

El Paso Community College

Syllabus

Part II

Official Course Description

SUBJECT AREA	<u>Medical Assisting Technology</u>
COURSE RUBRIC AND NUMBER	<u>MDCA 1409</u>
COURSE TITLE	<u>Anatomy and Physiology</u> <u>for Medical Assistants</u>
COURSE CREDIT HOURS	<u>4 4 :</u> <u>0</u>
	Credits Lec. Lab

I. **Catalog Description**

Emphasizes normal human anatomy and physiology of cells, tissues, organs, and systems with an overview of common pathophysiology. A grade of "C" or better is required in this course to take the next course.
Corequisite: MDCA 1305. (4:0).

II. **Course Objectives**

Upon satisfactory completion of this course, the student will be able to

- A. Incorporate proper medical terminology.
 - B. Greet patients.
 - C. Utilize Microsoft Office software.
 - D. Demonstrate the ability to research Internet sites.
 - E. Demonstrate the ability to store and retrieve information.
 - F. Maintain Material Safety Data Sheets.
1. Unit I. Structural Units
 - a. Describe which elements are most common in the human body.
 - b. Describe three types of chemical reactions.
 - c. Define acidosis and alkalosis.
 - d. Explain how cells in the human body vary in size, shape, and function and give examples of cells found in different types of tissue
 - e. Describe the two major parts of a cell.
 - f. Describe active transport mechanisms, including endocytosis, exocytosis, pinocytosis, and phagocytosis.
 - g. List four major tissue types, and provide examples of where each occurs in the body.
 2. Unit II. Anatomical Divisions
 - a. Describe the correct anatomical position.
 - b. Describe, in terms of relative position, the location of one body part with respect to another.
 - c. Describe the three major body sections of planes.
 - d. Identify the anterior and posterior body regions.
 - e. Explain the biological levels of organization.

3. Unit III. Organ Formation and Functions for Body Support
 - a. Define: epidermis and dermis
 - b. List the general functions of each layer of skin.
 - c. Describe the structure and function of nails.
 - d. Discuss the mayor function of bones
 - e. List the three classes of joints, describe their characteristics and name an example of each.
 - f. Explain the causes of muscle fatigue and cramping.
 - g. Explain how the locations and interactions of skeletal muscles make possible certain movements.

4. Unit IV. Neurons, Receptors, and Hormones
 - a. Describe how the nervous system interacts with other systems of the human body.
 - b. Explain how information passes from one neuron to another.
 - c. Name the major parts and functions of the brain.
 - d. Describe the formation and function of cerebral fluid.
 - e. Describe how the sense of pain is produced.
 - f. List diseases of the eye.
 - g. Describe the location of the thyroid gland and discuss its structure.
 - h. List the hormones and general functions that the different endocrine glands secrete.

5. Unit V. Body Systems for the Maintenance of Life
 - a. Describe the four elements of blood and discuss their major function.
 - b. Describe factors affecting red blood cell production, including B-complex vitamins and iron.
 - c. Distinguish among the five types of white blood cells and give the function of each.
 - d. Define: albumin, globulins, and lipoproteins.
 - e. Name and describe the locations and functions of the major parts of the heart.
 - f. Trace the pathway of blood through the heart and the vessels of coronary circulation
 - g. Describe a lymph node and its major functions.
 - h. Distinguish between specific and nonspecific immunity and provide examples of each.
 - i. Distinguish between active and passive immunity.

6. Unit VI. Body Systems that Keep the Balance
 - a. Describe the process of digestion and how it relates to the other systems of the human body.
 - b. Describe the similarities and differences in function among the major organs of the digestive system.
 - c. Describe the process of peristalsis.
 - d. Describe the general function of the salivary glands.
 - e. List the major sources of carbohydrates, lipids, and proteins.
 - f. List the general function of the respiratory system.
 - g. Discuss how the various factors affect the respiratory center.
 - h. Explain how air and blood exchange gases and how blood transports these gases.
 - i. Discuss the general functions of the organs of the urinary system.
 - j. Discuss the role of tubular reabsorption of urine formation.

7. Unit VII. Reproductive Systems
 - a. Name the major structures of the male reproductive system.
 - b. Describe the major functions of the male reproductive system.
 - c. Name the major structures of the female reproductive system.
 - d. Describe the major functions of the female reproductive system.
 - e. Discuss the roles of the hypothalamic and pituitary hormones.
 - f. Outline the process of spermatogenesis and oogenesis.
 - g. Describe the major events of the menstrual cycle.

8. Unit VIII. Related Conditions and Diseases
 - a. Discuss common diseases of the respiratory tract.
 - b. List some parasitic infections that can invade the human body.
 - c. List and discuss some of the more common disorder of the Hematopoietic System.
 - d. Discuss at least 10 possible infections of the Integumentary System.
 - e. List general symptoms of sexually transmitted diseases.
 - f. Discuss how diabetes can affect different body systems.

- g. Discuss the treatments, causes, and prevention of breast cancer.
- h. Describe how blood reactions may occur between fetal and maternal tissues.
- i. Discuss ways in which hypertension may be controlled.
- j. Discuss what causes varicose veins.
- k. Discuss how dermatitis, hay fever, asthma, hives, eczema, and allergies to pollen relate to the immune system.
- l. Discuss the physiological response to stress.

III. THECB Learning Outcomes (WECM)

1. Identify and correlate cells, tissues, organs, and systems of the human body.
2. Differentiate normal from abnormal structure and function.
3. Differentiate all body systems, their organs, and relevant pathophysiology.

IV. Evaluation

A. Evaluation Methods

1. Four types of evaluation tools will be used to evaluate students achievement of course objectives.
2. Lecture quizzes, terminology quizzes, lecture exams and the final written examination will be used to assess students' competency in didactic objectives.
3. Professional and ethical classroom behavior and attendance will be worth 5 % points.
4. Student grades are tabulated using a final grade a break down sheet. To successfully complete MDCA 1409 Anatomy and Physiology for Medical Assistants, the student must achieve at least a 70% average. The students' overall grade must be no less than a "C".

B. Grading Scale

90-100%	A
80-89%	B
70-79%	C
< 70%	F

*A grade of "D" or "F" will need to be repeated for all Health Occupation Classes in order to graduate. In addition, each grade will initially be determined in decimals to the tenths. They will only be recorded in whole numbers. The guide used will round .1 through .4 to the lower whole number, and .5 through .9 are raised to next whole number. Example: If a student earns 87.4 the grade will be reflected as 87%. If the student earns 87.6% the grade is rounded to 88%. No decimals will be shown on the grade scanners.

V. Disability Statement (Americans with Disabilities Act [ADA])

EPCC offers a variety of services to persons with documented sensory, mental, physical, or temporary disabling conditions to promote success in classes. If you have a disability and believe you may need services, you are encouraged to contact the Center for Students with Disabilities to discuss your needs with a counselor. All discussions and documentation are kept confidential. Offices located: VV Rm C-112 (831-2426); TM Rm 1400 (831-5808); RG Rm B-201 (831-4198); NWC Rm M-54 (831-8815); and MDP Rm A-125 (831-7024).

VI. 6 Drop Rule

Students who began attending Texas public institutions of higher education for the first time during the Fall 2007 semester or later are subject to a 6-Drop limit for all undergraduate classes. Developmental, ESL, Dual Credit and Early College High School classes are exempt from this rule. All students should consult with their instructor before dropping a class. Academic assistance is available. Students are encouraged to see Counseling Services if dropping because exemptions may apply. Refer to the EPCC catalog and website for additional information.