

**Human Physiology**  
***NROSCI/BIOSC-1070 & MSNBIO-2070***  
**Fall 2019 Syllabus**

**Classroom:** 169 Crawford Hall

**Class Meetings:**

- **Lectures:** Monday, Wednesday—6:00-7:15 PM
- **PBLs and Exams:** Friday—3:00-5:00 PM

**Grading:**

Your grade will be calculated as follows:

- 20% from each of 4 exams
- 12% from group learning exercises
- 5% for course participation and homework ([Tophat](#))
- 3% for completing the [Neurophysiology Modules](#) during the first three weeks of class

**General Info:**

Exams will cover material presented in lectures and handouts. Although textbook readings will not explicitly be covered on examinations, students are highly encouraged to at least skim this material to provide a better understanding of information from lectures. Furthermore, the textbook should be used as a reference while studying lecture notes and handouts and preparing for problem based learning exercises.

If a legitimate reason (illness, death in family, medical school interview, etc.) prevents a student from taking an exam on the scheduled date, he or she **must** notify Dr. Yates in advance and pre-arrange an alternate time to take the exam. If arrangements are not made **BEFOREHAND**, the student will receive a failing grade for the exam.

**Academic Integrity Statement:**

Cheating/plagiarism will not be tolerated. Students suspected of violating the [University of Pittsburgh Policy on Academic Integrity](#), from the February 1974 Senate Committee on Tenure and Academic Freedom reported to the Senate Council, will be required to participate in the outlined procedural process as initiated by the instructor. A minimum sanction of a zero score for the quiz or exam will be imposed.

**Disability Resource Statement:**

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both your instructor and the [Office of Disability Resources and Services](#), 140 William Pitt Union, 412-648-7890/412-624-3346 (Fax), as early as possible in the term. Disability Resources and Services will verify your disability and determine reasonable accommodations for this course.

## Course Schedule:

Readings are from Guyton and Hall text unless indicated

Date	Topic	Lecturer	Reading
<b>Block 1 - Cardiovascular/Muscle</b>			
26-Aug Monday	Course Overview and Logistics; Cardiovascular 1	Yates	pp. 169-178
28-Aug Wednesday	Cardiovascular 2 <i>Hemodynamics</i>	Yates	pp. 179-188
30-Aug Friday	Muscle Contraction 1 <i>Skeletal Muscle</i>	Yates	pp. 75-96
2-Sep Monday	Labor Day Holiday <i>No Class</i>		
4-Sep Wednesday	Muscle Contraction 2 <i>Smooth and Cardiac Muscle</i>	Yates	pp. 97-105; 109-112
6-Sep Friday	Control Mechanisms 1 <i>Neural Mechanisms and Prep for PBL 1</i>	Yates	pp. 773-785
9-Sep Monday	Control Mechanisms 2 <i>Endocrine Signaling</i>	Yates	pp. 925-937
11-Sep Wednesday	Control Mechanisms 3 and Return to Cardio System <i>Integration / Electrical Events and ECG / Cardiac Cycle</i>	Yates	pp. 330-331; 113-122; 283-291
13-Sep Friday	Problem Based Learning Activity 1 <i>Paralytics and Myesthesia Gravis</i>	TAs	PBL Activity 1
16-Sep Monday	Cardiovascular 3 <i>Determinants of Cardiac Output 1</i>	Yates	pp. 245-258
18-Sep Wednesday	Cardiovascular 4 <i>Determinants of Cardiac Output 2</i>	Yates	pp. 245-258
20-Sep Friday	Problem Based Learning Activity 2 <i>Antiarrhythmic Agents</i>	TAs	PBL Activity 2
23-Sep Monday	Cardiovascular 5 <i>Neural and Local Control of Blood Flow 1</i>	Yates	pp. 203-225; 227-243
25-Sep Wednesday	Cardiovascular 6 <i>Neural and Local Control of Blood Flow 2</i>	Yates	pp. 203-225; 227-243

Date	Topic	Lecturer	Reading
27-Sep Friday	<b>EXAM #1: 8/26 - 9/18 Lectures (Cardio 1-4/Muscle Contraction/Control Mechanisms) &amp; Neurophysiology Modules</b>		
30-Sep Monday	Cardiovascular 7 <i>Capillary Dynamics</i>	Yates	pp. 189-201; 305-321
2-Oct Wednesday	Cardiovascular 8 <i>Exercise Cardiovascular Responses; Integrated Responses; Clinical Issues</i>	Yates	pp. 259-281; 293-302
4-Oct Friday	Problem Based Learning Activity 3 <i>Orthostatic Intolerance</i>	TAs	PBL Activity 3
<b>Block 2 - Renal &amp; Immunology</b>			
7-Oct Monday	Renal 1 <i>Functional Anatomy of the Kidney</i>	Sved	pp. 323-346
9-Oct Wednesday	Renal 2 <i>Tubular Processing 1</i>	Sved	pp. 347-369
11-Oct Friday	Problem Based Learning Activity 4 <i>Heart Failure</i>	TAs	PBL Activity 4
14-Oct Monday	Renal 3 <i>Tubular Processing 2</i>	Sved	pp. 371-407
16-Oct Wednesday	Renal 4 <i>Regulation of Fluid Osmolarity / Control Mechanisms</i>	Sved	pp. 409-426; 427-442
18-Oct Friday	Problem Based Learning Activity 5 <i>Confusion</i>	TAs	PBL Activity 5
21-Oct Monday	Immunology 1	Reinert	Supplement
23-Oct Wednesday	Immunology 2	Reinert	Supplement
25-Oct Friday	<b>Exam #2: 9/23 - 10/16 Lectures (Cardio 5-8/Renal)</b>		

Date	Topic	Lecturer	Reading
<b>Block 3 - Respiratory &amp; Hematology</b>			
28-Oct Monday	Respiratory 1 <i>Blood Composition, Clotting, Respiratory Mechanics</i>	Yates	pp. 445-454; 483-494; 497-507
30-Oct Wednesday	Respiratory 2 <i>Respiratory Mechanics</i>	Yates	pp. 497-507; 509-526
1-Nov Friday	Problem Based Learning Activity 6 <i>"Out of Sorts"</i>	TAs	PBL Activity 6
4-Nov Monday	Respiratory 3 <i>Pulmonary Circulation &amp; Control of Breathing</i>	Yates	pp. 527-537; 539-548
6-Nov Wednesday	Respiratory 4 <i>Clinical Aspects &amp; Review</i>	Yates	pp. 549-557; 561-565; 569-574; 409-426
8-Nov Friday	Problem Based Learning Activity 7 <i>Respiratory Disease</i>	TAs	PBL Activity 7
<b>Block 4 - Gastrointestinal</b>			
11-Nov Monday	Gastrointestinal 1 <i>Gastrointestinal Physiology 1</i>	Yates	pp. 797-842
13-Nov Wednesday	Gastrointestinal 2 <i>Clinical Aspects &amp; Review</i>	Yates	pp. 843-849; 881-902; 983-999
15-Nov Friday	<b>Exam #3: 10/21- 11/6 Lectures (Immunology/Respiratory/Hematology)</b>		
18-Nov Monday	Gastrointestinal 3 <i>Metabolism 1</i>	Yates	pp. 853-880; 951-963; 965-982
20-Nov Wednesday	Gastrointestinal 4 <i>Metabolism 2</i>	Yates	pp. 853-880; 951-963; 965-982

Date	Topic	Lecturer	Reading
<b>Block 5 - Reproductive &amp; Developmental Physiology; Growth &amp; Temperature Regulation</b>			
22-Nov Friday	Growth Regulation	Yates	pp. 1001-1019
25-Nov— 29-Nov	Thanksgiving Break <i>No Class</i>		
2-Dec Monday	Reproduction 1 <i>Male and Female Reproductive Physiology</i>	Yates	pp. 1021-1054
4-Dec Wednesday	Reproduction 2 <i>Pregnancy and Contraception</i>	McDonnell	pp. 1055-1069
6-Dec Friday	Developmental Physiology; Temperature Regulation <i>Fetal &amp; Neonatal Physiology; Physiology of Aging; Temperature Regulation</i>	Yates	pp. 911-922; 1071-1081
TBD	<b>Exam #4: 11/11- 12/06 Lectures (Gastrointestinal/Reproduction/Growth &amp; Temperature Regulation)</b>		