BME 5010 Quantitative Physiology
– Winter 2017

Time and place:
Tuesday and Thursdays, 6:30-8:20 p.m.
Place: 02220 BIOE

Instructors:

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Teaching Assistant: Jeremy Llaniguez
E-mail: et9286@wayne.edu
Office Hours: T/Thu 10:00 – 3:00 p.m. or By Appointment (No Walk-Ins).

Objectives: Physiology is the study of the mechanisms by which the body functions. Your primary objective in this course is to learn the basics of human physiology – that is, the mechanisms by which the organ systems of the human body function, with a unique emphasis on the quantitative aspects of the human systems. A second objective is to become familiar with some of the ways in which biomedical engineering, genetic engineering and cell biology are being used to address problems of health and disease based on the principles of physiology.

Required Textbook:

Additional learning materials: The lecture handouts and review sheet for each chapter are available on the course Blackboard web site, available through PipeLine. It is the responsibility of the student to obtain the handouts from the course web site. Students should access the notes prior to class.

Some editions to the textbook come with CDROM, "Essential Study Partner," which can be used for self-study. We also have ADAM Interactive Physiology CD-ROMs available. These are not required but serve as an additional study aid. They cover the muscular, cardiovascular, nervous, respiratory and urinary systems. There are eight CDs available on each subject. They can be checked out from Teaching Assistant on Monday and returned Wednesday of the same week or checked out Wednesday and returned the following Monday. Please return them at these times without exception so that other students can check them out. If they are still available you are free to check them out again. Students who are regularly
delinquent in returning CDs will be warned and will then be penalized 5 exam points on the next exam for every day that the CD is not returned. Grades will not be issued to students who do not return CDs at the end of the semester. You can also buy an entire set of CDs from Tangent Scientific (phone, 1-800-363-2908). Again, the CD-ROMs are an optional learning tool, and not required for the course.

**Grading:** Grades for this class will be based on the following components:

- 4 Exams: 30 points each
- Assignment Report/Presentation: 30 points

The grading scale for graduate students is as follows:

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<th>Grade</th>
<th>Percentage</th>
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<tr>
<td>A</td>
<td>93-100%</td>
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<tr>
<td>A-</td>
<td>86-92</td>
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<td>B+</td>
<td>81-85</td>
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<td>B</td>
<td>76-80</td>
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<td>C+</td>
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<td>C</td>
<td>61-65</td>
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<td>F</td>
<td>60 or less</td>
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****THERE ARE NO EXTRA ASSIGNMENTS YOU CAN DO TO INCREASE YOUR GRADE.

**Examination policy:** This course will have four examinations, which may consist of multiple choice, true/false, short answer, problem solving and/or short essay questions. Your exam grades will be determined by the total number of points obtained. You will have the entire class period to complete each exam. The exams are closed book.

**Material covered on the exams:** You are responsible for all material in the lecture, notes and the assigned reading in the textbook (figures, tables and text). See attached course schedule for dates of all exams. THERE ARE NO MAKE-UP EXAMS.

**Assignments:** There is one assignment to complete during the semester. This assignment will be in the form of a written report and class presentation. **The written report must be submitted electronically via Blackboard, and the PowerPoint presentation must be sent to Instructor two days before presentation through Email.** Late assignments will not be accepted and students will receive a zero for their grade.

**Course Prerequisites:** Previous college-level human physiology or other biology-related courses.

**Homework policy:** The required reading for this course is shown in the attached schedule. For many students there is much new material covered. Students are strongly encouraged to read the assigned text before the material is covered in class. The end of each chapter or section in the text has (1) a summary of key concepts, (2) a list of key terms and (3) a series of review questions. Reviewing these will be helpful to your understanding of the material. The figures in the text are good, and studying them will help you learn key concepts.

**Attendance policy:** Regular attendance of the lectures is strongly encouraged, but attendance is not part of the grade for this course. However, you will need to attend on the days you are scheduled to present your
assignment. The instructor may elect to look at strong attendance favorably in a borderline case where the final course grade falls just short of the next higher grade.

Policy on cheating and student conduct: It is the responsibility of each student to adhere to the principles of academic integrity. Academic integrity means that a student is honest with him/herself, fellow students, instructors, and the University in matters concerning his or her educational endeavors. Thus, a student should not falsely claim the work of another as his/her own, or misrepresent him/herself so that the measures of his/her academic performance do not reflect his/her own work or personal knowledge. In this regard, cheating will not be tolerated. Cheating includes (but is not limited to) any communication (written or oral) during examinations and sharing of work, such as using the same models or computer programs or copying work. All assignments and projects must be an individual effort unless specifically noted. All written assignments and oral presentations are expected to conform to standards for citation (referencing). Please refer to the “Expectations for Citation in Biomedical Engineering” handout (attached and available on the web) for guidance. STUDENTS WHO CHEAT ON ANY ASSIGNMENT OR DURING ANY EXAMINATION WILL BE ASSIGNED A FAILING GRADE FOR THE COURSE.

Therefore avoid all appearance of improper behavior! Students who witness cheating should report the incident to the instructor as soon as possible. (Cheating observed during an Exam should be quietly reported during the Exam period). Students are also welcome to discuss any concerns related to cheating with Dr. John Cavanaugh, Interim Chair of Biomedical Engineering.

Blackboard: Blackboard will be used throughout the course for communication among students and with the instructor. Feel free to post both private and common questions. Written assignments will be turned in and distributed to students via Blackboard. In order to use the system, you must log on through PipeLine. Please activate your Wayne email address, forwarding it to your standard email if you wish. This will be the address with which the class communicates with you.