

**Central Ohio Technical College**  
**New Courses for the 2009-2010 Academic Year:**

**BHS-1370 Social Psychology**

5 credit hours, 5 contact hours (5 hours lecture and 0 hours lab). Prerequisite: C grade (2.00) or better in 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.

**BIO-1772 Human Anatomy and Physiology I**

*Replaces BIO-1770 and BIO-1771.*

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: (C grade (2.00) or better in high school chemistry) or (CHM-1700 and CHM-1710 with a grade of C (2.00) or better) or (CHM-1713 with a grade of C (2.00) or better). Course is graded A-E.

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.

**BIO-1773 Human Anatomy and Physiology II**

*Replaces BIO-1774 and BIO-1775.*

6 credit hours, 7 contact hours (5 hours lecture and 2 hours lab). Prerequisite: C grade (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, 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.

**BIO-1780 Biology I**

6 credit hours, 8 contact hours (4 hours lecture, 1 hour recitation, 3 hours lab). Prerequisite: (High school biology with a grade of C (2.00) or better or BIO-1705 with a C grade (2.00) or better) and (High School Algebra [at the intermediate Algebra level] with a grade of C (2.00) or better or MTH-1210 with a C grade (2.00) or better) and (high school chemistry with a grade of C (2.00) or better or CHM-1700 with a C grade (2.00) or better). Recommend completion of or concurrent enrollment in PCE-1400 or equivalent course 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.

## **COTC New Courses for the 2009-2010 Academic Year:**

### **BIO-1781 Biology II**

6 credit hours, 8 contact hours (4 hours lecture, 1 hour recitation, 3 hours lab). Prerequisite: C grade (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.

### **CMP-2565 Directed Studies in Computers**

*This course replaces CMP-2595 Directed Studies in Computers.*

3 credit hours, 5 contact hours (1 hour lecture and 4 hours lab). Prerequisite: C grade (2.00) or better in CMP-2593 and CMP-2594. Course is graded A-E.

This course involves the application of computer programming using a relational database and system development concepts, principles and practices to create a comprehensive system development project. The student is required to analyze, design, program, test and document realistic systems on a microcomputer using a specified current database technology. The student will work on an independent-study basis with the guidance of faculty.

### **DDT-3704 Auto CAD Civil 3D**

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DDT-3706 or permission of the instructor. Course is graded A-E.

This introductory level course covers the fundamentals of AutoCAD Civil 3D and gives the student comprehensive experience with the three-dimensional, interactive, dynamic design features of AutoCAD Civil 3D.

### **DDT-3705 Revit Architecture**

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: DDT-3706 or equivalent and DDT-3758. Course is graded A-E.

This course introduces Revit, an object-based "building information modeling" (BIM) computer program used by Architects and building designers. In this lab-based course the student will explore Revit and gain experience in its concepts and capabilities. Through a series of hands-on lessons the student will create a detailed computer model of a building. The student will then use the program to develop a set of construction drawings generated from the building model.

## **COTC New Courses for the 2009-2010 Academic Year:**

### **DDT-3759 3D Design with SketchUp**

2 credit hours, 3 contact hours (1 hour lecture and 2 hours lab). Prerequisite: CMP-1601 or permission of the instructor. Course is graded A-E.

This course covers techniques for conceptualizing, creating and presenting three-dimensional ideas quickly and easily using SketchUp software. The student will gain a sound foundation and working knowledge of SketchUp with the primary focus being on the creation of objects, buildings, and landscapes through 3D computer modeling.

### **MTH-1210 Intermediate Algebra**

*This is a course name change effective summer quarter 2009.*

### **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.

### **NPN-4829 Maternal/Child Nursing for the Practical Nursing Student**

*This course replaces NPN-4824 Maternal/Child Nursing for the Practical Nursing Student.*

7 credit hours, 10 contact hours (5.5 hours lecture, 1.5 hours lab, 3 hours clinical). Prerequisite: Enrollment in the Practical Nursing program and C grade (2.00) or better in BHS-1345, BIO-1750, NPN-4821 and NPN-4823, and concurrent enrollment in NON-4809 and NPN-4825. Course is graded A-E.

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## **COTC New Courses for the 2009-2010 Academic Year:**

### **NPN-4829 Maternal/Child Nursing for the Practical Nursing Student (Continued)**

This course provides the opportunity for the student to explore and develop concepts basic to meeting the health care needs of the childbearing family. Utilizing the framework of Maslow's Hierarchy of Basic Human Needs and Orem's theoretical framework as well as Gordon's functional health patterns as the biological, psychosocial, and cultural components of human sexuality through pregnancy, birth, and childbearing are introduced. The family is viewed in terms of life span development. The concept of the role of the practical nurse in the promotion of wellness for the families at all stages of development is stressed. Guidelines for the establishment of therapeutic communication as it relates to the concepts of caring will be reviewed and specific methods for communication with parents and children will be presented. In the clinical setting, emphasis is placed on the practical nurse's contribution to the nursing process as it relates to the care of families in pregnancy, childbirth and parenting. Included is the adaptation of basic nursing skills in meeting the needs of both the parents and the child in promoting, maintaining, and restoring health. The effects of illness and hospitalization on the developing family are explored. Opportunity is provided for observation in a variety of community settings serving the health care and developmental needs of the family. Scientific principles, concepts, and skills development relating to both maternal and child care will be presented. The student is expected to demonstrate characteristics of personal responsibility and legal and ethical standards of the profession.

### **PHY-1726 Physics I - Mechanics**

*This course replaces PHY-3025 Physics-Mechanics (5 credit hours).*

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: C grade (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.

## **COTC New Courses for the 2009-2010 Academic Year:**

### **PHY-1728 Physics III - Heat, Light and Sound**

*This course replaces PHY-3032 Physics-Heat, Light and Sound (3 credit hours) for the 2009-2010 academic year.*

5 credit hours, 6 contact hours (4 hours lecture and 2 hours lab). Prerequisite: C grade (2.00) or better in PHY-1727 or C grade (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.

May 1, 2009 -- Office of the Vice President for Academic Affairs