DISCLAIMER: This is an example syllabus that is subject to change at faculty discretion.

Course Syllabus

Course Information

BIO 215 Anatomy and Physiology I

4 Credit Hours

Instructor Information

Instructor Name

Email Address:

Phone (Optional):

Office Hours: If you need to contact me directly, I prefer that you email me. Please allow 24 hours for me to respond to emails Monday through Friday and 48 hours on the weekend.

Communicating With the Instructor

When questions arise throughout the course, please remember to check the following resources for an answer before reaching out to me:

1. Course Syllabus
2. Announcements
3. The Question Center discussion board

Question Center Discussion

The Question Center Discussion is an excellent place to ask questions and get answers from peers and me. You are encouraged to post your questions here before contacting me unless it is a time-sensitive matter. If you have questions of a personal nature, such as relating to a personal emergency, questioning a grade on an assignment, or something else that needs to be communicated privately, you are welcome to contact me directly via email or phone.

Technology Help

If you have a question about the technology used in the course, please contact the Doane University Service Center for assistance; their contact information is listed later in the syllabus. If third-party tools are utilized in the course, please contact them directly.

Proctored Assessments:

This course may contain proctored quizzes & exams, which are **not optional**. For these proctored events, Doane uses a third-party provider, which is a secure, online proctoring service that allows you to complete your exam from any chosen location at any time. Proctoring provides your instructor with the assurance that any suspicious activity by test takers will be monitored and reported. The cost of the proctoring is included in the tuition and fees for this course.

Calendar:

Click here to download the calendar

Course Details

Catalog Description

A study of the structure and function of the human body, beginning with cells and tissues and then continuing with the study of the 11 major systems. Upon successful completion of this human anatomy class, students will have a solid foundation in human structure and function and be prepared for basic clinical course-work.

Course Prerequisites

BIO 101 or BIO 111 or BIO 112

Course Textbook and Materials

Course books are delivered electronically and integrated into the course. Course books and materials will be integrated into your Canvas portal.

(eText) Anatomy & Physiology: The Unity of Form and Function with Connect

- Author/s: Saladin, K. S.
- Edition number and year of publication:10th ed. 2023
- ISBN: 9781265328627
- Publisher Website: https://www.mheducation.com/highered/product/anatomy-physiology-unity-form-function-saladin/M9781265328627.html

Required Technology

- Canvas
- YuJa Verity extension (Download requires Google Chrome (preferred), Opera, Microsoft Edge, or Brave
- McGraw Hill Connect

Learning Objectives and Course Outline

Course Objectives

By the end of the course, you will be able to:

1. Define anatomy and physiology
2. Explain the importance of the relationship between structure and function
3. Describe and identify directional terms, anatomical positions, and anatomical structures in relation to each other.
4. Explain the role of chemistry in the human body.
5. Explain the structure and function of a human cell with a focus on organelles, cell replication and transport.
6. Describe the make-up of a tissue and be able to recognize the primary tissue types.
7. For each primary tissue type, explain overall functions and know specific locations in the body.
8. Describe the structure and function of the integumentary system.
9. Describe the structure, function and articulations of the skeletal system.
10. Summarize the major characteristics and functions of skeletal, smooth and cardiac muscle.
11. Identify the major superficial muscles of the human body and their interactions with the skeletal system including actions of skeletal muscles.
12. Describe the structure, function and interaction of the nervous system.

Course Outline

Module	Topic	Assessments & Activities	Module Objective
1	Intro to A&P, Chemistry, Cells, and pH	Discussion: Self-Introduction Assignment: Smartbook Chapter 1 Assignment: Smartbook Chapter 2 Assignment: Smartbook Chapter 3	Define anatomy and physiology and explain the connection between structure and function. Identify scientific methods used in A&P. Explain the levels of human structure, from simplest to most complex.

Module	Topic	Assessments & Activities	Module Objective
		Discussion: Lab Safety and Membrane Transport Connect Lecture Quiz: Chapters 1-3	Identify key elements in the body and differentiate between isotopes, ions, and compounds. Interpret the pH scale and describe acid-base balance. Outline the major components of cells, including membranes and organelles. Describe cellular transport mechanisms and their significance.
2	Histology and The Integumentary System	Assignment: Smartbook Chapter 5 Assignment: Smartbook Chapter 6 Discussion: Histology Lab Connect Lecture Quiz: Chapters 5-6	Contrast the general features and functions of the four major tissue types. Describe the properties that distinguish epithelium from other tissue classes and classify different epithelial types. Identify and classify various connective tissues, describing their structural properties. Recognize and describe the major cell types found in nervous tissue. Identify and describe the three types of muscular tissue. Explain how junctions hold cells and tissues together and define different types of glands. List the functions of the skin and explain its structure. Describe variations in skin color and classify types of hair. Explain the structure and function of nails. Differentiate between sweat glands, sebaceous glands, and ceruminous glands. Identify common forms of skin cancer and understand classifications of burns and their treatment.
3	The Skeletal System	Assignment: Smartbook Chapters 7-9 Virtual Bone Lab	Identify the tissues and organs that compose the skeletal system and their functions.

Module	Topic	Assessments & Activities	Module Objective
		Discussion: Bone and Joint Lab Connect Lecture Quiz: Chapters 7-9	Describe the structure and composition of bone tissue, including its histology. Explain bone formation, growth, remodeling, and mineral balance. Identify the role of hormones in bone physiology and common bone diseases. Recognize the major bones and their anatomical features within the axial and appendicular skeletons. Classify joints and describe their structures and movements. Identify the major anatomical features of joints such as the jaw, shoulder, elbow, hip, knee, and ankle.
4	Muscular Tissue	Assignment: Smartbook Chapters 11 Virtual Muscle Lab Discussion: Muscle Lab Connect Midterm Quiz: Chapters 1-3, 5-9, 11	Describe the physiological properties that all muscle types share. Identify the defining characteristics and structural components of skeletal muscle. Explain the arrangement of muscle fibers and the functions of key proteins. Explain how motor units function and how nerve fibers interact with muscles. Describe the electrical charge difference across the plasma membrane and how it influences muscle contraction. Explain the mechanisms of muscle contraction and relaxation. Analyze the relationship between muscle length and contraction force. Differentiate between contraction types and muscle twitch stages. Explain how skeletal muscle meets its energy demands. Compare the structural and physiological differences between skeletal, cardiac, and smooth muscle.

Module	Topic	Assessments & Activities	Module Objective
5	The Muscular System	Assignment: Smartbook Chapters 10 Virtual Skeletal Lab Lab Discussion: Skeletal Muscle Injuries Connect Lecture Quiz: Chapters 10	Describe the functions of muscular tissue and the connective tissue components of a muscle. Explain muscle shape based on fascicle arrangement and describe how muscles function in groups. Identify the nerve and blood supply to skeletal muscles. Name and locate muscles of the head, neck, trunk, shoulder, upper limb, hip, and lower limb. Describe muscle attachments, actions, and innervations for various muscle groups.
6	Nervous Tissue	Assignment: Smartbook Chapters 12 Neuron Physiology Lab Lab Discussion: Nervous System Connect Lecture Quiz: Chapters 12	Describe the overall function of the nervous system and its major anatomical and functional subdivisions. Identify and classify neurons, including their parts, structural classifications, and functional roles. Define the six types of neuroglial cells and explain their functions, including the role of the myelin sheath and axon regeneration. Explain the electrical charge difference across a neuron's membrane and how neurons generate and conduct nerve impulses. Describe how messages are transmitted between neurons via synapses and neurotransmitters. Explain neural integration, including how neurons process information and generate responses.
7	Central and Peripheral Nervous System	Assignment: Smartbook Chapters 13 Assignment: Smartbook Chapters 14 Reflexes Lab	Describe the anatomy and microscopic structure of the spinal cord and its nerve impulse pathways. Explain the anatomy of nerves and ganglia and their attachment to the spinal cord. Identify the five plexuses of spinal nerves and their major nerves.

Module	Topic	Assessments & Activities	Module Objective
		Lab Brain, Spinal Cord, Cranial Nerves, and Spinal Nerves Lab Discussion: Spinal and Cranial Nerves Connect Lecture Quiz: Chapters 13 and 14	Describe the general components of a reflex arc and the function of somatic reflexes. Explain the major subdivisions and landmarks of the brain, including the distribution of gray and white matter. Identify the meninges, ventricles, and cerebrospinal fluid functions in the brain. Describe the components and functions of the hindbrain, midbrain, diencephalon, and cerebrum. Explain brain waves, sleep stages, and hemispheric differences. Describe the 12 cranial nerves and their functions.
8	Autonomic Nervous System and Sense Organs	Assignment: Smartbook Chapters 15 Assignment: Smartbook Chapters 16 Eye Dissection Lab Autonomic Nervous System and Sense Organs Lab Lab Discussion: Autonomic Nervous System and Sense Organs Final Exam Chapters 1-16	Differentiate between the autonomic and somatic nervous systems in form and function. Describe the anatomical components and nerve pathways of the sympathetic and parasympathetic divisions. Explain the significance of the enteric plexus in the digestive tract. Identify neurotransmitters and receptors in the autonomic nervous system and how they influence autonomic effects. Recognize the brain regions that influence the autonomic nervous system. Classify receptors based on function and location. Explain how taste and smell receptors are stimulated and describe their projection pathways. Describe the gross and microscopic anatomy of the ear and how the vestibular system interprets body position and movement. Discuss the structure of the eye, the retina, and its receptor cells and trace visual projection pathways in the brain.

Course Requirements

This is an online course, and there will **not be any face-to-face class sessions**. All communications, submissions of assignments, course interactions, and posting of grades will utilize Canvas LMS (https://doane.instructure.com). You must have a **reliable internet connection** throughout the course.

Attendance/Participation

Attendance in an online course means logging into Canvas regularly and participating in all the activities posted in the course. In addition, check your Doane University email account regularly, as I may send important information about the course.

Class Preparation

Preparation for class means reading the assigned readings and reviewing all information required for that module. You should plan to work on this course every day. Regular engagement is expected for online courses.

Netiquette Guidelines

At heart, netiquette (etiquette for the Internet) is simple, including good manners and business courtesy. Some of it may seem basic, but some infringements can result in major problems for others or create an unintended insult to another user. The guidelines are adapted from Virginia Shea's *The Core Rules of Netiquette* (1994). Please review the Netiquette Guidelines in the Student Resource Center for more information.

Computer Requirements

To successfully use Canvas, please refer to Doane University's minimum computer requirements. This also includes:

- Reliable computer and internet connection
- A web browser (Chrome or Mozilla Firefox)
- Adobe Acrobat Reader (free)
- Word processing software—Microsoft Word or Google Docs
- Webcam and mic*

*A webcam is optional for privacy purposes during video conferencing and recording.

Campus Network or Canvas Outage

When access to Canvas is not available for an extended period of time (greater than one entire evening - 6 pm until 11 pm), you can reasonably expect that the due date for assignments will be changed to the next day.

Drop and Add Dates

If you feel it necessary to withdraw from the course, please contact your advisor for full details on the types of withdrawals available and their procedures.

Federal requirements state that students must complete 75% of the coursework to be eligible to receive an incomplete for the course. Students who fall more than two weeks behind cannot meet this requirement.

Access to Course

You can access the course in Canvas starting from the first day of the course and for 15 days after the term ends. If you need access beyond those 15 days, you must submit a request with a valid reason, which the administration must approve.

Academic Integrity

Fundamental to our mission, core values, and reputation, Doane University adheres to high academic standards. Students of Doane University are expected to conduct themselves in a manner reflecting personal and professional integrity. Disciplinary actions may be taken against students whose academic behavior is not congruent with the expectations of the University. Students are responsible for adhering to the standards detailed in this policy. Not being familiar with these standards does not mean that the students will not be accountable for adherence to them. Additional details on the Academic Integrity policy for violating academic integrity are published in the undergraduate and graduate catalogs. Please review Doane University's Academic Integrity Policy.

Course Grading

Submitting Assignments

Unless otherwise communicated to me, all assignments must be submitted via Canvas. Each assignment will have a designated place to submit your work. All materials, assignments, and deadlines are subject to change without prior notice. You are responsible for staying in touch with me and reviewing the course site, including Announcements, regularly to learn about changes to assignments or due dates.

Grading Scale

Assignment of letter grades is based on a percentage of points earned. The letter grade will correspond with the following percentages achieved. All course requirements must be completed before a grade is assigned.

- A+: 97-100
- A: 93-96
- A-: 90-92
- B+: 87-89

- B: 83-86
- B-: 80-82
- C+: 77-79
- C: 73-76
- C-: 70-72
- D+: 67-69
- D: 63-66
- D-: 60-62
- F : <60

Grading Scheme

The following outlines the weighted breakdown for how grades will be calculated:

- Lecture Assignments: 15%
- Digital and APR Lab Activities: 20%
- Lab Discussion: 10%
- Lecture Quizzes: 15%
- Lecture Exams (Proctored): 40%
- Total – 100%

Tutoring Services

Students can access a **free online tutoring service** within their Canvas account. You can connect with a live free tutor or submit a paper to get feedback before submitting.

Proctored Assessments

This course **may contain proctored quizzes and exams, which are not optional**. For these proctored events, Doane uses YuJa Verity, a secure, online proctoring service that allows you to complete your exam from any chosen location at any time. Proctoring assures your instructor that any suspicious activity by test takers will be monitored and reported. The cost of the proctoring is included in the tuition and fees for this course.

Late or Missed Assignments

All assignments must be completed and turned in to finish the course. Unless you discuss a late assignment with your instructor prior to the assignment due date, your assignment will not receive credit if late. You have a week to complete each assignment.

Assignment & Assessment Feedback

Please allow 1-3 days for feedback on assignments. Be sure to review all of my feedback, as this will help you reflect on what you have learned while receiving suggestions for improvement.

Grade Appeals

Students who believe that their grade was miscalculated due to a mathematical error should contact the instructor within **ten (10) days of the grade posting**. Students are encouraged to

talk with their advisor to offer an assessment of the concern and clarify the steps of the appeal process. More information is published in the Undergraduate and Graduate Catalogs.

Support and Services

Technical Support

If you need technical assistance, please access the Self-Service Portal. The help desk can be reached at 402-826-8411 or by email at helpdesk@doane.edu.

Accessibility Statement

In compliance with the Rehabilitation Act of 1973, Section 504, and the Americans with Disabilities Act of 1990, professional disability specialists and support staff at Doane University facilitate a comprehensive range of academic support services and accommodations for qualified students with disabilities. Doane University staff coordinate student transitions from high schools and community colleges, conduct in-service training for faculty and staff, enable the resolution of accessibility issues, conduct community outreach, and facilitate collaboration among Doane University staff on disability policies, procedures, and accommodations.

Accommodations & Disability Services

Doane University's Disability Services Office will guide accommodations and universal access. To request accommodation, please complete the Self-Identification Form and visit the website for additional information as soon as possible.

Academic Support

Doane University offers all of its students access to Academic Support services.

Title IX Requirements: Mandatory Reporting

At Doane, all university employees, including faculty, are considered Mandatory Reporters. As a Mandatory Reporter, I am required to report incidents of sexual misconduct and relationship violence to the Title IX Coordinator and, thus, cannot guarantee confidentiality. This means that if you tell me about an incident of sexual harassment, sexual assault, domestic violence, dating violence, stalking, and/or other forms of prohibited discrimination, I have to share the information with the University's Title IX Coordinator. My report does not mean that you are officially reporting the incident. This process is in place to ensure you have access to and are able to receive the support and resources you need. Please visit the Campus Advocacy, Prevention, and Education (CAPE) Project for additional information, including confidential resources.

Anti-Harassment Policy

Doane University, referred to as the "University," is committed to providing all University community members with a safe and non-discriminatory learning, living, and working environment. This policy addresses the University's responsibilities under Title IX, the Violence Against Women Reauthorization Act of 2013, and the Jeanne Clery Disclosure of Campus Security Policy and Campus Crime Statistics Act ("Clery Act"). More information is published in the Student Handbooks.

Instructional Technology Accessibility and Privacy Policies

Technology accessibility and privacy policies are available on the Student Resource Center within the Canvas LMS.

Regular and Substantive Interaction

The U.S. Department of Education mandates that online courses include “regular and substantive interaction” (RSI) between students and instructors to be considered distance education. This course adheres to the RSI expected of all distance education courses. The course adheres to the regular component through

● a clear schedule of due dates for lessons, readings, and assessments, and

● an instructor of record who monitors student progress in the course and alerts the students who are not engaging adequately in the course.

The substantive interaction is achieved through

● assessment of student’s work with feedback on a scheduled basis

● an active discussion board about course content monitored by the instructor

● providing information about the course content on a regular basis or in response to Questions.

Syllabus Addendum & Disclaimer

I (the instructor) view the course syllabus as an educational contract between myself and each student. Every effort will be made to avoid changing the course schedule, but unforeseen events may make syllabus changes necessary. I reserve the right to make changes to the syllabus as deemed necessary. Students will be notified promptly of any syllabus changes via email or

course site announcements. Please check your Doane University email and the course site announcements often.

Syllabus Changes

The instructor and Doane University reserve the right to change this course syllabus. All students will be notified of any changes.

Syllabus Addendum

Each student is responsible for knowing the policies, resources, and expectations specified in the Doane Syllabus Addendum.