



TENTATIVE—SUBJECT TO CHANGE
BIOL 2114: Anatomy & Physiology II
COURSE SYLLABUS
Hybrid
Fall 2019 Mini Mester: Tuesday Lecture

COURSE INFORMATION

Credit Hours/Minutes: 3/2250

Campus/Class Location: Vidalia Campus/Health Science Annex (HSA) Building, Room 903

Class Meets: Tuesday 8:00 AM – 12:00 PM (Lecture **Hybrid format**: 60% face to face in class & 40% online).

Course Reference Number (CRN): 20132

Preferred Method of Contact: email [Sadia Ajohda \(sajohda@southeasterntech.edu\)](mailto:sajohda@southeasterntech.edu)

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Sadia Ajohda

Campus/Office Location: Vidalia Campus, Gillis Building, Office 723

Office Hours: 7am-1pm, 3pm-4pm Mondays and (&) 7am-8am Tuesdays, Wednesdays, & Thursdays

Email Address: [Sadia Ajohda \(sajohda@southeasterntech.edu\)](mailto:sajohda@southeasterntech.edu)

Phone: 912-538-3216

Fax Number: 912-538-3156

Tutoring Hours: By appointment

This course is taught in a hybrid format. Hybrid classes require students to complete a portion 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 HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and 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, 15th Edition, John Wiley and Sons, Incorporated. WileyPLUS (WP) Next Gen with eText and loose-leaf bundle.

²**Anatomy and Physiology Lab Workbook, BIO 2113** First Edition; Southeastern Technical College (STC), 2017

REQUIRED SUPPLIES & SOFTWARE

Supplies necessary for this course include the following: One clear front report cover with prongs used for lab (make sure it is sturdy and can hold 100 pages or more), colored pencils, ink pens, highlighters, and any other supplies deemed necessary by instructor. This course uses a third party platform operated and maintained by the Publisher's *WileyPLUS Next Gen* Tortora/Grabowski, 15th Edition, John Wiley and Sons, Incorporated.

WileyPLUS (WP) Next Gen with eText and loose-leaf bundle with online access code can be purchased at STC's bookstore. **Weekly assignments will be graded online and must be completed by deadline. Weekly WileyPlus assignments account for 10% of final grade. If Assignments are not completed online by deadline, points will be deducted.**

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

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 electrocardiogram (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 thymus cells (T cells) and bone marrow cells (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 blood grouping systems: Type A, Type B, and Type O (ABO). Describe Rhesus (Rh) blood grouping systems as well.
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 thymus cells (T-cells).
4. Explain the process of humoral immunity and the role of bone marrow cells (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 gastro intestinal (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 potential of Hydrogen (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:

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

Students are responsible for the policies and procedures in the Southeastern Technical College's (STC's) Catalog and Handbook. All examinations are conducted face to face in class with a proctor. 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 (including smart watches) during a test will be considered cheating and given a grade zero for the test. This applies to students who have completed/submitted test while testing is still in progress (other students 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 and 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 is at the discretion of the instructor. 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.

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 one (1) day a week for eight (8) weeks, the maximum number of days a student may miss is ONE (1) day during the semester.

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 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.

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

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** (LO) for each chapter. Learning objectives (LO) are found on Southeastern Technical College's (STC's) Material Drive (M Drive). All completed learning objectives should be **hand written** in blue ink and turned in EACH WEEK in lab report. Additional Assignments are stipulated in the Lesson Plan and can be found on STC's M. Drive as well. All assignments are due on dates delineated on Lesson Plan.

EVALUATION PROCEDURES

All examinations/tests are conducted in class in traditional face to face format for both Lecture and Lab. In order to sit for the final exam, a student must maintain a Lecture Test 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. 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.

WILEYPLUS ASSIGNMENTS AND ACTIVITIES (TICKET TO CLASS)

WileyPLUS online Assessments & Adaptive Practice must be completed weekly. These assignments account for 10% of final grade and must be completed by deadline. Failure to do so will result in zero points for the missed activity. No points will be awarded if the activity is completed **after** deadline. Each week students must complete WileyPLUS online chapter Assessments & Adaptive Practices for every chapter listed weekly on Lesson Plan below. Students will print a summary sheet for each chapter Assessment and Adaptive Practice upon completion. **Please highlight** name, chapter, time spent on assignment and grade as it will be recorded on every summary sheet. These summary sheets will serve as a **"TICKET TO CLASS"** & should be turned in on lab day. Students will not be permitted to enter lab without ticket to class and will be considered absent.

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. Failure to take a make-up exam on the specified date will result in a grade of zero.

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: [Macy Gay, \(mgay@southeasterntech.edu\)](mailto:mgay@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 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 make arrangements with the appropriate campus coordinator.

Swainsboro Campus: [Macy Gay, \(mgay@southeasterntech.edu\)](mailto:mgay@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 the absence occurs. Requests made after delivery **MAY NOT** be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that 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 Southeastern Technical College Catalog and 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" (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 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 (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:

<p>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</p>	<p>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</p>
<p>Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1st Street, Vidalia Office 165 Phone: 912-538-3126 Email: Helen Thomas (hthomas@southeasterntech.edu)</p>	<p>Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1st Street, Vidalia Office 138B Phone: 912-538-3230 Email: Lanie Jonas (ljonas@southeasterntech.edu)</p>

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 BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College's 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
Chapter Tests	50%
Learning Objectives Assignment	10%
Weekly WileyPLUS Online Assignments: Assessments & Adaptive Practices	10%
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. This course does not utilize Blackboard.

Fall 2019 Mini-Semester (BIO 2114 TUESDAY LECTURE) Lesson Plan
Subject to change at Instructor's discretion

Date	Chapters (Chs.)/Content	Assignments	Competency Area
10/8	Introduction to Course, Syllabus, Outline, Policies/Procedures, emergency plan & rules/regulation. Ch. 18: The Endocrine System (Sys) Ch. 19: The Cardio Sys: Blood Ch. 20: The Cardio Sys: The Heart Ch. 21: The Cardio Sys: Blood Vessels Reminder: Lab this week will be conducted out of class: Complete Hybrid Assignments (do not come to lab). See Lab lesson plan for details.	<ul style="list-style-type: none"> Read Chapters (Chs.) before Lecture & complete (LO) Learning Objectives. LO due each week. Complete from M. Drive/Wiley Plus: 4. Blood/Circulation Worksheet: Heart Dissection Worksheet Print WileyPLUS "TICKET TO CLASS" (see lab syllabus for instructions) & turn in next week.	1,2,3 a-c
10/15	LECTURE TEST # 1 LAB TEST #1 Ch. 22: The Lymphatic System Ch. 23: The Respiratory System Ch. 24: The Digestive System	Lecture Test #1 (Chapters: 18, 19, 20 & 21) Lab Test #1 (Chapters:18, 19, 20 & 21) <ul style="list-style-type: none"> Complete Learning Objectives Print WileyPLUS Tickets for Chs. 22-24 	3-5 a-c
10/22	LECTURE TEST # 2 LAB TEST #2 Ch. 25: Metabolism and Nutrition Ch. 26: The Urinary System Anatomy Ch. 27: Fluid and Electrolyte	<u>Lecture</u> Test #2 (Chapters: 22 & 23) Lab Test #2 (Chapters 22 & 23) <ul style="list-style-type: none"> Complete Learning Objectives Print WileyPLUS Tickets for Chs. 25-27 	6,7 a-c
10/29	LECTURE TEST #3 LAB TEST #3 Chapter 28: The Reproductive System Group Assignment	Lecture Test #3 (Chapters: 24 & 25) Lab Test #3 (Chapters: 24 & 25) <ul style="list-style-type: none"> Complete Learning Objectives Print WileyPLUS Tickets for Chs. 28 	7,8 a-c
11/5	LECTURE TEST # 4 LAB TEST #4 Power Point/Group Presentation November 12th= 65% Point	Lecture Test #4 (Chapters: 26 -27) Lab Test #4 (Chapters: 26 - 28) <ul style="list-style-type: none"> Complete Learning Objectives 	1-8 a-c
11/12	Power Point/Group Presentation (continued)	Print Power Point (3 slides per pg.) Place in Lab Report.	1-8 a-c
11/19	Finals Review: M Drive All Assignment & Learning Objectives due	Meet in Gillis lab: Place all assignments in lab report.	1-8 a-c
11/26	FINALS: LAB & LECTURE	FINALS-LAB (ALL CHAPTERS) FINALS-LECTURE (ALL CHAPTERS)	1-8 a-c

COMPETENCY AREAS:

- 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:

- 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.