Biology 32
Human Anatomy & Physiology I
Bakersfield College
Fall 2017

Instructor: Chad Newton
Office: MS 15A
Office Hours: MW 7:35-8:00am and 8:55-9:25pm
TR 8:30-9:35am
Online – TBA
And by appointment
Email: cnewton@bakersfieldcollege.edu
Course web site: www2.bakersfieldcollege.edu/cnewton

Lecture: MW 8:00-9:25am – SE 56
Lab: crn#71206: TR 9:35-11:00am– MS14

Course Syllabus

Required Text and Materials

Available at the Bakersfield College Bookstore:

(ISBN: 9780134712437)


Prerequisites

Reading - one level prior to transfer

Course Description

Biology 32 is the first part of a rigorous, two-semester integrated anatomy and physiology sequence that covers the structure, function, integration and homeostasis of the human body at the cellular, tissue, organ, organ system and organism level, including the integumentary, skeletal, muscular, nervous, sensory, cardiovascular, lymphatic, immune, respiratory, urinary, digestive, endocrine, and reproductive systems. This series meets the diverse needs of students seeking careers in allied health fields such as nursing, pharmacy, and physician’s assistant.
**Student Learning Outcomes**

At the conclusion of this course, students should be able to:

1. Describe and distinguish various roles of major classes of biomolecules in living cells.
2. Describe key structural features of different human cells and major tissue types.
3. Identify and describe the anatomy of the systems of the human body.
4. Identify key functions of major organ systems and the physiological mechanisms underlying their operation.
5. Relate structure and function at the cellular through system levels of organization of human body systems.
6. Describe structural or anatomical changes that occur in disease, injury or aging of the human body systems.
7. Demonstrate knowledge of metabolic and physiological disorders of the major organ systems.
8. Describe key functional features of different types of human cells and how they communicate.
9. Demonstrate an understanding of how organ systems of the body are integrated and regulated.
10. Demonstrate an understanding of how homeostasis is maintained in the body.
11. Analyze experimental data to demonstrate physiological principles.
12. Demonstrate an understanding of the scientific method, experimental design, and the philosophy of science. Apply the scientific method and philosophy of science by designing components of and carrying out physiological experiments.
Attendance Policy

Coming to all class meetings is absolutely mandatory. There is a direct correlation between attendance and your grade in the course, and you will not pass if you fail to show up.

You are allowed to miss a total of three (3) class meetings throughout the semester; however, a student who is absent from more than three class meetings will either be dropped from the class or fail the course.

No make-up quizzes, labs or exams will be given. Missed exams will be assigned a grade of zero.

Lastly, promptness is expected of you; arriving to class late is NOT acceptable and you will be marked as absent if you are more than 15 minutes late to lecture or lab. In addition, tardiness may prevent you from taking quizzes and/or examinations, as extra time will not be allotted for those students who show up late.

I have not created these guidelines to be overly stern or stringent, but to emphasize the importance of being present for all lecture and laboratory meetings and to best prepare you for a professional career.

Academic Honesty

Academic dishonesty in any form (including, but not limited to, cheating, copying test answers or outside assignments, sharing answers, using pre-prepared notes, text messages, or any other information, plagiarism, etc.) will not be tolerated and is grounds for immediate failure of the class assignment and/or test with a grade of F and serious disciplinary action by the college.

Course Requirements / Grading

Your final course grade will be based on the following:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Points</th>
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<tbody>
<tr>
<td>3 LECTURE/LAB EXAMINATIONS @ 100 POINTS:</td>
<td>300</td>
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<tr>
<td>1 LECTURE/LAB FINAL EXAMINATION:</td>
<td>150</td>
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<tr>
<td>6 QUIZZES @ 10 POINTS:</td>
<td>60</td>
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<tr>
<td>18 HAND-IN ASSIGNMENTS @ 5 POINTS:</td>
<td>90</td>
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<tr>
<td>3 CASE STUDIES @ 10 POINTS:</td>
<td>30</td>
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<tr>
<td>1 ORAL PRESENTATION:</td>
<td>10</td>
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<tr>
<td>LABORATORY NOTEBOOK CHECK:</td>
<td>10 points</td>
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<td>650</td>
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Midterm and Final Examinations

There will be three midterm examinations worth 100 points each and a 150-point cumulative final examination. Missed exams will be assigned a grade of zero. All examinations will cover material presented in both lecture and lab, and they will be administered using a written, multiple choice and practical exam format.

EXAMINATION I

WRITTEN: MONDAY, SEPTEMBER 18TH
PRACTICAL: TUESDAY, SEPTEMBER 19TH

EXAMINATION II

WRITTEN: MONDAY, OCTOBER 9TH
PRACTICAL: TUESDAY, OCTOBER 10TH

EXAMINATION III

WRITTEN: WEDNESDAY, NOVEMBER 1ST
PRACTICAL: THURSDAY, NOVEMBER 2ND

FINAL LAB PRACTICUM: THURSDAY, NOVEMBER 30TH
FINAL EXAMINATION (WRITTEN): WEDNESDAY, DECEMBER 6TH 8:00-9:50AM

Quizzes

Quizzes (totaling six) will be given promptly at the beginning of lecture or lab. All quizzes will cover material presented in both lecture and lab, and they will be administered using an oral, laboratory practical exam format, short answer, matching, and/or fill-in items. They cannot be made-up. If you miss a quiz due to tardiness or an absence, the missed quiz will be assigned a grade of zero.

QUIZ #1: TUESDAY, SEPTEMBER 12TH
QUIZ #2: THURSDAY, SEPTEMBER 28TH
QUIZ #3: THURSDAY, OCTOBER 5TH
QUIZ #4: THURSDAY, OCTOBER 19TH
QUIZ #5: TUESDAY, OCTOBER 31ST
QUIZ #6: THURSDAY, NOVEMBER 16TH

Hand-in Assignments

You will have a total of eighteen (18) short assignments due throughout the semester. They will be based on selected pages from your lab manual, textbook, critical thinking questions, modules, etc., and they must be turned in promptly at the beginning of the class period immediately following the one in which they were assigned. No late assignments will be accepted.
If you must be absent from a class meeting in which something is assigned, you are still responsible for the material covered, laboratory exercise, and submitting the assignment on time. If you miss an assignment or fail to submit it on time due to tardiness or an absence, the missed assignment will be assigned a grade of zero.

Case Studies

You will have a total of three (3) case studies due throughout the semester worth 10 points each. They will be based on selected medical conditions associated with body systems and/or concepts that we will discuss throughout the course. Although case studies may be completed in groups, each student must submit his or her own in order to receive credit.

If you must be absent from a class meeting in which a case study is distributed and assigned, you are still responsible for submitting the case study on time. If you fail to submit it on time due to tardiness or an absence, the missed case study will be assigned a grade of zero.

Oral Presentation

You will be required to give a short oral presentation sometime during weeks 7 - 10 of the semester. Oral presentations will be conducted and graded as a clinical team, and assigned topics will be based on “learn lists” and models from selected components of the Skeletal System.

Laboratory Notebook

You will be required to assemble a laboratory notebook that will contain ALL of the work you complete during the laboratory portion of this course. The notebook will be evaluated at the end of the semester for organization and completeness. Any missed assignments, questions, exercises or lack of organization will result in point deductions from your overall score.

The notebook itself should be a black, 1.5-inch, 3-ring binder with 20 numbered or lettered dividers that individually separate each laboratory exercise and case study, and you will need to format a “Table of Contents” that facilitates easy reference to each numbered or lettered section. Hand-in assignments that pertain to a particular laboratory exercise should be included in the section containing the laboratory exercise from which it was derived. Case studies should be located at the very back of the notebook, each one separated by its own divider as well.
Grading

Letter grades will be assigned as follows:

A = 90–100%  NOTE: No exceptions; these standards are not subject to change
B = 80-89%
C = 70-79%
D = 60-69%
F = less than 60%

Special Accommodations

Students with disabilities needing accommodation, including those who had an IEP in high school, should make requests to Disabled Students Programs and Services CSS 10 or Delano room 1001 or by calling (661)395-4334 at BC or (661)720-2000 in Delano. All requests for accommodations require appropriate advance notice to avoid a delay in services. Please discuss approved accommodations with me so we can work together to ensure your access and success at BC.

Cell Phone/Electronic Communication Devices

Cell phones, pagers, and other such electronic devices must be turned off during class and lab time and securely stowed away. Communication by electronic devices, including but not limited to instant messaging, text messaging, and telephone, during class is strictly prohibited. Taking video of any kind or of any person (including me) during lecture or lab is also strictly prohibited. Use of electronic communication devices during examinations, exam debrief (or walkthroughs), or other graded activities may constitute grounds for serious disciplinary action. I do understand that emergency, family, or employment situations may at times require access to electronic communication services, so arrangements may be made with me in advance to accommodate those situations. Still, however, any exceptions granted for use during class time will NOT apply during any exam or testing situation.
Supplemental Instruction (SI)

Supplemental Instruction (SI) is offered for Biology 32 again this semester. SI sessions are group study opportunities that are scheduled at least two times per week. These sessions are facilitated by our SI Leaders Avery Kim and Caitlyn Lancaster who have successfully completed Biology 32 themselves and will be preparing SI sessions based on our course content. I strongly encourage you to attend SI sessions to ask questions about lecture and laboratory material and to develop learning and study strategies. Students who have participated in SI sessions in the past have typically earned higher exam scores and final course grades than students who did not participate in SI. SI attendance is voluntary, and please note that it is NOT a substitute for class attendance or individualized study time on your own outside of class.
# Tentative Course Schedule for Biology 32 - Fall 2017

<table>
<thead>
<tr>
<th>Date</th>
<th>Lecture</th>
<th>Reading</th>
<th>Lab</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Aug 21-25</td>
<td>Syllabus/Orientation; Orientation to A&amp;P</td>
<td>Ch. 1</td>
<td>T: Lab Orientation&lt;br&gt;R: Orient. to Human Body</td>
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<tr>
<td>Aug/Sept</td>
<td>Inorganic Chemistry; Organic Chemistry</td>
<td>Ch. 2</td>
<td>T: Chem. Lab I&lt;br&gt;R: Chem. Lab II</td>
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<td>28-1</td>
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<tr>
<td>Sept 4-8</td>
<td>Holiday; Cells I(cell str &amp; function)</td>
<td>Ch. 3</td>
<td>T: TBA&lt;br&gt;R: Microscope Lab</td>
<td>Holiday 9/4</td>
</tr>
<tr>
<td>Sept 11-15</td>
<td>Cells II (mitosis &amp; cancer); Cells III(DNA replication &amp; protein synthesis)</td>
<td>Ch. 3</td>
<td>T: Cell structure &amp; function; Mitosis&lt;br&gt;R: DNA Lab; CS #1</td>
<td>Quiz #1 (9/12)</td>
</tr>
<tr>
<td>Sept 18-22</td>
<td>Lab practical I</td>
<td>Ch. 4</td>
<td>T: Lab Practical I&lt;br&gt;R: Tissue Lab (epithelial)</td>
<td>Exam I (9/18 and 9/19)</td>
</tr>
<tr>
<td>Sept 25-29</td>
<td>Tissues cont. (membranes, inflammm., &amp; tissue repair); Integumentary System</td>
<td>Ch. 4</td>
<td>T: Tissue Lab (conn., muscle, nervous); CS #2&lt;br&gt;R: Integumentary models; Intro. to skull</td>
<td>Quiz #2 (9/28)</td>
</tr>
<tr>
<td>Oct 2-6</td>
<td>Bone &amp; Skeletal Tissue; Bone Growth, Repair &amp; Disease; Axial Skeleton</td>
<td>Ch. 6</td>
<td>T: Skeletal tissue &amp; skull&lt;br&gt;R: Thoracic cage &amp; vert. Column</td>
<td>Quiz #3 (10/5) Oral Presentations</td>
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<tr>
<td>Oct 9-13</td>
<td>Appendicular Skeleton</td>
<td>Ch. 7</td>
<td>T: Lab Practical II&lt;br&gt;R: Pectoral girdle; Upper extremities</td>
<td>Exam II (10/9 and 10/10) Oral Presentations</td>
</tr>
<tr>
<td>Oct 16-20</td>
<td>Appendicular Skeleton; Joints &amp; Body Movts</td>
<td>Ch. 7</td>
<td>T: Pelvic girdle; Lower extremities&lt;br&gt;R: Joints &amp; Body Movts</td>
<td>Quiz #4 (10/19) Oral Presentations</td>
</tr>
<tr>
<td>Oct 23-27</td>
<td>Muscular Sys. I (muscle tissue; fiber anatomy); Muscular Sys. II (physio.)</td>
<td>Ch. 10</td>
<td>T: Muscle Anatomy&lt;br&gt;R: Muscle Anatomy cont.; CS#3</td>
<td>Oral Presentations</td>
</tr>
<tr>
<td>Oct/Nov</td>
<td>Muscular Sys. III (muscle physiology cont.); Exam III</td>
<td>Ch. 9</td>
<td>T: Review&lt;br&gt;R: Lab Practical III</td>
<td>Quiz #5 (10/31)</td>
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<td>30-3</td>
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<td>Exam III (11/1 and 11/2)</td>
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<tr>
<td>Nov 6-10</td>
<td>Intro. To Nervous System; Central Nervous System;</td>
<td>Ch. 11</td>
<td>T: Intro to Nervous Sys.&lt;br&gt;R: CNS Lab</td>
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<tr>
<td>Nov 13-17</td>
<td>Peripheral Nervous Sys.; Special Senses</td>
<td>Ch. 13</td>
<td>T: PNS Lab&lt;br&gt;R: Eyes &amp; Ears Lab</td>
<td>Quiz #6 (11/16) Lab Notebook Due (11/16)</td>
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<tr>
<td>Nov 20-24</td>
<td>Autonomic Nervous System; Somatic Nervous System</td>
<td>Ch. 14</td>
<td>T: ANS Lab&lt;br&gt;R: Thanksgiving Holiday</td>
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<td>Nov/Dec</td>
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<td>Final Lab Practicum (11/30)</td>
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<tr>
<td>27-1</td>
<td>Final Exam Review</td>
<td></td>
<td>T: Final Exam Review&lt;br&gt;R: Final Lab Practicum</td>
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<tr>
<td>Dec 4-8</td>
<td>Final Exam (written)</td>
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<td>Final Exam (12/6)&lt;br&gt;6:00-7:50 PM</td>
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**NOTE:**
- **Schedule is tentative and therefore subject to change at instructor’s discretion**
- **Last date to drop without “W” is September 3rd**
- **Last date to drop with “W” is October 20th**
Bio 32 Laboratory Safety Policies and Procedures

- No eating, drinking (including water) or smoking in the classroom, hallways or labs.

- Cell phones, pagers, and other such electronic devices must be turned off during class and lab time and securely stowed away.

- Memorize the locations of the emergency eyewash station, emergency shower, fire blanket and fire extinguisher. In the event of a fire, smother it with a blanket. If it involves your clothing or hair, never run. Stop, drop and roll.

- In the case of fire, explosion, earthquake or disaster, there are procedures posted by the door. Evacuate the classroom immediately and check in with the instructor. Do not leave the area until you have informed the instructor.

- In the case of an Active Shooter situation, it is important to be prepared and think about how you will respond beforehand, as these situations are dynamic and evolve rapidly. According to the Department of Homeland Security (DHS), you should 1) run, 2) hide, 3) fight. More information can be found on the Bakersfield College and Department of Homeland Security websites.

- Work in the lab only when supervised and perform only authorized experiments.

- Be prepared for each upcoming lab. Read each lab beforehand, and be aware of the safety measures required for each lab.

- Keep your work area clean and neat for the experiment, and wear appropriate clothing, lab coats, safety goggles or glasses if necessary.

- Shoes must be worn at all times while in the lab.

- Report any accident immediately to the instructor regardless of how minor it may appear. Be cautious if there is any bleeding or if a chemical is spilled or glass is broken.

- **Clean up your bench area before leaving the laboratory.** Please reassemble all models and return them back to their appropriate location(s). When you leave, the lab should look exactly like it did when you arrived.