COURSE: Biology
PREFIX NO.: BIO 210
EFFECTIVE DATE: Fall 2014
NEXT REVIEW DATE: Fall 2015

TITLE: Anatomy and Physiology I
CREDITS: 4
CLASS - LAB - TOTAL: 3

PREREQUISITES: A “C” or better in BIO 112 or BIO 101 within ten years

DESCRIPTION: This is the first in a sequence of courses, including an intensive coverage of the body as an integrated whole. All body systems are studied.


LAB MANUAL: Photomanual and Dissection Guide to the Cat, by Bohensky; Handouts used in lab will be provided by the instructor electronically or by distribution in class.

MATERIALS (specifying those to be purchased by student): Latex gloves are recommended for lab and should be furnished by the student. Safety glasses and lab aprons are available in lab upon request (no purchase required)

COLLATERAL READING: Students may be asked to review periodical or online resources.

CLASS MANAGEMENT ACTIVITIES (Attendance, tardies, testing, etc.):
Academic Dishonesty: As stated in the college catalog, any student that plagiarizes or is caught cheating on any assignment in a course will receive a zero for that assignment. The documentation will be collected and reported to the Dean of Student Services.

Attendance: According to college policy, a student may miss 20% of the scheduled class periods. A student withdrawing from a course up to midterm will be assigned a “W”. A “W” will be assigned after midterm only if the student has instructor-documented satisfactory progress. A “WF” may be assigned for a student withdrawal after midterm when the student is not passing the course. An “F” may be assigned for excessive absences without withdrawal.

Tardies: Three tardies will equal one absence. Please remember this when you are counting your absences. A tardy is when the student comes into class after the roll has been called. You are responsible for material covered in any class or lab you miss.

General Information: There is no eating, drinking, or smoking in any science lab at NETC as indicated by posted signs. Students should also familiarize themselves with the safety procedures as posted in classrooms and/or discussed in class. Each student
must wear his or her student ID at all times when on campus. Use of cell phones/beepers or cameras is not permitted at any time during any class or lab unless the instructor deems them useful for a class activity. If needed, calculators will be supplied by the instructor.

Classroom Etiquette: An integral part of an education is developing a sense of integrity and responsibility toward faculty and other students. Arriving late to class, being unprepared, inappropriate talking while class is in session, using cell phones, etc. negatively reflects on you and your fellow students. Please be considerate to them and your instructor.

DISABILITIES STATEMENT:
Students with disabilities are encouraged to contact the Dean of Student Services to discuss needs or concerns as they pursue an academic program and participate in campus life. The Dean of Student Services will provide guidance regarding official documentation of disabilities and/or accommodation of needs. (See College Catalog)

RESOURCES (A-V, persons, tools/equipment): The following equipment may be used in lecture or lab settings: Smart Board, VCR/DVD player, computer, LCD projector, microscopes, various biological lab equipment as specified in individual labs.

COURSE TOPICAL OUTLINE (List topics and sub-topics of course) and Calendar or approximate length of time devoted to topic.

Any necessary changes will be announced via Moodle or in class.

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TOPIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Introduction to Anatomy &amp; Physiology</td>
</tr>
<tr>
<td>2</td>
<td>Chemical Basis of Life</td>
</tr>
<tr>
<td>3</td>
<td>Cells</td>
</tr>
<tr>
<td>5</td>
<td>Tissues</td>
</tr>
<tr>
<td>6</td>
<td>Integumentary System</td>
</tr>
<tr>
<td>7</td>
<td>Skeletal System</td>
</tr>
<tr>
<td>8</td>
<td>Joints of the Skeletal System</td>
</tr>
</tbody>
</table>

Test #1 on Chapters 1 & 2

Test #2 on Chapter 3

Test #3 on Chapters 5 & 6

Test #4 on Chapters 7 & 8
CHAPTER | TOPIC
------- | --------
9       | Muscle System

Test #5 on Chapter 9

10      | Nervous System I
11      | Nervous System II

Test #6 on Chapters 10 & 11

Comprehensive Final Exam

PROPOSED LAB SCHEDULE: any necessary changes will be announced via email or in class. As time permits, some lecture topics may be covered during lab.

<table>
<thead>
<tr>
<th>LAB MEETING</th>
<th>TOPICS COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body Orientation &amp; Anatomical Terminology; Lab Safety &amp; contract</td>
</tr>
<tr>
<td>2</td>
<td>Continue Body Orientation &amp; Anatomical Terminology as needed; complete Scientific Method Lab</td>
</tr>
<tr>
<td>3</td>
<td>Scientific Method Report due; Biochemistry Lab</td>
</tr>
<tr>
<td>4</td>
<td>Lab Test #1 (covering Lab Safety through Biochemistry lab); perform lab on Microscopy &amp; Tissues</td>
</tr>
<tr>
<td>5</td>
<td>Diffusion &amp; Osmosis</td>
</tr>
<tr>
<td>6</td>
<td>Lab Test #2 (covering Microscopy through Cell Division); perform lab on Introduction to Skeleton and the Skull</td>
</tr>
<tr>
<td>7</td>
<td>Lab Test #3 (on Intro to Skeleton &amp; Skull); perform lab on Axial Skeleton (Vertebral Column &amp; Thoracic Cage)</td>
</tr>
<tr>
<td>8</td>
<td>Lab Test #4 (on Axial Skeleton); perform lab on Appendicular Skeleton</td>
</tr>
<tr>
<td>9</td>
<td>Lab test #5 (on Appendicular Skeleton; Intro to Dissection</td>
</tr>
<tr>
<td>10</td>
<td>Superficial Muscles of Head, Torso, &amp; Extremities</td>
</tr>
<tr>
<td>11</td>
<td>Finish Superficial Muscles of Head, Torso &amp; Extremities; Human Muscle Models</td>
</tr>
<tr>
<td>12</td>
<td>Lab test #6 (on Superficial Muscles); Deep Muscles</td>
</tr>
</tbody>
</table>
LAB MEETING TOPICS COVERED

13  Lab test #7 (on Deep Muscles); perform labs on Cranial Nerves & Brain

14  Lab test #8 (on Cranial Nerves); perform lab on Eye & Ear

15  Lab Test # 9 (on Brain, Eye, & Ear)

LEARNING OUTCOMES/COURSE OBJECTIVES:

1. Name the primary organs and functions of each system of the body as an introduction to anatomy and physiology.

2. Describe the primary inorganic and organic substances in the body and their uses.

3. Describe the parts and functions of animal cell organelles.

4. Describe the appearance and major functions of the body tissue groups.

5. Describe the organs, functions, and selected clinical conditions of the
   A. integumentary system
   B. skeletal system, including joints
   C. muscular system
   D. nervous system

6. The student will use basic biological lab equipment, such as scalpels, glassware, pipettes, etc. for various lab experiments.

7. The student will be able to use the scientific method to solve problems.

INSTRUCTIONAL METHODS TO COMPLETE OBJECTIVES: Lecture tests, lab tests, and various assignments will be made throughout the semester including a library assignment and online activities on Moodle with those activities based on the A & P Revealed website. Many assignments, announcements, and handouts will be made on the Moodle course management system, which students can access at no charge through the NETC website. With the online activities, no credit will be issued for misspelled words or grammatical errors. It is the student’s responsibility to be aware of the due dates posted online, and students are expected to have printed the handouts in advance of lab or class, as needed.

ASSESSMENT: Tests covering the assigned chapters of study will be given. No lecture test grades will be dropped. A comprehensive final exam will also be given. Lab tests will be given based on the previous labs, and one lab report will be required that will count as a lab test grade. One lab grade will be dropped before final averaging. Outside assignments and reports will be evaluated as outlined in the syllabus or in handouts.
MAKEUP WORK: Any lecture test taken late must have a “No Questions Asked” certificate attached to the assignment. The test must be made up prior to the student’s return to class or lab. Any work submitted electronically must be received by the instructor prior to the beginning of class. One lab test grade or report will be dropped, so missed lab tests or reports may not be made up or turned in late. Homework may not be submitted late, as all homework assignments, except the library assignment, are completed online. If the student is absent when the library assignment is due, he or she should make arrangements to send it electronically by the due date and time or arrange for it to be delivered by another student, etc.

LAB: Practical tests, objective tests, and lab reports are used in lab as assessments. The average will be based on the average of one lab report and the scheduled lab tests, all counting equally. Missed lab work (reports, tests, etc.) may not be made up or submitted late so a zero is recorded for that test or lab report. However, the lowest lab grade will be dropped at the end of the term before final averages are calculated.

Extra Credit Information: Bonus questions may be offered on lecture tests.

GRADING POLICY: Points will be taken off for spelling/grammatical errors on all graded work, except bonus questions. The following represents the percentage of each category toward the final average:

FINAL AVERAGE:
- Lecture average = 50%
- Lab average = 25%
- Comprehensive final = 20%
- Homework, etc. = 5%

GRADING SCALE:
- 93 - 100 = A
- 85 - 92 = B
- 77 - 84 = C
- 70 - 76 = D
- BELOW 70 = F