

**Central Ohio Technical College
COTC Course Description Listing – General Education Courses – Social and Behavioral Science Courses
2009-2010 Academic Year**

ALL STUDENTS MUST TAKE PLACEMENT TESTS PRIOR TO SCHEDULING THE FIRST COMMUNICATIONS OR MATHEMATICS COURSE.

BHS-1006 Critical Thinking

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: COM-1535. Course is graded A-E.

This course, an introduction to logic, teaches students to analyze the media, advertising, and everyday problems -- career, academic, and personal. It aims at equipping students with the basic skills and discipline necessary to make valid judgments.

BHS-1030 Reasoning Skills

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: This course is required for all students who place in two or more Pre-College Communications courses. This course is open to any student with a grade of C (2.00) or better in PCE-1400 (or a score of at least 75 on the COMPASS writing skills test, or a score of at least 42 on the ASSET writing skills test) and a grade of C (2.00) or better in PCE-1423, or either a score of at least 85 on the COMPASS reading skills test or a score of at least 44 on the ASSET reading skills test. Course must be taken within student's first 45 credit hours. Course is graded A-E.

This course develops the critical thinking skills needed to analyze situations in personal, academic, and career life. Skills developed include analyzing facts, applying strategies for deep learning, recognizing assumptions, making decisions, evaluating information critically and ethically, and opening one's mind to other options.

BHS-1340 Ethics

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: COM-1535. Course is graded A-E.

This Ethics course explores ethical theories as well as ethical practices. It seeks to develop critical thinking skills as a basis for ethical choice using lectures, open discussion, and case studies. A variety of topics will be evaluated in a cultural, social and historical context.

BHS-1345 Human Development

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in BHS-1383 or BHS-1376. Course is graded A-E. Not open to students with credit for BHS-4045.

Students study human development as a dynamic, multi-dimensional process from conception through death. Emphasis is placed on the inter-relationship of the many biopsychosocial factors influencing human development, general principles of growth and development, major developmental tasks encompassing each stage of the life cycle, and health and development problems common to each stage. Course requirements include a project focusing on the application of human development theories, concepts, principles, and tasks.

BHS-1370 Social Psychology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: BHS-1376. Course is graded A-E.

Social Psychology is the study of the reciprocal influence of individuals and social situations. Major areas of study include basic theoretical concepts, social cognition and perception, the emergence of the self, attitudes including stereotyping and prejudice, discrimination, relationships, conformity, prosocial behavior, aggression and the social effects of belonging.

BHS-1376 General Psychology

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Minimum ASSET score of 44 in reading and writing or minimum COMPASS score of 85 in reading and 75 in writing or completion of both PCE-1400 and PCE-1423. Course is graded A-E. Course is not open to students with credit for BHS-1395, BHS-1396, or BHS-1386.

General Psychology provides an introduction to the history of psychology, basic theoretical constructs, research methods, physiological effects on behavior, cognitive functioning, social psychology, organizational psychology, personality theory and psychopathology.

**COTC Course Description Listing – General Education Courses – Social and Behavioral Science Courses
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BHS-1378 Abnormal Psychology

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in BHS-1376. Course is graded A-E. Not open to students with credit for BHS-1388 or BHS-1397.

Abnormal Psychology is the study of psychological disorders with emphasis on current theoretical views, assessment, clinical characteristics, causes and treatments. Major areas of study include anxiety disorders, stress disorders, mood disorders, somatoform disorders, dissociative disorders, substance abuse disorders, psychotic disorders, and personality disorders. Topics will be developed through lecture, class discussion, papers, structured class activities and films.

BHS-1379 Cultural Diversity

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. This course is not open to students with credit for BHS-1389, BHS-1392 or BHS-1399. Course is graded A-E.

This course focuses on the differences and similarities among racial, ethnic, religious and other diverse populations in the United States and includes historical, religious and sociocultural issues and current conflicts.

BHS-1382 Sociology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

Sociology is the study of social groups and societal institutions and their effect on society and individuals. Topics covered include research methods, theoretical perspectives, culture, the structure and organization of society, systems of stratification including global inequality, racial stratification, social class and gender stratification, major social institutions and current topics.

BHS-1383 Psychology of Adjustment

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: (Minimum ASSET score of 44 in reading and 44 in writing) or (minimum COMPASS score of 85 in reading and 75 in writing) or (completion of both PCE-1400 and PCE-1423). Course is graded A-E. Not open to students with credit for BHS-1393.

This course deals with issues related to personal growth and adjustment. Topics covered include basic research methods, personality, aspects of the self, social influence, interpersonal attraction and communication, emotional expression, sexual expression, adolescent and adult development, gender roles and mental health.

BHS-1385 Organizational Psychology

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

Organizational Psychology is an introduction to the application of the methods, facts, and principles of psychology of human behavior within work organizations. Topics include history and use of applied psychology, causation and purpose in behavior, leadership, group problem solving and group leadership, evaluating individual abilities, motivating workers for optimum performance, job fatigue, and counseling skills for managers. Course objectives are achieved through lecture and discussion, role-playing exercises, and written projects.

BHS-1399 Cultural Diversity for Law Enforcement

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Open to Law Enforcement Technology students only. This course is not open to students with credit for BHS-1389 or BHS-1392. Course is graded A-E.

This course focuses on the differences and similarities among racial, ethnic, and other diverse populations in the United States and includes historical, religious, and sociocultural issues and current conflicts.

**Course Description Listing – General Education Courses – Natural Sciences – Biological Sciences Courses
2009-2010 Academic Year****BIO-1705 Introduction to Human Biology**

4 credit hours, 4 contact hours (4 hours lecture and 0 hours lab). Prerequisite: None; Completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course is recommended. Course is graded A-E. Not open to students with credit for NAT-1705 or NAT-4008. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation.

This introductory course is designed for the student planning entry into a technology requiring an understanding of human structure, function, and familiarity with anatomical and physiological terminology.

BIO-1730 Environmental Science

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: None. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1730 or NAT-4061.

This course is an introduction to environmental science with an emphasis on the complexity and interrelatedness of environmental issues, concerns, problems, and economics. The impact of humans on ecosystems, resources, energy and the environment are presented. Special reference is made to the significance of toxic materials. The roles of business, industry, and government as related to the environment will also be addressed. The laboratory portion of this course enhances the theories and concepts presented in the lecture.

BIO-1740 General Biology

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: A grade of C (2.00) or better in High School Biology or BIO-1705. Recommended the completion of this course for students who must take BIO-1772 Human Anatomy and Physiology I, and BIO-1773 Human Anatomy and Physiology II. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1740 or NAT-4070.

General Biology introduces the major concepts and principles of biology, emphasizing inorganic, organic and biochemistry processes and concepts, cell structure and function, DNA function and technology, genetics, diversity of all living organisms, and ecology. The laboratory portion of this course enhances the theories and concepts presented in lecture.

BIO-1745 Human Biology

5 credit hours, 7 contact hours (3 hours lecture and 4 hours lab). Prerequisite: Grade of C (2.00) or better in high school biology or BIO-1705. This course may not be taken concurrently with BIO-1705. High school chemistry is recommended but not required. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1745 or NAT-4081.

Human Biology is a one-quarter introductory course that examines introductory chemistry, the cell, cellular reproduction and differentiation, tissues, a review of the anatomical and physiological aspects of the integumentary, skeletal, musculature, nervous, endocrine, cardiovascular, immune, respiratory, digestive, urinary, and reproductive systems. Also, students will review the principles of genetics and will discuss genetic disorders. Laboratory studies will involve the application of lecture materials and may involve the use of human cadavers, along with other learning resources including videos, computer applications, histological slides, animal specimens/dissections, and anatomical models.

BIO-1750 Elementary Microbiology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1740 or BIO-1745. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Not open to students with credit for NAT-1745, NAT-1755, NAT-4003 or NAT-4004. Course is graded A-E.

This course is an introduction to microbiology, surveying the basic types of microscopic organisms. Classification, structure, culturing, transmission, microbial control, and selected diseases are studied.

**COTC Course Description Listing – General Education Courses – Natural Sciences – Biological Sciences Courses
2009-2010 Academic Year****BIO-1755 Microbiology**

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in high school chemistry or CHM-1700 *and* grade of C (2.00) or better in BIO-1740 or BIO-1745 or BIO-1772. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1755 or NAT-4003.

This course is a survey of the microbial world including types of microbes, microbial metabolism, microbial genetics, microbial growth, host/microbe interactions, immunology, and infectious diseases of the body systems. The laboratory portion of this course enhances the theories and concepts presented in the didactic portion of the course.

BIO-1760 Medical Terminology

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Student must have knowledge of computer applications and access to a computer as this course is offered only online. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. BIO-1760 has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course OHL005 requirements. Not open to students with credit for NAT-1760 or NAT-4039.

This web-based on-line course is designed to introduce the student to the basic elements of medical terminology. The material presented will give the student the ability to combine root elements with prefixes, suffices, and combining vowels to decipher and understand medical terms.

BIO-1765 Nutrition

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None. High school chemistry is recommended but not required. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1765 or NAT-4036.

Students will learn about the fundamental principles and practices that are essential in nutritional care to maintain health, to prevent illness, and to provide support and therapy during illness. The focus will be on the composition and function of foods; the nutritional needs during the life cycle; and the ways in which variations in caloric content, consistency, and nutrient composition may be employed to meet individual diet requirements.

BIO-1772 Human Anatomy and Physiology I

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in CHM-1710 or CHM-1713. Course is graded A-E.

This course is an introduction to the study of anatomy and physiology of the human body, including standard terminology, chemistry review, cells, tissues, and structure, function and physiology of the integumentary, skeletal, muscular, nervous, special senses and receptors. Laboratory studies will involve the application of lecture materials and may involve the use of human cadavers, along with other learning resources including videos, computer applications, histological slides, animal specimens/dissections, and anatomical models.

BIO-1773 Human Anatomy and Physiology II

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1772. Course is graded A-E.

The student will continue to study the anatomy and physiology of the human body, including the structures and functions of endocrine system, cardiovascular system, lymphatic system, respiratory system, digestive system, urinary, and reproductive systems. The course also includes the study of genetics and embryology. Laboratory may include the study of human cadavers along with other learning resources including videos, computer applications, histological slides, animal specimens/dissections, and anatomical models.

**COTC Course Description Listing – General Education Courses – Natural Sciences – Biological Sciences Courses
2009-2010 Academic Year****BIO-1778 Pathophysiology I**

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1772. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1778 or NAT-4048. BIO-1778 plus BIO-1779 together have been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

This course is the study of pathological imbalances including cellular adaptation and injury, fluid compartment exchanges with edema and dehydration, electrolyte functions, control and imbalances, acidosis and alkalosis, nervous system injuries and responses, sensory imbalances, skeletal system injury and repair, soft tissue injury and repair, and muscle injury and dysfunction.

BIO-1779 Pathophysiology II

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1773 and BIO-1778. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1779 or NAT-4049. BIO-1778 plus BIO-1779 together have been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

This course is the study of pathological imbalances including blood pressure, homeostasis, shock, cardiac malfunction, respiratory malfunction, hematopoiesis with anemias and leukemias, gastrointestinal imbalances, liver malfunction, renal failure, bladder injury and control, and endocrine hypersecretions and hyposecretions.

BIO-1780 Biology I

6 credit hours, 8 contact hours (4 hours lecture, 1 hour recitation, 3 hours lab). Prerequisite: Grade of C (2.00) or better in high school biology or BIO-1705 and grade of C (2.00) or better in high school Algebra II or MTH-1210 and grade of C (2.00) or better in high school chemistry or CHM-1700. Recommend completion of or concurrent enrollment in PCE-1400 or college level composition course. Course is graded A-E.

This course explores general biological problems and processes as they are experienced by all living organisms: the chemistry and energetic of life, molecular genetics, cellular reproduction, and evolution. The laboratory portion enhances the theories and concepts presented in lecture. This is the first of a two-quarter sequence - BIO-1780 Biology I and BIO-1781 Biology II.

BIO-1781 Biology II

6 credit hours, 8 contact hours (4 hours lecture, 1 hour recitation, 3 hours lab). Prerequisite: Grade of C (2.00) or better in BIO-1780. Course is graded A-E.

This course explores general biological problems and processes as they are experienced by all living organisms: plant and animal diversity, evolution, basic plant and animal systems, hormones, and immunology. The laboratory portion enhances the theories and concepts presented in lecture. This is the second of a two-quarter sequence - BIO-1780 Biology I and BIO-1781 Biology II.

**Course Description Listing – General Education Courses – Natural Sciences – Chemistry Courses
2009-2010 Academic Year****CHM-1700 Basic Chemistry**

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in either high school Algebra I or MTH-1205 or score of at least 43 on COMPASS Elementary Algebra test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course or college level composition course. Course is graded A-E. Not open to students with credit for NAT-1223 or NAT-1700.

An introduction to the basic concepts of chemistry designed to serve as a foundation (or refresher) for the student about to enter the study of allied health sciences. The course includes the following topic areas: metrics; elements, compounds and mixtures; atomic structure; bonding; chemical reactions, energy of reactions; oxidation-reduction; gas laws, solids and liquids; liquid mixtures; acids, bases and salts; and a brief look at fluid-electrolyte balance. The laboratory portion of this course enhances the theories and concepts presented in lecture.

CHM-1710 General Organic Chemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: (Grade C (2.00) or better in either high school Algebra I or MTH-1205 or a score of at least 43 on COMPASS Elementary Algebra test) and grade C (2.00) or better in either high school chemistry or CHM-1700. Completion of or concurrent enrollment in PCE-1400 or college level composition course is recommended. Course is graded A-E. Not open to students with credit for NAT-1228 or NAT-1710.

The course discusses the structures, reactions, properties, and naming of simple organic compound classes, including hydrocarbons, working up to the more complex biological compounds. The laboratory portion of this course enhances the theories and concepts presented in lecture.

CHM-1713 General, Organic, and Biochemistry

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in both high school Chemistry and high school Algebra I or MTH-1205. Course is graded A-E.

This General, Organic, and Biochemistry course is primarily designed to serve the student entering the Nursing and Allied Health programs. The course is the study of the general chemistry principles with a focus on identification of functional groups, understanding the properties of each functional group, the naming rules for simple molecules, and key reactions for each functional group; and biochemistry principles with a focus on the properties carbohydrates, lipids, proteins, enzymes, nucleic acids, and basic metabolic pathways. The laboratory portion of this course enhances the theories and concepts presented in lecture.

**Course Description Listing – General Education Courses – Communications and Electives Courses
2009-2010 Academic Year**

ALL STUDENTS MUST TAKE PLACEMENT TESTS PRIOR TO SCHEDULING THE FIRST COMMUNICATIONS OR MATHEMATICS COURSE.

COM-1007 Career Explorations

2 credit hours, 2 contact hours (2 hours lecture and 0 hours lab). Prerequisite: None. Course is graded A-E.

Career Explorations provides opportunities for students to build confidence and to develop self-reliance while they relate their educational experience to the importance of career planning. The course focuses on self-awareness, job market research, career services and options at COTC, and team building. Students will experience contact with working professionals, class and team discussions, lectures, videos, handouts, readings, on-site visitations, and individual reports.

COM-1011 Career Planning I

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: COM-1007, or documented enrollment in a technology program, or permission of the Academic Dean, or current employment. Course is graded A-E.

This course develops the student's ability to prepare resumes, cover letters, and employment applications. Students examine authentic job materials with emphasis on writing job objectives, using action words, as well as focusing on the benefit factor. Professional appearance of documents is stressed.

COM-1012 Career Planning II

1 credit hour, 2 contact hours (0 hours lecture and 2 hours lab). Prerequisite: COM-1007, or COM-1011, or documented enrollment in a technology program, or permission of the Academic Dean, or current employment. Course is graded A-E.

Technology Career Planning II prepares the student for the three stages of the interview process: pre-interview planning, interview management, and post-interview follow-up. Specific topics include: 1) company research; 2) interview questions and responses; 3) employer evaluation criterion; 4) positive image; 5) skill reinforcement; and 6) interview reassessment. Emphasis is given to professionalism and persuasive communication. This course is taught through employer contacts, role-play, small group discussion, lectures, videos, and videotaped interviews.

COM-1050 Introduction to Online Learning

Zero credit hours, 1 contact hour (0.4 hours lecture and 0.4 hours lab). Prerequisite: None; students must enroll in COM-1050 prior to first online/hybrid course enrollment. Course is graded S/U.

This course is designed to teach the student how to successfully learn online. The student will receive training on terminology, concepts, course tools, learning resources, and expectations as it relates to online learning. The course, or its equivalent proficiency assessment, must be successfully completed prior to or concurrent with the student's first online course.

COM-1504 Public Speaking

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. This course is not open to students with credit for COM-1112, COM-1509, COM-1509.1, COM-1512, or COM-1521. Course is graded A-E.

This course emphasizes instruction and practical experience in public speaking. Students learn to analyze audiences, select topics, apply research learned, organize, and present a series of extemporaneous speeches. This course introduces other interpersonal and intrapersonal communications skills, including listening, non-verbal communications, and small group communications.

COM-1514 Contemporary Fiction

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: COM-1535 or equivalent. Course is graded A-E.

This course acquaints the student with various pieces of contemporary fiction. The student reads noteworthy novels and short stories and writes essays demonstrating his/her analysis and understanding of these texts.

**COTC Course Description Listing – General Education Courses – Communications and Electives Courses
2009-2010 Academic Year**

COM-1523 Small Group Communications

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is not open to students with credit for COM-1115 or COM-1515. Course is graded A-E. This course has been approved by the Ohio Board of Regents as meeting the Transfer Assurance Guide (TAG) course requirements.

Students practice the techniques of defining, researching, planning, and group decision making in a series of five conferences, stressing leadership, participation, and responsibility.

COM-1525 Technical Writing

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E. This course is not open to students with credit for COM-1113, COM-1505, COM-1513, or COM-1522.

Training in writing techniques used in business, industry, and public service is stressed. The student prepares, edits, and submits memoranda, letters, reports, and resumes.

COM-1531 National Issues

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: COM-1535. This course is not open to students with credit for COM-1530. Course is graded A-E.

The course explores the economical, historical and geo-political nature and ramification of several current issues facing the people of the United States. Each issue will be studied in depth. It requires synthesis and fine-tuning of the basic communicative skills--thinking, listening, speaking, reading, and writing. Frequent oral and written reports are required.

COM-1534 Effective Communications

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E.

This course is constructed to help the student meet those needs identified as critical by the local business and professional community. It focuses the student on further development of their communication skills as well as their methods of delivery in the workforce. Skills emphasized include presenting effective verbal communications for one-on-one and group formats, assessing effectiveness of written and oral presentations, enhancing awareness of listening barriers, in addition to identifying and adjusting to non-verbal cues of audience. Development in methods of delivery include selecting and utilizing a variety of appropriate tools such as electronic media and graphics.

COM-1535 Composition I

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in PCE-1400, or ASSET score of 42 or above on writing skills test, or a score of at least 75 on the COMPASS writing skills test and a score of at least 85 on the COMPASS Reading skills test, or a score of at least 44 on the ASSET reading skills test, or a grade of C (2.00) or better in both PCE-1413 and PCE-1423. Course is graded A-E. COM-1535 is not open to students with credit for the following courses: COM-1111, COM-1502, COM-1506, COM-1507, COM-1511, COM-1520, COM-1532 or COM-1533.

Composition I is a writing intensive theme-based course that facilitates the development of college-level writing skills. The student will compose papers using expository writing while incorporating one's own thinking with credible research using MLA format. The course emphasizes critical thinking, analytical reading, thesis development and deep revision of one's own compositions. The course also includes analysis of audience and theme in one's own writing and the writings of others, while developing the student's critical reading skills. **Minimum Passing Grade for this Course is a C (2.00).**

COM-1536 Composition II

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E. COM-1536 is not open to students with credit for the following courses: COM-1503; COM-1507, COM-1508, COM-1511, COM-1521 or COM-1533.

In this course, using the framework of the American experience theme, the student will continue to develop proficiencies in analytical reading, critical thinking, thesis development, deep revision, and research of credible sources. Composition II emphasizes problem solving with writing-intensive assignments grounded in argumentation. The student will evaluate readings from historical, social and political perspectives. Examination of one's own position in relation to audience and evidence facilitates awareness of a writer's ethical responsibilities. Research of multiple sources using APA format is required. **Minimum Passing Grade for this Course is a C (2.00).**

**COTC Course Description Listing – General Education Courses – Communications and Electives Courses
2009-2010 Academic Year**

COM-1550 Literary Perspectives

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in COM-1535. Course is graded A-E. Not open to students with credit for COM-1502, COM-1503, COM-1506, COM-1507, COM-1532, COM-1533 or COM-1560.

This course will concentrate on analysis and interpretation of literary themes as well as development and evaluation of student compositions. In a collaborative learning environment and through assigned readings, expository and argumentative writing assignments, and discussions, the student will experience diverse points of view in psychological, historical, socio-economic and ethical aspects of life. The student will engage in these experiences to enhance self-understanding and to deepen their perspectives about the world in which they live. Literary Perspectives is designed for the student who plans to continue their education at four-year institutions. **Minimum Passing Grade for this Course is a C (2.00).**

**Course Description Listing – General Education Courses – Mathematics Courses
2009-2010 Academic Year**

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MTH-1200 Basic Mathematics

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: None. Not open to students with credit for MTH-3000 or MTH-3002. Course is required for all students scoring below 41 on the ASSET numerical skills test or below 44 on the COMPASS numerical skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. Course is graded A-E.

Basic Mathematics is designed to develop the student's potential to succeed in other college mathematics courses. The basic arithmetic skills involving whole numbers, fractions, and decimals are reviewed. Also covered are signed numbers, percents, dimension analysis, and the rudiments of algebra.

MTH-1203 Introduction to Geometry

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. Course is graded A-E.

This course is an introduction to elementary geometric concepts. It includes the study of lines, angles, triangles, polygons, circles and solids. Right triangle trigonometry and classic geometric constructions are also explored. This course is problem-solving oriented rather than proof-oriented.

MTH-1204 Business Math

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1200, or score of at least 41 on ASSET numerical skills test or score of at least 44 on COMPASS pre-Algebra/Numerical Skills Test. Course is graded A-E. This course is not open to students with credit for MTH-1201 or MTH-1202.

This course is a study of basic business arithmetic. It presents the concepts and applications of percentages, payroll, insurance, consumer interest, loans, and other common business computations.

MTH-1205 Introduction to Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1200, or score of at least 41 on ASSET Numerical Skills test, or score of at least 44 on COMPASS Pre-Algebra/Numerical Skills test. This course will count neither for elective credit nor toward meeting minimum credit hours for graduation. This course is not open to students with credit for MTH-1210. Course is graded A-E.

This course is an introduction to elementary algebraic concepts. It includes operations with real numbers, exponents and radicals, variable expressions, first degree equations, word problems, formulas and graphing. The student will develop the ability to use a scientific calculator efficiently.

MTH-1208 Elementary Statistics

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1205 or score of at least 43 on COMPASS Elementary Algebra test. This course is not open to students with credit for MTH-1224, MTH-1230 or MTH-2030. Course is graded A-E.

This is an introductory course in descriptive and inferential statistics. Topics covered include summarizing data with frequency tables; pictures of data; measures of center, variation and position; exploratory data analysis; probability; probability distributions; normal probability distributions; estimates and sample sites; hypothesis testing; inferences from two samples; correlation and regression. Concepts are explained intuitively and supported by examples. The applications are general in nature, and the exercises include problems from agriculture, biology, business, economics, education, environmental studies, psychology, engineering, medicine, sociology, and computer science.

**COTC Course Description Listing – General Education Courses – Mathematics Courses
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MTH-1210 Intermediate Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1205, or score of at least 10 on COTC Algebra Skills test, or score of at least 43 on COMPASS Elementary Algebra test. This course is not open to students with credit for MTH-3010. Course is graded A-E.

This course is a study of intermediate algebraic operations. It includes solving equations and inequalities, factoring, rational expressions, radicals, systems of equations, and graphing.

MTH-1215 College Algebra

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Successful completion of MTH-1210 with a grade of "C" (2.00) or better or a score of at least 71 on the COMPASS Algebra test. A Texas Instruments 83, 84, or 89 graphing calculator is required for this course. Course is graded A-E.

This course is a study of algebraic functions including polynomial, rational, radical, exponential, logarithmic and piece-wise defined functions. Topics investigated will include domain, range, graphs, inverses, operations, equations, inequalities and their applications.

MTH-1216 Pre-Calculus

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: Successful completion of MTH-1215 with a grade of "C" (2.00) or better or a score of at least 80 on the COMPASS Algebra test. Course is graded A-E.

This course is a study of the concepts of Trigonometry (including graphs), vectors and conic sections.

MTH-1226 Trigonometry

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1210 or a score of at least 71 on the COMPASS Algebra test. Course is graded A-E.

Exponential and logarithmic functions and concepts of trigonometry, including the graphing of trigonometric functions, are discussed.

MTH-1232 Introduction to Calculus

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: MTH-1226 or a score of 46 on the COMPASS Trigonometry test. Course is graded A-E. Course is not open to students with credit for MTH-1231 or MTH-3020.

An introduction to the principles of Analytic Geometry to develop an understanding of graphic functions. These concepts are expanded to the calculus or rate of change expressed through algebraic functions, derivatives, maximum and minimum velocity, temperature, and the applications of the integral in areas, volumes, pressure, power, electrical charge and work; with the emphasis on their application as related to the engineering technician.

MTH-2553 Mathematics for Programming

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in MTH-1210 or a score of at least 71 on the COMPASS Algebra test. Course is graded A-E.

Areas of study include numeration systems, matrix and Boolean algebra, probability, mathematics of finance, and other mathematical topics used in programming.

**Course Description Listing – General Education Courses – Communications – Pre-College Education Courses
2009-2010 Academic Year**

ALL STUDENTS MUST TAKE PLACEMENT TESTS PRIOR TO SCHEDULING THE FIRST COMMUNICATIONS OR MATHEMATICS COURSE.

PCE-1400 Basic Writing Skills

4 credit hours, 5 contact hours (3 hours lecture and 2 hours lab). Prerequisite: None.. This course is required of all students scoring below 75 on the COMPASS writing skills test or below 42 on the ASSET writing skills test. Course is not open to students with credit for PCE-1110, PCE-1500, PCE-1501 or PCE-1510. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is graded A-E.

This course provides the student with the opportunity to strengthen written language skills with emphasis on the writing process, sentence structure, unified paragraphs, word usage, capitalization, punctuation, and spelling.

PCE-1413 Basic College Success Skills

3 credit hours, 3 contact hours (3 hours lecture and 0 hours lab). Prerequisite: None. This course is required of all students scoring below 85 on Compass Reading Skills, or below 44 on ASSET Reading Skills. Course must be taken within student's first 30 hours of enrollment and is strongly recommended as a first-quarter course. Course is not open to students with credit for PCE-1013 or PCE-1015. This course will count neither for elective credit nor toward meeting the minimum credit hour requirements for graduation. Course is graded A-E.

College success skills are those skills that the student must master in order to function and succeed within the structure of college life. Many of these skills will carry over into the world of work. Skills developed in this course include basic organizational techniques such as time management, memory and concentration, prioritizing tasks, and goal setting. Academic skills include identifying individual learning styles, note taking, and test taking skills.

PCE-1423 Basic Reading Skills

3 credit hours, 4 contact hours (2 hours lecture and 2 hours lab). Prerequisite: None; however, this course is required of all students scoring below 85 on the COMPASS reading skills test, or below 44 on the ASSET reading skills test. Course must be taken within student's first 30 hours of enrollment and is strongly recommended as a first-quarter course. Course is graded A-E. This course will count neither for elective credit nor toward meeting the minimum credit hour requirements for graduation. This course is not open to students with credit for PCE-1023.

Critical reading skills necessary for successful use of college level reading materials are the focus of this course. Critical reading and vocabulary building skills covered include: features of textbooks, interpreting graphics, identifying main ideas and supporting details, textbook marking and annotating, vocabulary building, dictionary usage, and reading systems. This course may be taken concurrently with College Success Skills.

PCE-1424 English for Speakers of Other Languages (ESOL) I

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Self placement or ESL Compass Score of XXXX. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is graded S/U.

English for Speakers of Other Languages I (ESOL I) focuses on basic sentence structure and the writing process, developing a reflective writing portfolio, and basic reading comprehension skills. ESOL I is a technology assisted instruction course that utilizes a constructivist humanistic methodology in developing basic American English skills required for successful entry into college level technology courses. This course is graded on a Satisfactory/Unsatisfactory basis.

PCE-1425 English for Speakers of Other Languages (ESOL) II

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: Successful completion of PCE-1424 ESOL I or ESL Compass Score of XXXX. This course will count neither for elective credit nor toward meeting minimum credit hour requirements for graduation. Course is graded S/U.

English for Speakers of Other Languages II (ESOL II) focuses on basic sentence structure and the writing process, developing a reflective writing portfolio, and basic reading comprehension skills. ESOL II is a technology assisted instruction course that utilizes a constructivist humanistic methodology in developing basic American English skills required for successful entry into college level technology courses. This course is graded on a Satisfactory/Unsatisfactory basis.

**Course Description Listing – General Education Courses – Natural Sciences – Physics Courses
2009-2010 Academic Year**

PHY-1721 General Physics

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade C (2.00) or better in MTH-1210. Course is graded A-E.

Fundamental concepts of measurement, force, motion, dynamics, energy, friction, temperature scales, effects of heat on matter, principles of sound, electricity, magnetism, nature of light and atomic physics. The student will apply many of these principles in the laboratory portion of the course.

PHY-1726 Physics I - Mechanics

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in MTH-1215 and either MTH-1226 or MTH-1216 (or concurrent). Course is graded A-E.

This algebra-based course presents an experimental and analytical study of Newtonian mechanics, emphasizing one- and two-dimensional kinematics, dynamics, work and energy, conservation theorems, linear and angular momentum, collisions, rotational dynamics, and simple harmonic motion.

PHY-1727 Physics II - Electricity and Magnetism

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in PHY-1726. Course is graded A-E.

This algebra-based course presents an experimental and analytical study of electrostatics, electric fields, DC and AC circuits, magnetism, electromagnetic induction, electromagnetic waves, including the laws of Coulomb, Faraday, Gauss, Ampere, and Kirchhoff.

PHY-1728 Physics III - Heat, Light and Sound

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: Grade of C (2.00) or better in PHY-1727 or grade of C (2.00) or better in EET-3029. Course is graded A-E.

This algebra-based course presents an experimental and analytical study of the thermal properties of matter, laws of thermodynamics, the kinetic molecular theory, calorimetry, Carnot cycle, heat engines, heat pumps, the nature of light, geometrical and physical optics, as applied to reflection, refraction, polarization, interference, and diffraction, and the nature of sound.