



## **BIOLOGY (BIOL) 2113: Anatomy and Physiology I**

### **ON CAMPUS (CA) COURSE SYLLABUS**

**Course with 60% Face to Face & 40% Online  
Fall Semester 2023**

#### **COURSE INFORMATION**

**Credit Hours/Minutes:** 3/2250

**Class Location:** Vidalia Campus/Health Sciences Annex (HSA) Building C: Room 902

**Class Meets:** Tuesday 2:00pm-3:30pm, **this course is taught with an online component-60% face-to-face (FTF) in class and 40% Online (OL).**

**Course Reference Number (CRN):** 20143

**Preferred Method of Contact:** Email [Sherry Sturgis \(ssturgis@southeasterntech.edu\)](mailto:ssturgis@southeasterntech.edu)

#### **INSTRUCTOR CONTACT INFORMATION**

**Instructor Name:** Sherry C. Sturgis Beasley

**Email Address:** [Sherry Sturgis \(ssturgis@southeasterntech.edu\)](mailto:ssturgis@southeasterntech.edu)

**Bio:** I received my B.S. and M.S. in Biology from Georgia Southern University, with an emphasis in Ecology. I am an Ecologist, Conservationist, and Environmental/Nature Educator. I have taught many courses in science, especially Biology, in the field of higher education. I love all aspects of Biology, especially Anatomy & Physiology & Microbiology. I also love teaching Forensic Science.

**Campus/Office Location:** Vidalia Campus/Health Sciences Annex (HSA) – Building C: Room 901

**Office Hours:** M-W 8:30am-11:30am & TH 8:00am-9:00am

**Email Address:** [ssturgis@southeasterntech.edu](mailto:ssturgis@southeasterntech.edu)

**Phone:** (912) 538-3188

**Cell:** (912) 531-4543, Please text me first, and do not use this number unless you really need to reach me. I do not mind you contacting me by cell phone, just do not abuse the privilege.

**Fax Number:** NA

**Tutoring Hours:** By appointment only, I will be glad to set up a tutoring session during office hours.

**This course requires students to complete a portion of the required contact hours by attending classes on campus while completing the remaining portion online as shown on the lesson plan. The course is taught in an on campus (CA) format. On campus (CA) classes require students to complete 60% face to face in class and 40% online of the required contact hours traditionally by attending classes on campus while completing the remaining portion online at the student's convenience with respect to the instructor's requirements.**

#### **SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND STUDENT HANDBOOK**

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Student Handbook \(http://www.southeasterntech.edu/student-affairs/catalog-handbook.php\)](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php).

## **REQUIRED TEXT**

1. **Principles of Anatomy and Physiology**, Tortora/Grabowski, 16th Edition, John Wiley and Sons, Incorporated.
2. Southeastern Technical College 2114 Lab Manual, Ajohda, 1st edition

## **REQUIRED SUPPLIES AND SOFTWARE**

3-hole binder, clear front report cover (make sure it is sturdy and can hold 100 pages or more), colored pencils, ink pens, highlighter, and any other supplies deemed necessary by instructor.

Note: Although students can use their smart phones and tablets to access their online course(s), exams, discussions, assignments, and other graded activities should be performed on a personal computer. Neither Blackboard nor Georgia Virtual Technical Connection (GVTC) provide technical support for issues relating to the use of a smart phone or tablet, so students are advised to not rely on these devices to take an online course.

**Students should not share login credentials with others and should change passwords periodically to maintain security.**

## **COURSE DESCRIPTION**

Selected laboratory exercises paralleling the topics in BIOL 2113. The laboratory exercises for this course include body organization, cell structure and functions, tissue classifications, integumentary system, skeletal system, muscular system, and nervous sensory systems

## **MAJOR COURSE COMPETENCIES**

1. Body Organization and Chemical Basis of Life
2. Cell Structure and Function
3. Tissue Classifications
4. The Integumentary System
5. The Skeletal System
6. The Muscular System
7. The Nervous and Sensory Systems

## **PREREQUISITE(S)**

Regular Admission

Co-requisites: All Required

ENGL 1101 - Composition and Rhetoric

BIOL 2113L - Anatomy and Physiology Lab I

## **COURSE OUTLINE**

### **BODY ORGANIZATION AND CHEMICAL BASIS OF LIFE**

1. Define the terms anatomy and physiology.
2. Describe the basic biological functions necessary for survival.
3. Define anatomical position.
4. Identify descriptive body terms, planes, abdominopelvic regions and quadrants, directional terms as

they relate to anatomical position, body membranes and cavities.

5. Discuss complementarity between structure and function.
6. Describe the various organizational levels of the human body.
7. Define homeostasis and metabolism.
8. Define positive and negative feedback cycles and provide examples of each.
9. Describe basic atomic structure.
10. Define the terms molecule, element, compound, mixture, solution, solvent and solute and give examples of each.
11. Describe and give examples of covalent (non-polar and polar), ionic and hydrogen bonding.
12. Describe water as an inorganic compound and universal solvent.
13. List the major elements present in the body.
14. Discuss and give examples of the most important carbohydrates, proteins, lipids and nucleic acids found in the body and relate these substances to specific body structures or functions.
15. Describe intermediary metabolism.
16. Describe potential of hydrogen (pH) scale, acids and bases.

### **CELL STRUCTURE AND FUNCTIONS**

1. Describe the structure of a typical cell.
2. List the organelles and discuss the functions of each.
3. Describe the types of movement of materials across the cell membranes and relate these to functions of the cells of the body.
4. Discuss the molecular structure of deoxyribonucleic acid (DNA) in relation to hereditary characteristics.
5. Discuss mitosis and meiosis.

### **TISSUE CLASSIFICATIONS**

1. Define the term tissue and histology.
2. Identify the four major types of tissue in the body and their basic functions.
3. Describe the structure, function, and location of epithelial tissues in the body.
4. Describe the structure, function, and location of connective tissues in the body and contrast these to epithelial tissues.
5. Compare and contrast the three forms of muscle tissue: skeletal, smooth and cardiac.
6. Describe the structure, function, and location of nervous tissue in the body.
7. Classify the membranes of the body and provide examples of each.
8. Describe the basic steps in tissue repair.

### **THE INTEGUMENTARY SYSTEM**

1. Discuss functions of the skin as an organ system and role in homeostasis of body temp.
2. Describe layers, structural components, and functions of epidermis dermis and hypodermis.
3. Describe the basic structure and function of epidermal derivatives such as hair, nails, sweat, sebaceous and ceruminous glands.
4. Discuss the classification of burns by degree and surface areas involved.
5. Discuss the three principal types of skin cancer and differentiate among them.

### **THE SKELETAL SYSTEM**

1. Discuss the components and functions of the skeletal system.
2. Discuss the basic anatomy of long and flat bones.
3. Describe the histological features of compact and spongy bone tissue.
4. Compare and Contrast intramembranous ossification and endochondral ossification.
5. Define interstitial and appositional bone growth.

6. Describe the process of bone remodeling and fracture repair.
7. Classify the principal types of bones on the basis of shape and location.
8. Describe the various markings on the surface of bones.
9. Identify the bones and principal markings of the bones of the axial skeleton.
10. Identify the bones and principal markings of the bones of the appendicular skeleton.
11. Define an articulation and identify the factors that determine the types and degree of movement at a joint.
12. Classify joints based on their structure and function using proper terminology.
13. Describe the major movements allowed by synovial joints.
14. Describe selected articulations of the body with respect to the bones that enter into their formation, structural classification, and anatomical components.
15. Discuss selected bone diseases and common fractures.

## **THE MUSCULAR SYSTEM**

1. List the characteristics and functions of muscle tissue.
2. Discuss the organization of muscle tissue and its components.
3. Discuss the anatomy of the muscle (cell) fiber and the microscopic anatomy of the muscle cell including the sarcomere as the basic unit of muscle contraction.
4. Discuss the sliding filament theory of muscle contraction.
5. Discuss the structure and function of the neuromuscular junction.
6. Describe the movement of the action potential in skeletal muscle.
7. Describe the adenosine triphosphate (ATP) needs and the energy sources used by skeletal muscle.
8. Explain concepts in muscle physiology such as twitch, motor unit, tetanus, as well types of muscle fibers and muscle contractions.
9. Define origin and insertion.
10. Describe the relationship between bones and skeletal muscles in producing body movements.
11. Discuss most body movements as activities of groups of muscles by explaining the roles of the prime movers, synergist, antagonist and fixator.
12. Define the criteria employed in naming skeletal muscles.
13. Identify the principal skeletal muscles in selected regions of the body and their functions.
14. Discuss selected muscle disorders.

## **THE NERVOUS AND SENSORY SYSTEM**

1. Identify the basic functions of the nervous system in maintaining homeostasis.
2. Describe the components of the central and peripheral divisions of the nervous system.
3. Describe the structure of a neuron.
4. Identify the major supporting cells of neurons in the central nervous system (CNS) and the peripheral nervous system (PNS).
5. Compare and contrast structural and functional classifications of neurons.
6. Define a synapse and describe all of the events that occur at the synapse.
7. Describe the action potential, its generation, and transmission of action potential in neuron.
8. Discuss concepts in neurophysiology such as excitatory post synaptic potential (EPSP), inhibitory post synaptic potential (IPSP), summation, all-or-none law, and neuron regeneration.
9. Discuss common neurotransmitters.
10. Describe the layers of meninges and longitudinal anatomy of the spinal cord.
11. Describe cross sectional anatomy of spinal cord including location of sensory and motor neurons.
12. Identify major sensory and motor tracts in the spinal cord.
13. Describe components of a reflex arc, patellar, Golgi tendon, stretch, and withdrawal reflexes.
14. Identify the major plexuses in the spinal cord as well as major spinal nerves and their functions.

15. Discuss the immediate and long-range effects of spinal cord injury.
16. Identify the principal parts of the brain.
17. Explain the function of the cerebrospinal fluid (CSF), its composition, and the pathway of CSF flow.
18. Describe the blood supply to the brain and the blood-brain barrier.
19. Identify major structural and functional areas of the cerebral cortex and cerebrum including basal nuclei.
20. Identify the parts of the diencephalon and explain their roles in homeostasis.
21. Identify the three major components of the brain stem, their substructures and functions.
22. Discuss the structure and function of the cerebellum.
23. Discuss common disorders of the central nervous system.
24. Identify twelve pairs of cranial nerves, their name, number, and functions, and classify whether they are sensory, motor or mixed nerves.
25. Identify the major nerves of the brachial plexus.
26. Identify the major nerves of the lumbosacral plexus.
27. Describe exteroceptors, interoceptors, and proprioceptors.
28. Compare the structural and functional differences between somatic and autonomic nervous systems.
29. Compare and contrast structure and function of the parasympathetic and sympathetic nervous systems and effects on organs.
30. Discuss acetylcholine and norepinephrine as the major neurotransmitters in the autonomic nervous system (ANS).
31. Discuss olfactory sensations and receptors.
32. Discuss gustatory sensations and receptors.
33. Describe external and internal anatomy of the eye.
34. Discuss the visual pathway and common errors of refraction.
35. List the major structures and functions of the external ear, middle ear and internal ear.
36. Discuss selected disorders of the special senses.

## GENERAL EDUCATION CORE COMPETENCIES

STC has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

## STUDENT REQUIREMENTS

In order to be successful in this class, students should study a minimum of 2 hours per credit hour each week (minimum of 8 hours). Before arriving for class, students should read assigned chapters taking special note of bold-faced vocabulary terms and any study questions within the chapter. All assignments and pre-lab work must be completed and turned in when due, to avoid penalty. Failure to comply with these suggestions will make it impossible to understand and follow the lecture material and will result in a student being unsuccessful in this course.

Students are responsible for the policies and procedures in the STC Catalog and Handbook. Additionally, during exams, students are to place all notebooks, bags, and other belongings on the floor or on the counters located in the back and sides of the classroom. Also, during examinations students are to be seated with one empty chair between each student. No talking is permitted once the exams are handed out. Students are not allowed to leave the room during an exam (with their cell phone). Students need to go to the bathroom prior to the exam. The instructor will make an exception for emergencies. **Students found with their cellphone or any other personal communication device (including smart watches) will be considered cheating and given a zero for the exam. This includes taking out a phone or similar device after the student has completed the**

## **exam but while others in the classroom are still testing.**

Students are expected to exhibit professional behavior at all times. Each student is to show respect and concern for fellow students and for the instructor. Insubordination will not be tolerated, and disciplinary measures will be enacted.

As students taking this course are striving to become healthcare professionals, they will be expected to follow certain healthcare program rules. This includes but is not limited to: proper dress (when in lab setting or other activities in class), no perfumes or strong fragrances, cleanliness (hands, clothes, hair), and effective communication skills.

Per STC policy no cell phones are allowed in hallways or in classrooms. If your phone must be with you it must be turned off and in a bag. In cases of emergency when a student needs his or her phone, he or she is expected to 1) notify the instructor before class begins and 2) leave the phone on silent (NO VIBRATE) while they are in the class (this excludes examination guidelines for phones). No personal calls are to be taken during class, regardless of the situation. This should be handled before or after class.

No eating or drinking is permitted in the lab or lecture classroom. Water is allowed if it is in a spill-proof container and must be kept under the desk or on the sides of the classroom.

## **ATTENDANCE GUIDELINES**

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of "F" (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work are at the instructor's discretion.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws, stops attending, or receives an "F" in a course.

## **STUDENTS WITH DISABILITIES**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

**Swainsboro Campus:** [Daphne Scott \(dscott@southeasterntech.edu\)](mailto:dscott@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

**Vidalia Campus:** [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

## SPECIFIC ABSENCES

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

## PREGNANCY

Southeastern Technical College does not discriminate based on pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

**Swainsboro Campus:** [Daphne Scott \(dscott@southeasterntech.edu\)](mailto:dscott@southeasterntech.edu) 478-289-2274, Building 1, Room 1210

**Vidalia Campus:** [Helen Thomas, \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before absence occurs. Requests made after delivery **MAY NOT** be accommodated. The coordinator will contact your instructor to discuss accommodation when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

## WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which the student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" (Failing 0-59) being assigned.

Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above.

There is no refund for the partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

## FINAL ELIGIBILITY AND FINAL EXAMINATION

A comprehensive final examination will be given at the end of the semester. All students in the course will complete the Final Exam on the specified date and time as stipulated in the lesson plan outline. There will be **no make-up exam** for the final examination. To determine if you are eligible to take the finals, a student must maintain a **Lecture and Lab Test average of seventy percent (70%) or above prior to the date of the scheduled final exam.** Grades of 69.9% will not be rounded up. If the student has below a 70% average, the student will be given a letter grade based on Tests average. Blackboard assignments, Learning Objectives, Discussion Boards, etc. are **not** included in the Test average, **only test grades.**

## MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC.)

Students will be allowed to make-up **one** examination (one lecture and one lab), **EXCLUDING** the final examination, due to an extenuating circumstance. This should be discussed with the instructor. Please submit an official copy of medical, court documentation/jury duty, or any other formal written documents supporting the reason for missing a test. **Any other test missed will result in an automatic grade of zero.** **Note:** If student

notifies the instructor regarding inability to complete assignments because of technical problems **after due date**, the student will **NOT** be allowed to make-up the assignments. All make-up exams will be conducted face to face (FTF) on the scheduled date. Students have one week to make up a missed exam, if a student does not meet this period, the make-up exam will be given at the end of the semester. Make-up exams given at the end of the semester will consist of questions in short answer & essay format.

**Lecture examinations:** Students will be allowed to make up one lecture examination (excluding the final exam), due to a documented, excused absence approved by the instructor. Any subsequently missed lecture exam will result in an automatic zero.

**Lecture assignments:** Late assignments will be accepted but not for full credit. Assignments submitted after the due date will incur a 10% deduction per day late.

**Group Projects:** Projects are due the date your group agrees upon, unless there is an emergency. If a group member fails to show up, they will receive a zero as a grade.

## **ASSIGNMENTS**

Students are required to read and study each lecture and review the chapters for more detail and study daily. This is a challenging class with a lot of material. You can fall behind very easily in this course. You must also complete learning objectives for each chapter. This will help you absorb the information. Learning objectives can be found on the M-Drive and in Blackboard. All completed learning objectives should be submitted by the deadline on Blackboard in the appropriate drop box. There will also be 5 discussion board posts in blackboard you must reply to throughout the semester. See the syllabus for the LO & DB due dates. Your instructor may also give you assignments related to the material throughout the course, you may complete and hand to your instructor or email them. Some in class assignments may be due at the end of the class period. The instructor will review all the requirements in detail on the first day of class.

## **GROUP PROJECT PRESENTATION**

Students will work in small groups and give an educational presentation on a topic or disease/disorder that affects certain body systems related to the chapters covered in this course. Your instructor will provide the class with a list of topics. The topic must be approved by the instructor. Presentations should be 15-20 minutes long. The presentation should be at least 15 slides per presentation. Students must have some visual aid. Informative videos or other media may be used if it will enhance the presentation. These video clips or other media are not to exceed 7 minutes of the presentation. Please see the rubric at the end of the syllabus. Group members should have equal participation in this project's completion. A team rating scale will be provided for students to "grade" each other on the work they have done concerning their project. Additionally, students are encouraged to report team members' failure to comply with scheduled meetings, discussions, emails, group texts, etc. Failure to correspond and communicate with group members will result in different project grades. If one of your group members is not communicating or participating with you and your group, you need to contact the instructor as soon as possible. **Students may work on this project individually if discussed with the instructor at the beginning of the semester.**

The deadline for the presentations (See course schedule), all presentations are to be submitted to the instructor, saved on the classroom computer's desktop from a jump drive, or downloaded from the web prior to the day of the presentations. Thus, no procrastination will be accepted.

## **ACADEMIC DISHONESTY POLICY**

The STC Academic Dishonesty Policy states All forms of academic dishonesty, including but not limited to

cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the STC Catalog and Student Handbook.

## **PROCEDURE FOR ACADEMIC MISCONDUCT**

The procedure for dealing with academic misconduct and dishonesty is as follows:

### **1. First Offense**

Students will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

### **2. Second Offense**

Student is given a grade of "WF" (Withdrawn failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued due to second offense. The Registrar will input the incident into Banner for tracking purposes.

### **3. Third Offense**

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued due to third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period. The Registrar will input the incident into Banner for tracking purposes.

## **STATEMENT OF NON-DISCRIMINATION**

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes. The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 165 Phone: 912-538-3126 Email: <a href="mailto:hthomas@southeasterntech.edu">Helen Thomas</a> <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Until HR position is filled, contact Denise Powell, VP of Administrative Services Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138C Phone:912-538-3162 Email: <a href="mailto:dpowell@southeasterntech.edu">Denise Powell</a> <a href="mailto:dpowell@southeasterntech.edu">dpowell@southeasterntech.edu</a>

### ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

### GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College’s website.

### ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and Banner Web via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

### TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT

*The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

### GRADING POLICY

Assessment/Assignment	Percentage
Lecture Exams	50%
Learning Objectives, Discussion Boards & Related Assignment	10%
Group Presentation	10%
Comprehensive Final	30%
<b>Total</b>	<b>100%</b>

### GRADING SCALE

Letter Grade	Range
A	90-100

<b>Letter Grade</b>	<b>Range</b>
B	80-89
C	70-79
D	60-69
F	0-59

**DISCLAIMER STATEMENT**

**Instructor reserves the right to change the syllabus and/or lesson plan as necessary. The official copy of the syllabus is located on the STC M-Drive and will be discussed on the first day of class. The syllabus displayed in advance of the semester in any location is for planning purposes only.**

# BIOL 2113: Anatomy and Physiology I

## Fall Semester 2023 Lesson Plan

### Lecture Tuesday

Subject to change at instructor's discretion

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
Week of 08/22 <b>(Tuesday)</b>	Introduction to the Course, syllabus review, outline, regulation, etc.  <b>In Class Activities include:</b> Chapters 1 & 2	Introductions, Syllabus Review, Group Project Group Assignments, File creations, Chapter 1: Intro to the Human Body Chapter 2: The Chemical Level of Organization	Read lectures and chapters before coming to class and complete learning objectives (found on the M-Drive & in Blackboard).  <b>Online activities include:</b> Learning Objectives (LO), Discussion Boards (DB) & any other assignment given: LO should be submitted on Blackboard in the drop box DB are also posted in Blackboard  <b>LO=Learning Objectives            LO Chapter 1 &amp; 2 are due            09/05</b>	C: 1,2 G: a-c
08/29	<b>In Class Activities include:</b> Chapter 3 Chapter 4	Chapter 3: The Cellular Level of Organization Chapter 4: Tissue Level of Organization  Review for lecture exam 1	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapter 1 &amp; 2 are due            09/05</b>  <b>Discussion Board (DB) 1 is due            09/12</b>	C: 2,3 G: a-c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
09/05  <b>09/04 Labor Day Holiday, no class this day</b>	<b>In Class Activities include:</b> Chapter 3 Chapter 4 Chapter 5	Chapter 3: The Cellular Level of Organization Chapter 4: Tissue Level of Organization Chapter 5: The Integumentary System	<b>Lecture Exam 1: Chapters            1-3 on 09-05</b>  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapter 3 &amp; 4 are due            09/19</b>	C: 2,3 G: a-c
09/12	<b>In Class Activities include:</b> Chapter 4 Chapter 5	Chapter 4: Tissue Level of Organization Chapter 5: The Integumentary System  Review for Lecture Exam 2	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapter 5 due 10/03</b>	C: 3,4 G: a-c
09/19	<b>In Class Activities include:</b> Chapter 6 Chapter 7 Chapter 8 Chapter 9	Chapter 6: Skeletal System: Bone Tissue Chapter 7: Skeletal System: Axial Chapter 8: Skeletal Appendicular Chapter 9: Joints	<b>Lecture Exam 2: Chapters 4            &amp; 5 on 09/19</b>  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapter 5 due 10/03</b>	C: 2-5 G: a, c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
09/26	<b>In Class Activities include:</b> Chapter 9 Chapter 10 Chapter 11	Chapter 9: Joints  Review for lecture exam 3	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given: should be submitted on Blackboard in the drop box <b>LO Chapter 5 due 10/03</b>  <b>Discussion Board (DB) 2 due 10/10</b>	C: 4 G: a-c
10/03	<b>In Class Activities include:</b> Chapter 10 Chapter 11	Chapter 10: Muscle Tissue Chapter 11: Muscular System	<b>Lecture Exam 3: Chapters 6,7, 8 &amp; 9 on 10/03</b>  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapter 6,7,8 &amp; 9 due 10/17</b>	C: 5 G: a, c
10/10	<b>In Class Activities include:</b> Chapter 12	Chapter 12: Nervous System Chapter 13: Spinal Cord & Nerves	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapter 6,7,8 &amp; 9 due 10/17</b>	C: 5 G: a-c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
10/17	<b>In Class Activities include:</b> Chapter 13	Chapter 13: Spinal Cord and Nerves	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapters 10 &amp; 11 due 10/31</b>  <b>Discussion Board (DB) 3 due 10/31</b>	C: 5-6 G: a-c
10/24	<b>In Class Activities include:</b> Chapter 13 Chapter 14	Chapter 14: Brain and Cranial Nerves	Work on LO  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapters 10 &amp; 11 due 10/31</b>	C: 5-6 G: a-c
10/31  <b>11/02 65% Point, Last day for students to withdraw without academic penalty</b>	<b>In Class Activities include:</b> Chapter 14 Chapter 15	Chapter 14: Brain and Cranial Nerves  Research Assignment Presentation	<b>Lecture Exam 4: Chapters 10 &amp; 11 on 10/31</b>  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box <b>LO Chapters 12-17 Due 11/28</b>  <b>Discussion Board (DB) 4 due 11/14</b>	C:7 G: a, c

Date	Chapter/Lesson	Content	Tests, Assignments, & Due Dates	Competency Area
11/07	<b>In Class Activities include:</b> Chapter 15	Chapter 15: Autonomic Nervous System Chapter 16: Sensory, Motor and Integrative  Presentations	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>LO Chapters 12-17 Due 11/28</b>	C:7 G: a-c
11/14	Chapter 15 Chapter 16 Chapter 17	Presentations	<b>Lecture Exam 5: Chapters 12,13, &amp; 14 on 11/14</b>  Study for lecture exam 6 and work on the LO and DB  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>Discussion Board (DB) 5 is due 11/28</b>	C:7 G: a-c
<b>11/20-11/24 Thanksgiving Holiday No classes this week</b>	n/a	n/a	n/a	n/a
11/28	<b>In Class Activities include:</b> Chapter 15 Chapter 16 Chapter 17	Chapter 15: ANS Chapter 16: Sensory, Motor and Integrative Chapter 17: The Special Senses  Presentations	<b>Lecture Exam 6: Chapters 15, 16 &amp; 17 on 11/28</b>  <b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>All Discussion Boards (DB) must be completed by 12/05</b>	C: 6-7 G: a-c

<b>Date</b>	<b>Chapter/Lesson</b>	<b>Content</b>	<b>Tests, Assignments, &amp; Due Dates</b>	<b>Competency Area</b>
12/05  <b>Last day of class in the course</b>	<b>In Class Activities include:</b> Chapter 15 Chapter 16 Chapter 17  <b>Final Exam Review</b>	Chapter 15: ANS Chapter 16: Sensory, Motor and Integrative Chapter 17: The Special Senses  Presentations  <b>Make-up Exam Day</b>  <b>Final Exam Review</b>	<b>Online activities include:</b> Learning Objectives (LO) & any other assignment given should be submitted on Blackboard in the drop box  <b>All work must be turned in by 12/05, no credit will be given after this date. This includes all Learning Objectives (LO) &amp; Discussion Boards (DB) and any other in-class work given.</b>	C:7 G: a-c
12/12  <b>Final Exam Day</b>	<b>In Class Activities include:</b> Chapters 1-17  <b>Finals Exam</b>	<b>Comprehensive Final Exam- all chapters</b>	n/a	C: 1-7 G: a-c

#### **COMPETENCY AREAS (C)**

- 1) Body Organization
- 2) Cell Structure and Function
- 3) Tissue Classifications
- 4) The Integumentary System
- 5) The Skeletal System
- 6) The Muscular System
- 7) The Nervous and Sensory Systems

#### **GENERAL CORE EDUCATIONAL COMPETENCIES (G)**

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.

## **Group Topic Presentation Instructions:**

The instructor will provide an array of topics from which your group will select. These topics will apply to content in which we are studying throughout the semester in Anatomy I. The topic must apply to an area in which we are studying. Some past topics have included the following:

### **Past Topic Examples:**

Melanoma  
Bone Cancer  
Diabetes  
How bones are important in Forensic Science  
Steroid Abuse  
Brain tumor  
Hearing loss  
Skin Grafting  
Aging & muscle tissue  
Nerve damage  
Why is good posture important?

### **Instructions:**

Once your group has a topic, you will research the topic and concentrate on organizing your information for a presentation. This presentation should consist of 15 slides for a presentation. Your group should work out the workload and flow amongst yourselves. You should concentrate on organization and following the rubric below. The instructor will review this in class as well. Your group will present your topic and findings to the class. A good, organized guideline is as follows. This is only an example.

If your topic is Ovarian Cancer, a good organization would be;

- a. Title page
- b. What is ovarian cancer?
- c. What groups are affected? What ages? Why are these groups mostly at risk?
- d. How does ovarian cancer affect the body? Symptoms
- e. How is this cancer treated? Is it treatable?
- f. What is the outcome for someone with this type of cancer?
- g. What are treatment options and why?
- h. Who is doing the latest research on ovarian cancer? What college or organization? What researcher or doctor? What are they doing? Incorporate a case study, if you can.
- i. Conclusion

**Biology 2113**  
**Group Project Rubrics**

Students will work in small groups (2-3 people/group) and give an educational presentation on a Topic & Case Study in Anatomy I. Each member will participate in the research process, presentation and discussion.

**EVALUATIONS**

Topic in Anatomy I: \_\_\_\_\_

Group Members: \_\_\_\_\_

Possible Points/Section	Criteria for each section	Instructor Comments	Points Earned
<b>Introduction/Background (25 points possible)</b>	The presenter(s) introduced the topic by providing an adequate introduction of the topic. This includes any background information.		
<b>The topic was addressed in detail (25 points possible)</b>	The presenter(s) provided in-depth information on the topic and explained it in detail, including examples.		
<b>Ongoing Research &amp; Case Study (25 points possible)</b>	The presenter addressed the following; How this topic is important, and how it applies in the discipline of Biology. The presenter also addressed the latest research on the topic selected. The presenter added a case study, if applicable.		
<b>Overall Presentation Quality &amp; Group Participation (25 points)</b>	All group members appeared to have contributed equally. The group's preparation, delivery, and use of visual aids were both interesting and informative. The presentation was organized and professional. The presenter addressed the audience and did not "just read from the presentation slides." The work included a work cited page. The presentation was emailed to the instructor on the date due or prior to the due date.		

Possible Points/Section	Criteria for each section	Instructor Comments	Points Earned
			<b>Total Points:</b>

## Learning Objectives (LO) Grading Rubric

Category and Points Earned	Criteria and Examples
<p><b>Meets Expectations</b> <b>FULL CREDIT</b> <b>(100%)</b></p>	<p><b>The student provides:</b></p> <ol style="list-style-type: none"> <li>1. <u>Complete</u> and <u>thorough</u> discussion with <u>sufficient details</u> that support mastery of the material.</li> <li>2. Answer that focuses on the <u>related</u> question.</li> <li>3. Answer that deals <u>fully</u> with the <u>entire</u> question (some questions come in two parts, such as <u>list</u> and <u>describe</u>...).</li> <li>4. Factually correct material.</li> <li>5. Clear and readable answer with very few/no problems with spelling, punctuation or grammar.</li> </ol> <p><b>Note: Do not copy answers from Instructor's PowerPoint, websites, etc. This is plagiarism. No credit will be given for taking someone else's work and passing it off as your own.</b></p> <p><b>-EXAMPLE: "Contrast internal and external respiration and explain the role of the alveolar-capillary membrane."</b></p> <p><b>-STUDENT'S ANSWER:</b></p> <p><i>"External respiration is a pulmonary gas exchange. It is the diffusion of O2 from air in the alveoli of the lungs to the blood pulmonary capillaries and diffusion of CO2 in the opposite direction. It converts deoxygenated blood coming from the right side of the heart into oxygenated blood that returns to the left side. It occurs <b>only</b> in the lungs.</i></p> <p><i>Internal respiration is systemic gas exchange. It is the exchange of O2 and CO2 between systemic capillaries and tissue cells. It converts oxygenated blood into deoxygenated blood. It occurs in tissues throughout the body.</i></p> <p><i>Alveolar capillary membrane plays a role in the rate of external and internal respiration. It allows the gas exchange between blood and alveolar air depending on factors like partial pressure difference of the gases, surface area available for gas exchange, diffusion distance, and molecular weight and solubility."</i></p> <p>→ <b>GRADING:</b> The student dealt <b>fully</b> with the entire question by providing a clear and thorough <b>contrast</b> of internal and external respiration and completely <b>explained the role</b> of the alveolar-capillary membrane. The student used original work that is factually correct material. The student's answer was organized in such a way to make it clear and readable. The student's answer has few/no spelling, punctuation &amp; grammar problems. <b>This student receives full credit for this LO essay.</b></p>
<p><b>Below Expectations</b> <b>HALF CREDIT</b> <b>(50%)</b></p>	<p><b>The student provides:</b></p> <ol style="list-style-type: none"> <li>1. <u>Incomplete</u> discussion with <u>insufficient or missing details</u> that support mastery of the material.</li> <li>2. Answer that focuses on an <u>unrelated</u> question or issue.</li> <li>3. Answer that only <u>partially</u> deals with the question.</li> <li>4. Some factually incorrect material.</li> <li>5. Unclear answer with several problems with spelling, punctuation or grammar.</li> </ol> <p><b>-EXAMPLE: "Contrast internal and external respiration and explain the role of the alveolar-capillary membrane."</b></p> <p><b>-STUDENT'S ANSWER:</b></p> <p><i>"Internal (tissue) respiration is the exchange of gases. It supplies cellular respiration and makes ATP. External (pulmonary) respiration is the exchange of gases between alveoli and blood. The alveolar capillary membrane (ACM) is composed of alveolar epithelial cells that share a basement membrane, and at times fuse with microvascular endothelial cells. The alveolar epithelium is composed of alveolar epithelial type 1 (T1) and type 2 (T2) cells."</i></p> <p>→ <b>GRADING:</b> The student mostly <b>defined</b> the terms and did not <b>contrast</b> them. The student described/defined alveolar-capillary membrane (<b>ACM</b>), <b>but</b> the discussion does not fully deal with what the LO essay asked, which was to <b>explain the "role"</b> of the ACM. Also, the ACM information was copied &amp; pasted from an online source. <b>This student receives half credit for this LO essay.</b></p>
<p><b>Did Not Meet Expectations</b> <b>NO CREDIT</b> <b>(0%)</b></p>	<p><b>The student provides:</b></p> <ol style="list-style-type: none"> <li>1. <u>No answer.</u></li> <li>2. <u>Incomplete</u> discussion with <u>no relevant details.</u></li> <li>3. Answer that <u>does not</u> focus on the <u>related</u> question.</li> <li>4. Answer that <u>does not</u> deal with the question.</li> <li>5. <u>Incorrect</u> material.</li> <li>6. Unclear answer with frequent/many problems with spelling, punctuation or grammar.</li> <li>7. Copied answer from Instructor's PowerPoint, websites, etc. (This is <b>plagiarism</b>).</li> </ol> <p><b>-EXAMPLE: "Contrast internal and external respiration and explain the role of the alveolar-capillary membrane."</b></p> <p><b>-STUDENT'S ANSWER:</b></p> <p><i>"external respirations move gas from blood. Internal respirations are when gas exchanges place of the blood and tissues"</i></p> <p>→ <b>GRADING:</b> The LO essay asks for a <b>contrast</b> of internal and external respiration <b>AND</b> to <b>explain</b> the role of the alveolar-capillary membrane. The student did not thoroughly contrast internal and external respiration. The student merely attempted to <b>define</b> the terms. The student did not correctly deal with the LO question. The student used <b>factually incorrect</b> material and <b>did not</b> explain the role of the alveolar-capillary membrane at all. The students' answers have frequent spelling, punctuation and grammar problems. <b>This student receives no credit (0 points) for this LO essay.</b></p>

## Discussion Board (DB) Grading Rubric

# of DB POSTS	# of DB REPLIES	Grade	Deadlines, Point Deductions, Original Posts, Response Requirements etc.
<b>1</b>	<b>1</b>	<b>100</b>	<p>Students who post their initial discussion board response to the discussion board topic and reply to at least one other student's post will be given a 100 on the assignment <b>IF</b>:</p> <ul style="list-style-type: none"> <li>Initial post and response turned in by the <b>due date</b> on Lesson Plan.</li> <li>Students must have thorough and thoughtful replies to another student's post. Response <b>must contain 4-5 sentences</b>. No credit will be given for any response or reply that is simply an answer of "yes/no" or "I agree/disagree." All responses must contain 4-5 sentences <b>pertaining to the DB topic</b>. No credit will be given for 4 sentences or comments such as: <i>Thank you for your post. You did a great job describing the process. I learned a lot from your descriptions. Great job, keep up the good work.</i> <b>These 4 sentences do not</b> pertain to DB topic. They are merely comments.</li> <li>Replying to your own post is <b>NOT</b> considered a reply.</li> <li>No credit given for <b>copying/pasting</b> your original post &amp; submitting as a response.</li> <li>Do not copy answers from Instructor's PowerPoint, websites, etc. This is <b>plagiarism</b>. No credit will be given for taking someone else's work and passing it off as your own.</li> </ul>
<b>1</b>	<b>0</b>	<b>70</b>	<p>Any student that does not respond to at least one other student's post will not receive a grade above 70. The grade of 70 will be the highest grade that the student will be able to receive on the discussion response and complies with instructions below:</p> <ul style="list-style-type: none"> <li>Initial post and response turned in by the <b>due date</b> on Lesson Plan.</li> <li>No credit given for <b>copying/pasting</b> your original post &amp; submitting as a response.</li> <li>Students must have thorough/thoughtful replies to another student's post discussing the DB topic. Response <b>must contain 4-5 sentences with criteria listed above</b>.</li> <li>No credit will be given for general comments on another student's post such as: <i>Yes/No. I agree/disagree. Thank you for your post. You did a great job describing the process. I learned a lot from your descriptions. Great job, keep up the good work. You were right about your statements. I enjoy learning about the different kinds of muscles and what they do is really interesting! This section has been one of my favorites so far! You gave a great descriptive answer to the discussion question, great job.</i> These sentences do not pertain to the discussion board topic. They are comments on another student's work and do not include sentences regarding the discussion board topic.</li> </ul>
<b>0</b>	<b>1</b>	<b>50</b>	<p>Students who <b>do not</b> post their own answer, but only respond to one other student's post will not receive a grade above 50. The grade of 50 will be the highest grade that the student will be able to receive on the DB response and complies with instructions below:</p> <ul style="list-style-type: none"> <li>Initial post and response turned in by the <b>due date</b> on Lesson Plan.</li> <li>Students must have thorough/thoughtful replies to another student's post as stated above. Response <b>must contain 4-5 sentences with criteria as stipulated above</b>.</li> <li>No credit will be given for any response or reply that is simply an answer of "<b>yes/no</b>" or "<b>I agree/disagree</b>" or include comments as listed above.</li> </ul>
<b>0</b>	<b>0</b>	<b>0</b>	<ul style="list-style-type: none"> <li>Students will receive a 0 on the discussion question if the student does not post an answer or response to one other students' post by the due date on Lesson Plan.</li> </ul>

