

Montgomery County Community College
HCP/MAS/BIO 104
Human Body in Health and Disease
3-3-0

COURSE DESCRIPTION:

This introductory course provides students with the essentials of anatomy, the basic functions of the human body and the effects of disease using a systems approach. The normal structural organization and processes of each body system, common diseases, clinical applications, treatments and diagnostic procedures will be examined.

REQUISITES:

Previous Course Requirements

ESL 011 ESL Basic Writing or ENG 011 Basic Writing or ENG 010A Basic Writing
REA 011 Fundamentals of College Reading or ESL/ REA 017 Vocabulary & Reading
Comprehension Development II

LEARNING OUTCOMES Upon successful completion of this course, the student will be able to:	LEARNING ACTIVITIES	EVALUATION METHODS
1. Describe the structural organization of the human body	Lecture Discussion Demonstrations Reading Assignments	Quizzes Final Exam
2. Identify the body systems and major organs.	Lecture Discussion Demonstrations Reading Assignments	Quizzes Final Exam
3. Describe the normal function of each body system separately and discuss their relationship to each other.	Lecture Discussion Demonstrations Reading Assignments	Quizzes Final Exam
4. Identify and describe common disease processes related to each system.	Lecture Discussion Demonstrations Reading Assignments	Quizzes Final Exam
5. Describe the clinical application of common diagnostic procedures, interventions and supportive treatments.	Lecture Discussion Demonstrations Reading Assignments	Quizzes Final Exam

At the conclusion of each semester/session, assessment of the learning outcomes will be completed by course faculty using the listed evaluation method(s). Aggregated results will be submitted to the Associate Vice President of Academic Affairs. The benchmark for each learning outcome is that *70% of students will meet or exceed outcome criteria*.

SEQUENCE OF TOPICS:

1. The Body as a Whole
 - a. Scientific Method
 - b. Organization of the Human Body
 - c. Chemistry, Matter, and Life
 - d. Cell Anatomy and their functions
 - e. Tissues
 - i. Benign and Malignant Tumors
 - ii. Aging
2. Disease and the First Line of Defense
 - a. Disease and Disease-producing Organisms
 - i. Diagnosis, Treatment, and Prevention
 - ii. Infectious Disease
 - iii. Microbiology
 - iv. Laboratory Identification of Pathogens
 - b. Introduction to Pharmacology
 - i. Identification of Medications
 - ii. Indications of Medications
 - iii. Classification of Medications
 - c. Integumentary System
 - i. Structures
 - ii. Functions
 - iii. Repair and Healing
 - iv. Common Disorders
 - v. Current Medical and Surgical Treatments
3. Movement and Support
 - a. Musculoskeletal System
 - i. Structures
 - ii. Functions
 - iii. Common Disorders
 - iv. Current Medical and Surgical Treatments
4. Coordination and Control
 - a. Nervous System
 - i. Structures
 - ii. Functions
 - iii. Common Disorders
 - iv. Current Medical and Surgical Treatments
 - b. The Senses- overview
 - c. Endocrine System
 - i. Glands and Hormones
 - ii. Functions

- iii. Current Medical Treatments
- 5. Circulation and Body Defense
 - a. Blood
 - i. Structure
 - ii. Functions
 - iii. Blood Types
 - iv. Blood Disorders
 - v. Blood Studies
 - b. Heart
 - i. Structures
 - ii. Heart Function
 - iii. Repair and Healing
 - iv. Common Disorders
 - v. Current Medical and Surgical Treatments
 - c. Blood Vessels and Circulation
 - i. Structures
 - ii. Circulation- Blood Flow, Pulse, and Blood Pressure
 - iii. Common Disorders
 - iv. Current Medical and Surgical Treatments
 - d. Lymphatic System
 - i. Structures
 - ii. Functions
 - iii. Common Disorders and Current Treatments
 - e. Immunity
 - i. Innate and Adaptive
 - ii. Immune Disorders
- 6. Energy Supply and Use
 - a. Respiratory System
 - i. Structures
 - ii. Respiration
 - iii. Common Disorders and Current Treatments
 - b. Digestive System
 - i. Structures
 - ii. Functions
 - iii. Common Disorders and Current Treatments
 - c. Urinary System
 - i. Structures
 - ii. Functions
 - iii. Common Disorders and Current Treatments
- 7. Perpetuation of Life
 - a. Reproductive System
 - i. Male Structures and Functions
 - ii. Common Disorders and Current Treatments
 - iii. Female Structures
 - iv. Female Reproductive Cycle
 - v. Common Disorders and Current Treatments

- vi. Pregnancy and Childbirth
- b. Heredity and Hereditary Diseases
 - i. Genes and Chromosomes
 - ii. Genetic Diseases
 - iii. Treatment and Prevention of Genetic Diseases

LEARNING MATERIALS:

Required textbook:

Cohen, Barbara and Hull, Kerry. (2014). Memmler's The Human Body in Health and Disease. 13th edition, Lippincott.

Cohen, Barbara and Hull, Kerry. (2014). Study Guide. Memmler's The Human Body in Health and Disease. 13th edition, Lippincott.

Colbert, Bruce and Ruth Woodrow. (2019) Essentials of Pharmacology for Health Professionals. 8th edition, Cengage.

Other learning materials may be required and made available directly to the student and/or via the College's Libraries and/or course management system.

COURSE APPROVAL:

Prepared by: Kathleen Schreiner

Date: 11/1/2018

VPAA/Provost or designee Compliance Verification:
Victoria L. Bastecki-Perez, Ed.D.

Date: 12/19/2018

Revised by: Kathleen Schreiner

Date: 8/13/2019

VPAA/Provost or designee Compliance Verification:

Date: 8/14/2019



This course is consistent with Montgomery County Community College's mission. It was developed, approved and will be delivered in full compliance with the policies and procedures established by the College.