

November, 2023

Prerequisites: General biology and chemistry**Faculty:** Brittany Martinez, Ph.D., Department Co-Chair
Rebekah Stepp, MS, CRNP, Department Co-Chair
Tammie Kephart, MS, RDN, LDN, Department Co-Chair

Janine Bartholomew, Ph.D.	Alycia Dalbey, MPAS, PA-C
Christine Bowman, DMD	Jessica R. Kassner, MSN, RN
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Allison Keck, DPT	Stefanie DiSilvio, BSN, MSN, DNP
Melinda Kozminski, PharmD, BCACP	Eric Oberg, MOT, OTR/L
Renee Correll, DPT	Kelly Straley, MS, CRNP
Jerrold A. Poe, Ph.D.	Brandon Zangus, MOT, OTR/L
Crista Bush, MOT, OTR/L	Lindsay Landis, MSN, NP-C
Elizabeth Marrie, MS, RDN, LDN	Linda Lombard-Ash, MSN, FNP-BC
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Nancy Milligan, M.S.	Loretta Vece, DNP, MSN, RN
Jodi Weigand, MS PT	

Contact Information: Faculty may be contacted through the Canvas messaging system**Additional Information:** www.portagelearning.edu^{1*}**Course Meeting Times:** BIOD 151 is offered continuously

Course Description: A systematic integration of the structure and function of the cells, tissues, organs and systems of the human body. The systems discussed are the respiratory system, digestive system, skeletal system, axial and appendicular musculature, endocrine system, and the integumentary system. This course also includes an overview of basic anatomical terminology, cell composition, and a discussion of the cellular membrane. Modules include discussions of anatomy and physiology of the individual systems as well as common pathology and treatments associated with each. The laboratory component of this course is delivered

^{1*} Portage Learning college courses are offered by Geneva College, which is accredited by the Middle States Commission on Higher Education. Portage Learning is included in the College's Department of Professional and Online Graduate Studies; courses are delivered through the Portagelearning.edu platform.

using virtual labs and interactive simulations with detailed instruction and demonstrations from an experienced instructor.

Course Outcomes: As a result of this course experience a student should be able to:

- Identify and explain the function of all cell organelles
- Explain all types of cellular transport including diffusion, facilitated diffusion, active transport, exocytosis, endocytosis, phagocytosis, and pinocytosis
- Describe basic microscopy
- Define and correctly use basic anatomical terminology
- Identify the anatomy and physiology of the respiratory system
- Explain the anatomy and physiology of the digestive system
- Describe the anatomy and physiology of the skeletal and muscular systems
- Explain the anatomy and physiology of the endocrine system
- Identify the anatomy and physiology of the integumentary system

**Please see the [Module & Lab Topics](#) section below for expanded course outcomes.*

Lab Outcomes: As a result of this laboratory experience, students should be able to:

- Practice safe procedures within a laboratory
- Identify basic components of a light microscope
- Define and demonstrate anatomical position
- Differentiate between types of epithelial tissue and describe their function
- Differentiate between types of connective tissue and describe their function
- Identify anatomical structures of the respiratory system
- Explain pulmonary function testing and basic spirometry
- Describe anatomical structures of the digestive system and their function
- Identify all major bones within the axial and appendicular skeleton and understand the function of bone
- Identify all major muscles/muscle groups within the axial and appendicular divisions and understand their function as well as nervous innervation

Each of these BIOD 151 student learning outcomes is measured:

- Directly by:
- (1) Module application problems (with instructor feedback)
 - (2) Module exams
 - (3) Lab exams
 - (4) Cumulative final exam

Indirectly by an end of course student-completed evaluation survey

Course Delivery: This course is asynchronously delivered online and is composed of 45 - 55 hours of reviewed module assignments with instructor feedback, 7 contact hours of secure online module exams, 15 – 20 hours of observation of demonstration labs and 8 hours of lab exams.

Course Progression: It is the policy for all Portage Learning courses that only one (module lecture/final) exam is to be completed within a 48-hour period. Research on the best practices in learning indicates that time is needed to process material for optimal learning. This means that once an exam has been completed, the next exam may not be opened or taken until 48 hours after the submission of the previous module exam. This allows for instructor feedback/class expectations as the student moves through the material. Instructors, like the College, are not available during the weekend; grading, therefore, is M-F and may take up to 72 hours during these days. Also, it is the policy of Portage Learning to support a minimum of 28 days to complete a course; this is not a negotiable time period. Please plan your time accordingly.

Note: Professors reserve the right to reset any exam taken in violation of these guidelines.

Required readings, lectures and assignments: Portage courses do not use paper textbooks. Students are required to read the online lesson modules written by the course author which contain the standard information covered in a typical course. Please note the exam questions are based upon the readings. Video lectures which support each lesson module subject should be viewed as many times as is necessary to fully understand the material.

We do not support the use of outside resources to study, except for the ones listed in the syllabus under “Suggested External References”. If you have questions about the material or would like further explanation of the concepts, please contact your instructor.

Module Problem Sets: The practice problems within the modules are a part of your final grade, and the module work will be reviewed for completeness (not correctness) by the instructor. **Be sure to answer all of the problems, being careful to answer the questions in your own words at all times since this is an important part of adequate preparation for the exams.** After you answer the practice problems, compare your answers to the solutions provided at the end of the module. If your answers do not match those at the end, attempt to figure out why there is a difference. If you have any questions, please contact the instructor via the Canvas messaging system (see Inbox icon).

NOTE: Module problem sets are not an option or a choice; *they are required*. This means that you must complete all the review questions within the modules. Not only are problem sets class participation, they are the best way to prepare for the exams.

Academic Integrity is a serious matter. In the educational context, any dishonesty violates freedom and trust, which are essential for effective learning. Dishonesty limits a student's ability to reach his or her potential. Portage places a high value on honest independent work. We depend on the student's desire to succeed in the program he or she is entering. It is in a student's own best interests not to cheat on an exam or put their work into question, as this would compromise the student's preparation for future work. It is the student's responsibility to review the **Student Handbook** and all policies related to academic integrity. If clarification is necessary, the student should reach out to their instructor for further explanation **before** initiating module one.

Required Computer Accessories: It is recommended that students use a desktop or laptop computer, PC or Mac, when taking the course. Some tablet computers are potentially compatible with the course, but not all features are available for all tablet computers. The latest full version of Google Chrome, Firefox, Edge, or Safari browser is required for the optimal operation of the Canvas Learning Management System. In addition, this course will use the Respondus Lockdown Browser for exams; a strong internet connection is needed. You are also **required to use LockDown Browser with a webcam**, which will record you during an online, nonproctored exam. (The webcam feature is sometimes referred to as "Respondus Monitor.") **Your computer must have a functioning webcam and microphone. Additionally, students will need a photo ID that includes your picture and full name is required. Please note, Chromebooks and tablets (other than iPad) are not compatible on exams using the Lockdown Browser.** Instructions on downloading and installing this browser will be given at the start of the course. We highly recommend using a high-speed Internet connection to view the video lectures and labs. You may experience significant difficulties viewing the videos using a dial-up connection.

For more information on basic system and browser requirements, please reference the following:

Canvas browser and system

requirements: <https://community.canvaslms.com/t5/Canvas-Basics-Guide/What-are-the-browser-and-computer-requirements-for-Canvas/ta-p/66>

Respondus Requirements: <https://web.respondus.com/he/lockdownbrowser/resources/>

Respondus Monitor Requirements: <https://web.respondus.com/he/monitor/resources/>

Module & Lab Topics

Module 1: In this module students will be introduced to the general function of each body system. In addition, basic anatomical terminology is covered including directional terminology and anatomical planes. Content also includes coverage of cell metabolism. This module will also introduce the structure of eukaryotic cells including an in-depth description of the cell membrane as well as cell organelles and their function.

- Module 2: In this module, students will receive an overview of the anatomy of the respiratory system including histology of the respiratory tract as well as specialized cells. Students will cover detailed physiology of all aspects of respiration including breathing, internal/external respiration, and aerobic cellular respiration. Practical application is provided through the overview of common pathology of the respiratory system.
- Module 3: In this module, students will receive an overview of the anatomy of the entire GI tract. Content covers the physiology of mechanical and chemical digestion throughout the GI tract as well as the role digestion plays in the body's ability to produce energy.
- Module 4: In this module, students will be introduced to the skeletal system. Content includes a comprehensive anatomical overview of types of bones and joints. Students will be introduced to all major bones, ligaments, and joints throughout the body. This module also includes a physiological overview of bone development and common pathology of the skeletal system.
- Module 5: In this module, students will be introduced to the muscular system. Content includes a comprehensive anatomical overview of major muscle groups throughout the body, including origin, action, insertion, and nervous innervation. This module also includes a physiological overview of muscle contraction.
- Module 6: In this module, students will be introduced to the endocrine system. Content includes an anatomical summary of all endocrine glands and the hormones that they produce. Students will learn the physiological effects of hormones on the organs that they target.
- Module 7: In this module, students will be introduced to the integumentary system. Content includes an anatomical summary of the skin, hair, and nails. Students will learn the physiological effects of tissue repair.
- Lab 1: In this lab students will be introduced to anatomical terminology. They will also learn lab safety and basic identification of the parts of a light microscope.
- Lab 2: In this lab students will cover the general anatomy of the respiratory system. They will learn the difference between restrictive and obstructive lung disorders and examples of each. Common pulmonary function tests will be covered in-depth as well as a demonstration in spirometry.
- Lab 3: In this lab students will cover the anatomy and physiology of the digestive system. This includes all major portions of the GI tract as well as accessory organs. Content also includes practical application through discussion of common pathology of the GI tract.

- Lab 4: In this lab students will cover a comprehensive anatomical overview of the axial and appendicular skeleton. Major bones in each division are presented.
- Lab 5: In this lab students will cover a comprehensive anatomical overview of the axial musculature. Major muscle groups are presented including origin, insertion, action, and nervous innervation for each.
- Lab 6: In this lab students will cover a comprehensive anatomical overview of the appendicular musculature. Major muscle groups are presented including origin, insertion, action, and nervous innervation for each.
- Lab 7: In this lab students will learn the histology of epithelial tissue. Content includes in-depth discussion of the composition and structure of all types of epithelial tissue as well as practical application of where each can be found within the body.
- Lab 8: In this lab students will learn the histology of connective tissue. Content includes in-depth discussion of the composition and structure of all types of connective tissue as well as practical application of where each can be found within the body.

Required labs and assignments:

For the laboratory portion of the course, students will observe an experienced lab instructor. It is the responsibility of the student to view each lab video in its entirety and only mark the lab as “done” when it is completed. **Please note that the use of outside material (i.e. the internet, textbooks, articles, etc.) is not permitted while taking the lab exams.** A recommended lab schedule can be found on the home page of each lab; the student should follow this schedule to meet course objectives.

Suggested Timed Course Schedule (to complete the course within a typical college semester)

All Portage courses are offered asynchronously with no required schedule to better fit the normal routine of adult students, but the schedule below is suggested to allow a student to complete the course within a typical college semester. Students may feel free to complete the course on a schedule determined by them within the parameters outlined under “Course Progression.”

<u>Time Period</u>	<u>Assignments</u>	<u>Subject Matter</u>
Days 1-14 (2 weeks)	Module 1, Exam 1 Lab 1 and Lab Exam 1	Overview of major body systems, anatomical terminology and microscopy

Days 15-28 (2 weeks)	Module 2, Exam 2 Lab 2 and Lab Exam 2	Anatomical and physiological overview of the respiratory system
Days 29-43 (2 weeks)	Module 3, Exam 3 Lab 3 and Lab Exam 3	Anatomical and physiological overview of the digestive system
Days 44-58 (2 weeks)	Module 4, Exam 4 Lab 4 and Lab Exam 4	Anatomical and physiological overview of the skeletal system
Days 59-73 (2 weeks)	Module 5, Exam 5 Labs 5 & 6 and Lab Exams 5 & 6	Anatomical and physiological overview of the muscular system
Days 74-88 (2 weeks)	Module 6, Exam 6	Anatomical and physiological overview of the endocrine system
Days 89-103 (2 weeks)	Module 7, Exam 7 Labs 7 & 8 and Lab Exams 7 & 8	Anatomical and physiological overview of the integumentary system
Days 103-108	Final Exam	Based upon module material

Grading Rubric:

Check for Understanding =	1 pt.
7 Module Problem Sets = 5 pts. each x 7 =	35 pts.
7 Module Exams = 100 pts. each x 7 =	700 pts.
8 Lab Exams = 40 pts. Each x 8 =	320 pts.
<u>Final Exam = 140 pts.</u>	<u>140 pts.</u>
Total	1,196 pts.

The current course grade and progress is continuously displayed on the student desktop.

Grading Scale:

96.5% - 100% = A+
92.5% - 96.4% = A
89.5% - 92.4% = A-
86.5% - 89.4% = B+
82.5% - 86.4% = B
79.5% - 82.4% = B-
76.5% - 79.4% = C+
72.5% - 76.4% = C
69.5% - 72.4% = C-
66.5% - 69.4% = D+

62.5% - 66.4% = D
59.5% - 62.4% = D-
0% - 59.4% = F

External References: If the student desires to consult a reference for additional information, the following textbooks are recommended as providing complete treatment of the course subject matter.

- Frank H. Netter, MD, **Atlas of Human Anatomy**, Saunders
- Richard Drake PhD FAAA, **Gray's Anatomy for Students**, Churchill Livingstone
- John E. Hall, **Guyton and Hall Textbook of Medical Physiology**, Saunders

NOTE: We do not support the use of outside resources to study, except the ones listed above.

Learning Support Services:

Each student should be sure to take advantage of and use the following learning support services provided to increase student academic performance:

Video lectures: Supports diverse learning styles in conjunction with the text material of each module

Messaging system: Provides individual instructor/student interaction

Tech support: Available by submitting a help ticket through the student dashboard

Accommodations for Students with Learning Disabilities:

Students with documented learning disabilities may receive accommodations in the form of an extended time limit on exams, when applicable. To receive the accommodations, the student should furnish documentation of the learning disability at the time of registration, if possible. Scan and e-mail the documentation to studentservices@portagelearning.edu. Upon receipt of the learning disability documentation, Portage staff will provide the student with instructions for a variation of the course containing exams with extended time limits. This accommodation does not alter the content of any assignments/exams, change what the exam is intended to measure or otherwise impact the outcomes of objectives of the course.

One-on-one Instruction:

Each student is assigned to his/her own instructor. Personalized questions are addressed via the student dashboard messaging system.

Online learning presents an opportunity for flexibility; however, a discipline to maintain connection to the

course is required; therefore, communication is essential to successful learning. **Check your messages daily.** Instructors are checking messages daily Monday-Friday to be sure to answer any questions that may arise from you. It is important that you do the same, so you do not miss any pertinent information from us.

Holidays:

During the following holidays, all administrative and instructional functions are suspended, including the grading of exams and issuance of transcripts.

New Year's Day	MLK Day
Easter	Memorial Day
Juneteenth	Independence Day
Labor Day	Thanksgiving weekend
Christmas Break	

The schedule of holidays for the current calendar year may be found under the Student Services menu at www.portagelearning.edu

Code of Conduct: Students are expected to conduct themselves in a way that supports learning and teaching and promotes an atmosphere of civility and respect in their interactions with others. Verbal and written aggression, abuse, or misconduct is prohibited and may be grounds for immediate dismissal from the program.

This is a classroom; therefore, instructors have the academic freedom to set forth policy for their respective class. Instructors send a welcome e-mail detailing the policy of their class, which students are required to read prior to beginning the course.

Grievances: If a student has a complaint about the coursework or the instructor, the student is advised to first consult the instructor, who will be willing to listen and consider your concern. To file a formal grievance for consideration by the Academic Review Committee, the process must be initiated via written communication to academics@portagelearning.edu.

Remediation: At Portage Learning we allow a "one-time" only opportunity to re-take an alternate version of **one** module exam on which a student has earned a grade lower than 70%. This option must be exercised before the final exam is started. If an exam is retaken, the original exam grade will be erased, and the new exam grade will become a permanent part of the course grade. However, before scheduling and attempting this retest, the student must resolve the questions they have regarding the material by reviewing both the old

exam and the lesson module material. Once ready to attempt the retest of the exam they must contact their instructor to request that the exam be reset for the retest. Remember, any module retest must be requested and completed **before** the final exam is opened.

Note: Exams on which a student has been penalized for a violation of the academic integrity policy may not be re-taken.

Syllabi are subject to change as part of ongoing educational review practices. Students are responsible for accessing and using the most recent version of the course syllabus.