HORRY GEORGETOWN TECHNICAL COLLEGE

INSTRUCTIONAL PACKAGE

BIO 210

Anatomy and Physiology I

Fall 2018 – Summer 2019

INSTRUCTIONAL PACKAGE

PART I: COURSE INFORMATION

Effective Term: 2018-2019

COURSE PREFIX: BIO 210 COURSE TITLE: Anatomy and Physiology I

CONTACT HOURS: 3-3 CREDIT HOURS: 4

RATIONALE FOR THE COURSE:

BIO 210 is the first of a two-course series that provides students with a detailed study in anatomy and physiology and prepares students for Allied Health programs, such as Nursing, Radiology and Dental Hygiene. After completion of this course, students will possess an increased awareness of the various structures and functions of the human body and will have a better understanding of how this relates to future allied health careers. Through guided classroom and laboratory experiences, students will identify body parts and relate organ systems for a comprehensive understanding of body function.

COURSE DESCRIPTION:

This is the first in a sequence of courses, including intensive coverage of the body as an integrated whole. All body systems are studied. This course is transferable to public senior institutions as part of the South Carolina Commission on Higher Education Statewide Articulation Agreement.

PREREQUISITES/CO-REQUISITES:

Credit level BIO 101 Minimum Grade of C or Credit level BIO 102 Minimum Grade of C or Credit level CHM 110 Minimum Grade of C or Credit level BIO 112 Minimum Grade of C or Credit level BIO 101 Minimum Grade of TC or Credit level BIO 102 Minimum Grade of TC or Credit level CHM 110 Minimum Grade of TC or Credit level BIO 112 Minimum Grade of TC or (COMPASS Reading 85 and COMPASS Algebra 46 and COMPASS Writing 78) or (SAT Critical Reading 480 and SAT Mathematics 460) or (ACT Reading 19 and ACT English 19 and ACT Math 19) or (ACCUPLACER Elementary Algebra 075) or (Multiple Measures English 1 and Multiple Measures Math 1) or (COMPANION Reading 075 and COMPANION Sentence Skills 081 and COMPANION Elementary Algebra 075)

*__Online/Hybrid__ courses require students to complete the DLi Online Student Orientation prior to completing an online course. The DLi Online Student Orientation can be found in WaveNet, under the My Student tab.

REQUIRED MATERIALS:

Please visit the Bookstore online site for most current textbook information. Use the direct link below to find textbooks.
BOOKSTORE.

Enter the semester, course prefix, number and section when prompted and you will be linked to the correct textbook.

ADDITIONAL REQUIREMENTS:

A Connect code from McGraw-Hill is a required component of this course.

For Hybrid/Online Students Only: Each student will be required to view an orientation PowerPoint presentation during the first week of class. This presentation can be found on the course homepage in D2L under News. After viewing the presentation, all online students must complete the orientation quiz which can be found under the dropdown assignment menu. A student will not be considered officially enrolled in the course until the presentation has been viewed and the quiz completed with a 100% score. Any submitted work from the student including discussion posts, assignments, etc. will not be given a grade until the presentation has been viewed and the quiz has been submitted. Failure to view the presentation and take the quiz before midnight on the last day to add/drop classes will result in the student being automatically dropped from the course.

TECHNICAL REQUIREMENTS:

Access to Desire2Learn (D2L), HGTC's student portal for course materials.
WaveNet and D2L email access.

STUDENT IDENTIFICATION VERIFICATION

Students enrolled in online courses will be required to participate in a minimum of one (1) proctored assignment and/or one (1) virtual event to support student identification verification. Please refer to your Instructor Information Sheet for information regarding this requirement.

CLASSROOM ETIQUETTE:

As a matter of courtesy to other students and your professor, please turn off cell phones and other communication/entertainment devices before class begins. If you are monitoring for an emergency, please notify your professor prior to class and switch cell phone ringers to vibrate.

NETIQUETTE: is the term commonly used to refer to conventions adopted by Internet users on the web, mailing lists, public forums, and in live chat focused on online communications etiquette. For more information regarding Netiquette expectations for distance learning courses, please visit: Online Netiquette.

ACADEMIC DISHONESTY:

All forms of academic dishonesty, as outlined in the Student Code in the HGTC catalog, will NOT be tolerated and will result in disciplinary action. Anyone caught cheating or committing plagiarism (Defined in the code as: "The appropriation of any other person's work and the unacknowledged incorporation of that work in one's own work offered for credit") will be given a grade of a zero for that assignment and reported to the Senior VP of Academic Affairs, in accordance with the student handbook. A second offense will result in the student being withdrawn from the course with a "WF" and charges being filed with the Chief Student Services Officer.

Part II: Student Learning Outcomes

COURSE LEARNING OUTCOMES and ASSESSMENTS*:

CHAPTER 1: INTRODUCTION TO HUMAN ANATOMY AND PHYSIOLOGY

Defining anatomy and physiology and explaining how they are related.
Listing the levels of organization in the human body and the characteristics of each.
Outlining the major characteristics of life.
Defining metabolism.
Outlining the major requirements of organisms.
Explaining the importance of homeostasis to survival and outlining the parts of a homeostatic mechanism, including positive and negative feedback systems.
Identifying major body cavities, serous membranes, and associated organs.
Naming the major organ systems, and listing the main functions of each.
Utilizing correct anatomical terminology for relative positions, body sections, and body regions.

CHAPTER 2: CHEMICAL BASIS OF LIFE

Defining chemistry and relating this to anatomy and physiology.
Relating matter, atoms, and compounds.
Explaining how atomic structure predicts how atoms interact.
Utilizing molecular and structural formulas to symbolize the composition of compounds.
Identifying three types of chemical reactions.
Explaining pH, including the role of buffers, and contrasting acids and bases.
Listing the major groups of inorganic chemicals and explaining the function(s) of each.
Explaining the general functions and structures of the main classes of organic molecules in cells.

CHAPTER 3: CELLS

Outlining the structures of a composite cell including the cell membrane, organelles, and nucleus.
Explaining how substances move into and out of cells.
Organizing the cell cycle and explaining how a cell divides.
Explaining how stem cells and progenitor cells make possible growth and repair of tissues.
Discussing apoptosis.

CHAPTER 4: CELLULAR METABOLISM

Comparing and contrasting anabolism and catabolism.
Explaining how metabolic pathways are regulated and the role of enzymes in metabolic reactions.
Discussing how ATP stores chemical energy and makes it available to a cell.
Outlining the reactions of cellular respiration.
Discussing the process of protein synthesis and the roles of DNA and RNA.

CHAPTER 5: TISSUES

Identifying the types of intercellular junctions in tissues.
Listing the four major tissue types in the body, including general characteristics and functions.
Identifying the types of epithelium, including location and function.
Explaining how glands are classified.
Identifying the types of connective tissue, including location and function.
Determining each of the four types of membranes.
Distinguishing among the three types of muscle tissue.
Discussing the general characteristics and functions of nervous tissue.

CHAPTER 6: INTEGUMENTARY SYSTEM

Discussing the layers of the skin, including location, tissue type, and functions.
Summarizing the factors that determine skin color.
Discussing the accessory structures associated with the skin and their functions.
Listing various skin functions, and explaining how the skin helps regulate body temperature.
Discussing wound healing and types of burns.

CHAPTER 7: SKELETAL SYSTEM

Classifying bones according to their shapes, and naming examples from each group.
Identifying the macroscopic and microscopic structures of a long bone and listing the functions of these parts.
Distinguishing between intramembranous and endochondral bones, and explaining how such bones develop and grow.
Discussing the effects of sunlight, nutrition, hormonal secretions, and exercise on bone development and growth.
Outlining the major functions of bones.
Distinguishing between the axial and appendicular skeletons.
Identifying bones and major anatomical markings in the skeleton.

CHAPTER 8: JOINTS OF THE SKELETAL SYSTEM

Explaining how joints can be classified structurally and functionally.
Classifying fibrous, cartilaginous and synovial joints and locating examples in the body.
Discussing the general structure of a synovial joint.
Explaining how skeletal muscles produce movements at joints, and identifying several types of joint movements.
Discussing the shoulder, elbow, hip and knee joints in detail, including major ligaments.

CHAPTER 9: MUSCULAR SYSTEM

Identifying the major parts of a skeletal muscle fiber and discussing the functions of each.
Summarizing the neuromuscular junction.
Explaining the major events of skeletal muscle fiber contraction and relaxation.
Listing the energy sources for skeletal muscle fiber contraction and discussing oxygen debt and fatigue.
Discussing how muscle contractions are recorded and explaining summation/recruitment.
Distinguishing between fast and slow twitch muscle fibers.
Comparing and contrasting skeletal, smooth and cardiac muscle.
Defining origin and insertion and explaining the interaction of skeletal muscles to allow movement.
Identifying skeletal muscles of each body region.

CHAPTER 10: NERVOUS SYSTEM I

Listing the general functions of the nervous system.
Identifying the two types of cells that comprise nervous tissue and dividing the nervous system organs into two groups.
Identifying the parts of a neuron and explaining their functions.
Classifying neurons based on structure and function.
Identifying the types of neuroglia and their functions.
Explaining how information passes from a presynaptic neuron to a postsynaptic cell.
Discussing cell membrane potential and the events leading to the generation of an action potential.
Explaining how action potentials move down an axon and the role of myelin.
Identifying the changes in membrane potential associated with excitatory and inhibitory neurotransmitters.
Explaining the basic ways in which the nervous system processes information.

CHAPTER 11: NERVOUS SYSTEM II

Summarizing the types of meninges and their functions.
Discussing the formation and function of cerebrospinal fluid.
Discussing the structure and functions of the major parts of the brain, brainstem, and spinal cord.
Explaining hemisphere dominance.
Explaining the stages in memory storage.
Outlining a reflex arc and reflex behavior.
Outlining ascending and descending spinal cord tracts.
Distinguishing between the major parts of the peripheral nervous system and discussing the structure of a peripheral nerve.
Identifying the cranial and spinal nerves and listing their major functions.
Comparing and contrasting the sympathetic and the parasympathetic divisions of the autonomic nervous system, including actions and neurotransmitters.

CHAPTER 12: NERVOUS SYSTEM III

Distinguishing between general senses and special senses.
Naming the five types of receptors and listing the function of each.
Explaining sensation, perception, and sensory adaptation.

Discussing the different types of general senses and how they function.
Explaining how the sensations of smell and taste are produced and interpreted.
Labeling the parts of the ear and explaining the function of each part.
Outlining the auditory pathway.
Distinguishing between static and dynamic equilibrium.
Labeling the parts of the eye and explaining the function of each part.
Outlining the visual pathway.
Comparing and contrasting rods and cones.

Lab Specific Outcomes

Learning outcomes for the lab portion of this course are included in the Lab Student Handouts, a document that will be provided to you by your lab Instructor. They are detailed for each lab topic covered in the course and include items like identification of structures on lab models, diagrams, devices, and dissected materials. Learning outcomes include utilization of microscopes to view and identify cells and tissues. Accurate spelling is a learning outcome and graded component of this course.

Students – please refer to the Instructor's Course Information sheet for specific information on assessments and due dates.

Part III: Grading and Assessment

EVALUATION OF REQUIRED COURSE MEASURES/ARTIFACTS*
Students' performance will be assessed and the weight associated with the various measures/artifacts are listed below.

DEPARTMENT OF NATURAL SCIENCES GRADING POLICY
Your grade for this course will be determined solely on the basis of the criteria outlined below. Students will not be allowed to substitute other activities (reports, homework, etc.) to count in place of any of the stated criteria (this means there will be NO extra credit offered). As the tests/exams given in this course are designed to measure the extent to which you have mastered course materials, students should not expect there to be any "curving" of grades.

EVALUATION*
50-55% Unit Lecture Tests
15% Comprehensive Final
5-10% Assignments/Homework
10% Lab Daily Grades
15% Lab Practicals (2)
100%
Students, for the specific number and type of evaluations, please refer to the Instructor's Course Information Sheet.

GRADING SYSTEM:
Please note the College adheres to a 10 point grading scale A = 100 – 90, B = 89- 80, C = 79 – 70, D = 69 – 60, F = 59 and below.

Grades earned in courses impact academic progression and financial aid status. Before withdrawing from a course, be sure to talk with your instructor and financial aid counselor about the implications of that course of action. Ds, Fs, Ws, WFs and Is also negatively impact academic progression and financial aid status.

Withdrawal before the sixth day of the term is considered a "drop" and will not show on the official transcript. Withdrawal from the sixth day of the term through the two-thirds point of the term results in a grade of "W." Students who withdraw after the two-thirds point will receive either a grade of a "W" (if passing the course at the time of withdrawal), or the course instructor can assign a grade of "WF" (if the student is not passing the course at the time of withdrawal). Students should discuss their withdrawal plans and the grade they will receive with their instructor prior to withdrawal.

The Add/Drop Period is the first 5 days of the semester for **full term** classes. Add/Drop periods are shorter for accelerated format courses. Please refer to the academic calendar for deadlines for add/drop (ACADEMIC CALENDAR). You must attend at least one meeting of all of your classes during that period. If you do not, you will be dropped from the course(s) and your Financial Aid will be reduced accordingly.

Part IV: Attendance

Horry-Georgetown Technical College maintains a general attendance policy requiring students to be present for a minimum of eighty percent (80%) of his or her classes in order to be eligible to receive credit for any course. However, due to the varied nature of courses taught at the College, a more rigid attendance policy may be required by individual instructors. At a minimum, a student may be withdrawn from a course(s) after he or she has been absent in excess of ten percent (10%) of the total contact hours for a course. **Instructors define absentee limits for their class at the beginning of each term; please refer to the Instructor Course Information Sheet.**

For online and hybrid courses, check your Instructor's Course Information Sheet for any required on-site meeting times. Please note, instructors may require tests to be taken at approved testing sites, if you use a testing center other than those provided by HGTC, the center may charge a fee for its services.

Lecture Attendance:
For a 15 week course (fall and spring), the allowed number of absences for a MW or TR class is as follows: 4 absences are allowed for lecture, regardless of reason. For a lecture class that meets once a week, the allowed number of absences is two (2). When a student surpasses the allowed number of absences, the student will be dropped automatically from the course with a W or a WF. **Remember, an absence is an absence, no matter if it is excused or not!**

Lab Attendance:
Students are allowed one (1) lab absence for a lab that meets weekly. When a student surpasses the allowed number of absences, the student will be dropped automatically from the course with a W or a WF.

Online/Hybrid Attendance:
Students enrolled in distance learning courses (hybrid and online) are required to maintain contact with the instructor on a regular basis to be counted as "in attendance" for the course. All distance learning students must participate weekly in an Attendance activity in order to demonstrate course participation.

Students showing no activity in the course for two weeks (these weeks do not need to be consecutive) will be withdrawn due to lack of attendance.

Lab Attendance for Hybrid Courses:
Students in hybrid classes in which labs only meet 5 or 6 times during the semester, must attend **all** lab sessions for its entirety. Failure to attend **one** lab will result in immediate withdrawal. Students in hybrid classes where labs meet every week, you are allowed **one** lab absence. When a student surpasses the allowed number of absences, the student will be dropped automatically from the course with a W or a WF.

Check your Instructor's Course Information Sheet for any required on-site meeting times. For hybrid courses, in which students attend on-site labs, lab attendance is recorded separately and participation in lab activities does NOT apply toward lecture attendance.

Part V: Student Resources

The Student Success and Tutoring Center (SSTC)

The SSTC offers to all students the following **free** resources:

1. **Academic coaches** for most subject areas, **Writing Center Support**, and **college success skills.**
2. **On-line student success and academic support resources.**

Visit the SSTC website: Student Success & Tutoring Center and visit the student services tab in your WaveNet account to schedule appointments using TutorTrac. For more information, call: SSTC Conway, 349-7872; SSTC Grand Strand, 477-2113; and SSTC Georgetown, 520-1455. Room locations and Live Chat is available on the SSTC website.

Student Information Center: WaveNet Central (WNC)

WNC offers to all students the following **free** resources:

1. **Getting around HGTC**: General information and guidance for enrollment!
2. Use the **Online Resource Center (ORC)** for COMPASS support, technology education, and online tools.
3. **Drop-in technology support or scheduled training** in the Center or in class.
4. **In-person workshops, online tutorials and more services** are available.

Visit the WNC website: Wavenet Central. Live Chat and Center locations are posted on the website. Or please call one of the following locations: WNC Conway, 349-5182; WNC Grand Strand, 477-2076; and WNC Georgetown, 520-1473.

Student Testing: (If course is offered in multiple format include this section, delete if only F2F sections are offered.)

Testing in an **online/hybrid** course may be accomplished in a variety of ways:

- Test administered within D2L
- Test administered in writing on paper
- Test administered through Publisher Platforms

Furthermore, tests may have time limits and/or require a proctor.

Proctoring can be accomplished either face-to-face at an approved site or online through RPNow, our online proctoring service. To find out more about proctoring services, please visit the Online Testing section of the HGTC's Testing Center webpage.

The **Instructor Information Sheet** will have more details on test requirements for your course.

Disability Services

HGTC is committed to providing an accessible environment for students with disabilities. Inquiries may be directed to Jocelyn Williams, Director of Student Development on the Conway Campus Jaime Davis, Counselor/Advisor on the Georgetown Campus or Kristin Griffin, Counselor on the Grand Strand Campus. These individuals will review documentation of the student's disability and, in a confidential setting with the student, develop an educational accommodation plan.

Note: It is the student's responsibility to self-identify as needing accommodations and to provide acceptable documentation. After a student has self-identified and submitted documentation of a disability, accommodations may be determined, accepted, and provided.

Title IX Requirements

Horry Georgetown Technical College prohibits the offenses of domestic violence, dating violence, sexual assault, and stalking. Any student who believe he or she has experienced or witnessed discrimination including sexual harassment, domestic violence, dating violence, sexual assault or stalking is encouraged to report such incidents to one of the College's Title IX Coordinators.

> *Faculty and Staff are required to report incidents to the Title IX Coordinators when involving students. The only HGTC employees exempt from mandatory reporting are licensed mental health professionals (only as part of their job description such as counseling services).

Inquiries regarding the non-discrimination policies:	
Student and prospective student inquiries concerning Section 504, Title II, and Title IX and their application to the College or any student decision may be directed to the Associate Vice President for Student Affairs.	Employee and applicant inquiries concerning Section 504, Title II, and Title IX and their application to the College may be directed to the Associate Vice President for Human Resources.
Dr. Melissa Batten, AVP Student Affairs *Title IX Coordinator* Building 1100, Room 107A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5228 Melissa.Batten@hgtc.edu	**Jacquelyne Snyder, AVP Human Resources** *Section 504, Title II, and Title IX Coordinator* Building 200, Room 212A, Conway Campus PO Box 261966, Conway, SC 29528-6066 843-349-5212 Jacquelyne.Snyder@hgtc.edu