces for common routed protocols. Also covers installation, configuration, and troubleshooting essentials required by technicians to install and maintain these devices. Hands-on exercises reinforce Cisco certification exam objectives. 2 lecture/2 laboratory hours

NET 212 Linux 3 credits
Prerequisites: NET 102 or A+ Certification; NET 104 or Network+ Certification
Study of current hardware and software components of two operating system environments: Linux and AS/400. Major concentration is on Linux with an introduction to AS/400. Hands-on lab projects reinforce selected Linux lecture topics. 2 lecture/2 laboratory hours

NET 214 Mastering Linux 3 credits
Prerequisite: NET 212 or permission of course coordinator
In-depth study of the Linux operating system, designed for anyone who has had an introduction to Linux and desires to expand their knowledge and skills. Includes an introduction to writing shell scripts plus attention to system utilities, text processing, and system administrator responsibilities. 2 lecture/2 laboratory hours

NET 230 Scaling Networks 3 credits
Prerequisite: NET 130
Study of the concepts and commands required to use routing and switching technologies together, including recommended campus network design methodologies. Topics include Layer 2 switching technologies including Spanning Tree, VLAN, frame tagging, and protocols; and Layer 3 routing services including inter-VLAN routing, multilayer switching, Hot Standby Routing Protocol (HSRP), and IP multicast. Hands-on exercises reinforce Cisco certification exam objectives. 2 lecture/2 laboratory hours

NET 239 Connecting Networks 3 credits
Prerequisite: NET 130
Covers the technology and terminology required to use routing and switching technologies together in a wide area network (WAN) infrastructure, including advanced IP addressing techniques, NAT, PAT, DHCP, PPP, ISDN, DDR, frame relay, and an introduction to optical networking. Hands-on exercises reinforce Cisco certification exam objectives. 2 lecture/2 laboratory hours

NET 240 Network Security 3 credits
Prerequisite or Corequisite: NET 130; NET 244 recommended
Explores security design considerations for enterprise networks through the evaluation of existing and planned technical environments, including identifying security risks and defining security baselines. Topics include controlling resource access using various security techniques. Hands-on exercises reinforce certification exam objectives. 2 lecture/2 laboratory hours

NET 242 Directory Services Infrastructure Design 3 credits
Prerequisites: NET 124, NET 126
Analyzes requirements related to the design of a directory services infrastructure, including connectivity and access, security, performance, and end user support. Topics include assessment of the impact on existing systems and processes, creating a forest model and schema modification plan, and defining and naming domains. Hands-on exercises reinforce Microsoft certification exam objectives. 2 lecture/2 laboratory hours

NET 244 Network Defense and Countermeasures 3 credits
Prerequisite: NET 104 or Network+ Certification
Examines the second five domains covered in the International Information Systems Security Certification Consortium’s Common Body of Knowledge, including capturing/analyzing Internet protocol traffic, exploiting protocol weaknesses, packet filtering, password policies, file integrity, securing perimeter routers, firewalls, intrusion detection systems, and “denial of service” strategies. Topics reinforce CISSP/CCIE certification exam objectives. 2 lecture/2 laboratory hours

NET 288 MS Exchange Server 3 credits
Prerequisites: NET 124, NET 126
Promotes the skills necessary to administer the Microsoft Exchange Server, involving messaging components, architecture, installation, and management of the Exchange environment. Hands-on exercises reinforce Microsoft certification exam objectives. 2 lecture/2 laboratory hours
NRS—Nursing

The minimum passing grade for all NRS courses is 76.

NRS 101 Entry Into Professional Nursing 1 credit
Prerequisites: ENG 101, MAT 037 or higher, and enrollment in the Nursing Science major for the MCCC Nursing program
Introduces the pre-nursing student to the profession, including its history. Along with the concept of critical thinking and its application to the nursing process model of decision-making, students are taught study skills to enhance their success in the Nursing program. 1 lecture hour

NRS 102 Health Assessment Across the Life Span 2 credits
Prerequisites: BIO 103, BIO 104
Introduces the new nursing student to health assessment, which is the first step in understanding the nursing process. Focus on the concepts, knowledge, and skills necessary to complete a health assessment for patients in all age groups emphasizes the major elements, sequence, and methodology involved. 1 lecture 2 college laboratory 6 clinical hours

NRS 110 Fundamental Concepts of Nursing 6 credits
Prerequisites: NRS 101, NRS 102, formal admission into the Nursing program
This 15-week course introduces the fundamental concepts and knowledge needed to meet the basic needs of all patients. The nursing process is used as a framework for care delivery as well as concepts from the social, psychological, and physical sciences. Includes clinical experiences planned in area health care agencies. 3 lecture 2 college laboratory 6 clinical hours

NRS 120 Alterations in Health I 3 credits
Prerequisite: NRS 110 with a minimum grade of 76
This five-week course presents a continuation of the concepts, knowledge, and skills introduced in NRS 110 with an emphasis on the concepts of oxygenation and perfusion across the life span. The course examines the nursing needs of patients who demonstrate alterations in ventilation, diffusion, and tissue perfusion. Includes selected clinical experiences in area health care agencies. 3 lecture 2 college laboratory 6 clinical hours

NRS 121 Alterations in Health II 3 credits
Prerequisite: NRS 110 with a minimum grade of 76
This five-week course presents a continuation of the concepts, knowledge, and skills introduced in NRS 110 with an emphasis on the concepts of safety and the protective environment. Alterations in mobility, skin integrity, and immunity are examined. Concepts pertaining to the care of the operative patient are also considered. Includes selected clinical experiences in area health care agencies. 3 lecture 2 college laboratory 6 clinical hours

NRS 122 Concepts of Mental Health Nursing 2 credits
Prerequisite: NRS 110 with a minimum grade of 76
This five-week course continues the alterations in health conceptual framework with an emphasis on mental health nursing, including concepts of self, family, stress, and coping. Includes selected clinical experiences in area mental health agencies. 3 lecture 9 clinical hours

NRS 220 Alterations in Health III 3 credits
Prerequisites: NRS 110, NRS 120, NRS 121 with a minimum grade of 76
This five-week course presents the concepts of cellular regulation and metabolism while caring for the patient across the life span. Alterations in endocrine function, digestion, absorption, bowel elimination, and cell growth are examined. Includes selected clinical experiences in area health care agencies. 3 lecture 3 college laboratory 6 clinical hours

NRS 221 Alterations in Health IV 3 credits
Prerequisites: NRS 110, NRS 120, NRS 121 with a minimum grade of 76
This five-week course presents the concepts of mobility and safety while caring for the patient across the life span, with an emphasis on care for the aging patient. Alterations in neurosensory and central/peripheral nervous systems are also examined. Includes selected clinical experiences in area health care agencies. 3 lecture 3 college laboratory 14 clinical hours

NRS 222 Concepts of Maternal and Family Nursing 2 credits
Prerequisites: NRS 110, NRS 120, NRS 121
This five-week course presents the concepts of maternal/family nursing, emphasizing the needs of the childbearing and child-caring family. Includes selected clinical experiences in area health care agencies. 3 lecture 9 clinical hours

NRS 230 Alterations in Health V 3 credits
Prerequisites: NRS 110, NRS 120, NRS 121, NRS 122, NRS 220, NRS 221, NRS 222 with a minimum grade of 76
This five-week course is a continuation of the alterations in health conceptual framework with an emphasis on the concepts of elimination, oxygenation, and perfusion. The concepts of shock and multisystem organ failure are also examined. Includes selected clinical experiences in area health care agencies. 3 lecture 3 college laboratory 14 clinical hours

NRS 231 Alterations in Health VI 3 credits
Prerequisites: NRS 110, NRS 120, NRS 121, NRS 122, NRS 220, NRS 221, NRS 222 with a minimum grade of 76
This five-week course is a continuation of the alterations in health conceptual framework with an emphasis on the concepts of safety, intracranial regulation, sensory perception, and tissue integrity. Includes selected clinical experiences in area health care agencies and simulations. 3 lecture 3 college laboratory 14 clinical hours

NRS 240 Transition to Practice 4 credits
Prerequisites: NRS 110, NRS 120, NRS 121, NRS 122, NRS 220, NRS 221, NRS 222, NRS 230, NRS 231 with a minimum grade of 76
This five-week course prepares the student to enter the workforce, with an emphasis on strategies for professional practice and career development. In a weekly seminar setting, students actively participate in presenting select topics in leadership theory. Through a precepted clinical experience, time management and coordination of care principles and concepts are integrated in planning for the care of patients in selected clinical settings within area health care agencies. 3 lecture 135 clinical hours

NSG—Nursing: Cooperative Program

All NSG courses are based with and taught at St. Francis Medical Center School of Nursing.

NSG 131 Concepts of Nursing I 6 credits
Corequisites: BIO 103, PSY 101
Introduction to concepts and procedures of nursing practice. Fundamental skills are developed and applied within the framework of the nursing process to meet the physiological, social, and psychological needs of clients. Clinical experiences focus on alterations in health of the adult client with acute and chronic medical-surgical conditions. 60 theory 120 clinical hours
NSG 133  Concepts of Nursing III  3 credits
Prerequisites: BIO 104, NSG 134, NSG 135, PSY 207
Assists students in the use of the nursing process when caring for the client experiencing mental health problems. Emphasizes client care during all phases of mental health disorders, from prevention through rehabilitation. Explores concepts of groups. Provides experiences in a variety of mental health settings.  30 lecture/60 clinical hours

NSG 135  Concepts of Nursing II  7 credits
Prerequisite: NSG 131 with a minimum C grade
Corequisite: BIO 104 or NSG 134
Prepares students to use the nursing process in caring for clients experiencing common physiological alterations. Introduces concepts of leadership and management. Builds on previous learning to develop additional skills. Provides clinical experience in a variety of settings.  60 lecture/180 clinical hours

NSG 136  LPN Transition: Nursing Through the Life Span  9 credits
Prerequisites: BIO 103, BIO 104, ENG 101, PSY 101, PSY 207, NSG 137, NUR 151
Corequisite: BIO 201
Designed to assist in the transition from licensed practical nurse to registered nurse. Building on previous learning while introducing new knowledge and skills that pertain to the registered nurse role, prepares for the final two nursing courses in the curriculum. Emphasizes use of the nursing process in meeting the self-care deficits of clients and families through the life span.  5 lecture/180 clinical hours

NSG 137  Physical Assessment  3 credits
Prerequisite: formal admission into the Nursing program
Corequisites: BIO 103, PSY 101
Provides the knowledge and skills necessary to perform a comprehensive adult health assessment. Through discussion as well as laboratory and individual practice, all body systems are assessed. Emphasizes interviewing, obtaining a complete health history, performing a physical assessment, and systematic documentation of findings.  2 lecture/1 laboratory hours

NSG 232  Advanced Medical Surgical Nursing  9 credits
Prerequisites: BIO 201, ENG 101, NSG 133, PSY 207
Develops knowledge and skills to care for clients – individuals and groups – with multiple needs requiring complex interventions. Explores complex client problems, resulting in alteration of homeostatic mechanisms. Expands leadership and management skills. Clinical learning experiences are provided in a variety of settings including critical care areas.  6 lecture/180 clinical hours

[final time offered: Spring 2015]

NSG 233  Pathways to Practice  2 credits
Prerequisite: NSG 232
Explores current issues affecting healthcare delivery, management techniques, and political/legislative strategies. The student manages client care, acts as a member of the health care team, and has an opportunity for further role socialization. Focuses on the application of critical judgment in specific settings, with the majority of contact hours in the clinical affiliate.  1 lecture/60 clinical hours

NSG 234  Concepts of Nursing IV  9 credits
Prerequisites: ENG 101, NSG 133, PSY 207
Corequisite: BIO 201
Prepares the student to use the nursing process in caring for clients across the life span. Emphasizes health promotion, illness prevention, and rehabilitation. Further explores the concept of leadership and management. Offers learning experiences in a variety of settings including pediatric facilities.  5 lecture/180 clinical hours

NUR—Nursing

The minimum passing grade for all NUR courses is C.

NUR 151  Pharmacology in Nursing  3 credits
Prerequisite: Nursing program first year completion, or permission of instructor
Theoretical approach to pharmacology, expanding basic concepts of drug knowledge required to administer medication safely. Emphasizes pharmacology as an integrated science requiring up-to-date information consistent with current nursing responsibilities, technology, and practice. Drug therapies affecting body systems are a major consideration.  3 lecture hours

NUR 215  Precepted Clinical Experience  2 credits
Prerequisites: Nursing program first year completion, and externship acceptance
Supervised clinical experience in conjunction with externship at an approved local healthcare facility. Designed to strengthen and broaden the competencies of second-year nursing students and enhance their knowledge of the role of the RN. Participants must be accepted into the facility's externship program. Includes periodic on-campus seminars. 0.5 seminar hours/40 clinical days

OHT—Ornamental Horticulture

OHT 101  Plant Science  3 credits
Prerequisite: CHE 100 or equivalent with a minimum C grade or permission of program coordinator
Introduction to the field of plant science. Topics include basic botany and plant physiology; plant growth; leaves, roots, fruits, stems, and flowers; cells; plant reproduction; genetics; and the plant kingdoms. [Fall offering]  2 lecture/2 laboratory hours

OHT 102  Ornamental Horticulture  3 credits
Prerequisite: CHE 100 or equivalent with a minimum C grade or permission of program coordinator
Examines plant propagation, plant pests, landscape establishment and maintenance, greenhouse management, principles of landscape design, and fruit and vegetable production. [May be taken independently of OHT 101.] [Spring offering]  2 lecture/2 laboratory hours

OHT 108  Soil and Plant Nutrition  4 credits
Prerequisite: CHE 100 or equivalent with a minimum C grade or permission of program coordinator
Explores the origins, composition, and properties of soils. Addresses physical and chemical properties including ion exchange and pH effects, soil organic matter, soil-water relationships, the nature of and reasons for soil nutrient deficiencies, composition, and the use of fertilizers and other soil adjuvants. Lab work involves representative New Jersey soils to illustrate basic soil behavior. [Spring offering]  3 lecture/3 laboratory hours

OHT 121  Herbaceous Plants  3 credits
Prerequisite: BIO 101 or OHT 101 with a minimum C grade or permission of program coordinator
Study of cultivated, ornamental herbaceous plant species including annuals, perennials, bulbs, herbs, and grasses. Emphasizes identification, use, color, height, and season of bloom. Special topics include planning a herbaceous garden, insect pests, diseases, and propagation. [Fall offering]  2 lecture/2 laboratory hours

OHT 201  Basic Landscaping and Planning I  3 credits
Principles and technology of landscape design. Covers the practical and aesthetic aspects of planning the residential landscape, involving both materials and methods. Emphasizes design and graphics skills. [Fall offering]  2 lecture/3 laboratory hours
OHT 202 Basic Landscaping and Planning II 3 credits
Prerequisite: OHT 201 with a minimum C grade
Continuation of OHT 201. Emphasizes practical projects for residential areas and public common spaces. [Spring offering] 2 lecture/3 laboratory hours

OHT 204 Plant Diseases 3 credits
Prerequisite: OHT 101 or permission of program coordinator
Introduction to the history, economic importance, symptoms, causal agents and management of plant diseases. Lab exercises include the isolation, culture, and identification of plant pathogens. [Fall offering] 2 lecture/2 laboratory hours

OHT 207 Floral Design I 3 credits
Basic principles and elements of design as applied to floral arranging. Emphasizes the primary types of arrangements, flower and greens identification, history of floral design, and an introduction to the floral industry. [Fall offering] 1 lecture/3 laboratory hours

OHT 208 Floral Design II 2 credits
Prerequisite: OHT 207 or permission of program coordinator
Emphasis on the commercial rate of production and pricing for corsage, funeral, and bridal work. Includes complete study of floral decorations for formal and informal occasions; advanced color theory and use of textures in designs; creative thinking with designs and containers; and further exploration of the floral industry. [Spring offering] 1 lecture/3 laboratory hours

OHT 212 Landscape Construction 3 credits
Prerequisite: OHT 102 or permission of program coordinator
Introduces students to the implementation and maintenance of landscape projects. Dominant areas of study include bidding and estimating; hardscape installation and maintenance; and advanced landscaping skills and techniques. Advanced skills covered include lighting, drainage, irrigation, planting and pruning.

OHT 219 Plant Propagation 3 credits
Prerequisite: OHT 101 or permission of program coordinator
Principles and techniques involved in the selection, propagation, and growth of garden flowers, greenhouse crops, woody plants, turfgrass, and plants for interior landscape. [Fall offering] 2 lecture/2 laboratory hours

OHT 223 Topics in Horticulture: Gardening 1 credit
Explores topics in gardening, including triumphs and pitfalls of growing annuals, perennials, bulbs, fruits, vegetables and woody plants. Involves fieldwork. [Summer offering] 2 laboratory hours

OHT 224 Topics in Horticulture: Landscaping 1 credit
Prerequisite: OHT 201
Application of computer programs to enhance design presentation skills. [Occasional offering] 2 laboratory hours

OHT 226 Interior Landscape Design 3 credits
Prerequisite: OHT 101 or OHT 102 or permission of program coordinator
Emphasizes the key ornamental aspects, cultural requirements, and uses of each species covered. Specific topics include indoor landscaping, propagation, terrariums, and environmental requirements. Involves both taxonomic and common nomenclature. [Spring offering] 2 lecture/2 laboratory hours

OHT 231 Turfgrass Management I 3 credits
Prerequisite: OHT 101 or OHT 102 or permission of program coordinator
How to establish and maintain turfgrass for residential and commercial applications. Includes identification and use of cultivars, seeding and sodding, insects and pests, fertilization, and irrigation methods. [Spring offering] 2 lecture/2 laboratory hours

OHT 232 Nursery Management I 3 credits
Prerequisite: OHT 101 or OHT 102 or permission of program coordinator
Examines nursery operations and mechanics. Topics include planting and transplanting trees and shrubs, fertilization, pest control, irrigation, pruning, propagation techniques, business operations, and employee management. Lab exercises and a field study of local businesses reinforce material. [Spring offering] 2 lecture/2 laboratory hours

OHT 241 Equipment and Integrated Pest Management 3 credits
Prerequisite: OHT 102 or permission of program coordinator
Review of the equipment and procedures used in horticultural settings with an emphasis on pest management. Topics include theories of and strategies for integrated pest management, pest identification, application of pesticides, calibration of equipment, and equipment operation. [Spring offering] 2 lecture/2 laboratory hours

OHT 291 Ornamental Horticulture Cooperative Education I 3 credits
Continuation of OHT 291. [Spring, Summer, Fall offering] 270 work experience hours

OHT 292 Ornamental Horticulture Cooperative Education II 1 credit
Prerequisite: OHT 291
Continuation of OHT 291. [Spring, Summer, Fall offering] 90 work experience hours

OST—Office Systems Technology

OST 102 Introduction to Medical Insurance and Billing 3 credits
Covers health insurance claim processing as well as the medical billing cycle. Includes all aspects of medical insurance including plan options, carrier requirements, state and federal regulations, abstracting relevant information from source documents, and accurate completion of claim forms.

OST 105 Medical Insurance Coding and Billing 3 credits
Prerequisites: OST 102, HPE 113 or equivalent proficiency
Extensive coverage of CPT and ICD-9-CM coding procedures. Students learn to abstract information from the patient record and combine it with reimbursement and coding guidelines to optimize physician payment.

OST 106 Medical Office Transcription 3 credits
Prerequisites: OST 111, OST 219 or equivalent keyboarding and word processing skills; HPE 113 or equivalent medical terminology background
Introduction to medical transcription and to Electronic Health Records (using Spring Charts) through medical center work simulations. Exposure to a variety of dictated medical documents including chart notes, history and physical reports, consultations, office procedure notes, X-ray reports, progress notes, and letters. Includes a review of medical terminology as well as specific typing rules for medical documents.
OST 107  Procedures, Law, and Ethics for the Medical Office  3 credits
Prerequisite: OST 111 or equivalent keyboarding skills
Focuses on administrative skills necessary for work in a medical office. Includes communicating with patients, telephone management, organizing and maintaining records, coordinating appointments, and legal and ethical issues. Students use medical management software for scheduling and records management.  3 lecture hours

OST 111  Computer Keyboarding with Word Processing Applications  3 credits
Develops basic keyboarding skills. Students learn the keyboard and basics of word processing including proper formatting procedures for letters, memos, reports, and tables. Skill goal is 30 to 45 words per minute for three minutes with three or fewer errors.  2 lecture/2 laboratory hours

OST 112  Advanced Keyboarding Applications  3 credits
Prerequisite: OST 111 with a minimum C grade
Advanced keyboarding applications including various letter styles and notations, comprehensive reports and tables, and business statements and forms. Skill goal is 45 to 58 words per minute for five minutes with five or fewer errors. Proofreading and editing skills are also addressed.  2 lecture/2 laboratory hours

OST 219  Word Processing Concepts and Applications  3 credits
Prerequisite: OST 111 with a minimum C grade or equivalent keyboarding proficiency
Students develop proficiency in a wide range of word processing functions using Microsoft Word software. Covers generic concepts pertinent to all word processing software, as well as correct document formatting.  2 lecture/2 laboratory hours

OST 222  Current Topics in Office Administration  3 credits
Prerequisites: OST 111 and OST 219 or equivalent keyboarding and word processing skills
Comprehensive coverage of all facets of administrative assistant responsibilities, including travel and conference planning, time and stress management, handling incoming and outgoing communications, e-mail and Internet proficiency, and international protocol. Additionally focuses on professional image building and career advancement.  2 lecture/2 laboratory hours

OST 223  Advanced Word Processing Applications  3 credits
Prerequisites: OST 111 and OST 219 or equivalent keyboarding and word processing proficiency
Details advanced word processing functions including macros, adding borders, inserting clipart, drawing shapes, executing word art and equation editor, applying columns, styles, fill-in forms and desktop publishing applications. Microsoft Publisher is introduced.  2 lecture/2 laboratory hours

Phi—Philosophy

Phi 102  Introduction to Philosophy  3 credits
A study of the basic problems and methods of philosophical inquiry. Topics include theories about knowledge, reality, human nature, ethics, religion and science, with consideration of the thought of such major thinkers as Plato, Aristotle, Descartes, Hume, Kant, Nietzsche, and Sartre.  3 lecture hours

Phi 113  Logic  3 credits
An introduction to the principles and methods of correct reasoning. A problem-solving approach to the nature and scope of different kinds of logic, identifying and evaluating arguments and fallacies, and crafting well-formed arguments.  3 lecture hours

Phi 204  Ethics  3 credits
An examination of the basic methods and problems of ethics. Consideration of the nature of moral terms, reasoning and action; conceptions of the good life and of right and wrong; free will; and major ethical approaches, including the theories of Aristotle, Kant, Mill, and others.  3 lecture hours

Phi 209  Business Ethics  3 credits
Ethical concepts applied to business and government. Case studies and analysis of selected moral issues include the ethics of the marketplace, consumerism, the environment, advertising, job discrimination, distributive justice and world poverty. [occasional offering]  3 lecture hours

Phi 210  Eastern Philosophy  3 credits
Prerequisite: ENG 101 or permission of instructor
An examination of the basic methods and problems of ethics. Consideration of the nature of moral terms, reasoning and action; conceptions of the good life and of right and wrong; free will; and major ethical approaches, including the theories of Aristotle, Kant, Mill, and others.  3 lecture hours

Phi 205  Business Ethics  3 credits
Ethical concepts applied to business and government. Case studies and analysis of selected moral issues include the ethics of the marketplace, consumerism, the environment, advertising, job discrimination, distributive justice and world poverty. [occasional offering]  3 lecture hours

PHO—Photography

PHO 101  Introduction to Photography  3 credits
Foundation course in photography emphasizes basic techniques for the still film camera and darkroom. The development of creative visual expression is strongly encouraged. Students purchase a manually-controlled film camera and other appropriate materials.  1 lecture/4 studio hours

PHO 102  Intermediate Photography  3 credits
Prerequisite: PHO 101 with a minimum C grade
Building upon PHO 101, students learn more advanced black-and-white film processing and darkroom techniques. Medium-format cameras provided for student use.  2 lecture/3 laboratory hours

PHO 103  Introduction to Digital Photography  3 credits
Introductory course for students having basic computer knowledge and interested in gaining knowledge of digital imaging tools and techniques, and improving their creativity. Topics include Photoshop, digital retouching, digital cameras, inkjet printing, resolution, and scanning.  2 lecture/3 laboratory hours
**PHY—Physics**

**PHY 101 College Physics I 4 credits**

Corequisite: MAT 115
The first of a two-semester non-calculus sequence intended for engineering technology and related majors. Topics include mechanics, heat, sound, and properties of matter. [Students who have not taken high school physics may wish to take PHY 111 as a preparatory course.]

3 lecture/3 laboratory hours

**PHY 102 College Physics II 4 credits**

Prerequisites: PHY 101 and MAT 115 with a minimum C grade or approved equivalent
The second of a two-semester non-calculus sequence. Topics include electricity and magnetism, optics, atomic physics, and nuclear physics.

3 lecture/3 laboratory hours

**PHY 202 Studio Photography 3 credits**

Prerequisite or Corequisite: PHO 102 or PHO 203 with a minimum C grade
Use digital or film cameras of any format to create portraits, still-life, and product shots. Topics include lighting, composition, technique, and studio equipment.

3 lecture hours

**PHY 203 Digital Photography 3 credits**

Prerequisite: DMA 110 or PHO 103 with a minimum C grade
Digital still photography including scanning, color matching, editing, retouching and printing using archival workflow practices. Students present their work in group critique.

1 lecture/4 studio hours

**PHY 204 Photographic Processes 3 credits**

Explores the methods of historical and non-traditional photographic image making. Techniques explored include Cyanotype, Van Dyke, and Gum Bichromate. Students learn to make duplicate negatives through traditional and digital techniques.

1 lecture/4 laboratory hours

**PHY 215 Large Format Field Photography 3 credits**

Prerequisite: PHO 102 with a minimum C grade or portfolio review
Students explore the mechanics and aesthetic potential of the large-format camera while shooting during class field trips, and enhance darkroom skills while working with large-format negatives. 4x5 field and rail cameras provided.

1 lecture/4 studio hours

**PHY 251 Documentary Photography 3 credits**

Prerequisite or Corequisite: PHO 103 or PHO 203 with a minimum C grade
Emphasizes techniques and issues of long- and short-term location assignment shooting. Students are afforded opportunities to gain practical experience covering news, features and sports events for The College Voice and to work with journalism students. A photographic essay is developed throughout the semester.

1 lecture/4 studio hours

**PHY 285 Special Studies in Photography 3 credits**

Prerequisites: PHO 102 or PHO 203 with a minimum C grade and coordinator approval
Advanced topics in both traditional and digital photography. Course material is tailored to satisfy special requests by students and to share the specialized talents of the college faculty. [Occasional offering]

1 lecture/4 studio hours

**PHY 290 Photography Internship 3 credits**

Prerequisite: coordinator approval
Work experience from participating photographic studios, labs, and galleries.

1 lecture/180 laboratory hours
PSY—Psychology

GenEd Social Science

PSY 101 Introduction to Psychology 3 credits
The scientific study of human nature – facts, principles, and theories concerning the mental, emotional, neurological, and social dimensions of human experience. Topics include consciousness, learning, thinking, memory, brain structure and function, motivation and emotion, development, personality, mental illness and its treatment, relationships, and social influence.

3 lecture hours

PSY 201 Educational Psychology 3 credits
An in-depth study of fundamental concepts and principles with broad applicability to classroom practice, supporting the preparation and continuing development of educational and human service professionals. Topics include student development, student diversity, learning, cognitive processes, motivation, and instructional and assessment strategies.

3 lecture hours

PSY 204 Social Psychology 3 credits
Studies the behavior and development of the individual in society, the function of social attitudes, and the emergence of social awareness. Topics include socialization and identity, personality, perception, attraction, attribution, theory, conformity and obedience, and attitudes and prejudices.

3 lecture hours

PSY 206 Child Development 3 credits
Studies the physical, mental, emotional, and social development of the individual from conception through adolescence. Topics include motor and language development, attachment, temperament, gender and identity development, intelligence, prosocial and aggressive behavior, play, and family influences on development.

3 lecture hours

PSY 208 Theories of Personality 3 credits
Defines and assesses human personality within the context of current scientific advances as well as seminal historical perspectives. Examines the impact of individual psychological differences in predicting various life outcomes.

3 lecture hours

PSY 210 Abnormal Psychology 3 credits
Discusses the question: What is abnormal behavior and when does this behavior become a diagnosable disorder? History of psychological disorders and early treatments are examined along with the current classifications of psychological disorders as defined by the American Psychological Association. Theories of causation, prevalence, and treatments are also explored.

3 lecture hours
PSY 215  Human Sexuality  3 credits  
Prerequisite: PSY 101 with a minimum C grade  
Describes the anatomy and physiology of the human reproductive system and the physiology of human sexual functioning. Emphasizes human sexuality as reflecting the psychological makeup of the individual. Stresses the importance of cultural influences on an individual's behavior, along with interpersonal relationship factors. 3 lecture hours

PSY 221  The Psychology of Women  3 credits  
Prerequisite: PSY 101 with a minimum C grade  
Investigates personality development, physiology, sexuality, and identity formation through an analysis of sex roles and sex typing for women and men. Examines how traditional, theoretical, and therapeutic frameworks view and treat women, and explores alternative theoretical and therapeutic modes. 3 lecture hours

PSY 230  Special Studies in Psychology  3 credits  
Prerequisites: ENG 102 and PSY 101 with a minimum C grade or permission of instructor  
Consists of special courses in psychology which cater to needs expressed by the student and the broader general community. Taking advantage of particular faculty expertise, the course is offered on occasion in response to specific demand. 3 lecture hours

PTA—Physical Therapist Assistant

Except as noted, enrollment in PTA courses is limited to students who have completed all basic skill requirements and who have received full acceptance into the program. PTA majors are required to earn a minimum grade of C+ in PTA courses.

PTA 101  Introduction to PTA  1 credit  
Prerequisite: ENG 101  
Open to all students interested in physical therapy as a career and required for Physical Therapist Assistant majors. Provides an overview of the health care system and the specific roles of physical medicine and rehabilitation professionals. Topics include medical terminology, documentation, and communication skills. 1 lecture hour

PTA 105  Kinesiology  3 credits  
Prerequisite: BIO 103 with a minimum C+ grade completed within the past five years  
Open to all students interested in physical therapy as a career or in the study of human movement; required for Physical Therapist Assistant majors. Introduces the concepts of locomotion, forces, levers, and biomechanics. Topics include origins, insertions, innervations, and actions of the prime movers of the musculoskeletal system. 3 lecture hours

PTA 106  Therapeutic Measurement  2 credits  
Prerequisites: BIO 104 with a minimum C+ grade completed within the past five years; PTA 101, PTA 105  
Laboratory practice of measurement skills for joint range of motion (ROM), muscle length, and muscle strength. Includes volumetric, circumferential and postural assessments; manual muscle tests; and range of motion measurements using a goniometer. Competencies evaluated throughout the course. 1 lecture/2 laboratory hours

PTA 112  Pathology for PTAs  3 credits  
Prerequisites: BIO 104 with a minimum C+ grade completed within the past five years; PTA 101, PTA 105  
Required for Physical Therapist Assistant majors. Covers the essential nature of diseases and abnormalities of structure and function characteristic of diseases. 3 lecture hours

PTA 205  Motor Development  1 credit  
Prerequisites: PTA 101, PTA 105, PTA 112  
Corequisite: PTA 213  
Introduces developmental milestones for normal human motor development. Topics include hereditary, congenital, and acquired disorders with special emphasis on abnormalities of structure and function that impact human motor development. 1 lecture hour

PTA 210  PTA Techniques and Modalities  4 credits  
Prerequisites: PTA 106, PTA 112  
Adresses patient care and handling, including patient positioning and bed mobility, vital signs, transfers, gait and posture, massage, aseptic techniques, wound care and bandaging, edema management, and continuous passive motion devices. Students develop their skills through practice with each other. Competencies evaluated throughout the course. 3 lecture/2 laboratory hours

PTA 211  Physical Agents  4 credits  
Prerequisites: PTA 106 and PTA 112; MAT 115 or MAT 140 or PTA program approved MAT equivalent with a minimum C grade  
Study of physical agents and therapeutic modalities in physical therapy practice. Lab and lecture activities develop problem-solving and critical thinking skills for the use of electrical stimulation, heat, cold, traction, and hydrotherapy for therapeutic interventions. Competencies evaluated throughout the course. 3 lecture/3 laboratory hours

PTA 213  PTA Therapy Clinic  3 credits  
Prerequisites: PTA 210, PTA 211  
Corequisite: PTA 205  
Therapeutic interventions for conditions arising from cerebral vascular accidents, traumatic brain injury, spinal cord injury, amputations, joint replacement, cardiac disease, and neurologic dysfunction. Emphasizes activities to promote optimal functional outcomes. Lab develops decision-making skills involving assistive devices, orthotics and prosthetics. Competencies evaluated throughout the course. 3 lecture/3 laboratory hours

PTA 216  Orthopedics in PTA  2 credits  
Prerequisites: PTA 106, PTA 112, PTA 210  
A study of orthopedic conditions and their underlying pathology. Emphasis on physical therapy interventions utilized in the rehabilitation of specified conditions. Required course for all PTA majors. 2 lecture/laboratory hours

PTA 224  PTA Clinical Education I  3 credits  
Prerequisites: PTA 106, PTA 112  
Corequisite: PTA 226  
Supervised clinical instruction to observe the clinic environment and PT/PTA interactions; develop professional deportment and communication; refine measurement and time management skills; and learn about patient chart information. Experiences are shared with classmates and faculty in PTA Seminar I (PTA 226). 40 hours per week for 4 weeks = 160 clinical hours

PTA 226  PTA Seminar I  2 credits  
Prerequisites: PTA 106, PTA 112  
Corequisite: PTA 224  
Review and discussion of clinical experiences using a case study approach. Topics include documentation, professional growth and development, quality assurance concepts, and negotiation skills for employment opportunities. 3 lecture hours
RAD—Radiography

Enrollment in radiography courses is limited to students who have completed all basic skill requirements and who have received full acceptance into the program. The minimum passing grade for all RAD courses is C.

RAD 107 Introduction to Radiography 1 credit
Prerequisites: MAT 037 (or MAT 037A and 037B), ENG 024, ENG 034
Corequisites: RAD 119, RAD 127, BIO 103, MAT elective
Introduction to radiography including accreditation requirements, professional organizations, professional ethics, legal responsibilities, patient care, elementary radiation protection, and darkroom technique. [Fall offering] 1 lecture hour

RAD 114 Radiation Protection 2 credits
Prerequisites: RAD 107, RAD 119, RAD 127
Corequisites: BIO 104, RAD 120, RAD 128
Examines principles of radiation biology and radiation protection, including the production of X-rays, the interaction of radiation and matter, radiation units, and methods to protect the radiographer and patient. [Spring offering] 2 lecture hours

RAD 119 Principles of Imaging Science I 2 credits
Prerequisites: MAT 037 (or MAT 037A and 037B), ENG 024, ENG 034
Corequisites: RAD 107, RAD 127, BIO 103, MAT elective
Examines fundamental principles of radiation physics including the atom, electromagnetic radiation, X-ray tube components, and X-ray production. Presents imaging science principles including the primary factors of technique formation and the art of film critique, with clinical application of these principles. [Fall offering] 2 lecture hours

RAD 120 Principles of Imaging Science II 3 credits
Prerequisites: RAD 107, RAD 119, RAD 127
Corequisites: BIO 104, RAD 114, RAD 128
Examines image production factors that control and contribute to the radiographic image, including density, contrast and recorded detail. Presents the radiation physics principles of electricity, magnetism and X-ray circuitry. The laboratory component demonstrates the clinical application of image production and evaluation. [Spring offering] 2 lecture/2 laboratory hours

RAD 127 Radiographic Procedures I 6 credits
Prerequisites: MAT 037 (or MAT 037A and 037B), ENG 024, ENG 034
Corequisites: RAD 107, RAD 119, BIO 103, MAT elective
Study of standard radiographic positioning and related medical terminology of the chest, abdomen, and upper and lower extremities. Involves laboratory simulation and evaluation. Students acquire clinical experiences at an affiliate hospital sufficient to demonstrate competency in a specified number and variety of radiographic procedures. [Fall offering] 3 lecture/3 laboratory/24 clinical days

RAD 128 Radiographic Procedures II 6 credits
Prerequisites: RAD 107, RAD 119, RAD 127
Corequisites: BIO 104 or RAD 114, RAD 120
Continuation of RAD 127, with standard radiographic positioning and related medical terminology of the bony thorax, pelvic girdle, upper femora, and vertebral column. Involves laboratory simulation and evaluation. Students acquire clinical experiences at an affiliate hospital sufficient to demonstrate competency in a specified number and variety of radiographic procedures beyond those demonstrated the previous semester. [Spring offering] 2 lecture/3 laboratory/28 clinical days

RAD 206 Clinical Practicum 3 credits
Prerequisites: RAD 114, RAD 120, RAD 128
Explores principles of radiation biology and radiation protection, including the production of X-rays, the interaction of radiation and matter, radiation units, and methods to protect the radiographer and patient. [Spring offering] 42 clinical days

RAD 216 Advanced Imaging Modalities and Special Procedures 3 credits
Prerequisite: RAD 206
Corequisite: RAD 228
Explores principles of radiation biology and radiation protection, including the production of X-rays, the interaction of radiation and matter, radiation units, and methods to protect the radiographer and patient. [Spring offering] 3 lecture hours

RAD 220 Quality Assurance and Radiography Seminar 4 credits
Prerequisites: RAD 216, RAD 228
Corequisites: RAD 224, RAD 240
Evaluation of radiographic systems to ensure consistent quality of diagnostic images. Includes discussion of state, federal and nongovernmental requirements. Introduces computer applications used in medical facilities and helps students prepare for the A.R.R.T. examination. [Spring offering] 3 lecture/2 laboratory hours

RAD 224 Introduction to Pathology 2 credits
Prerequisites: RAD 216, RAD 228
Corequisites: RAD 220, RAD 240
Survey of the disease process and pathological conditions. Includes an in-depth study of diseases commonly demonstrated radiographically. [Spring offering] 2 lecture hours
RAD 228 Radiographic Procedures III 7 credits
Prerequisite: RAD 206
Corequisite: RAD 216
Continuation of RAD 128. Study of standard radiographic positioning and related medical terminology of the urinary system, alimentary canal, biliary system and cranium. Involves laboratory simulation and evaluation. Students acquire correlated clinical experience and continue the clinical competency evaluation process at an affiliate hospital. [Fall offering] 2 lecture/3 laboratory/42 clinical days

SOC 104 Sociology of Education 3 credits
Corequisite: ENG 101 or college-level eligibility
Overview of the relationship between the school and society. Topics include the school as an agent of social change, the role of teachers, multiculturalism, human development stages, domains of learning, and the socio-historical role of education. 3 lecture hours

REL—Religious Studies

REL 101 Introduction to Religious Studies 3 credits
An introduction to the study of religions, focusing on the nature of religious beliefs and practices, such as sacred power, myths, texts, art and rituals, the problem of evil, and the relationship between cultures, ethics and religions. 3 lecture hours

REL 102 Living World Religions 3 credits
A comparative study of the world’s major religions, through a critical exploration of the essential teachings and cultural context of Hinduism, Buddhism, Judaism, Christianity, Islam, Daoism, Confucianism among others, including pre- and post-colonial African and American traditions. 3 lecture hours

SOC—Sociology

SOC 101 Introduction to Sociology 3 credits
Corequisite: ENG 101 or college-level eligibility
An introduction to sociological theory and methods, with applications on the nature, causes of, and possible solutions to major social problems facing large, complex societies. Possible topics discussed include poverty and inequality, drug addiction, crime, health care, racial and minority group issues, and environmental concerns. 3 lecture hours

SOC 104 Sociology of Education 3 credits
Corequisite: ENG 101 or college-level eligibility
Overview of the relationship between the school and society. Topics include the school as an agent of social change, the role of teachers, multiculturalism, human development stages, domains of learning, and the socio-historical role of education. 3 lecture hours

SOC 107 Social Problems 3 credits
Corequisite: ENG 101 or college-level eligibility
An introduction to sociological theory and methods, with background on the nature, causes of, and possible solutions to major social problems facing large, complex societies. Possible topics discussed include poverty and inequality, drug addiction, crime, health care, racial and minority group issues, and environmental concerns. 3 lecture hours
SPA—Spanish

Note: Students who have taken two or more years of a foreign language, and have done so in the last two years, should begin that language at the 200 level or switch to a new language. If there is doubt, placement will be determined by testing or consultation with the academic division.

**Humanities**

SPA 101  Beginning Spanish I  3 credits

*Prerequisite:* placement by exam or permission of instructor [not open to students who received a C- or better in high school Spanish] The first in a sequence of courses designed for students with little or no prior knowledge of Spanish. Spoken communication in Spanish is both the end goal and the means of instruction. Emphasizes the four communicative skills in a contextually authentic context. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar skills are also introduced.  

SPA 102  Beginning Spanish II  3 credits

*Prerequisite:* SPA 101 with a minimum C-grade, placement by exam, or permission of instructor [not open to students who have passed two or more years of high school Spanish] The second in a sequence of courses designed for students with little or no prior knowledge of Spanish. Spoken communication in Spanish is both the end goal and the means of instruction. Emphasizes the four communicative skills in an authentic language context. Reading, writing, and grammar study are assigned out of class to facilitate effective listening and speaking practice in class.

SPA 110  Hispanic Culture  3 credits

Survey of the history, ethnic character, way of life, music, art, literature, linguistic background, and other distinctive features of Spain and Latin America. Study of the unity and diversity among Hispanic countries as well as Hispanic influence in the United States. [Taught in English; does not fulfill foreign language requirement.]  

SPA 121  Spanish for Health Providers I  3 credits

The first in a sequence of courses designed for healthcare students and professionals with little or no prior knowledge of Spanish. Spoken communication in Spanish is both the end goal and the means of instruction. Emphasizes listening, speaking, reading, and writing within the context of providing healthcare, medicine, and well-being. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar is also introduced.

SPA 122  Spanish for Health Providers II  3 credits

*Prerequisite:* SPA 101 or SPA 121

The second in a sequence of courses designed for healthcare students and professionals with little or no prior knowledge of Spanish. Spoken communication in Spanish continues as both the end goal and the means of instruction. Builds on listening, speaking, reading, and writing within the context of providing healthcare, medicine, and well-being. Reading and writing are assigned out of class to facilitate effective listening and speaking practice in class. Basic grammar is also introduced.

**Humanities / Diversity and Global Perspective**

SPA 251  Advanced Spanish I  3 credits

*Prerequisite:* SPA 102 with a minimum C-grade, placement by exam, or permission of instructor

A conversation course which covers a variety of topics related to Hispanic culture through the reading and interpretation of texts including examples of authentic Hispanic literature. Taught entirely in Spanish, this course additionally develops speaking and writing skills, builds vocabulary, and stimulates debate, conversation, and class discussion.

SPA 252  Advanced Spanish II  3 credits

*Prerequisite:* SPA 152 or permission of instructor

A grammar course taught conversationally in Spanish and within the context of topics related to Hispanic culture and society, including some reading from authentic Hispanic literature. Involves vocabulary building, but mainly emphasizes review and oral practice of grammatical constructions to improve the non-native student's oral and written communication skills.

**Humanities**

SPA 151  Intermediate Spanish I  3 credits

*Prerequisite:* SPA 102 with a minimum C-grade, placement by exam, or permission of instructor

Previously learned grammar is reviewed and applied – typically in the present tense – to discussions and debates of topics in Hispanic culture, politics, and history. Spanish reading, writing, listening, and speaking are the means and end goal of instruction.

SPA 152  Intermediate Spanish II  3 credits

*Prerequisite:* SPA 151 with a minimum C-grade, placement by exam, or permission of instructor

Continuation of SPA 151. Previously learned grammar is reviewed and applied – typically in the present tense – to discussions and debates of topics in Hispanic culture, politics, and history. Spanish reading, writing, listening, and speaking are the means and end goal of instruction.

**Humanities / Diversity and Global Perspective**

SPA 151 or permission of instructor

A grammar course taught conversationally in Spanish and within the context of topics related to Hispanic culture and society, including some reading from authentic Hispanic literature. Involves vocabulary building, but mainly emphasizes review and oral practice of grammatical constructions to improve the non-native student's oral and written communication skills.

SST—Security Systems Technology

**Physical Security Product Technologies**

SST 200  Physical Security Product Technologies  3 credits

*Prerequisites:* NET 103 and NET 104 or equivalent experience

Addresses the operation and integration of physical security products and technologies including IP-based video surveillance equipment, analytics software, and physical security information management (PSIM), how to satisfy the needs of end user customers by reducing operating costs, and how these technologies keep assets safe around the world.  

SST 210  Security Project Management  3 credits

*Prerequisite:* SST 200

Examines the role of the security project manager, including the concepts and tools of professional project management. Topics include managing costs, assuring quality, and controlling all aspects of projects throughout the lifecycle, plus fundamental factors affecting a given project, such as stakeholder influence, cash flow, and risk management.
### SST 220 - Systems Integration: A Business Blueprint 3 credits

**Prerequisite:** SST 200

Students learn to build a security solution which combines equipment, engineering and service, analyze the attributes of products and services, assess customer needs, align organizational strategy to leverage the most powerful features and strengths of products and services, and create a system to meet a client need or solve a client problem. 2 lecture/2 laboratory hours

### SST 230 - Security Sales: The Consultative Approach 3 credits

**Prerequisite:** SST 200

An introduction to the sales process, focusing on security solutions. Students learn how to organize the sales effort; assess customer needs and present security solutions; organize constituencies to develop, design, and implement security systems solutions; assess return on security investment; manage the customer experience; and maintain consultative, profitable customer relationships. 2 lecture/2 laboratory hours

### STA — Study Abroad

#### STA 101 - Study Abroad Seminar 1 credit

**Prerequisite:** prior approval to travel abroad

Corequisite: Study Abroad course(s)

A complement to a student's study abroad experience. Students are challenged to reflect on their exposure to culturally diverse people, examine multicultural experiences, and draw connections between study abroad and future endeavors, with the goal of articulating this significance to potential employers and other audiences. Students construct an e-portfolio to catalog their work. 1 lecture hour

### SWK — Social Work

#### SWK 110 - Introduction to Human Services 3 credits

**Corequisite:** ENG 101 or college-level eligibility

Overview of human service and social work practice and problem areas, requiring a supervised 45-hour (minimum) volunteer experience within a social service agency and including study of and experience with social development in diverse environments using human service models to understand individual, population, community, and ecosystem organization. 3 lecture/2 studio hours

### THR — Theatre

#### GEN Ed Humanities

**THR 101 - Introduction to Theatre**

Beginning study of the theatre as an art form, examines how a dramatic text is transformed into a stage production. Students read and analyze plays to understand theatre production practices – historical as well as current – and dramatic theory. Requires attending current theatre productions. [Fall and Spring offering] 3 lecture hours

**THR 102 - Stagecraft**

Introduction to the skills and practice of technical theatre. Studies include elementary carpentry and set construction, scene painting, shop procedures, lighting, cost efficiency, and safety. Students work on college theatre productions. [Fall and Spring offering] 2 lecture/2 laboratory hours

**THR 104 - Fundamentals of Acting**

Introductory course for both actors and non-actors, examines the history and theory of acting with emphasis on Stanislavski and 20th century methods. Students participate in breathing, relaxation, and centering exercises, theatre games, and improvisational work to develop basic acting skills. Study includes the fundamentals of text analysis, group rehearsal dynamics, and verbal evaluation of other acting work. The class concludes with a public performance. [Fall and Spring offering] 2 lecture/2 laboratory hours

**THR 105 - Acting II: Principles of Characterization**

**Prerequisite:** THR 104

Continuation of the skills developed in THR 104. Focuses on the actor’s movement and voice skills to support character work. Students utilize Michael Chekhov’s Acting Technique, mask work, and improvisation to broaden basic acting skills. Attendance at dance, chorus, and theatre productions is required. [Spring offering] 2 lecture/2 laboratory hours

**THR 107 - Dramatic Writing for Stage and Screen**

**Prerequisite:** ENG 101 or divisional permission

Works of master playwrights and screenwriters are read and discussed. In-class writing exercises, “sense memory” prompts, and strategies for developing dynamic character-based storytelling for the stage are covered during first half of course. Students then adapt and expand this work to create a 20-minute screenplay. 2 lecture/2 laboratory hours

**THR 150 - Scenic Techniques for the Entertainment Industry**

**Prerequisites:** ETT 102, THR 102 with a minimum C grade

Through a variety of projects, students are introduced to fundamental techniques and materials used in scenic art. Explores color theory, various media, proper preparation of surfaces, different painting techniques, Pissarro shapes, cartoonying backdrops, trompe l’oile, and teamwork. Examines ways these techniques and materials are used in the theatre and other entertainment industries including film, television, theme parks, and casinos. [Occasional offering] 2 lecture/2 laboratory hours

**THR 152 - Lighting Technology**

**Prerequisite:** ETT 102

Introduction to stage lighting and to the aesthetics of scenic lighting as a visual art. Involves hanging, alignment, focusing, maintenance, and operation of various types of stage lighting fixtures. Students are required to work as a lighting technician at approved venues. 2 lecture/2 laboratory hours

**THR 207 - Scene Study I**

**Prerequisite:** ETT 102

Combines literary and theatrical skills. Students analyze scenes from plays, screenplays, and non-dramatic literature to discover how theatre artists use character, setting, circumstance, and dialogue when transforming text into performance. The interaction of writers, actors, and directors in developing and presenting scenes in performance is also observed. The class concludes with a public performance. [Fall offering] 3 lecture hours
GenEd  Humanities
THR 210  Theatre History:  
Classical to Elizabethan  3 credits
A study of the evolution of theatre from classical Greek and 
Roman traditions through the Elizabethan period. Empha-
sis on the play in performance reflecting the changing physi-
cal theatre, as well as the social, political, and artistic cur-
rents of each period. [Spring offering] 3 lecture hours

GenEd  Humanities / Diversity and Global Perspective
THR 212  Central Voices in World Drama  3 credits
Prerequisite: ENG 102 or divisional permission
Introduces students to important dramatic texts and exam-
ines them beyond the page as blueprints for performance. 
Emphasizes playwriting conventions, elements, styles, 
trends, and movements to chart changing dramaturgy and 
production practices in the world. Some playwrights include 
Christopher Marlowe, Henry David Hwang, Tennessee Wil-
liams, Bertolt Brecht, Amiri Baraka, Arthur Miller, Caryl 
Churchill, and Wole Soyinka. [Fall offering] 3 lecture hours

GenEd  Diversity and Global Perspective
THR 217  Theatre Workshop  3 credits
Prerequisites: THR 104 and THR 105 
and/or permission of instructor
A practical study of theatrical production by intensive 
script study and supervised technical projects which cul-
minates in performances for a live audience. Students ap-
ply techniques they have learned in prior acting and tech-
nical classes to the research, rehearsal and performance 
of a role in a fully realized theatrical production. [Spring 
offering] 1 lecture/5 laboratory hours

GenEd  Diversity and Global Perspective
THR 252  Lighting Design  3 credits
Prerequisites: ETT 102, THR 152 with a minimum C grade 
Fundamentals of lighting design. Analysis of a script for 
lighting and development of a workable design concept. 
Through this concept and an evaluation of the performers' 
spatial relationships in the production, students generate 
light plots and the associated paperwork common to a pro-
duction. Students are required to work as a lighting designer 
at approved venues. 2 lecture/2 laboratory hours

VPA—Visual and Performing Arts
VPA 228  Artistic Collaboration Workshop  3 credits
Prerequisite: ENG 101
Open to actors, dancers, musicians, media professionals, 
and fine artists. Alternates between generating new per-
formance work and examining the history of collaboration 
among established artists of different disciplines in Modern-
ist and Postmodernist movements. Students work with the 
materials of their specific craft while taking inspiration from 
the other artistic movements. Participants must attend all 
sessions, and all assignments require rehearsals outside of 
class time. [Fall offering] 2 lecture/2 laboratory hours

WGS—Women’s and Gender Studies
GenEd  Diversity and Global Perspective
WGS 132  Introduction to Women’s 
and Gender Studies  3 credits
Corequisite: ENG 101 or college-level eligibility 
[also offered as SOC 132] An introduction to major theories 
and ideas developed within feminism and the field of gender 
studies. Specific topics include theoretical explanations of gen-
der, representations of gender; economic, social, and political 
implications of gender constructs; and cross-cultural perspec-
tives on gender. Texts, films, and other resources contribute to-
ward an understanding of these issues. 3 lecture hours

GenEd  Diversity and Global Perspective
WGS 221  Seminar in Women’s 
and Gender Studies  3 credits
Prerequisites: ENG 102 with a minimum C grade; 
9 credits of electives as listed in the 
Women’s and Gender Studies guidelines
An in-depth interdisciplinary exploration of the contribu-
tions of the social sciences, the behavioral sciences, literature, 
and the arts to the study of gender in society. Specific topics in-
clude feminist theories, feminist methodologies, and women 
and gender issues in relation to culture, politics, and the 
economy. Texts, films, and other resources contribute toward 
an understanding of these issues. 3 lecture hours