

DESIGN OF FISH AND WILDLIFE PROJECTS (FW 370)
Fall Semester, 2017

INSTRUCTOR: Dr. Will Clements
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OFFICE: 236 Wagar, 491-0690
OFFICE HOURS: 2:00-4:00 M, T (and by appointment)

TEXTS: **Gotelli and Ellison (2013) A Primer of Ecological Statistics (Required)**
McMillan (2012) Writing Papers in the Biological Sciences (Recommended)

GENERAL

The purpose of this course is to introduce you to the general principles of conducting research in fish, wildlife and conservation biology. The course format will include lectures, discussion of papers from the primary literature and laboratory exercises designed to improve your understanding and appreciation of statistics. The course will emphasize philosophy and history of science, application of the scientific method in ecological research, preparation of research proposals, experimental design, data collection/analysis, scientific writing and scientific communication.

CLASS DISCUSSION

In addition to the assigned readings from Gotelli and Ellison, we will also discuss papers from the primary literature. Papers for these discussion sections will emphasize philosophy of science, experimental design and the importance of using the scientific method in fishery and wildlife research. These papers will be placed on Canvas. To participate in discussion sections, it is essential that you read these materials prior to class.

RESEARCH PROPOSALS

A research proposal (15-20 pages) describing a fish, wildlife or conservation biology investigation is required. Students will work in teams of 4 to develop the proposal, which will include a comprehensive literature review, a statement of the specific hypotheses being tested, justification for the importance of conducting the proposed research, detailed methods including experimental design and statistical analyses, expected results, and a budget (not to exceed \$150 K per year). Examples of previous proposals and other information are posted on Canvas.

POSTER PRESENTATIONS

During the last week of class, each team will develop a poster presentation describing and defending their proposed research. Poster presentations are open to graduate students and faculty in the department.

GRADES

Lab Assignments & Homework.....	25%
Midterm Exam.....	30%
Final Research Proposal.....	30%
Poster Presentations.....	15%