

**Human Physiology I**  
**BIPN 100, Spring 2017**  
**Mon, Wed, Fri 9:00 - 9:50, WLH 2001**

Instructor: **Dr. James Cooke**  
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email: [j2cooke@ucsd.edu](mailto:j2cooke@ucsd.edu) (if you email me, please include “BIPN 100” in the subject)  
Office hours: To be determined by student votes during the first class.

**Required Materials:**

- Textbook: Human Physiology by Silverthorn, 7th edition (older versions are okay, but page numbers will likely be different.)

<b>Evaluation:</b>	Pre-Lecture Quizzes	3 quizzes x 2% each = 6%
	Midterm 1	24%
	Midterm 2	25%
	Final Exam	45%

**iClickers**

We will be using iClickers for our pre-lecture quizzes that will occur during class time. You will need to have your clicker to take part in these quizzes, and you will need to register your clicker on our TritonEd webpage.

Also, I will have clicker questions posed to the class during lectures. These ‘during lectures’ clicker questions will not count for any points; but I believe that they can be a useful tool for us to gauge our learning on certain subjects.

**Pre-lecture quizzes:** There will be three quizzes during the quarter. Our quizzes will take roughly 10 minutes at the very beginning of class, and will occur on the following dates:

Monday April 10 (Week 2); Monday May 8 (Week 6); Wednesday May 31 (Week 9).

The quizzes will be based on key terms and definitions in physiology. I will post the terms and definitions the Friday prior to the upcoming quiz (eg: on Friday April 7, I will upload the reading for the quiz on April 10). The quizzes themselves will be answered using iClicker devices in class. If you miss a quiz, sadly you will not be able to make it up at a later date.

**TritonEd website for BIPN 100:**

- You can access your pre-lecture assignments the Friday before our quizzes.
- You can access your grades.
- You can access lecture notes. There will be lecture notes before class, and a second (complete) set of slides after class. So for each lecture, there will be a “pre” and “post” set of notes.

## Integrity

I believe that academic integrity is a shared responsibility between myself (and the teaching team) and the students. Below, I outline six core values that pertain to academic integrity and describe how myself, and the students, are expected to uphold them.

	It is expected that students will:	The students can expect that I will:
<b>Honesty</b>	<ul style="list-style-type: none"><li>You will demonstrate your knowledge and abilities without outside aids or looking at the answers of others during exams.</li></ul>	<ul style="list-style-type: none"><li>I will evaluate your knowledge of course concepts objectively and honestly.</li><li>I will admit if a mistake has been made, and correct the mistake.</li></ul>
<b>Responsibility</b>	<ul style="list-style-type: none"><li>You will show up to class on time, ready to think critically about, and engage meaningfully with, course material.</li></ul>	<ul style="list-style-type: none"><li>I will use student-centered approaches in the classroom that have been shown to increase retention of course material, improve grades, and lower failure rates for all students, especially first-generation students and under-represented minorities (Eddy and Hogan, 2014).</li><li>I will start class on time.</li></ul>
<b>Respect</b>	<ul style="list-style-type: none"><li>You will use language in the classroom that is inclusive and respectful of myself and your peers.</li></ul>	<ul style="list-style-type: none"><li>I will help facilitate respectful dialogue amongst students.</li><li>I will engage with students in a respectful manner.</li></ul>
<b>Fairness</b>	<ul style="list-style-type: none"><li>You will contribute meaningfully to group discussions, so as not to take advantage of others.</li></ul>	<ul style="list-style-type: none"><li>I will create and grade assessments in a manner that is objective and reasonable.</li><li>I will treat all groups equally.</li></ul>
<b>Trustworthiness</b>	<ul style="list-style-type: none"><li>You will not post any of our course content (slides, practice problems, pre-reading quiz problems) on the internet</li></ul>	<ul style="list-style-type: none"><li>I will respond to emails in a timely fashion, <b>IF</b> the answer to any question is not in the syllabus</li></ul>
<b>Courage</b>	<ul style="list-style-type: none"><li>You will say or do something when you see actions that undermine the above values.</li></ul>	<ul style="list-style-type: none"><li>I will happily receive constructive criticism about my teaching at any time.</li><li>I will say or do something when I see actions that undermine the above values.</li></ul>

modified with permission from Dr. Tricia Bertram Gallant.

Please see the UCSD rules on Academic Integrity and Standards ([academicintegrity.ucsd.edu](http://academicintegrity.ucsd.edu)).

### Policy on missed midterm

If you miss a midterm with a valid excuse (ie: illness with doc's note), I'll take the relevant questions on the final (from same material of the missing midterm) and make them worth the missing 24 or 25%.

**Discussion Sections:** are not mandatory. There will be practice exam questions during discussion sections that not only allow students the opportunity to practice course material, but also gives students exposure to the types of exam questions that will be asked of them. You are allowed to attend any discussion section you like. However, if you want to attend a section other than the one to which you

are registered, priority will be given to students registered in each section in the event that that section is too full (fire codes and all).

**Midterm Group Exams:** we are going to use group exams for a portion of our midterms. Here's how it works: you take a midterm and hand it in (pretty typical so far!). You will get the opportunity to re-take one of the questions from the midterm a second time (I will take the higher of the two scores). You hand that in. You then get into a group of 3 to 5 people. In your groups, you will then answer another one of the midterm questions that you wrote (they are typically 1 page long, and take ~10 minutes each) a second time. Here's how the scoring will work for group exam questions:

I will take the average of the individual scores of all members of the group for that question. I will then take the group's score on the group portion of the exam. If the group exam score is higher than the average of the individuals, then I will add the difference to each individual's score.

**Eg:**

Student A: 90% on individual portion for question 4 (for example)

Student B: 80% on individual portion for question 4

Student C: 70% on individual portion for question 4

Student D: 60% on individual portion for question 4

Average of individual scores for question 4: 75%.

That same group gets 80% on the group exam for question 4.

Difference between ave individual and group = 5%.

Therefore, each individual gets an additional 5% on their scores for question 4, so the grades look like:

Student A: 95% for question 4

Student B: 85% for question 4

Student C: 75% for question 4

Student D: 65% for question 4

IF your group grade is lower than the average grade for your group, then it will NOT lower your grade for that question. The group exam CANNOT lower your grade: only raise it.

**Reference letters:** In reference letters, I cite specific behavioral examples of when you have demonstrated any type of behavior that might reflect well in a reference letter. So, the best way to get a reference letter is to show these kinds of behaviors over the course of the quarter.

**Grades** will follow the scheme below:

A+	90+	B-	70-73
A	85 - 90	C+	67-69
A-	80-84	C	64-66
B+	77-79	C-	60-63
B	74-76	D	50-59



## Tentative Schedule BIPN100, Spring 2017

Date	Topic
Apr 3 - 7	membranes and membrane transport Resting membrane potential
Apr 10 - 14	<b>QUIZ #1</b> action potentials: channels and their function action potentials: refractory periods and propagation
Apr 17 - 21	Synaptic transmission: vesicular release; receptors; termination; EPSPs and IPSPs; post-synaptic summation organization of the nervous system
April 24 - 28	Spinal cord organization Sensory systems
<b>Apr 26, 8:00 to 10:00 pm</b>	<b>Midterm 1 in GH 242</b>
May 1 - 5	Autonomic nervous system Endocrinology: Feedback loops, hormones, receptors, HPA axis
May 8 - 12	<b>QUIZ #2</b> Skeletal muscle: excitation-contraction coupling, cross-bridges and power strokes, recruitment, contraction, metabolism
May 15 -19	Smooth muscle contraction and regulation Cardiac muscle: excitation-contraction coupling; Action potentials
<b>May 17, 8:00 to 10:00pm</b>	<b>Midterm 2 in GH 242</b>
May 22 - 26	Cardiac muscle: Action potentials of pacemaker cells inotropy, chronotropy, dromotropy Cardiac muscle: EKGs; Wigger's diagram; P/V loops
May 31 - June 2	<b>QUIZ #3</b> Blood flow, pressure and resistance Capillary exchange Regulation of blood pressure
June 5 - 9	Renal physiology: filtration, reabsorption, secretion, excretion Measuring renal flow rates Endocrine control of renal function
<b>Jun 10, 11:30 - 2:30</b>	<b>Final exam: Comprehensive</b>