Vertebrate Endocrinology - BIOL 679

Autumn 2007

Instructor: Dan Buchholz
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Office: 832 Rieveschl Hall
Office Hours: M,W 1-2

Time: MWF 12:00 - 12:50pm
Location: Swift Hall 719
Required Text: Vertebrate Endocrinology, 2007 (4th edition, Academic Press) by David Norris.

Goals:
The objective of this course is to learn the major concepts in endocrinology, hormonal systems, and endocrine mechanisms. Mammalian endocrinology will be emphasized, but commonalities across vertebrates will be covered. In addition, we will examine two examples of primary literature. Ultimately, the students will gain an appreciation for the fundamentals of endocrinology as well as the relevance of endocrinology in everyday life.

Prerequisites: Animal Physiology, Molecular Biology, and Organic Chemistry are strongly advised but not required.

Attendance Policy:
Attendance is important to learn the material and know what topics will be covered on the exams. The text serves merely as a guide to understanding the lecture material, not an outline or replacement of it. Lecture notes and power point slides are not available. Participation during class is encouraged as a means of aiding in understanding the material.

BE SURE TO CHECK THE COURSE BLACKBOARD SITE FOR CLASS ANNOUNCEMENTS AND ASSOCIATED CLASS MATERIAL.

Grading Policy:
There will be midterm exam and one final exam. The final exam will be cumulative. Each test will be composed of multiple choice and short answer/essay questions. The final grade will be based on the following point system:

Midterm	40%	200 pts
Final	60%	300 pts
Total		500 pts

Makeup Policy:
Make-up exams are not allowed, unless there is a medical or family emergency; in these cases verifiable documentation from a doctor or appropriate professional is required. The make-up exam must be taken within a week of the originally scheduled time and will be an oral exam on the same material. Failure to comply will result in an exam grade of zero.

Academic Integrity Statement:
The University Rules, including the Student Code of Conduct, and other policies related to academic integrity will be aggressively enforced. Any violation of these regulations, including acts of plagiarism or cheating, will be dealt with swiftly. The Student Code of Conduct document can be accessed at: http://www.uc.edu/ucinfo/conduct.html.

Special Needs Statement:
If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should meet with the instructor to arrange for reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services (513-556-6823).

SCHEDULE (subject to change if necessary):

Date	Day	Lecture	Topic	Reading*
Sept. 19	W	1	Introduction	Chap. 1, Sect. I-VI
Sept. 21	F	2	Protein Hormones	Chap. 3, Sect. I
Sept. 24	M	3	Steroid Hormones	Chap. 3, Sect. II
Sept. 26	W	4	Hormone Signaling	---
Sept. 28	F	5	Methods in Endocrinology	Chap. 2
Oct. 1	M	6	Hypothalamus and Pituitary I	Chap. 4, Sect. I-V
Oct. 3	W	7	Hypothalamus and Pituitary II	---
Oct. 5	F	8	Male Reproduction	Chap. 10, Sect, I, IV
Oct. 8	M	9	Female Reproduction I	Chap. 10, Sect. V
Oct. 10	W	10	Female Reproduction II	Chap. 10, Sect. VI (C)
Oct. 12	F	11	Pregnancy and Parturition	---
Oct. 15	M	12	Lactation, Reproductive Disorders	Chap. 10, Sect. VII
Oct. 17	W		Journal Article	---
Oct. 19	F	13	Puberty, Growth and Development	Chap. 10, III
Oct. 22	M	14	Hormones in Aging	---
Oct. 24	W		Review	---
Oct. 26	F		Midterm	---
Oct. 29	M	15	HPT Axis	Chap. 6
Oct. 31	W	16	HPA Axis	Chap. 8, Sect. 1-III, V-VI
Nov. 2	F	17	Endocrinology of Stress	---
Nov. 5	M	18	Salt and water balance	Chap. 8, Sect. IV
Nov. 7	W	19	Mineral balance	Chap. 14, Sect. I-III
Nov. 9	F	20	Feeding/Brain neuropeptides	Chap. 12, Sect. I
Nov. 12	M		*Veterans Day - no class*	---
Nov. 14	W	21	Digestion	Chap. 12, Sect. II
Nov. 16	F	22	Sugar balance	Chap. 12, Sect. III-IV
Nov. 19	M	23	Fat balance	---
Nov. 21	W		Journal Article	---
Nov. 24	F		*Thanksgiving - no class*	---
Nov. 26	M	24	Pineal gland	Chap. 4, Sect. VI
Nov. 28	W	25	Student's Choice**	---
Nov. 30	F		Review	---
Dec. 3	M		***Final Exam*** *1:30 - 3:30am*	---

* Readings from Norris' Vertebrate Endocrinology (2007).
** Students will chose any endocrine lecture topic, including from the following topics: Receptor/ligand coevolution, metamorphosis, prolactin (the "bionic" hormone), endocrine-based sex differences, endocrinology of pain, endocrine/immune interactions, endocrine disruption, insect endocrinology