Biology 4212WA Biology of Fishes
Course syllabus

Winter term 2017

TEXTS: **Helfman, et al. 2009/2016. The Diversity of Fishes, 2nd edition. Wiley-Blackwell**

Lab manual: Caillet, et al. 1986/1996 Fishes. A field and laboratory manual. Waveland Press.

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OFFICE HOURS: posted on office door or by appointment

LECTURES: TuTh – 1:00 – 2:30 pm – RB 2044

EVALUATION:

Lecture Midterm	= 20%
Lab Midterm	= 20%
Lab Assignments	= 20%
Lecture Final	= 30%
iclicker	= 10%

GRADES:

A+ ≥ 90
A = 80 – 89 (1st class standing)
B = 70 – 79
C = 60 – 69
D = 50 – 59
E = 40 – 49 (failed)
F = 1 – 39 (failed)
F Academic Dishonesty = 0

Withdrawal without academic penalty: 10 March 2017

COURSE OBJECTIVES:
Lectures

Fishes represent the largest and most diverse group of vertebrates. This upper-level course will provide an overview of the diversity and biology of fishes. Lecture material will cover the systematics, evolution, anatomy, biology, and ecology of fishes. Additional topics will include fish behaviour, fisheries techniques, including various aspects of stock assessment and conservation.

Labs in the first half of the course will examine the morphology, classification, and identification of fishes. In the lab you will examine live and preserved specimens, and will be expected to recognize specific structures and understand the function(s) they serve, how they may differ among groups, and how those structures may serve to define taxonomic groups. At the conclusion of the course you should be able to recognize species of the major fish taxa in Northwestern Ontario, understand how they survive and persist in their environment and, hopefully, have an appreciation of the great array of fish diversity.

The second half of the course will entail a few activities involving life fish. One of these labs will be an experiment evaluating the mating behaviours of swordtail fishes, requiring detailed observations and analyses of the data collected, which will result in a lab report describing the results of the experiment. Additionally, we will visit the Dorion fish hatchery to see a large-scale production facility in action. Additional labs will be computer or lab-based, emphasizing approaches to analyzing fisheries data, including the exploration, analysis and interpretation of growth rates from fisheries data, methods in population estimation and stock recruitment models.

Course Policies

Exams: Missed exams will receive a grade of zero unless you are absent for a documented valid reason such as a family or medical emergency. If you wish to have an exam regraded you must submit a written explanation of why you think the assigned grade was incorrect within 2 weeks of return of the exam. Be aware the entire exam will be re-evaluated and your mark may go up, remain the same, or go down.

Note: this does not apply to arithmetic errors such as incorrect addition. You may bring these types of errors to my attention for correction, without a written explanation, at any time.

Written Assignments
Written assignments submitted late will be penalized 10% per day except for a documented valid reason such as a family or medical emergency. Papers will not be graded in the absence of a completed and signed form indicating the understanding of plagiarism in its many forms. **This will require the completion of an online exercise and quiz relating to plagiarism.** Additional direction regarding topics and format will be provided in class.

Academic Dishonesty
(The following is taken directly from the University website, with minor modification.)
The University takes a most serious view of offences against academic honesty. Penalties for dealing with such offences will be strictly enforced.
The following rules shall govern the treatment of candidates who have been found guilty of attempting to obtain academic credit dishonestly.
(a) The minimum penalty for a candidate found guilty of plagiarism, or of cheating on any part of a course will be a zero for the work concerned.
(b) A candidate found guilty of cheating on a formal examination or a test, or of serious or repeated plagiarism, or of unofficially obtaining a copy of an examination paper before the examination is scheduled to be written, will receive zero for the course and may be expelled from the University.
A copy of the "Code of Student Behaviour and Disciplinary Procedures" may be obtained from the Office of the Registrar.