

## **Bio 350 Fall 2016 - Cooper's sections**

- 8/24, Lecture 1: Overview of class: lecture+ lab, exams etc; How one learns.  
Homeostasis, Krogh principle, + and – feedback, overview of all systems,  
(Chapter 1 in Sherwood)
- 8/26, Lecture 2: continue with Homeostasis. Cellular energy: ATP from glucose, comparative-anoxic  
Animals. Cells and molecules (Chapter 1 & 2 in Sherwood)
- 8/29, Lecture 3: Cont. Cellular energy: ATP from glucose, comparative-anoxic  
Animals. Cells and molecules (Chapter 2 in Sherwood)
- 8/31, Lecture 4: membrane physiology, membranes, Na/K ATPase, membrane potential (Ch 3 &4)
- 9/2, Lecture 5: membrane physiology, membranes, Na/K ATPase, membrane potential (Ch 3 &4)
- 9/5, Labor Day - Academic Holiday
- 9/7, Lecture 6: APs, graded potentials, summation, V-gated Na and K channels-gates (Ch 3 &4)
- 9/9, Lecture 7: Continue Aps, graded potentials etc (Ch 3 &4)
- 9/12, Lecture 8: Anatomy of neuron, squid giant axon vs mammalian neurons, phasic and tonic  
responses, types of synapses (Ch 4)
- 9/14: Lecture 9: types of synapses, neuromuscular junction (Ch 4)
- 9/16: Lecture 10: types of synapses, neuromuscular junction & Nervous systems (Ch 4 & 5)
- 9/19: Lecture 11: Nervous systems, CNS, PNS, ANS, comparative, mammalian brain, Neurotransmitters  
(Ch 4 & 5)
- 9/21: Lecture 12: Neurotransmitters, Sensory mechanisms (Ch 5 & 6)
- 9/23: Lecture 13: Sensory mechanisms & behavior. (Ch 5 & 6)
- 9/26: Lecture 14: Sensory mechanisms & behavior. (Ch 5 & 6)
- 9/28: Lecture 15: Catch up & Exam review

### **9/30: EXAM 1 (FRIDAY) – Multiple choice, short answer and open responses.**

- 10/3, Lecture 16: Muscle physiology (Ch 8)
- 10/5, Lecture 17: Muscle physiology (Ch 8)
- 10/7, Lecture 18: Muscle physiology (Ch 8)
- 10/10, Lecture 19: Endocrine: Intro, (Ch 7)
- 10/12, Lecture 20: Endocrine: Growth, Adrenal (Ch 7)
- 10/14, Lecture 21: Endocrine: thyroids (Ch 7)
- 10/17, Lecture 22: Endocrine: fuel metabolism, energy balance (Ch 7).  
**Thermal physiology (Chapter 15)**

### **Oct 10-21, midterm grading window**

- 10/19, Lecture 23: Cardiovascular (Ch 9)
- 10/21, Lecture 24: Cardiovascular (Ch 9)
- 10/24, Lecture 25: Cardiovascular & Respiration (Ch 9 & 11)
- 10/26, Lecture 26: Respiration (Ch 11)
- 10/28 Lecture 27: Respiration (Ch 11)
- 10/31, Lecture 28: Respiration (Ch 11)
- 11/2, Lecture 29: Catch up & Exam review

### **11/4, EXAM 2 (FRIDAY) – Multiple choice, short answer and open responses.**

11/7, Lecture 30: Excretion, fluid and ionic/osmotic balance (Ch 12 & 13)

11/9, Lecture 31: Excretion, fluid and ionic/osmotic balance (Ch 12 & 13)

11/11, Lecture 32: Excretion, fluid and ionic/osmotic balance (Ch 12 & 13)

11/14, Lecture 33: Excretion, fluid and ionic/osmotic balance (Ch 12 & 13)

11/16, Lecture 34: Excretion, fluid and ionic/osmotic balance (Ch 12 & 13)

11/18, Lecture 35: Digestion (Ch 14)

11/21, Lecture 36: Digestion (Ch 14)

**11/23, No class, Thanksgiving**

11/28, Lecture 37: Digestion (Ch 14)

11/30, Lecture 38: Reproduction (Ch 16)

12/2, Lecture 39: Reproduction (Ch 16)

12/5, Lecture 40: Reproduction (Ch 16)

12/7, Lecture 41: Catch up on content

12/9, Lecture 42: Review for final exam

**FINAL EXAM: Monday 12/12/16 at 8:00 AM Room 116 Cumulative with emphasis on 3<sup>rd</sup> section of class** <http://www.uky.edu/registrar/content/fall-final-exam-schedule>

**Grade Point breakdown**

**LAB**

10 worksheets @ 10pts each = 100

10 quizzes @ 2 pts each = 20

**Lab Total: 120 (18% of grade)**

**GCCR**

Abstract 10

Introduction 10

Methods 10

Results 20

Discussion 20

Full Report 70

**GCCR Total: 140 (22% of grade)**

**LECTURE**

Exam 1 100

Exam 2 100

Exam 3 150

Other 60 (class participation and short assignments in class)

**Lecture Total: 410 (60% of grade)**

**Grand Total: 670** (89.5% up is an A; 79.5 to 89.49% is a B; 69.5 to 79.49% is a C; 59.5 to 69.49% is a D; less than 59.49% is a E)

**The course objectives:**

(1) Understanding of the fundamental principles of animal physiology;

- (2) Adaptations which occur in various animal groups which have developed through natural selection
- (3) Students will learn how to research and discuss concepts in animal physiology;
- (4) Conduct laboratory experimentation on living organisms by experimental design, collect data, analyzing, writing the results and interpretation of data in conjunction with scientific literature

**Course Learning Outcomes:** (same as those for a course in Australia

<https://www.adelaide.edu.au/course-outlines/105180/1/sem-1/>)

- (1) Describe the anatomy & physiology of the major systems of the body within the framework of the underlying principle of homeostasis
- (2) Describe and identify the variations in form and function between certain animal species
- (3) Demonstrate skills in animal handling and experimentation
- (4) Demonstrate skills in literature analysis, scientific report writing and group study

### **Excused Absences:**

Students need to notify the professor of absences prior to class when possible. *Senate Rules 5.2.4.2* defines the following as acceptable reasons for excused absences: (a) serious illness, (b) illness or death of family member, (c) University-related trips, (d) major religious holidays, and (e) other circumstances found to fit “reasonable cause for nonattendance” by the professor.

Students anticipating an absence for a major religious holiday are responsible for notifying the instructor in writing of anticipated absences due to their observance of such holidays no later than the last day in the semester to add a class. Two weeks prior to the absence is reasonable, but should not be given any later. Information regarding major religious holidays may be obtained through the Ombud (859-257-3737, [http://www.uky.edu/Ombud/ForStudents\\_ExcusedAbsences.php](http://www.uky.edu/Ombud/ForStudents_ExcusedAbsences.php)).

Students are expected to withdraw from the class if more than 20% of the classes scheduled for the semester are missed (excused) per University policy.

Per *Senate Rule 5.2.4.2*, students missing any graded work due to an excused absence are responsible: for informing the Instructor of Record about their excused absence within one week following the period of the excused absence (except where prior notification is required); and for making up the missed work. The professor must give the student an opportunity to make up the work and/or the exams missed due to an excused absence, and shall do so, if feasible, during the semester in which the absence occurred.

### **Verification of Absences:**

Students may be asked to verify their absences in order for them to be considered excused. *Senate Rule 5.2.4.2* states that faculty have the right to request “appropriate verification” when students claim an excused absence because of illness, or death in the family. Appropriate notification of absences due to University-related trips is required prior to the absence when feasible and in no case more than one week after the absence.

### **Academic Integrity:**

Per University policy, students shall not plagiarize, cheat, or falsify or misuse academic records. Students are expected to adhere to University policy on cheating and plagiarism in all courses. The minimum penalty for a first offense is a zero on the assignment on which the offense occurred. If the offense is considered severe or the student has other academic offenses on their record, more serious penalties, up to suspension from the University may be imposed.

Plagiarism and cheating are serious breaches of academic conduct. Each student is advised to become familiar with the various forms of academic dishonesty as explained in the Code of Student Rights and Responsibilities. Complete information can be found at the following website: <http://www.uky.edu/Ombud>. A plea of ignorance is not acceptable as a defense against the charge of academic dishonesty. It is important that you review this information as all ideas borrowed from others need to be properly credited.

*Senate Rules 6.3.1* (see <http://www.uky.edu/Faculty/Senate/> for the current set of *Senate Rules*) states that all academic work, written or otherwise, submitted by students to their instructors or other academic supervisors, is expected to be the result of their own thought, research, or self-expression. In cases where students feel unsure about a question of plagiarism involving their work, they are obliged to consult their instructors on the matter before submission.

When students submit work purporting to be their own, but which in any way borrows ideas, organization, wording, or content from another source without appropriate acknowledgment of the fact, the students are guilty of plagiarism.

Plagiarism includes reproducing someone else's work (including, but not limited to a published article, a book, a website, computer code, or a paper from a friend) without clear attribution. Plagiarism also includes the practice of employing or allowing another person to alter or revise the work, which a student submits as his/her own, whoever that other person may be. Students may discuss assignments among themselves or with an instructor or tutor, but when the actual work is done, it must be done by the student, and the student alone.

When a student's assignment involves research in outside sources or information, the student must carefully acknowledge exactly what, where and how he/she has employed them. If the words of someone else are used, the student must put quotation marks around the passage in question and add an appropriate indication of its origin. Making simple changes while leaving the organization, content, and phraseology intact is plagiaristic. However, nothing in these Rules shall apply to those ideas, which are so generally and freely circulated as to be a part of the public domain.

Please note: Any assignment you turn in may be submitted to an electronic database to check for plagiarism.

**Accommodations Due to Disability:**

If you have a documented disability that requires academic accommodations, please see me as soon as possible during scheduled office hours. In order to receive accommodations in this course, you must provide me with a Letter of Accommodation from the Disability Resource Center (DRC). The DRC coordinates campus disability services available to students with disabilities. It is located on the corner of Rose Street and Huguelet Drive in the Multidisciplinary Science Building, Suite 407. You can reach them via phone at (859) 257-2754 and via email at [drc@uky.edu](mailto:drc@uky.edu). Their web address is <http://www.uky.edu/StudentAffairs/DisabilityResourceCenter/>.