COURSE TITLE: BIO 201 (15626) – Human Anatomy and Physiology I

INSTRUCTOR: Shawn Hurley, Ph.D.
e-mail: shawn.hurley@natuniv.edu & sp.hurley@yahoo.com (use both)

Course website: hurleybiology.com (resources, activities, study guides, practice quizzes)

Class meeting times: M/W 9:00 am to 2:40 pm; 9:00-11:45 am (lecture) & 12:15-2:40 pm (lab)

Office hours: Scheduled by appointment (email to arrange time)

CREDIT: 4.5 Quarter Units

TEXTS: Principles of Anatomy & Physiology, 14th edition
Tortora, G. and Derrickson, B (Wiley, 2014)
Laboratory Man. for Anatomy. (Looseleaf) - With Access,

Pre-requisite:

National University's goal is for all students to achieve their academic potential, and to have a positive learning experience in the BIO 201-203 series. Department of Mathematics and Natural Sciences has developed advice for students for the courses BIO 201-203. The purpose of this advice is to ensure that students are properly prepared for the materials in these courses. The Department's advice to students is:

1. Health Science and Pre-Nursing students that are new to National University should take the Areas A-E program requirements (e.g. ENG 100, ENG 101, COM 200, ILR 260) before taking BIO 201-203. This will enable students to adjust to the pace of National University, while strengthening their written communication and exam skills.

2. Before taking BIO 201-203, students should have taken introductory biology and chemistry (BIO 100, 100A, 101, 101A), or the equivalent, within the past 5 years.

3. Students should take BIO 201-203 in the numerical sequence. This scheme familiarizes students with the laboratory before taking BIO 203, which is the most laboratory intensive course.

Diagnostic Self Test

Following are terms and concepts that you should be familiar with from previous science courses. If you are not able to explain these terms, or if they are completely unfamiliar, then this is a strong indication that you need to take lower level biology before enrolling in BIO 201-203.

Diffusion / Osmosis

pH scale: acids, bases

Cell structures: cytoplasm, cell membrane, nucleus, DNA, RNA, mitochondria, ribosomes,

Cell division: mitosis and meiosis

Cellular respiration
Course Description
Areas of study include cells, tissues, organ systems (integumentary, skeletal, muscular and nervous), and their functional relation to each other. Topics also include the aging process and diseases in these systems, as well as the effects of genetics, diet, lifestyle, and the environment.

Learning Outcomes

- Describe the physiology of cells and cell membranes, including membrane transport processes.
- Explain the structure and function of skin, epithelial membranes, and connective tissue membranes.
- Describe the process of bone formation, growth and function.
- Identify bones and joints of the human skeleton.
- Explain how muscles contract.
- Describe mechanisms of signal transduction by the nervous system, including action potentials and synaptic transmission.
- Describe the anatomy and physiology of the central and peripheral nervous system.
- Explain how the special senses operate.

COURSE CONTENT:
1. General Chemistry: Atoms, Biomolecules, Acids and Bases
2. Cells and Body Tissues
3. Integumentary System
4. Skeletal System and Joints
5. Muscular System
6. Nervous system
7. Special senses

TEACHING BY THE INSTRUCTOR WILL BE AIDED WITH:
1. The textbook
2. Written notes, including current newspaper and magazine information, for the students
3. Writing on the white board/black board
4. Use of PowerPoint
5. Use of videos
6. Use of handouts/packets
7. Wall charts and other visual aids
8. Questions from the students – BE INVOLVED!
   *Questions often end up with many in-depth discussions.*

COURSE REQUIREMENTS AND STUDENT RESPONSIBILITIES:

- Attend all class sessions and participate in each class activity.
- Read the assigned textbook chapters prior to each class meeting.
- Complete all written assignments on time and each exam as scheduled.
- Evaluate the course and your own individual performance.
INSTRUCTOR POLICIES

- There will be no texting or recreational use of cell phones in class. If you must take a message, please wait until break or leave the class. Students seen texting will be asked to turn off their phone or leave the class.
- Computers are to be used only for the class. Students using the computers for other purposes will be asked not to bring computers to class.
- If students know of an absence in advance, please coordinate with the instructor in person & by email prior to being absent. If notifying of an unforeseen absence, please email and follow up with instructor.
- Travel arrangements, appointments, etc. should not conflict with exams, quizzes, or homework due dates – students will be expected to fulfill their obligations for assigned dates. Absolutely no late work will be accepted – “late” means not handing in/presenting materials when they have been asked for. Make-up opportunities will not be given – no exceptions. Additionally, NO early exams/quizzes will be given.

ATTENDANCE PROCEDURES:

Students are expected to attend all class sessions. An absence is assessed each time a student is not in attendance during a regularly scheduled class period, whether or not it is an excused absence. An instructor may withdraw a student from class prior to the seventh session in undergraduate courses if there are more than two unexcused absences. Students who have more than three absences, excused or unexcused, cannot be given a satisfactory grade.

GRADE DISTRIBUTION:

Point Break-down
Exams (4 @ 100 pts each) 400 pts total
Quizzes (3 @ 20 pts each) 60 pts total
Homework Assignments 40 pts total
Summation of Points Possible = 500 pts

CLOSED BOOK EXAMS:

These involve multiple choice, true false, matching, fill-in-the-blank and short answer questions.

HOMEWORK and QUIZZES:

There will be assignments given worth variable points to be completed at home – some will require short answer responses and may necessitate research outside the text.

There will be quizzes of fill-in-the-blank, true/false, matching and/or multiple choice.
GRADES AND GRADING SYSTEM:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>94-100</td>
<td>C+</td>
<td>77-79</td>
<td>D+</td>
<td>67-69</td>
</tr>
<tr>
<td>A-</td>
<td>90-93</td>
<td>C</td>
<td>74-76</td>
<td>D</td>
<td>64-66</td>
</tr>
<tr>
<td>B+</td>
<td>87-89</td>
<td>C-</td>
<td>70-73</td>
<td>D-</td>
<td>60-63</td>
</tr>
<tr>
<td>B</td>
<td>84-86</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>B-</td>
<td>80-83</td>
<td>F</td>
<td>00-59</td>
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</tbody>
</table>

Definition of Grades (Undergraduate Level):

A: Outstanding Achievement: Significantly exceeds standards
B: Commendable Achievement: Exceeds standards
C: Acceptable Achievement: Meets standards
D: Marginal Achievement: Below standards
F: Failing
I: Incomplete: A grade given when a student has completed at least 2/3 of the course class sessions and is unable to complete the course requirements due to uncontrollable and unforeseen circumstances. The student must convey (preferably in writing) these circumstances to the instructor prior to the final day of the course. If the instructor decides that an “Incomplete” is warranted, the instructor must convey the conditions for removal of the “Incomplete” to the student in writing. A copy must also be placed on file with the Office of the Registrar until the Incomplete is removed or the time limit for removal has passed. An “Incomplete” is not assigned when the only way the student could make up the work would be to attend a major portion of the class when next offered. An “Incomplete” must be removed no later than the second complete quarter following the original course completion date, but may be for a shorter period at the discretion of the instructor. An “I” not removed within the stipulated time becomes an “F”. No grade points are assigned. The “F” will be calculated in the grade point average.

PLUS/MINUS GRADING:
National University utilizes a plus/minus grading system. The grades of A+, F+, and F- are not issued. The grade points per credit used in the calculation of the grade point average are as follows:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Grade Points per Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>4.0</td>
</tr>
<tr>
<td>A-</td>
<td>3.7</td>
</tr>
<tr>
<td>B+</td>
<td>3.3</td>
</tr>
<tr>
<td>B</td>
<td>3.0</td>
</tr>
<tr>
<td>B-</td>
<td>2.7</td>
</tr>
<tr>
<td>C+</td>
<td>2.3</td>
</tr>
<tr>
<td>C</td>
<td>2.0</td>
</tr>
<tr>
<td>C-</td>
<td>1.7</td>
</tr>
<tr>
<td>D+</td>
<td>1.3</td>
</tr>
<tr>
<td>D</td>
<td>1.0</td>
</tr>
<tr>
<td>D-</td>
<td>0.7</td>
</tr>
<tr>
<td>F</td>
<td>0.0</td>
</tr>
</tbody>
</table>

GRADING CRITERIA:

Written work will be graded using the following:
1. completeness and/or correctness of your answer
2. organization and development of your ideas
3. use of data/experience to support your ideas
4. use of references to substantiate your ideas
5. evidence of critical thinking in expressing your judgment
6. good grammar and correct spelling
Recommendations to improve the quality of your written work include:

- Cite references in your text and at the end of your work
- Pictures/drawings should be identified and of professional quality
- Use of credible scientific references in your work with appropriate citation.
- Clearly identify your own critical analysis and evaluation of the ideas presented – let us see good thought process
- Where appropriate, describe your own relevant experience
- Separate different ideas by paragraphs, but use transitions that allow the material to flow coherently

WRITING STANDARDS OF COLS:

Students are expected to demonstrate writing skills in describing, analyzing and evaluating ideas and experiences. Written material must follow specific standards regarding citations of authors’ work within the text and references at the end of the paper. Students are encouraged to use the services of the University’s Writing Center when preparing materials. Grades will be assigned for written material in accordance with the University catalog and the following general criteria adopted by the College of Letters and Sciences (COLS).

The following website provides information on APA, MLA and other writing and citation styles that may be required for term papers and the like:

http://www.nu.edu/LIBRARY/ReferenceTools/citations.html

NU LIBRARY STATEMENT:

The NU Library System (NULS) supports academic rigor by providing access to scholarly books, journals, e-books, and databases of all text articles from scholarly journals. Library books and journal articles can be shipped to online students. Librarians are available to assist students at the Spectrum Library in San Diego, at regional Library Information Centers (LIC), and online.

The National University Online Writing Center is available to help with all your writing needs.

- Make an appointment by going to http://tutor.nu.edu
- Email the online writing center at wonline@nu.edu if you have a quick question, or after you’ve made an appointment.
- Check out the Writing Center web pages for other useful information: http://www.nu.edu/Academics/StudentServices/WritingCenter.html

Library Electronic Resources:

The NU Library System (NULS) purchases access to several databases of full text articles from scholarly journals. Go to http://www.nu.edu/libaray and click on “Electronic Resources”.

PLAGIARISM:

Plagiarism is the presentation of someone else’s ideas or work as one’s own. Students must give credit for any information that is not either the result of original research or common knowledge. If a student borrows ideas or information from another author, he/she must acknowledge the author in the body of
the test and on the reference page. Students found plagiarizing are subject to the penalties outlined in the Policies and Procedures section of the University Catalog, which may include a failing grade for the work in question or for the entire course. The following is one of many websites that provide helpful information concerning plagiarism for both students and faculty:

Ethics:
Ethical behavior in the classroom is required of every student. Students are also expected to identify ethical policies and practices relevant to course topics.

Technology:
Students are expected to be competent in using current technology appropriate for this discipline. Such technology may include word processing, spreadsheet and presentation software. Use of the internet and e-mail may also be required.

Diversity:
Learning to work with and value diversity is essential in very class. Students are required to exhibit an appreciation for the multinational and gender diversity in the classroom.

Civility:
As a diverse community of learners, students must strive to work together in a setting of civility, tolerance and respect for each other and for the instructor. Rules of classroom behavior (which apply to online as well as onsite courses) include but are not limited to the following:

- Conflicting opinions among members of a class are to be respected and responded to in a professional manner.
- Side conversations or other distracting behaviors are not to be engaged in during lectures, class discussions or presentations.
- There are to be no offensive comments, language or gestures.

Students with Disabilities:
Students seeking special accommodations due to a disability must submit an application with supporting documentation, as explained under this subject heading in the General Catalog.

Instructors are required to provide such accommodations if they receive written notification from the University.

* The contents of this outline and syllabus are subject to change throughout the duration of the course.
# Course Syllabus

**Biology 201 Schedule** *(Dr. Hurley) – Term 1702: February/March 2017 (15626)*

<table>
<thead>
<tr>
<th>Class Week</th>
<th>Date/Day</th>
<th>Lecture Topics (Mon/Wed)</th>
<th>Tortora (14th edition)</th>
<th>Lab Topic (Mon/Wed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Feb 6 M</td>
<td>Intro to Human Body</td>
<td>Ch. 1, 2</td>
<td>Exercises 1 &amp; 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chemical Context of Life</td>
<td></td>
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<tr>
<td>1</td>
<td>Feb 8 W</td>
<td>Quiz 1 (Chpt. 1 &amp; 2)</td>
<td>Ch. 3</td>
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<tr>
<td></td>
<td></td>
<td>Eukaryotic Cellular Structure, Membrane Transport, Cell Division</td>
<td></td>
<td>Exercises 3 &amp; 4</td>
</tr>
<tr>
<td>2</td>
<td>Feb 13 M</td>
<td>Tissue Types &amp; The Integumentary System</td>
<td>Ch. 4, 5</td>
<td>Exercises 6 &amp; 7</td>
</tr>
<tr>
<td>2</td>
<td>Feb 15 W</td>
<td><strong>-Exam 1 (Chpt. 1-5)</strong></td>
<td>Ch. 6, 7</td>
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<tr>
<td></td>
<td></td>
<td>Osseous Tissue &amp; Axial Skeleton</td>
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<td>Exercise 8, 9, 10 (start bones)</td>
</tr>
<tr>
<td>3</td>
<td>Feb 20 M</td>
<td>Holiday (no lecture)</td>
<td></td>
<td>Holiday (no lab)</td>
</tr>
<tr>
<td>3</td>
<td>Feb 22 W</td>
<td>Appendicular Skeleton &amp; Articulations (Joints)</td>
<td>Ch. 8, 9</td>
<td>-Lab Exam 1 (anatomical terms/orientations/positions, microscopy &amp; tissues)</td>
</tr>
<tr>
<td>4</td>
<td>Feb 27 M</td>
<td>Muscular Tissue &amp; Physiology</td>
<td>Ch. 10</td>
<td>Exercises 9, 10, 11</td>
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<tr>
<td></td>
<td></td>
<td>Quiz 2 (Chpt. 6-8)</td>
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<tr>
<td>4</td>
<td>Mar 1 W</td>
<td>Muscular System Anatomy</td>
<td>Ch. 11</td>
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<td></td>
<td></td>
<td>Exercise 12 &amp; 14 (start muscles)</td>
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<tr>
<td>5</td>
<td>Mar 6 M</td>
<td><strong>-Exam 2 (Chpt. 6-10)</strong></td>
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<tr>
<td>5</td>
<td>Mar 8 W</td>
<td>Neural Tissue &amp; Physiology</td>
<td>Ch. 12</td>
<td>Exercises 16, 17, 18 (start nerves)</td>
</tr>
<tr>
<td>6</td>
<td>Mar 13 M</td>
<td>The Spinal Cord and Spinal Nerves</td>
<td>Ch. 13</td>
<td>-Lab Exam 2 (bones, joints, &amp; muscles)</td>
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<tr>
<td></td>
<td></td>
<td>Quiz 3 (Chpt. 12)</td>
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<tr>
<td>6</td>
<td>Mar 15 W</td>
<td>The Brain and Cranial Nerves</td>
<td>Ch. 14</td>
<td>Exercises 20 &amp; 21</td>
</tr>
<tr>
<td>7</td>
<td>Mar 20 M</td>
<td><strong>-Exam 3 (Chpt. 12-14)</strong></td>
<td>Ch. 15</td>
<td>Exercises 19 &amp; 22</td>
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<td></td>
<td></td>
<td>The Autonomic Nervous System</td>
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<tr>
<td>7</td>
<td>Mar 22 W</td>
<td>Sensation and Sensory Pathways, The Special Senses (overview)</td>
<td>Ch. 16, 17</td>
<td>Exercises 23 &amp; 24</td>
</tr>
<tr>
<td>8</td>
<td>Mar 27 M</td>
<td>The Special Senses (cont’d)</td>
<td>Ch. 17</td>
<td>Finish Exercise 24</td>
</tr>
<tr>
<td>8</td>
<td>Mar 29 W</td>
<td><strong>-Exam 4 (Chpt. 15-17)</strong></td>
<td></td>
<td>-Lab Exam 3 (CNS, PNS &amp; special senses)</td>
</tr>
</tbody>
</table>

* - Schedule is subject to change