

Syllabus

Vertebrate Physiology

Biol 416

Spring 2008

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Holt 223

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Office Hours: MTWRF 10-11

Physiology Berne, Levy, Koeppen, and Stanton 5th edition ISBN 0-323-02225-1

4 Exams 100% each, average of the 4 exams is the final grade.

93 – 100% A	75 – 79 C+
90 – 92 A-	70 – 74 C
87 – 89 B+	65 – 69 C-
83 – 86 B	55 – 64 D+
80 – 82 B-	50 – 54 D

Reading Assignments: The text is divided into 8 sections. Generally one section will be covered in lecture every two weeks, pace your reading accordingly.

The exams will cover any and/or all lecture material, laboratory exercises, and reading assignments.

Last day to drop without permission of instructor- Feb 8- after this the COP form must be used.

Last day to drop without a serious and compelling reason- Feb 22.

Student learning objectives (SLOs)

- 1) Understand the various processes of exchange and transport across the cell membrane.
- 2) Understand resting membrane potential and the basis of excitability.
- 3) Understand signal transduction.
- 4) Understand the functions and organization of the nervous system.
- 5) Describe excitation contraction coupling in various muscle types
- 6) Understand the role of the microcirculation in regulation of the cardiovascular system.
- 7) Understand the principles of gas exchange and perfusion ventilation coupling.
- 8) Describe the various homeostatic mechanisms that regulate salt and water balance.
- 9) Compare and contrast the regulation of physiological functions by the nervous system and the endocrine system.

Tentative Schedule

Week 1	Jan 29	Lecture
	Jan 31	Osmosis and Diffusion
2	Feb 5	Spectrophotometry
	Feb 7	Artificial membranes
3	Feb 12	Enzyme Activity
	Feb 14	Muscle Glycogen
4	Feb 19	Muscle Contraction
	Feb 21	Neuromuscular Excitation
5	Feb 26	Lecture and Review
	Feb 28	Exam 1
6	Mar 4	Surgical Procedures
	Mar 6	Unilateral nephrectomy
7	Mar 11	Protein electrophoresis and paper chromatography
	Mar 13	Complete nephrectomy
8	Mar 18	Spring Break Week of March 17th
	Mar 20	Spring Break
9	Mar 25	Lecture
	Mar 27	Exam 2
10	Apr 1	Heart dissection
	Apr 3	Lecture
11	Apr 8	ECG and Respiration
	Apr 10	Exercise physiology
12	Apr 15	Physiology of Cardiac muscle
	Apr 17	Integrated Cardiovascular physiology
13	Apr 22	Lecture
	Apr 24	Exam 3
14	Apr 29	Glomerular filtration
	May 1	Endocrine physiology
15	May 6	Temperature regulation
	May 8	Lecture
16	May 13	Lecture
	May 15	Lecture and review
	Finals May 23	Exam 4 2:00 pm to 3:50 pm