

BIOLOGY 340 (002-012): MAMMALIAN PHYSIOLOGY

INSTRUCTOR:	Dr. Chris Trimby ctrimby@njit.edu	LAB INSTRUCTOR:	TBD Boyden Hall (RU-N) Please email for appointment
OFFICE:	340F Central King Bldg.	LECTURES:	T, F: 2:30pm – 3:55pm [CKB 303]
OFFICE HOURS:	Tuesdays 11:00AM – 2:30PM Please email for an appointment.	LABORATORY:	Lab Schedules [CKB 302]

COURSE DESCRIPTION: This course will review general principles of the function of the human body as a mammal, with emphasis on the function and regulation of neuromuscular, cardiovascular, respiratory, endocrine, digestive, and excretory systems. The goal is to provide students with the basic knowledge to understand how their own bodies operate.

TEXTBOOK:

- ⊕ 'Vander's Human Physiology: The Mechanisms of Body Function, 13/e, By Widmaier, Raff, Strang + Connect/LearnSmart Access, McGraw Hill
- ⊕ An i>Clicker2 © 2011 is required for this course. You can purchase one from the NJIT campus bookstore

ATTENDANCE AND PARTICIPATION: Attendance and participation be assessed in **lab**, so you should be on time and mentally present. Lecture & lab are linked and attendance at all class sessions is important to doing well in the course. Discuss making up missed class time or work with your instructors as soon as possible. We provide numerous reminders of course deadlines and expect you to be responsible for meeting them; late assignments will be deducted 10% of the points available for each 24 hours after the assignment was due. However, we will make every effort to accommodate your valid, excused absences and are happy to work with you if you are struggling or falling behind. Be sure to communicate with us about your concerns regarding the course, the earlier the better! We are here to help. Please let us know if you need accommodations for a disability.

ACADEMIC DISHONESTY: The course has a zero tolerance policy for academic dishonesty, including plagiarism and cheating. Instances of dishonesty will be punished by a zero on the assignment and consultation with the office of the Dean of Students to determine if further action is required. If you have any questions about what constitutes plagiarism or cheating, please ask us or refer to the [Academic Integrity Code](#).

OVERALL COURSE GRADE: Your grade for this course will be based on lab, exams and assignments.

* Lab grade will be broken down further below. Note points will be scaled to equal 200.

Total Point Breakdown	Points
Laboratory*	200 points
Homework Assignments	100 points
Exams (4)	200 points
Total	500 points

Lab Point Breakdown	Points
Attendance & Participation	90 points
Lab Quizzes (12)	170 points
Lab Write-ups	160 points
Physician Fridays	80 points
Total	500 points

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GRADE SCALE: Grades will be determined by the percentage of the possible points earned, following the standard grade scale below. **Grades aren't curved & don't ask for extra credit.**

Letter Grade	Percentage	Letter Grade	Percentage
A	> 90%	C	70-75%
B+	85-90%	D	60-70%
B	80-85%	F	< 60%
C+	75-80%		

Scaling of lab grade to include in Course Grade:

Points earned/500 = %
 % x 200pts = Laboratory grade
 i.e. 450/500pts = .9 x 200 = 180pts

COURSE LEARNING OUTCOMES:

1.) Learning How to Learn

- Students will develop personal learning strategies based on recognition of their own learning processes.
- Students will identify their learning style and develop a learning plan that is aligned with that style.
- Students will reflect on the note taking and study process and self-monitor their habits throughout the semester
- Students will develop a plan for their continued learning beyond this course.

2.) Application

- Students will develop hypotheses to explain observed phenomena.
- Students will design a basic experiment to test a hypothesis, taking into account the ethical and methodological considerations for proper experimental design.
- Students will apply knowledge of functional mechanisms and their regulation to explain the pathophysiology underlying common diseases/disorders.

3.) Integration

- Students will synthesize ideas from multiple areas in order develop complex concepts.

4.) Human Dimension

- Students will feel confident in their ability to apply knowledge to solve problems.
- Students will cooperate with their peers to effectively solve problems as part of a team.
- Students will take responsibility for their learning process and academic success.

5.) Caring/Valuing

- Students will get excited about the value of course material within their personal and professional lives.
- Students will commit to being a good learner in this course and beyond.

6.) Content Specific

- Students will explain physiological mechanisms by applying the basic principles of biology, chemistry and physics.
- Students will describe the basic mechanisms of homeostasis by integrating the function of cells → organ systems.

Individual chapters that we cover will have more specific content outcomes, based on what is being discussed and how it relates to the larger goals of the course. Look for those to be posted to Moodle and/or contained in the lecture slides for that topic.

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TENTATIVE COURSE SCHEDULE: Dates listed by week; lectures will meet twice every week and laboratory will meet every week, unless otherwise noted. A more detailed schedule will be continually updated via the course Moodle site.

WEEK OF	LECTURE	HW	LABORATORY	
Jan 19	Tuesday – Introduction & Homeostasis Friday – Cell Signaling & Basics		Intro to Lab Tutor	
Jan 26	Tuesday – Neurobiology (Ch.6) Friday - Neurobiology	HW1	EEG Laboratory Physician Friday #1	Qz1
Feb 2	Tuesday – Sensory Intro (Ch.7) Friday – Muscle (Ch.9)	HW2	Sensory Biology Lab	Qz2
Feb 9	Tuesday – Muscle (Ch.9) Friday – Control of Movement (Ch.10)	HW3	Muscle & Fatigue Lab Physician Friday #2	Qz3
Feb 16	Tuesday – Ch.10 Spillover & Review FRIDAY - EXAM 1 (INTRO + CH. 6, 7, 9 & 10)	HW4 – Exam Review	Reflexes & Reaction Times Lab Physician Friday #3	Qz4
Feb 23	Tuesday – Cardiovascular (Ch.12) Friday - Cardiovascular	HW5	Guided PBL EMG Lab	Qz5
Mar 2	Tuesday – Cardiovascular Friday - Respiratory (Ch.13)	HW6	Heart & ECG Lab Physician Friday #4	Qz6
Mar 9	Tuesday – Respiratory Friday – Respiratory	HW7	Guided PBL ECG & Pulse	Midterm Qz
Mar 16	MARCH 16-20: SPRING BREAK – NO CLASSES			
Mar 23	Tuesday – Review/Spillover FRIDAY – EXAM 2 (CH. 12-13)	HW8 – Exam Review	Lung Function Lab Physician Friday #5	Qz7
Mar 30	3/30 Withdrawal Deadline Tuesday – GI (Ch.15) Friday No Classes	HW9	No Lab	
Apr 6	Tuesday –GI Friday – Nutrition/Metabolism (Ch.16)	HW10	Guided PBL Respiratory Lab Physician Friday #6	Qz8
Apr 13	Tuesday –Renal (Ch.14) Friday – Renal	HW11	Gut Absorption/Nutrition Lab Physician Friday #7	Qz9
Apr 20	Tuesday – Renal Spillover & Review FRIDAY – EXAM 3 (CH.14-16)	HW12 – Exam Review	Kidney & Urine Lab Physician Friday #8	Qz10
Apr 27	Tuesday – Endocrine (Ch.11) Friday - Endocrine	HW13		Final Qz
May 4	Tuesday (Friday Schedule) - Review Friday No Classes (Finals begin)	HW14 – Exam Review	Nutrition Lab Write-up Due to TA No Lab	
FINALS	FINAL EXAM WEEK: MAY 8-14, 2015			