

BIO 104 – BIOLOGICAL DIVERSITY I: KINGDOMS OF ORGANISMS

INSTRUCTORS:

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REQUIRED TEXTS: Hickman, C.P., Roberts, L.S., Larson, A., L'Anson, H. and Eisenhour, D.J. (2006) *Integrated Principles of Zoology*, 13th ed., McGraw-Hill Publishing, New York, NY (ISBN 0-07-283056-5)

Starr, C. and Taggart, R. (2006) *Biology: The Unity and Diversity of Life*, 11th ed., Wadsworth Publishing Company, Belmont, CA. We use a packet of two booklets, representing selected chapters from the text, and a CD-ROM: *Plant Structure and Function* (ISBN 0-495-12576-8) and *Diversity of Life* (ISBN 0-495-12577-6).

McMillan, V.F. (2006) *Writing Papers in the Biological Sciences*, 4th ed., St. Martin's Press, New York (ISBN 0-312-44083-9)

ATTENDANCE: Students are expected to attend all lectures and laboratories.

Exams: Missed exams may be rescheduled ONLY at the discretion of the instructor. See "EXAMINATIONS" below for more information on this policy.

Laboratories: Because many of the living organisms examined in lab are viable only for short periods of time, it may not be possible to make up missed lab work. Notify your lab instructor ahead of time if you know you will miss a lab. It is often possible to attend another lab section during the same week.

WEB RESOURCES: All lecture materials (PowerPoint files, copies of previous exams, study guides, web site links, etc.) will be posted to the course BlackBoard site (<http://blackboard.goucher.edu>). Open the "Biological Diversity I-Kingdoms of Organisms" link. All materials will be placed within the "Course Information" folder in the Content section.

In addition, pre-lab quizzes will be posted weekly on BlackBoard. Your lab instructor will provide additional information about taking the on-line quizzes.

CELL PHONES: If it rings once, you'll be asked to leave the class. If it rings a second time during the semester, you'll be asked to drop the course. No exceptions. The best "call" is to turn it off before entering the classroom. If emergency calls must be received in class, set phone to "vibrate" and take the call outside of the classroom.

ACADEMIC HONOR CODE:

All students are bound by the standards of the Academic Honor Code, found at <http://www.goucher.edu/documents/General/AcademicHonorCode.pdf>

LABORATORIES: Laboratories meet in HS G27. This room is available for student use Monday through Friday. Students are expected to have read assigned laboratory materials before lab and to report promptly at the beginning of each laboratory period. **Late attendance and unexcused absences will adversely affect grades.**

Laboratory grades will be based on notebooks, written reports, quizzes and overall performance. Written assignments must be turned in on time **at the beginning of class.** Grades on work turned in late will be penalized **five points per working day.** Late work **will not** be accepted after other papers have been graded and returned.

Due to the nature of our curriculum, laboratory exercises frequently require students to work with live organisms. **If, for any reason, you do not want to work with live organisms, you should consider dropping this course.**

EXAMINATIONS: There will be four lecture exams; their dates are listed in the lecture schedule. The exams will emphasize materials covered in lectures, laboratories and assigned readings. If you are unable to attend an exam, you may request an early exam. In case of illness or emergency, contact one of the instructors BEFORE the exam. Missed exams may be rescheduled only for valid reasons, at the discretion of the instructor.

FINAL GRADES: Grades will be determined as follows:

Lecture exams:	50%*
Laboratory grade	30%
Final exam	20%

* There are four lecture exams. Three exams count for 15% each of the final grade; the lowest lecture exam counts for 5% of the final grade (for a total of 50%).

LECTURE SCHEDULE – FALL, 2006

Week	Day	Date	Topic	Suggested Readings
1	W F	Aug. 29 31	Introduction; Basic needs; Energy and metabolism (A) Properties, living organisms; Origins of life (A)	Hickman Ch. 1 Hickman, Ch. 2; S&T CD-ROM IV:21*
2	M W F	Sept. 3 5 7	LABOR DAY (No class) Five Kingdoms overview/Classification systems/Intro. to Prokaryotes (S) Prokaryotes II-Structure & function/Extremophiles (S)	Hickman 194-206 S&T, p. 346-355 “ “
3	M W F	Sept. 10 12 14	Prokaryotes III-Human Relevance / Origin of eukaryotic cells, Endosymbiosis theory (S) The Eukaryotic Cell: Structure and Function (S) Protists I - Autotrophs (K) (CHE 111 – Exam 1)	S&T CD-ROM III:20 Hickman, p. 39-50 S&T CD-ROM I:4, S&T, p. 350-369
4	M W F	Sept. 17 19 21	Protists II - Heterotrophs (K) DNA replication, mitosis (S) EXAM I	“ “ Hickman, p. 50-53; 88-90
5	M W F	Sept. 24 26 28	Meiosis (S) Fungi I (S) Fungi II (S) (CHE 111 – Exam 2)	Hickman, 75-78 S&T, p. 390-401
6	M W F	Oct. 1 3 5	Plant adaptations to terrestrial environments (S) Bryophytes; Introduction to vascular plants (S) Plant reproduction I: Bryophytes; Gymnosperms (S)	S&T, p. 374-375 S&T, p. 376-377 S&T, p. 378-383
7	M W F	Oct. 8 10 12	Plant reproduction II: Angiosperms (S) Vascular plants: stems, roots and leaves (S) MID SEMESTER BREAK	S&T, p. 384-386; 526-535 S&T, p. 498-509 S&T CD-ROM I:7
8	M W F	Oct. 15 17 19	Photosynthesis and respiration I (S) Photosynthesis and respiration II (S) EXAM II	
9	M W F	Oct. 22 24 26	Plant hormones and light regulation of plant growth & development (S) TBA (K) (CHE 111 – Exam 3)	S&T, p. 540-545 S&T, p. 548-553

Week	Day	Date	Topic	Suggested Readings
10	M	Oct. 29	Porifera: The sponges (K) Introduction to Eumetazoa and to Ctenophora and Cnidarians (Hydrozoa and Scyphozoa): Jellies of the Deep (K) Cnidarians II. Anthozoa: Anemones and Coral Reefs (K)	Hickman, p. 242-251 Hickman, Ch. 13
	W	30		
	F	Nov. 2		Hickman, Ch. 13
11	M	Nov. 5	Worms and the evolution of body cavities (K) Annelids: Segmented worms and the nature of segmentation in body plans (K) EXAM III	Hickman, p. 282-288, 297-300, 305-307 Hickman, Ch. 17
	W	7		
	F	9		
12	M	Nov. 12	Parasitic worms (K) Arthropods I: Basic features and Arachnids (K) Arthropods II: Crustacea (K) (CHE 111 – Exam 4)	Hickman, p. 289-297, 308-312 Hickman, Ch. 19 Hickman, Ch. 20
	W	14		
	F	16		
13	M	Nov. 19	Arthropods III: Insects and flight (K) THANKSGIVING BREAK ENJOY YOUR HOLIDAY!	“ “
	W	21		
	F	23		
14	M	Nov. 26	Molluscs I: Gastropods and Bivalves (K) EXAM IV Molluscs II: Cephalopods: The pinnacle of invertebrate evolution (K)	Hickman, p. 325-345 Hickman, p. 345-353
	W	28		
	F	30		
15	M	Dec. 3	Movie: Dive to the Edge of Creation (K) (CHE 111 – Exam 5) Overview and evolutionary patterns (K)	Hickman, p. 156-163
	W	5		

* Starr & Taggart CD-ROM resources cited according to Unit:Chapter (e.g. I:7), following Table of Contents in bundled portions of the text.