Course Information

BIOL215
Anatomy and Physiology 1
4 Credit Hours

Instructor Information

Contact Information

Office:
Email Address:
Phone:

Communicating With the Instructor

This course uses a "three before me" policy in regards to student to faculty communications. When questions arise during the course of this class, please remember to check these three sources for an answer before asking me to reply to your individual questions:

1. Course syllabus
2. Announcements in Blackboard
3. The "Water Cooler" discussion board

This policy will help you in potentially identifying answers before I can get back to you and it also helps your instructor from answering similar questions or concerns multiple times.

If you cannot find an answer to your question, please first post your question to the "Water Cooler" discussion board. Here your question can be answered to the benefit of all students by either your fellow students who know the answer to your question or the instructor. You are encouraged to answer questions from other students in the discussion forum when you know the answer to a question in order to help provide timely assistance.

If you have questions of a personal nature such as relating a personal emergency, questioning a grade on an assignment, or something else that needs to be communicated privately, you are welcome to contact me via email or phone. My preference is that you will try to email me first. I will usually respond to email and phone messages from 8am to 5pm on weekdays, please allow 24 hours for me to respond.

If you have a question about the technology being used in the course, please contact the Doane University Help Desk for assistance (contact information is listed below).

Course Catalog Description

In this course we will study 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 course students will have a solid foundation in human structure with an emphasis on understanding the accepted language of anatomy and be prepared for basic clinical course-work.

Course Overview

One of the main goals of this course is to give you the ability to speak the language of anatomy, therefore we will emphasize communication using proper anatomical terminology in many of your assignments. The assignments in this course are designed, in part, to facilitate your ability to "speak anatomy". We will explore the location of anatomical structures and their functions, and how each piece of the human body contributes to the maintenance of the entire organism.

Course Prerequisites

One entry level biology class (for example, 101, 110, or 111)

Course Textbook and Materials

Required

Hole's Human Anatomy and Physiology by Shier et al, 14th edition CONNECT Access Code with eBook (ISBN – 9781259295676).

Optional

Biodigital online learning tool – this is a free asset that you might find useful for additional practice and exposure to course material

Learning Objectives

Course Objectives

At the completion of this course students will be able to:

1. Communicate concepts using proper anatomic terminology in written/oral presentations.
2. Compare and contrast tissues and organs in respect to structure and how that impacts function and interaction with other tissues/organs.
3. Identify and describe structures and their locations, including relation to other structures.
4. Describe how the function of each individual organ system contributes to the maintenance of homeostasis.

Unit Objectives

Unit I: Body plan, anatomical terminology, tissue overview and the Integumentary system

a. Describe a person in anatomical position
b. Describe the appearance of a body presented along various planes
c. List and describe the location of major anatomical regions of the body. Describe in order from simplest to most complex, the major levels of organization in the human organism.
d. Describe the major functions of each organ system.

e. Contrast the general features and functions of the four major tissue types.
f. Identify tissue types and structures of the integument.
g. Describe the general functions of the hypodermis, the dermis and the epidermis.
h. Describe the location and arrangement of tissues and cells of the integument using appropriate directional terminology.
i. Explain how function in the integument is maintained in the presence of infection or injury.

Unit II: The skeletal system

a. Define the two major divisions of the skeletal system.
b. Identify individual bones and their location within the body using appropriate directional terms.
c. Show and describe basic movements that occur within each anatomical plane.
d. Describe the basic structure of a synovial joint.
e. Predict movements that would be allowed at a given synovial joint and describe the bones and anatomical features involved.
f. Explain how the skeletal system relates to other body systems to maintain homeostasis.
g. Predict factors or situations affecting the skeletal system and articulations that could disrupt normal function.

Unit III: The muscular system

a. Compare and contrast structure, location and function of skeletal, cardiac and smooth muscle.
b. Describe the organization of muscle tissue from cell to whole muscle to groups of muscles.
c. Identify the origin, insertion and action of the major skeletal muscles and demonstrate these muscle actions.
d. Explain how the muscular system relates to other body systems to maintain homeostasis.
e. Predict factors or situations affecting the muscular system that could disrupt homeostasis.

Unit IV: The nervous system

a. Differentiate between the somatic and autonomic divisions of the nervous system.
b. List the parts of the nervous system that constitute the central nervous system and the peripheral nervous system.
c. Identify the five loves of the cerebral cortex and describe how the motor and sensory functions of the cerebrum are distributed among the lobes.
d. Identify the meninges and describe their functional relationship to the brain and cranial bones.
e. Describe the specific functions of select cranial nerves.
f. Describe the gross anatomy of the spinal cord and spinal nerves and specify their location relative to the anatomy of the skeletal system.
g. Discuss the two divisions of the autonomic nervous system and the general physiological roles of each.
h. Explain how the nervous system interacts with other body systems.
i. Predict deficits when presented with factors or situations affecting the nervous system.

Unit V: Special senses and the endocrine system

a. Identify accessory eye structures, optical components and the neural components of the eye.
b. Describe the path of nerve impulses from the olfactory receptors to various parts of the brain.
c. Identify the location and structure of taste buds.
d. Identify the hearing structures of the outer, middle and inner ear.
e. Describe how the various structures of the outer, middle and inner ear function in hearing.
f. Analyze factors or situations affecting the special sense organs and predict functional impact.
g. Identify the location and function of the glands of the endocrine system.
h. Compare and contrast how the nervous and endocrine systems control body function, with emphasis on the mechanisms by which the controlling signals are transferred through the body and the time course of the response(s) and action(s).

Unit VI: Cardiovascular and lymphatic systems

a. Describe the position of the heart in the thoracic cavity.
b. On the external heart identify the location of the four chambers as well as the coronary sulcus, anterior interventricular sulcus and posterior interventricular sulcus.
c. Identify and describe the function of the primary internal structures of the heart, including chambers, septa, valves, papillary muscles, chordae tendinae and venous and arterial openings.
d. Identify the right and left coronary arteries and their branches, the cardiac veins and the coronary sinus.
e. Identify the major blood vessels entering and leaving the heart and classify them as either an artery or a vein and as containing either oxygen rich or oxygen poor blood.
f. Identify the major arteries and veins.
g. Explain how the cardiovascular system relates to other body systems to maintain homeostasis.
h. Predict factors or situations affecting the cardiovascular system that could disrupt homeostasis.
i. Describe the location and function of each of the organs of the lymphatic system.
j. Analyze factors or situations affecting the lymphatic organs and predict functional impact.

Unit VII: Respiratory and digestive systems

a. Describe and distinguish between the upper and lower respiratory tracts.
b. Identify, describe and state function for each of the following structures of the respiratory system: nasal cavities, sinuses, pharynx, larynx, trachea, bronchi, lungs, pleural membranes, pulmonary vessels and diaphragm.
c. Explain how the respiratory system relates to other body systems to maintain homeostasis.
d. Predict factors or situation affecting the respiratory system that could disrupt homeostasis.

e. Describe the location, features and function of each portion of the alimentary canal.
f. Identify the naso, oro and laryngopharynx and classify these passages with respect to passage of food and/or air through them.
g. Describe the location, features and function of each of the accessory organs of the digestive system.
h. Identify the mesentery proper and mesocolon and explain their function.
i. Explain how the digestive system relates to other body systems to maintain homeostasis.
j. Predict factors of situations affecting the digestive system that could disrupt homeostasis.

Unit VIII: Urinary and reproductive systems

a. Describe the location, feature and function of the organs of the urinary system.
b. Identify the major blood vessels associated with the kidney.
c. Identify the major internal divisions and structures of the renal tissue.
d. Analyze factors or situation affecting the urinary system and predict functional impact.
e. Identify and describe the anatomy of the male and female reproductive system including the goands, ducts, accessory glands, associated support structures and external genitalia.
f. Describe the pathway of the ovum from the ovary to the uterus.
g. Describe the pathway of sperm from the seminiferous tubulues to the external urethral orifice of the penis.
h. Analyze factors or situations affecting the reproductive system and predict functional impact.

Course Requirements

Attendance Policy

You should plan to work on this course everyday. This means that you absolutely must have a reliable and consistent internet connection throughout the duration of the course. This also strongly suggests that you should not plan to take any vacations during this course. This is a condensed, fast-pace, course and it would be extremely difficult to catch up after a prolonged absence.

Online Course

This is an online course and therefore there will not be any face-to-face class sessions. All assignments and course interactions will utilize internet technologies.

Computer Requirements

This course requires that you have access to a computer that can access the internet. You will also need a camera either in your computer or phone that you can use to record short presentations. You will need to have access to, and be able to use, the following software packages:

- A web browser (Chrome or Mozilla Firefox)
- Adobe Acrobat Reader (free)
- Adobe Flash Player (free)
- Microsoft Word
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You are responsible for having a reliable computer and internet connection throughout the course.

Email and Internet
You must have an active Doane University e-mail account and access to the Internet. *All instructor correspondence will be sent to your Doane* University *e-mail account.* Please plan on checking your Doane Gmail account regularly for course related messages.

This course uses Blackboard for the facilitation of communications between faculty and students, submission of assignments, and posting of grades. The Blackboard Course Site can be accessed at http://bb2.doane.edu

Campus Network or Blackboard Outage
When access to Blackboard is not available for an extended period of time (greater than one entire evening - 6pm till 11pm) you can reasonably expect that the due date for assignments will be changed to the next day (assignment still due by midnight).

Attendance/Participation
Preparation for class means reading the assigned readings & reviewing all information required for that week. *Attendance* in an online course means logging into the Blackboard and on a regular basis and *participating* in the all of activities that are posted in the course.

Studying and Preparation Time
The course requires you to spend time preparing and completing assignments. Expect to spend approximately 18-24 hours a week preparing for and actively participating in this 8-week course.

Late or Missed Assignments
ALL assignments must be finished and turned in to complete the course. Unless the instructor is notified BEFORE the assignment is due and provides an opportunity for the student to submit his/her assignment late, points will be taken off for a late assignment.

Students are required to complete 75% of the course material in order to receive credit for the course. If students who fall more than two weeks behind, they cannot meet this requirement and will receive a withdrawal (W) for the course if this occurs within the first three weeks of the course. If this happens after the third week students will receive an F for the course.

Rewrites
Students may submit their assignments ahead of their due date for review by the instructor as long as the assignment is provided a minimum of three days prior to the course due date. The instructor will provide feedback on the assignment for consideration by the

student.

Submitting Assignments
All assignments, unless otherwise announced by the instructor, MUST be submitted via Blackboard. Each assignment will have a designated place to submit the assignment. Late submissions will result in a minimum 20% deduction for each day late. Feedback on assignments will be provided by the instructor within 3-5 days post submission.

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

Subject to change notice
All material, assignments, and deadlines are subject to change with prior notice. It is your responsibility to stay in touch with your instructor, review the course site regularly, or communicate with other students, to adjust as needed if assignments or due dates change.

Academic Integrity
Doane University expects and requires all its students to act with honesty and integrity, and respect the rights of others in carrying out all academic assignments. Academic dishonesty, the act of knowingly and willingly attempting or assisting others to gain academic success by dishonest means, is manifested in various measures. Gehring, et al, (1986) suggests that four categories of academic dishonesty exist[1]:

a. Cheating
b. Fabrication
c. Facilitating academic dishonesty
d. Plagiarism

For more information on academic integrity, please visit the website:
http://catalog.doane.edu/content.php?catoid=4&navoid=191

Course Grading

Grade composition
Your grade will be calculated based on the following weighted categories:
Module quizzes: 30%
Homework (labeling exercises, reading comprehension exercises and APR quizzes): 20%
Case study: 15%
Discussion board: 15%
Journal entries: 5%
Structure and terminology list: 5%
Short answer final: 10%

Grades and Grading Scale
Assignment of letter grades is based on a percentage of points earned. The letter grade will correspond with the following percentages achieved. This course moves very quickly and it is imperative that you keep up with the scheduled activities. **Any late assignments will**

be reduced a MINIMUM of 20% each day past the due date. All of our due date times are based on Central Standard Time, please plan accordingly. All course requirements must be completed before a grade is assigned.

A+	100 – 97
A	96.9 – 94
A-	93.9 - 90
B+	89.9 – 87
B	86.9 - 84
B-	83.9 – 80
C+	79.9 – 77
C	76.9 – 74
C-	73.9 – 70
D+	69.9 - 67
D	66.9 – 64
D-	63.9 - 60
F	59.9 and below

See the requirements for the specific Assignments on Blackboard.

How to Succeed in this Course

- Check your Doane email regularly
- Log in to the course web site daily
- Communicate with your instructor
- Create a study schedule so that you don't fall behind on assignments

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 transition from high schools and community colleges, in-service training for faculty and staff, resolution of accessibility issues, community outreach, and collaboration between all Doane University regarding disability policies, procedures, and accommodations.

Student Conduct Statement

Students are required to adhere to the behavior standards listed in **Doane University Policy Manual**

Appropriate classroom behavior is defined by the instructor. This includes the number and length of individual messages online. Course discussion messages should remain focused on the assigned discussion topics. Students must maintain a cordial atmosphere and use tact in expressing differences of opinion. Inappropriate discussion board messages may be deleted if an instructor feels it is necessary. Students will be notified privately that their posting was inappropriate.

Student access to the course Send Email feature may be limited or removed if an instructor feels that students are sending inappropriate electronic messages to other students in the course.

Technical Support Contact Information

For technical assistance 24 hours a day, 7 days a week, please contact the Doane University Technology Office Help Desk:

Phone: 402-826-8411
Email: helpdesk@doane.edu
Web: http://www.doane.edu

Syllabus Disclaimer

The instructor views the course syllabus as an educational contract between the instructor and students. Every effort will be made to avoid changing the course schedule but the possibility exists that unforeseen events will make syllabus changes necessary. The instructor reserves the right to make changes to the syllabus as deemed necessary. Students will be notified in a timely manner of any syllabus changes via email or in the course site Announcements. Please remember to check your Doane University email and the course site Announcements often.