BIOL 2401 Anatomy and Physiology I
Summer I 2022

Instructor: Carla J. Whittaker, PhD.
Section # and CRN: 30263/30265- P02/P62
Office Location: E.E. Obanion Science Building, Suite 430W
Office Phone: 936-261-3161
Email Address: cjwhittaker@pvamu.edu
Office Hours: Monday-Friday 12:00-1:00 pm, By Appointment
Mode of Instruction: Face to Face
Course Location: 30263/P02 M-TH Room 101 E.E. O'Bannion
30265/P62 M-TH Room 311 E.E. O'Bannion
Class Days & Times: 30263/P02 M-TH 1:00-2:20 pm
30265/P62 M-TH 2:30-5:30 pm
Catalog Description: An introductory course examining the organization of a human body and the mechanisms for maintaining homeostasis. Topics include chemistry of life, cell and tissue structure, metabolism, skeleton, muscular, nervous, endocrine, and integumentary system. Designed for students who will pursue a career in nursing.

Prerequisites: Lecture and Lab
Co-requisites: Lecture and Lab

Required Texts: Anatomy & Physiology (Saladin, 8th ed.)
On line access code (Connect) Required
University Bookstore ISBN: Saladin 8e: Connect AC – 9781264588480

Recommended Texts:

Student Learning Outcomes:

<table>
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<tr>
<th>Upon successful completion of this course, students will be able to:</th>
<th>Program Learning Outcome # Alignment</th>
<th>Core Curriculum Outcome Alignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Identify and summarize the steps of the scientific method and recognize their role in the context of a laboratory experiment</td>
<td>#1</td>
<td>Critical Thinking, Communication</td>
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<tr>
<td>2 List, identify, and classify the cellular organic macromolecules, specify the monomers for each, and explain their relevance to human structure and function.</td>
<td>#1</td>
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<tr>
<td>3 Explain basic cellular functions such as protein synthesis, cellular respiration, DNA replication, and cell division.</td>
<td>#2, #3</td>
<td>Communication</td>
</tr>
</tbody>
</table>
Recognize the anatomical structures, explain physiological functions, and recognize and explain the principle of homeostasis applied to the integumentary, nervous, endocrine, muscular and skeletal systems

Perform Oral and Written communication of biomedical terms relative to the human body

Collaboratively work through physiological case studies

Demonstrate a critical understanding of biological physiological processes

Analyze quantitative and empirical biomedical datasets and graphs

Please note that this course requires effective time management by students in order to remain on schedule.
Students should plan to allocate, at a minimum, the time required for the course when offered face to face setting. As a rule of thumb, it is recommended that a student spend 2 hours of study for each 1 hour in class. Therefore, for a 4.0 credit hour course (16 weeks of face to face: Lecture and lab), a minimum of 12 contact hours of study per week is required. Considerably more time will be required if the course is offered for 5 weeks.

The course is comprised of 16 Chapters, and multiple assignments organized to correspond to a standard semester. The course is NOT self-paced; approximately three chapters must be completed each week during the five week summer semester. Each Chapter includes the following learning activities: 1) assigned mandatory readings from the electronic E-Book. Each Smartbook chapter has an estimated completion time however, this time is often exceeded. 2. Depending on the chapter, completion of LearnSmart quizzes, quizzes, or discussions are required and 3) Daily assignments that state the daily/weekly activities and due dates.

Course Evaluation Methods
This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course.

Exams – Each lecture and laboratory exam will focus on measuring the students understanding of the physiological processes and anatomical structures of the human anatomy. Exams will be administered through connect, Respondus or Examity. You must set aside the time to take the exam during the designated timed exam.

Lecture: Minimum of four lecture exams will be given during the semester. Exams will consist of multiple-choice and short answer questions. The exams will measure the student’s ability to process anatomy and physiology lexicon, identify the structural similarities and differences, process physiological processes. In addition relate concepts to clinical application and communicate their thoughts in written format. The lecture exams count for 30% of your grade.

Laboratory: Minimum of four practical laboratory exams will be given during the semester. One laboratory practical will be oral format. The practical examinations consist of identification of anatomical parts and physiological functions. Models and animal specimen will be utilized to test your knowledge of these systems.
The laboratory exams accounts for 30% of your grade.

Learnsmarts
LearnSmart helps students succeed by providing a personalized learning path that’s based on responses to questions (right or wrong), as well as how confident they feel about the answers they provide. The program also encourages the retention of the material by identifying concepts that students are likely to forget, and directing them back to portions of the e-book to help them solidify concepts. **The Learnsmarts will be due each week and count 10% of your grade.**

Assignments Exercises – written assignments designed to supplement and reinforce course material

Assignments/Labs: will be answering a collection of questions discussing scientific concepts on the chapter by using composition, labeling, classification, sequencing, true and false, matching and essay question.

Connect Virtual Labs aids students to be better prepared for lab, increases efficiency, and provides the ability to retain more fundamental skills necessary for a successful laboratory experience. Whether used as a fully online solution for lab replacement or preparation, these simulations will help a student learn the practical and conceptual skills, then check for understanding and provide feedback.

This will count 10% of your grade.

Projects – web development assignments designed to measure ability to apply presented course materials.

Case studies/Biological Topic:
Students will collaboratively engage an assigned scientific topic discussed in the course. The group is expected to written and oral presentation of their case study to the class on the assigned day. **This will count 10% of your grade.**

Comprehensive Final Exam is given at the end of each semester. **The final exam accounts for 10% of your grade.** The final exam schedule is set by the University. See attached final exam schedule for exact date.

*Do not schedule any activity during the final exam period (*see above dates).

Critical Thinking, Empirical and Quantitative Core Assessment
Reaction Time Biopac (Lesson 11) assignment will measure the students ability to observe the effects of learning and physiological process on reaction times. It will also measure their ability to compare reaction times with two presentation schedules: fixed intervals and pseudo-random interval datasets. Lastly, they will calculate statistics of group mean, variance and standard deviation. This assignment will be referenced against the Association of American College and Universities Empirical and Quantitative rubric.

Teamwork, Oral and Written Communication
Case Study/Scientific Topic Core Assessment will measure the student’s ability to research, analyze and communicate information for a given case study/scientific topic. Each student will
be assigned to a group to discuss the requirements of the case study. Each member of the
group will be responsible for a written portion of the case study and providing a part for the oral
presentation. The topics will require students to research information and compare data. After
which, they will collaboratively assemble an oral presentation using video and youtube. This
assignment will be referenced against the Association of American College and Universities
Written and Oral communication rubric, Teamwork rubric and Peer Evaluation Rubric (Herreid,
C.F., 2007).

Example of Scientific Topic is a comparison of Nervous system disorders the students will be
responsible for knowing and communicating the history, effected population, discovery and
treatment of the disorder.

**Grading Matrix**

<table>
<thead>
<tr>
<th>Instrument</th>
<th>Value (points or percentages)</th>
<th>Total</th>
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<tbody>
<tr>
<td>Lecture Exams</td>
<td>4 Lecture exams at 100 points ea.</td>
<td>30%</td>
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<tr>
<td>Laboratory Practical Exams</td>
<td>4 Practical exams at 100 pts each</td>
<td>30%</td>
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<tr>
<td>LearnSmart</td>
<td>10 LearnSmart</td>
<td>10%</td>
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<tr>
<td>Assignment (Online, Discussion, Virtual Laboratory )</td>
<td>15 Assignments</td>
<td>10%</td>
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<tr>
<td>Case-studies</td>
<td>4 Case-studies</td>
<td>10%</td>
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<tr>
<td>Comprehensive Final Exam</td>
<td>100 points</td>
<td>10%</td>
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Grade Determination:
A = 100 – 90pts;
B = 89 – 80pts;
C = 79 – 70pts;
D = 69 – 60pts;
F = 59pts or below

Late Assignment Policy

A submission is labeled **Late** when it has been submitted past the due date. Only assignments with a status of Late will be affected by the Late Submission policy. The late policy will be applied to a submission when it is graded. Late assignments will reduce 1% per day late.
(Assignments can be moved as needed)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Lecture Topics</th>
<th>Assignments</th>
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<tbody>
<tr>
<td>1</td>
<td>6/6</td>
<td>Orientation Video</td>
<td>Connect Orientation Assignment</td>
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<td>Pre-Test</td>
<td>APR Orientation Assignment</td>
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<td>Readings</td>
<td>Connect :1st Lab - Virtual Labs Tutorial</td>
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<td>Atlas A (A.1, A.2, A.3, A.4)</td>
<td>Atlas A Assignment</td>
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<td>Practice Atlas: Body Orientation</td>
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<td>6/7</td>
<td>Chemistry of Life (2)</td>
<td>Lab Assignments</td>
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<td>Readings 2.1, 2.3, 2.4</td>
<td>Connect Virtual Labs: Chemical Composition of Cells - Test for Proteins</td>
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<td>Connect Virtual Labs: Chemical Composition of Cells - Test for Starch</td>
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<td>Connect Virtual Labs: Chemical Composition of Cells - Test for Sugars</td>
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<td>Lecture Assignments</td>
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<td>LearnSmart Chapter 2</td>
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<td>Assignment Chapter 2</td>
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<td>6/8</td>
<td>Cellular form and Function (3)</td>
<td>Lab Assignments</td>
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<td>Readings 3.1,3.2,3.3,3.4</td>
<td>Connect Virtual Labs: Microscopy - Operation of Brightfield Microscope</td>
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<td>Connect Virtual Labs: Osmosis - Tonicity in Red Blood Cells</td>
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<td>Lecture Assignments</td>
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<td>LearnSmart Chapter 3</td>
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<td>Assignment Chapter 3</td>
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<td>6/9</td>
<td>Genetics and Cellular Function (4)</td>
<td>Lab Assignments</td>
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<td>Readings 4.1,4.2,4.3</td>
<td>Connect Virtual Labs: DNA Biology and Technology - Isolation of DNA</td>
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<td>Lecture Assignments</td>
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<td>LearnSmart Chapter 4</td>
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<td>Assignment Chapter 4</td>
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<td>Discussion</td>
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<td>2</td>
<td>6/13</td>
<td>Histology (5)</td>
<td>Lab Assignments</td>
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<tr>
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<td>Readings 5.1,5.2,5.3,5.4,5.4,5.6</td>
<td>Make Histology Atlas</td>
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<td>Learn primary tissue, Tissue, function and Location</td>
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<td>Lecture Assignments</td>
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<td>LearnSmart Chapter 5</td>
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<td>Assignment Chapter 5</td>
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<td>6/14</td>
<td>Integumentary System (6)</td>
<td>Lab Assignments</td>
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<td>Readings 6.1, 6.2 , 6.3, 6.4</td>
<td>Practice Atlas : Integumentary system Study</td>
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<td>Practice Atlas : Integumentary system Assignment</td>
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<td>Lecture Assignments</td>
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<td>LearnSmart Chapter 6</td>
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<td>Assignment Chapter 6</td>
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<td>6/15</td>
<td>Lecture Exam I</td>
<td>Lab Assignments</td>
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<td>Bone Tissues (7)</td>
<td>Practice Atlas</td>
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<td>Readings 7.1,7.2,7.3, 7.5</td>
<td>Lecture Assignments</td>
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<td>LearnSmart Chapter 7</td>
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<td>Assignment Chapter 7</td>
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<td>6/16</td>
<td>Lab exam I</td>
<td>Lab Assignments</td>
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<td>Case Study/Discussion: Osteoporosis</td>
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</table>
| 3  | 6/20 | Skeletal System (8) | Readings 8.1, 8.2, 8.3, 8.4, 8.5 | Lab Assignments  
Practice Atlas  
APR assignment  
Lecture Assignments  
LearnSmart Chapter 8  
Assignment Chapter 8 |
|    |    |    |    |    |    |
| 6/21 | Skeletal System (8) | Readings 8.1, 8.2, 8.3, 8.4, 8.5 | | |
|    |    |    |    |    |    |
| 6/22 | Joints (9) | Readings 9.1, 9.3 | Lecture Exam 2 (Ch. 5-8) | Lab Assignments  
Practice Atlas  
APR assignment  
Lecture Assignments  
LearnSmart Chapter 9  
Assignment Chapter 9 |
|    |    |    |    |    |    |
| 6/23 | LAB PRACTICAL II | Muscle Tissue (10) | Readings 10.1, 10.2, 10.3, 10.4, 10.5 | Lab Assignments  
Practice Atlas  
APR Assignment  
Connect Virtual Labs: Skeletal Muscle - Electrical Stimulation  
Lecture Assignments  
LearnSmart Chapter 10  
Assignment Chapter 10  
Discussion |
|    |    |    |    |    |    |
| 4  | 6/27 | Muscle Tissue (10) | Readings 10.1, 10.2, 10.3, 10.4, 10.5 | Lab Assignments  
Practice Atlas  
APR Assignment  
Connect Virtual Labs: Electromyography - Motor Unit Recruitment  
Lecture Assignments  
LearnSmart Chapter 11  
Assignment Chapter 11 |
|    |    |    |    |    |    |
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|    |    |    |    |    |    |
| 6/30 | Exam 3 (Ch. 9-11) | Nervous Tissue (12) | Readings 12.1, 12.2, 12.3, 12.4 | LAB PRACTICAL III  
Lab Assignments  
Practice Atlas  
APR assignment  
Lecture Assignments  
LearnSmart Chapter 12  
Assignment Chapter 12  
Final Project: Nervous System Papers Due 6/26/20 |
|    |    |    |    |    |    |
| 5  | 7/5 | Spinal Cord, Spinal Nerves, Somatic Reflexes (13) | Readings 13.1, 13.2 | Lab Assignments  
Practice Atlas  
APR assignment  
Lecture Assignments  
LearnSmart Chapter 13  
Assignment Chapter 13 |
Brain, Cranial Nerves (14)

Lab Assignments
Practice Atlas
APR assignment
Lecture Assignments
LearnSmart Chapter 14
Assignment Chapter 14

Brain, Cranial Nerves (14)
Autonomic Nervous System and Visceral
reflexes (15)
Readings 15.1
Lecture Exam 4 (Ch. 12-14)

Lab Assignments
Practice Atlas
APR assignment
Lecture Assignments
Assignment Chapter 15-16
Lab Exam 4 (Ch. 12-14)

6 7/11 Final Exam (Comprehensive)

Student Support and Success

John B. Coleman Library
The library and its partners have as their mission "to provide resources and instructional material in support of the evolving curriculum, as a partner in Prairie View A&M University's mission of teaching, research, and service" and to support the University's core values of "access and quality, diversity, leadership, relevance, and social responsibility" through emphasis on ten key areas of service. It maintains library collections and access both on campus, online, and through local agreements to further the educational goals of students and faculty.

Center for Academic Support
The Center for Academic Support (CAS) offers Tutoring via peer tutoring. The services include workshops (i.e., Save My Semester, Recalculate Your Route), seminars (i.e., Tools You Can Use: TI-84), group review sessions (i.e., College Algebra Topic Reviews, GRE Preparation), group study opportunities (i.e., TSIA, HESI, Study Break, Exam Cram), and test-taking strategies (How to take Notes, Study Buddy, 5 Day Study Guide). The Tutoring Center is a nationally certified tutoring program through the National Tutoring Association. The peer tutors are trained and certified by the coordinator each semester. Location: J.B. Coleman Library

COMPASS
The Center for the Oversight and Management of Personalized Academic Student Success (COMPASS) is designed to help Prairie View students in their second year and beyond navigate towards graduation by providing the following services: Academic Advisement, Targeted Tutorials for Personalized Learning, Campus-Wide Referrals, and Academic & Social Workshops. Location: J.B. Coleman Library

Writing Center
The Writing Center provides student consultants on all aspects of the writing process and a variety of writing assignments. Writing Center consultations assist students in such areas as prewriting, brainstorming, audience awareness, organization, research, and citation. Location: Hilliard Hall 121

University Rules and Procedures

Disability statement (See Student Handbook):
Students with disabilities, including learning disabilities, who wish to request accommodations in class should register with the Services for Students with Disabilities (SSD) early in the semester so that appropriate
arrangements may be made. In accordance with federal laws, a student requesting special accommodations must provide documentation of their disability to the SSD coordinator.

**Academic misconduct (See Student Handbook):**
You are expected to practice academic honesty in every aspect of this course and all other courses. Make sure you are familiar with your Student Handbook, especially the section on academic misconduct. Students who engage in academic misconduct are subject to university disciplinary procedures.

**Forms of academic dishonesty:**
1. Cheating: deception in which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered; giving or receiving aid unauthorized by the instructor on assignments or examinations.
2. Academic misconduct: tampering with grades or taking part in obtaining or distributing any part of a scheduled test.
3. Fabrication: use of invented information or falsified research.
4. Plagiarism: unacknowledged quotation and/or paraphrase of someone else’s words, ideas, or data as one’s own in work submitted for credit. Failure to identify information or essays from the Internet and submitting them as one’s own work also constitutes plagiarism.

**Nonacademic misconduct (See Student Handbook):**
The university respects the rights of instructors to teach and students to learn. Maintenance of these rights requires campus conditions that do not impede their exercise. Campus behavior that interferes with either (1) the instructor’s ability to conduct the class, (2) the inability of other students to profit from the instructional program, or (3) campus behavior that interferes with the rights of others will not be tolerated. An individual engaging in such disruptive behavior may be subject to disciplinary action. Such incidents will be adjudicated by the Dean of Students under nonacademic procedures.

**Sexual misconduct (See Student Handbook):**
Sexual harassment of students and employers at Prairie View A&M University is unacceptable and will not be tolerated. Any member of the university community violating this policy will be subject to disciplinary action.

**Attendance Policy**
Prairie View A&M University requires regular class attendance. Excessive absences will result in lowered grades. Excessive absenteeism, whether excused or unexcused, may result in a student’s course grade being reduced or in assignment of a grade of “F”. Absences are accumulated beginning with the first day of class.

**Student Academic Appeals Process**
Authority and responsibility for assigning grades to students rests with the faculty. However, in those instances where students believe that miscommunication, errors, or unfairness of any kind may have adversely affected the instructor's assessment of their academic performance, the student has a right to appeal by the procedure listed in the Undergraduate Catalog and by doing so within thirty days of receiving the grade or experiencing any other problematic academic event that prompted the complaint.

**Disability statement (See Student Handbook):**
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**TECHNICAL CONSIDERATIONS**

**Minimum Recommended Hardware and Software:**
- Intel PC or Laptop with Windows 7; Mac with OS X; Smartphone or iPad/Tablet with Wi-Fi
- High speed Internet access
• 8 GB Memory
• Hard drive with 320 GB storage space
• 15” monitor, 800x600, color or 16 bit
• Sound card w/speakers
• Microphone and recording software
• Keyboard & mouse
• Most current version of Google Chrome, Safari, Internet Explorer or Firefox

Note: Be sure to enable Java & pop-ups

Participants should have a basic proficiency of the following computer skills:
• Sending and receiving email
• A working knowledge of the Internet
• Proficiency in Microsoft Word (or a program convertible to Word)
• Proficiency in the Acrobat PDF Reader
• Basic knowledge of Windows or Mac O.S.

Technical Support:
Students should go to https://mypassword.pvamu.edu/ if they have password issues. The page will provide instructions for resetting passwords and contact information if login issues persist. For other technical questions regarding eCourses, call the Office of Distance Learning at 936-261-3283

Communication Expectations and Standards:
Emails or discussion postings will receive a response from the instructor, usually in less than 48 hours. Urgent emails should be marked as such. Check regularly for responses.

Discussion Requirement:
Online courses often require minimal to no face-to-face meetings. However, conversations about the readings, lectures, materials, and other aspects of the course can take place in a seminar fashion. This will be accomplish by the use of the discussion board. The exact use of discussion will be determined by the instructor.

It is strongly suggested that students type their discussion postings in a word processing application and save it to their PC or a removable drive before posting to the discussion board. This is important for two reasons: 1) If for some reason your discussion responses are lost in your online course, you will have another copy; 2) Grammatical errors can be greatly minimized by the use of the spell-and-grammar check functions in word processing applications. Once the post(s) have been typed and corrected in the word processing application, it should be copied and pasted to the discussion board.