



## COURSE OUTLINE - FALL 2009

### Time and Place

M, W 8 – 8:50 AM 133 Wagar

### Instructors

Rob Schorr 134 Wagar 491-4273 [robert.schorr@colostate.edu](mailto:robert.schorr@colostate.edu)

### Required Materials

- Moyle, P.B. and J.J. Cech, Jr. 2004. Fishes: an introduction to ichthyology, 5<sup>th</sup> edition. Prentice-Hall, Upper Saddle River, NJ.
- FW300 lecture handouts (download from RamCT- these are copyrighted materials so you may not duplicate or distribute, they are for your use in the course only).

### Grading Policies

Midterm 1: 25% Midterm 2: 25% Midterm 3: 25% Final Exam: 25%

Exams require you to recall knowledge, articulate concepts, and synthesize material. As this course is heavy on terminology, correct spelling is essential and points will be deducted for incorrect spelling.

If you must miss an exam due to sickness or personal tragedy, Rob must be consulted **before** the exam begins--call, and leave a message if necessary! Also be prepared to provide evidence that you were at the event or doctor. Fail to provide such evidence and you will receive a zero on the exam.

No academic dishonesty will be tolerated: no resources are allowed during exams and you may not consult with or look at the work of others. My policy is simple: if you cheat you fail.

### Office Hours

Rob Schorr 9 -11 M, W and by appointment.

### Course Goals

By the end of this course, the student will have been given the opportunity to gain knowledge and forge interrelationships in eight areas of study basic to fish biology: anatomy, taxonomy, evolution, physiology, ecology, behavior, zoogeography, and conservation biology of fishes.

**Prerequisite:** a beginning course in basic biology (BY103 or Z110).

### How to do well in Ichthyology

Attend class regularly- exams stress material presented in lecture. Review your lecture notes in the evening after each lecture- it's an effective strategy for learning. Do the assigned reading- reading assignments have been carefully chosen to supplement and clarify the material presented in lecture. Organize your knowledge by constructing the tables suggested in lecture (more on this later).

### Special Needs

Please let me and Resources for Disabled Students (<http://rds.colostate.edu> or 491-6385) know as soon as possible if you have any special needs so that we can accommodate you.



**TENTATIVE LECTURE SCHEDULE - FALL 2009**

Date	Topic	Readings
Aug 24	1. Course overview	M&C 1
Aug 26	2. Overview of aquatic ecosystems	
Aug 31	3. Intro to fish classification, external anatomy	M&C 2 (pp.11-25), Bond 2*
Sep 2	4. Internal anatomy - GI system & gills	Bond 23*, 25*
Sep 7	<b>Labor Day Holiday – no class</b>	
Sep 9	5. Vascular system	Bond 23*
Sep 14	6. Vascular and urogenital systems	Bond 26*
Sep 16	<b>Midterm I</b>	
Sep 21	7. Nervous system, sensory perception	M&C 10
Sep 23	8. Endoskeleton	Bond 21*, 22*
Sep 28	9. Musculature	Bond 18*
Sep 30	10. Evolution of fishes	M&C 13
Oct 5	11. Fish evolution and taxonomy	M&C 12
Oct 7	12. Phylum Chordata to orders of fishes	Skim M&C 14-23
Oct 12	13. Population genetics and conservation	
Oct 14	<b>Midterm II</b>	
Oct 19	14. Systematics	Skim M&C 14-23
Oct 21	15. Systematics	
Oct 26	16. Physiology – Intro & fish locomotion	M&C 2 (pp. 25-34)
Oct 28	17. Swimming, respiration, scope for activity	M&C 3
Nov 2	18. Oxygen transport, buoyancy regulation	M&C 4 (pp. 53-61), M&C 5
Nov 4	19. Thermal regulation	M&C 5
Nov 9	20. Osmoregulation, freezing resistance	M&C 6
Nov 11	<b>Midterm III</b>	
Nov 16	21. Predation	M&C 7, Bronmark and Miner
Nov 18	22. Competition	Werner and Hall
Nov 23	<b>Fall Recess – no class</b>	
Nov 25	<b>Fall Recess – no class</b>	
Nov 30	23. Lentic fish communities	M&C 29-30, Brooks & Dodson
Dec 2	24. Tropical reefs and their fishes	M&C 33
Dec 7	25. Zoogeography	M&C 25, Rahel
Dec 9	26. Conservation Biology	M&C 37
Dec 17	<b>Final Exam 3:40-5:40p</b>	

\*Optional readings: Bond = Biology of Fishes (1996); read as necessary to supplement or clarify material presented in lecture.

All non-starred readings are REQUIRED. M&C = Moyle and Cech, required readings in course textbook; other readings to be announced (check webpage).