

INSTRUCTOR INFORMATION

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 - Office: Rankin Campus, George Wynn #249
 - Virtual Office Hours: M-R 8:00-9:00, F 12:30-1:00
- *If you need to contact me during other times, you may do so.

Email is the preferred mode of communication for this class. Please feel free to email me anytime via Canvas. You can also email me at rachael.mckinney@hindsgcc.edu, however, I prefer having all of our correspondence through Canvas, due to the convenience and the fact that I am in Canvas so often. I will always answer all email within 24 hours of the received time. If you do not receive a reply from me within 48 hours, please resend the email to ensure that I received the correspondence. There may be times when you need to contact me by phone. My contact numbers are listed above. The virtual office hours represent a period of time that I will be at my computer in my office. At this time, I will answer emails and phone calls as soon as they are received. I will also have be available to chat through Canvas (see “chat” button to the left).

COURSE TITLE

BIO 2513 (Human Anatomy and Physiology I)

TEXTBOOK

Hole’s Human Anatomy and Physiology, 14th edition. This is instant access, however, a low cost print option is available if you wish to have a hard copy of the textbook.

COURSE DESCRIPTION

A lecture course that covers the anatomical and physiological study of the human body as an integrated whole. The course includes detailed studies of: biological principles; tissues; and the integumentary, skeletal, muscular and nervous systems.

GOALS & OBJECTIVES

Students completing this course will describe and understand

- chemistry of relevance to human systems
- cell structure and physiology
- cell processes
- tissue types
- human integumentary, muscular, skeletal and nervous systems

INSTRUCTIONAL TECHNIQUES

Each week, you will work through the material in the module for that week. Each module contains the instructions, notes, Powerpoint presentation, supplemental study materials (videos, discussions, etc), and quiz for the week. Modules also contain additional assignments and/or discussions,

along with material to be read or viewed for this assignment. You will read the appropriate chapter(s), or portion of a chapter (designated by your schedule), in the textbook and use the Powerpoint presentation to guide you through the notes for that particular chapter. When you have completed this weekly assignment of reading and studying the material, you will take a quiz for that chapter (or section of the chapter outlined by the notes and Powerpoint presentation) for that week. The quizzes are not “timed”, but please do not click “submit” until you are finished with all of the questions. You may submit a quiz only once, unless the instructions specify otherwise. You will be able to see the correct answers once the quiz has been submitted. Also, check to make sure that your grade posted correctly in the grade center. All weekly quizzes will be posted on Saturday morning and are due no later than 11:59 pm Friday. After this time, the quiz will remain open, but a score of “0” will replace your score if you take the quiz. All content in the modules, other than quizzes and discussions, are open for the entire semester. This will allow you to plan and work through your semester on your schedule. However, please pay careful attention to the due dates for quizzes, as quiz will not open until the Saturday morning of the appropriate week.

OUTCOME COMPETENCIES

CHAPTER ONE – introduction to Human Anatomy and Physiology

01. Define anatomy and physiology and explain how they are related.
02. List and describe the major characteristics of life and the requirements of organisms.
03. Define homeostasis, explain its importance to survival and describe a homeostatic mechanism.
04. Explain the levels of organization of the human body.
05. Describe the locations of the major body cavities, list the organs and membrane located in each cavity.
06. Name the major organ systems, list the organs associated with each system, and describe the general functions of each system.

CHAPTER TWO – Chemical Basis of Life

01. Explain how the study of living material depends on the study of chemistry.
02. Describe the relationships among matter, atoms and molecules.
03. Discuss how atomic structure determines how atoms interact.
04. Explain how molecular and structural formulas symbolize the composition of compounds.
05. Describe three types of chemical reactions.
06. Define pH.
07. List the major groups of inorganic substances that are common in cells.
08. Describe the general functions of the main classes of organic molecules in cells.

CHAPTER THREE – Cells

01. Explain how cells differ from one another.
02. Describe the general characteristics of a composite cell.
03. Explain how the components of a cell's membrane provide its functions.
04. Describe each kind of cytoplasmic organelle and explain its function.
05. Explain how substances move into and out of cells.
06. Describe the cell cycle.
07. Explain how a cell divides.
08. Describe several controls of cell division.
09. Explain how stem cells and progenitor cells make possible growth and repair of tissues.

CHAPTER FOUR – Cellular Metabolism

01. Distinguish between anabolism and catabolism.
02. Explain how enzymes control metabolic processes.
03. Explain how the reactions of cellular respiration release chemical energy.
04. Describe how cells access energy for their activities.
05. Describe the general metabolic pathways of carbohydrate metabolism and explain how they are regulated.
06. Describe how DNA molecules store genetic information.
07. Explain how protein synthesis relies on genetic information.
08. Describe how DNA molecules are replicated.
09. Explain how genetic information can be altered and how such a change may affect an organism.

CHAPTER FIVE – Tissues

01. Describe the general characteristics and functions of epithelial tissue.
02. Name the types of epithelium, identifying the structure, function, and location of each.
03. Explain how glands are classified.
04. Describe the general characteristics of connective tissue.
05. Describe the major cell types and fibers of connective tissue.
06. List the types of connective tissue, identifying the structure, function, and location of each.
07. Describe the four major types of membranes.

CHAPTER SIX – Integumentary Systems

01. Describe the structure of the layers of the skin.
02. List the general functions of each layer of the skin.
03. Describe the accessory organs associated with the skin, explaining the function of each.
04. Explain how the skin helps regulate body temperature.
05. Summarize the factors that determine skin color.

CHAPTER SEVEN – Skeletal System

01. Classify bones according to their shapes and name an example from each group.

02. Describe the general structure of a bone and list the functions of its parts.
03. Distinguish between intramembranous and endochondral bones and explain how such bones grow and develop.
04. Describe several factors that affect bone development.
05. Discuss the major functions of bones.
06. Distinguish between the axial and appendicular skeletons and name the major parts of each.

CHAPTER EIGHT – Joints of the Skeletal System

01. Explain how joints are classified.
02. Distinguish between synarthroses, amphiarthroses, and diarthroses. Give examples of each.
03. Describe the general structure of a synovial joint.
04. List six types of synovial joints and name an example of each.

CHAPTER NINE – Muscular System

01. Discuss three types of muscle tissue.
02. Describe the connective tissue components of skeletal muscle.
03. Explain the structure of a skeletal muscle fiber.
04. Explain the structure and function of a neuromuscular junction.
05. What is a motor unit?
06. Describe the events that occur during skeletal muscle contraction and relaxation.
07. Discuss the energy source for the muscle contraction.
08. What happens during muscle fatigue? What is oxygen debt?
09. Discuss red and white muscles, threshold stimulus, myogram, twitch, latent period, refractory period, all-or-none response, summation, tetanic contraction, recruitment, muscle tone, origin and insertion.

CHAPTER 10 – Nervous System I

01. Discuss the general functions of the nervous system.
02. List organs of the nervous system.
03. Describe the general structure of a neuron.
04. Explain classifications of neurons on the basis of structure as well as functions.
05. Describe the structures and functions of different types of neuroglial cells.
06. Discuss regeneration of a nerve fiber. What is neuroma?
07. Explain the process of membrane polarization and the events that occur during impulse conduction.
08. Describe the structure of a synapse.
09. Discuss these terms: all-or-none response, refractory periods, salutatory conduction, synaptic potentials, neurotransmitters, neuronal pools, convergence, and divergence

CHAPTER 11 – Nervous System II

01. Describe three layers of meninges that cover the brain and spinal cord.

02. Explain the structure of the spinal cord and its functions.
03. Discuss the components of a reflex arc.
04. Describe the formation and functions of the cerebrospinal fluid. List the ventricles of the brain.
05. Discuss the brain development.
06. List the major parts of the brain and describe the functions of each.
07. Describe the motor, sensory, and association areas of the brain.
08. Explain hemisphere dominance and the stages in memory storage.
09. List the major parts of the peripheral nervous system.
10. Discuss the structure of a peripheral nerve. How are its fibers classified?
11. List the names and functions of the cranial nerves.
12. Explain different types of spinal nerves and their functions.
13. Describe the general characteristics of the autonomic nervous system.
14. Distinguish between the sympathetic and the parasympathetic divisions of the autonomic nervous system.

METHODS OF EVALUATION

14 quizzes, a Powerpoint presentation, various weekly assignments, and 3 proctored exams (See “Grading” for point weighting of assignments)

ATTENDANCE

In an online course, attendance is evident in participation in the course. Just as in traditional courses, students must be “present” to master the objectives of the course. Although the online learner attends each week at the times that are most convenient to him/her, attendance (participation) is necessary to succeed, perhaps even more so in an online setting. Attendance is recognized via submission of weekly quizzes, assignments, AND completion of proctored exams (for weeks that proctored exams are administered). If the weekly quiz is not submitted by 11:59 pm on Friday (or if h/she fails to take a proctored test during such weeks), the student will not be considered “present” in the class for that week. The student will receive a “first warning” upon his/her first absence and a “notice of absence” (NOA) upon his/her second absence. Please check your Hinds (Canvas) email often, as this is the email account through which I will communicate with you. **When a student has accumulated three absences, the student will be administratively withdrawn, or dropped for excessive absences, due to lack of participation, and receive an “F” in the course.**

GRADING

- 14 weekly quizzes will be administered
- Powerpoint presentation on disease process
- Introduction, content-related discussions on various topics via discussion board, and various assignments

- 3 proctored exams (roughly 100 questions each) will be administered

PROCTORED EXAMS MUST BE TAKEN IN A TESTING FACILITY, BY APPOINTMENT, DURING THE TIME THAT THEY ARE OPEN. THERE ARE NO EXCEPTIONS.

*Students must take ALL three proctored exams in order to receive a passing grade in the class. Students are not exempt from proctored exams.

The final average will be calculated as follows:

- Quizzes and assignments = 30%
- Proctored Tests = 70%

Departmental Grading Scale

A	90-100
B	80-89
C	70-79
D	60-69

When using the grade center to view grades and course average, you have the option to select whether or not to count the ungraded assignments as zeros or ignore them. Do not choose the option that count the ungraded assignments as zeros, as this will not be an accurate average. I will manually input zeros, when applicable) so that you will always have an accurate running average for the course.

ACADEMIC HONESTY

A hallmark of any profession is integrity and honesty. Academic honesty is expected of all students; therefore, each student is expected to accomplish his/her own work. Academic misconduct includes, but is not limited to deceptive acts such as the following:

- Plagiarizing from any source including websites
- Cheating in any manner on tests, papers, reports, etc.
- Turning in work as your own when, in fact, it was not your work
- Improperly using technology
- Stealing, buying, or selling course materials
- Either impersonating another student during a test or having another person assume one's identity during a test
- Deliberately conveying false or misleading information

When academic misconduct has occurred, the student will receive an “F” for the course.

TESTING

Quizzes will open on Saturday morning and must be submitted each week by Friday evening at 11:59 pm. The quiz will remain open after the due date (11:59 PM on Friday) for instructional practice for students, however, regardless of the score earned after the due date, the recorded score will be “0”. There are 14 weekly quizzes and three proctored exams. It is the student’s responsibility to schedule each exam in SmarterProctoring no less than 48 hours in advance. Students should refer to the course schedule and/or syllabus often, as well as pay attention to announcements, to insure that they do not fail to meet deadlines for tests and quizzes. Students should also be mindful of the testing schedules at the various labs (testing sites) and should schedule tests as early as possible. Students can find information concerning scheduling proctored tests by clicking on SmarterProctoring on the left margin of the Canvas page. The information pertaining to the Disease Powerpoint Project will be posted early in the semester (week 6) and can be submitted at any time. Instructions for the various discussions will be posted on the pages for the lessons in which they are included.

PREREQUISITES

Co-requisite: BIO 2511

ADA STATEMENT

Official Hinds CC Notice of Non-discrimination Statement:

Hinds Community College offers equal education and employment opportunities and does not discriminate on the basis of race, color, national origin, religion, sex, age, disability or veteran status in its programs and activities. The following person has been designated to handle inquiries regarding the non-discrimination policies: Dr. Debra Mays-Jackson, Vice President for Administrative Services, 34175 Hwy 18, Utica, MS 39175; 601.885.7001.

Official Hinds CC Disability Support Services Statement:

Hinds Community College provides reasonable and appropriate accommodations for students with disabilities. Disability Services staff members verify eligibility for accommodations and work with eligible students who have self-identified and provided current documentation. Students with disabilities should schedule an appointment with the designated Disability Services staff member on their respective campuses

to establish a plan for reasonable, appropriate classroom accommodations. For a full list of contact information for each Hinds campus, please visit <http://www.hindscc.edu/compliance/Default.aspx> or contact the DSS Office at (601) 857-3310.

Video Surveillance

Hinds Community College utilizes Video Surveillance Cameras in order to enhance security and personal safety on its campuses. It has been determined that use of this equipment may prevent losses and aid in the law enforcement activities of the Hinds Campus Police. To ensure the protection of individual privacy rights in accordance with the law, a formal Policy on the Use of Installation of Video Surveillance Equipment has been written to standardize procedures for the installation of this type of equipment and the handling, viewing, retention, and destruction for recorded media. Under no circumstances shall the contents of any captured audio or video recordings be exploited for purposes of profit or commercial publication, nor shall recording be publicly distributed except as may be required by law.

Netiquette

The term “netiquette” is a compound of the words “network” and “etiquette”. It refers to acceptable codes of practice for interacting with others while online. In order to prevent misunderstandings and promote engaging and meaningful collaboration, extra care must be taken into how you express yourself in your written communication.

How to communicate

- **Be professional** as you communicate. Reread your written text before posting or emailing. In much of the corporate world, writing in all caps is considered yelling and, therefore, is not acceptable in any online communication, nor is texting lingo.
- **Be considerate.** Think about how your words affect others.
- **Be respectful** of the opinions of others and respect your instructor.
- **Be calm.** Try to keep your emotions out of class.
- **Humor and sarcasm.** Because there are no visual cues in distance education, humor and sarcasm are impossible to discern. Be very careful when interjecting humor and refrain from using any remarks that are sarcastic in nature.
- **Harassment and other offensive behavior.** The online learning environment is no place to harass, threaten, or embarrass others. Comments that can be viewed as offensive, sexist, or racially motivated will not be tolerated.

- **Offensive material.** Students may not post, transmit, promote, or distribute content that is racially, religiously, ethnically offensive or is harmful, abusive, vulgar, sexually explicit, otherwise potentially offensive.
- **Copyrights and intellectual property.** Plagiarism will not be tolerated. Ideas that are copied should always be cited correctly.