

COURSE: FISH 4960, Special Problems in Parasitology, 2 total credit hours
WEEKLY MEETING TIME / LOCATION: Th, 2:00-5:00 pm / Swingle Hall Rm 215
OFFICE HOURS / LOCATION: open
REQUIRED PREREQUISITES: Permission of instructor
INSTRUCTOR: Dr. S. A. Bullard (office phone: 334-844-9278; ash.bullard@auburn.edu)

COURSE OBJECTIVES AND APPROACH: The objective of this Special Problems course is for the students to gain an appreciation for basic research in the biological sciences. The scientific area of specialization for this course is "Parasitology: Natural History of Host-Parasite Relationships". Through specific, directed research problems each student is expected to fully participate in their assigned research topic. Undergraduate students will fully participate in their assigned research projects. A clear hypothesis is identified in the first week of the term and materials are introduced that allow the student to best begin investigating that topic. Assigned reading materials supplement laboratory demonstrations and weekly seminars (each Thursday afternoon). Students will be expected to become increasingly more autonomous with the research project as the semester progresses, although it is expected that there is a close interaction throughout the semester between the instructor and the student.

PRIMARY RESOURCES FOR LECTURE MATERIALS:

Barton, M. 2007. Bond's Biology of Fishes, 3rd Edition.
Grizzle, J. M. and W. A. Rogers. 1976. Anatomy & Histology of the Channel Catfish.
Nelson, J.S. 2006. Fishes of the World, 4th Edition.
Kardong, 2008. Vertebrate Comparative Anatomy, Function, Evolution.
Kardong, 2008. Comparative Vertebrate Anatomy: A Laboratory Dissection Guide.

SUPPLEMENTAL RESOURCES:

Berra, T.M. 2001. Freshwater Fish Distribution. 604 pp.
Caillet, G., M. Love, & E. Alfred. 1996. Fishes: A Field & Laboratory Manual on Their Structure, Identification, & Natural History. 194 pages.
Carrier, J.C., J.A. Musick, M.R. Heithaus. 2004. Biology of Sharks and Their Relatives. 596 pp.
Evans, D.H. & J.B. Clairborne. 2006. The Physiology of Fishes, 3rd Edition. 601 pp.
Gregory, W.K. 1933. Fish Skulls. Trans. American Philosophical Soc., New Series, 23(2):1-481.
Helfman, G.S., B.B. Collette, & D.E. Facey. 1997. The Diversity of Fishes. Blackwell. 528 pp.
Lagler, K.F., J.E. Bardach, R.R. Miller, & D.R. May Passino. 1977. Ichthyology. 506 pages.
Moyle, P.B. & J.J. Cech. 2004. Fishes: An Introduction to Ichthyology, 5th Edition. 726 pp.
<http://www.nsf.gov> (National Science Foundation; for "real-world" basic research opportunities)
<http://apps.isiknowledge.com> (ISI Web of Knowledge; for an all-around useful bio-database)
<http://www.fishbase.org/search.php> (FishBase; for common and scientific names of fishes)
<http://www.ncbi.nlm.nih.gov/> (National Center for Biotechnology Information "GenBank")
<http://trc.ucdavis.edu/mjquinan/apc100/modules/> (for general terminology, organ systems)
<http://zebrafish.org/zirc/health/diseaseManual.php> (for a "model fish" disease program)
<http://bsweb.unl.edu/labs/janovy/fp.html> (for perspectives on field biology and Parasitology)
http://asp.unl.edu/index.php?option=com_content&task=view&id=39&Itemid=48 (Guide to Authors, Journal of Parasitology)

GRADING POLICY: Students will be evaluated based on the following criteria and grading scale.

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| 1. Participation in discussions: | 25 possible points | |
| 2. Preliminary research paper and summary: | 25 possible points | |
| 3. Final research paper: | 25 possible points | |
| 4. Oral presentation of research product: | 25 possible points | |
| A = 100-90% | C+ = 77-79% | D = 63-66% |
| B+ = 87-89% | C = 73-76% | D- = 60-62% |
| B = 83-86% | C- = 70-72% | F < 60% |
| B- = 80-82% | D+ = 67-69% | |

COURSE EVALUATIONS: A midterm and final course evaluation will allow you to submit anonymous constructive criticisms on how to improve this course. However, the quickest way to solve a problem is by bringing it to me as it occurs during the semester. We can work it out and make corrections then and there.

ATTENDANCE POLICY: You are expected to attend class. Missing a class meeting will likely affect your grade directly or indirectly.

CONDUCT POLICY: If you distract or disrupt other students' learning you will be ejected from the class upon instigating said behavior. If you are unsure about what comprises distracting or disrupting behavior, it is your responsibility to seek clarification from the instructor.

CHEATING POLICY: Cheating, which includes plagiarism, is guaranteed to result in a "0" (zero credit) mark on the relevant work. The cheater, without exception, will be reported to the appropriate authorities at Auburn University and punished to the maximum extent legally allowable under the University's guidelines. If unsure about what constitutes cheating, you are encouraged to query me and seek clarification before taking any questionable action.

E-MAIL POLICY: Here are five recommendations for emails regarding this course: concise emails will elicit the most rapid response!

- Your first and last name should be included in the body of the email; your email address does not suffice because it is an alias, not a proper name.
- If multiple recipients are listed in the "TO:" and/or "CC:" lines of your message, the text of your message should nevertheless specify (A) to whom you are sending information and/or (B) from whom you are requesting information. The latter avoids a 'no response' by the targeted recipient(s), who do not wish to duplicate effort(s).
- The subject line should include a helpful synopsis of why you are emailing, e.g., "stuff" and "question" are not helpful.
- The text should comprise complete sentences, or at least employ capital letters and periods enclosing a word string that communicates a subject-verb concept.
- Dictionary words should be used: email is not "text-messaging;" hence, your email should lack an abundance of acronyms.

ACCOMODATIONS FOR DISABILITIES: See me during the first week of classes if you are registered with Disabled Students Services and need special consideration.

WITHDRAWING FROM COURSE: Departmental and University policies are followed herein; see appropriate semester schedule for those policies as well as their respective deadlines.