



BIOL 2114: Anatomy & Physiology II
COURSE SYLLABUS
Fall Mini Mester 2017: Tuesday Lecture

COURSE INFORMATION

Credit Hours/Minutes: 3/2250
Class Location: HAS 903
Class Meets: 8:00 AM - 1:15PM (Tuesday-Lecture)
CRN: 20099

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Sadia Ajohda
Office Location: Room #723 (RMTC Bldg.)
Office Hours: 7-12, 1-3 M; 7:00-8:00 T, W, R
Email Address: sajohda@southeastarntech.edu
Phone: 912-538-3216
Fax Number: 912-538-3156
Tutoring Hours: By appointment

REQUIRED TEXT

¹Principles of Anatomy and Physiology, Tortora/Grabowski, 14th Edition, John Wiley & Sons, Inc.
²Anatomy & Physiology Lab Workbook, **BIO 2114** First Edition; Southeastern Technical College, 2017

REQUIRED SUPPLIES

Ink pens, highlighter, and any other supplies deemed necessary by instructor.

COURSE DESCRIPTION

Continues the study of the anatomy and physiology of human body. Topics include: endocrine system, cardiovascular system, blood and lymphatic system, immune system, respiratory system, digestive system, urinary system, and reproductive system. Lab experience supports the classroom learning.

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

Pre-requisite: BIOL 2113 and 2113L

Co-Requisite: BIOL 2114L

COURSE OUTLINE

THE ENDOCRINE SYSTEM

1. Discuss the functions of the endocrine system in maintaining homeostasis.
2. Contrast the endocrine and nervous systems.
3. Discuss how hormones work.
4. Discuss the control of endocrine organs.
5. Describe the role of the hypothalamus in endocrine control.
6. Describe the location, hormones, and functions of the following endocrine glands: pituitary, thyroid, parathyroid, adrenal, pancreas, ovaries, testes, pineal, and thymus.
7. Describe endocrine disorders of hypo- and hypersecretion.

THE CARDIOVASCULAR SYSTEM (THE HEART)

1. Describe the anatomy of the heart and heart wall.
2. Describe the flow of blood through the heart including the pulmonary and systemic circuits.
3. Explain the structural and functional features of the conduction system of the heart and EKG tracings
4. Describe the principal events of the cardiac cycle.
5. Contrast the sounds of the heart and their clinical significance.
6. Calculate cardiac output and discuss factors that affect it.
7. List the risk factors involved in heart disease.

BLOOD VESSELS AND THEIR ROUTES

1. Contrast the structure and function of the various types of blood vessels.
2. Explain how the venous blood is returned to the heart.
3. Explain blood pressure and pulse.
4. Discuss the factors that affect blood pressure.
5. Contrast the clinical significance of systolic, diastolic, and pulse pressure.
6. Discuss the mechanism of capillary exchange.
7. Describe blood flow through systemic and pulmonary circuits. Identify the principal arteries and veins of the systemic, pulmonary, and hepatic portal circulations.
8. Describe unique aspects of fetal circulation.
9. Explain the effects of exercise on the cardiovascular system.
10. Describe significant cardiovascular diseases including coronary artery disease and congestive heart failure.

THE BLOOD AND LYMPHATIC SYSTEM

1. Discuss Components and functions of blood, lymph, interstitial fluid, and the lymphatic system.
2. List the components of plasma and their functions.
3. List the characteristics and functions of formed elements.
4. List the lymphoid cells including lymphocytes (T & B cells), plasma cells, macrophages & reticular cells.
5. Lymphoid organs including lymph nodes, bone marrow, spleen, thymus, tonsils and nodule aggregates.
6. Identify the stages involved in hemostasis.
7. Explain the ABO and Rh blood grouping systems.
8. Discuss causes of anemia.
9. Describe selected blood disorders and tests.

THE IMMUNE SYSTEM (RESISTANCE)

1. Discuss the basic properties of immunity.
2. Discuss innate and adaptive immunity.
3. Explain the process of cellular immunity and the role of T-cells.
4. Explain the process of humoral immunity and the role of B-cells and antibodies.
5. Discuss the difference between primary and secondary responses.
6. Describe types of active and passive immunity.
7. Describe selected immune disorders.

THE RESPIRATORY SYSTEM (CHARACTERISTICS AND FUNCTIONS)

1. Identify the organs of the respiratory system and describe their functions.
2. Contrast internal and external respiration and explain the role of the alveolar-capillary membrane.
3. Describe the events involved in pulmonary ventilation and discuss the significance of pleura.
4. Explain the mechanism of oxygen and carbon dioxide transport in the blood.
5. Describe the various factors that control the rate of respiration.
6. Define selected disorders of the respiratory system

THE DIGESTIVE SYSTEM (FUNCTIONS AND PROCESSES)

1. Identify the organs of the gastrointestinal tract and the accessory organs of digestion and their functions in digestion.
2. Identify the general histological layers of the digestive organs and explain how the layers are modified to accommodate the function of each organ.
3. Describe the mechanical movements of the GI tract.
4. Identify the major digestive secretions and their functions.
5. List the enzymes involved in the breakdown of carbohydrates, fats, and proteins.
6. Describe the process of absorption of fats, carbohydrates, and proteins.
7. Define the processes involved in the formation of feces and defecation.
8. Describe common disorders of the digestive system.
9. Discuss carbohydrate, fat, and protein metabolism.
10. Discuss metabolic rate and the role of the liver in metabolism.
11. Describe the absorptive and post-absorptive states.

THE URINARY SYSTEM (FUNCTIONS AND PROCESSES)

1. Identify the external and internal gross anatomical features of the kidneys.
2. Discuss the formation of urine explaining the microscopic anatomy of the nephron and its basic functions of filtration, reabsorption, and secretion.
3. Discuss the role of the kidney in maintaining blood pressure and the function of the juxtaglomerular apparatus.
4. Explain the role of key hormones on the kidney and their role in water and electrolyte balance.
5. Discuss the role of the kidney in homeostasis of pH.
6. Discuss the components of urine.
7. Discuss the structure and physiology of the ureters, urinary bladder, and urethra.
8. Describe disorders of the urinary system.

THE REPRODUCTIVE SYSTEM (MALE AND FEMALE)

1. Explain the structure and functions of the male reproductive organs and the pathway of sperm.
2. Discuss the processes of spermatogenesis and spermatogenesis in the male.
3. Describe the normal composition of semen and the role of the accessory sex glands in production of semen.
4. Discuss the role of hormones in the male reproductive system.

5. Explain the structure and functions of the female reproductive organs and the pathway of the egg and zygote.
6. Discuss the process of oogenesis.
7. Discuss the principal events of the menstrual and ovarian cycles and explain all hormones involved.
8. Discuss the physiology of sexual intercourse.
9. Discuss examples of male and female reproductive diseases.

GENERAL EDUCATION CORE COMPETENCIES

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

- 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.

STUDENT REQUIREMENTS

Students are responsible for the policies and procedures in the STC E-Catalog. During an examination, students are required to place all textbooks and personal property on the floor or counter located in the back or to the side of the classroom. Students are to be seated with an empty seat between each student. No talking is allowed once the test begins. **Students found with cell phone or any other communication device during a test will be considered cheating & given a grade zero. This applies to students who have completed/submitted test & using cell phone in class while testing is still in progress/others are still testing.**

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 also 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 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 is at the discretion of the instructor.

ADDITIONAL ATTENDANCE PROVISIONS

HEALTH SCIENCES

Requirements for instructional hours within Health Science and Cosmetology programs reflect the rules of respective licensure boards and/or accrediting agencies. Therefore, these programs have stringent attendance policies. Each program's attendance policy is published in the program's handbook and/or syllabus which specify the number of allowable absences. All provisions for required make-up work in the classroom or clinical experiences are at the discretion of the instructor.

Attendance is counted from the first scheduled class meeting of each semester. To receive credit for a course a student must attend at least 90% of the scheduled instructional time. Time and/or work missed due to tardiness or absences must be made up at the convenience of the instructor. Any student attending less than the required scheduled instructional time (90%) may be dropped from the course as stated below in the Withdrawal Procedure.

Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course.

For this class, which meets 1 day a week for 8 weeks, the maximum number of days a student may miss is ONE (1) day during the semester.

SPECIAL NEEDS

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Helen Thomas, 912-538-3126, hthomas@southeasterntech.edu, to coordinate reasonable accommodations.

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 on the basis of 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 advise me and make appropriate arrangements with Helen Thomas, 912-538-3126, hthomas@southeasterntech.edu.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (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" is assigned when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a "W" for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of 'F' being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

There is no refund for 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. All grades, including grades of 'W', will count in attempted hour calculations for the purpose of Financial Aid.

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

EVALUATION PROCEDURES

In order to sit for the final exam, a student must maintain a Lecture Test and Lab Test Average of 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. Assignments, lab reports, or presentation grades are not included in tests averages, only tests grades.

THERE WILL BE NO DROP GRADE FOR LECTURE OR LAB.

FINAL EXAMINATION:

A comprehensive final examination will be given at the end of the semester. There will be **no make-up exam** for the final examination. Failure to take the final examination on the specified date will result in a grade of zero. The final exam will include all chapters covered.

LEARNING OBJECTIVE ASSIGNMENTS:

Students are required to read each chapter and complete **learning objectives** for each chapter. Learning objectives are found on the M Drive. All completed learning objectives should be **hand written** in blue ink & turned in EACH WEEK in lab report. Additional Assignments are stipulated in the Lesson Plan and can be found on the M. Drive as well. All assignments are due on dates delineated on Lesson Plan.

GROUP PROJECT/PRESENTATION:

Students will work in small groups (3-5 people/group) and give an educational Power Point presentation on a disease or disorder that affects certain body systems related to chapters we will cover in this course. List of topics to choose from along with guidelines for arrangement, content, requirements, and rubric for Power Point presentations are provided on STC's "M" drive. Presentations should be 15-20 minutes long. Please ensure presentations are within time limit. Do not exceed 20 minutes or do not present less than 15 minutes. Presentation grade will be affected if presentation is over or under time limit. You are required to include visual aid or short video clips or any materials/media that will enhance presentation. However, video clips should not exceed 3-4 minutes. Each presentation should not exceed two video clips. Points will be deducted for additional video clips. Group members should have **equal participation** for this project. The week before presentations, instructor will ask all group members for feedback on equal participation. Feedback on equal participation includes but not limited to the following: participating at group meetings during Lecture/Lab or out of class meetings, corresponding/communicating in a timely manner with group members to provide information on assigned portion of project, and providing pertinent information regarding assigned portion of project. The week of Presentation (date indicated on lesson plan), **all presentations should be submitted to instructor and saved on Instructor's Computer (Desktop) prior to the designated presentation day.**

MAKEUP GUIDELINES

Students will be allowed to make-up **one** lecture examination, excluding the final examination, due to an **excused absence** approved by the instructor. **Any other lecture exam missed will result in an automatic grade of zero.** There will be one day designated for the make-up Lecture exam. It will be scheduled at the end of the semester and stipulated on Lesson Plan. Failure to take a make-up exam on the specified date will result in a grade of zero.

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

Student 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" 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 as a result of 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 as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION

The Technical College System of Georgia and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, sex, 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 school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

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

ADA/Section 504 - Equity- Title IX (Students) - OCR Compliance Officer	Title VI - Title IX (Employees) - EEOC Officer
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 st Street, Vidalia Office 108 Phone: 912-538-3126 hthomas@southeasterntech.edu	Blythe Wilcox, Director of Human Resources Vidalia Campus 3001 East 1 st Street, Vidalia Office 138B Phone: 912-538-3147 bwilcox@southeasterntech.edu

GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on STC's website.

ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [STC website](#).

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
Chapter Tests	60%
Learning Objectives Assignment	5%
Group Presentation	5%
Comprehensive Final Exam	30%
TOTAL	100%

GRADING SCALE

Letter Grade	Range
A	90-100
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.

BIO 2114 Anatomy and Physiology II

Fall Mini-Semester 2017 (**TUESDAY LECTURE**) Lesson Plan

Subject to change at Instructor's discretion

Date	Chapter/Content	Assignments	Comp. Area
10/10	Introduction to Course, Syllabus, Outline, Policies/Procedures, emergency plan etc. Ch. 18: Endocrine System Ch. 19: Cardio. Sys: Blood Ch. 20: Cardio. Sys: The Heart Ch. 21: Cardio. Sys: Blood Vessels	<ul style="list-style-type: none"> Read Chapters before Lecture and complete (LO) Learning Objectives (On M Drive). LO for each chapter due lab days (place in lab report). REMINDER: Complete before next Lab day. Print and complete to turn in from M. Drive located in "Assignments" and "Lab" folders: <ol style="list-style-type: none"> Blood/Circulation Worksheet Heart Dissection Worksheet 	C: 1,2,3 G: a-c
10/17	LECTURE TEST # 1 LAB TEST #1 Ch. 22: Lymphatic System Ch. 23: Respiratory System Ch. 24: Digestive System	Lecture Test #1 (Chapters: 18, 19, 20, 21) Lab Test #1 (Chs:18, 19, 20, 21) Complete Learning Objectives: M Drive	C: 3-5 G: a-c
10/24	LECTURE TEST # 2 LAB TEST #2 Ch. 25: Metabolism and Nutrition Ch. 26: Urinary System Anatomy Ch. 27: Fluid and Electrolyte	<u>Lecture</u> Test #2 (Chapters: 22 & 23) Lab Test #2 (Chapters 22 & 23) Complete Learning Objectives: M Drive	C: 6,7 G: a-c
10/31	LECTURE TEST #3 LAB TEST #3 Chapter 28: Reproductive System	Lecture Test #3 (Chapters: 24 & 25) Lab Test #3 (Chapters: 24 & 25) Complete Learning Objectives: M Drive	C: 7,8 G: a-c
11/7	LECTURE TEST # 4 LAB TEST #4 Power Point/Group Pres. continued 65% November 15 th	Lecture Test #4 (Chapters: 26 -27) Lab Test #4 (Chapters: 26 - 28) Print Power Point (3 slides per pg.) Place in Lab Report.	C: 1-8 G: a-c
11/14	Finals Review: M Drive All Learning Objectives due	Meet in Gillis lab	C: 1-8 G: a-c
11/21	FINALS: LAB & LECTURE	FINALS-LAB (ALL CHAPTERS) FINALS-LECTURE (ALL CHAPTERS)	C: 1-8 G: a-c
11/28	M. Drive Assignment Final lab Check Offs	M. Drive/Assignments folder: Lect. /lab worksheet Chapters: 18-22. Place in Lab Report (Meet in Gillis Lab)	C: 1-8 G: a-c

COMPETENCY AREAS (C):

- 1) The Endocrine System
- 2) The Cardiovascular System
- 3) The Blood and Lymphatic System
- 4) The Immune System
- 5) The Respiratory System
- 6) The Digestive System
- 7) The Urinary System
- 8) The Reproductive System

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.