

## ECOTOXICOLOGY (FW 544)

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**Office Hours:** 2:00-4:00 M & T

### SUMMARY

The purpose of this course is to provide students with an overview of ecological and environmental aspects of toxicology and pollution ecology. The course will emphasize population, community, and ecosystem responses to contaminants and other anthropogenic stressors. I teach the course assuming that all students have a basic understanding of ecology, chemistry, and statistics.

### TEXT

Newman, M.C. and W.H. Clements 2008. *Ecotoxicology: A Comprehensive Treatment*. CRC Press, Boca Raton, FL, 852 pp.

### FORMAT

This course uses a lecture-discussion format, typically consisting of two 50-min lectures (M, W morning) and a 50-min discussion on Wednesday afternoons. Discussion sessions will focus on papers from the primary literature that are related to the week's lecture topics.

### DISCUSSION

During the first week of class, students will select from a list of topics for the weekly discussion. Generally, 2-3 students will be responsible for leading the discussion each week. Papers for the weekly discussion have been selected by the instructor and are available on Ram CT.

Students leading the weekly discussion are responsible for preparing a list of study questions that address critical issues in the papers (e.g., Are the data sound and presented in a valid manner? Are the conclusions drawn correctly? Did the authors adequately address the original hypothesis? What are the strong/weak points of the papers?). Group leaders will distribute study questions to the class during the lecture period prior to the discussion session (Wednesday morning).

**Important Note:** Discussion sections will emphasize critical evaluation and synthesis of papers rather than simply summaries of findings. Because class discussion counts 20% of your grade, it is expected that **all** students will carefully read the papers, examine the study questions, and participate in these discussion sessions.

### RESEARCH PROPOSAL

Each student will prepare a research proposal (<15 pages) on the effects of a contaminant (or class of contaminants) on population, community, and/or ecosystem processes. The topic chosen cannot be one that is currently, or has been previously a subject of the student's research background. Topics will be selected by the student but must be approved by the instructor. A pre-proposal will be due on the **5th Week**. During the **11th Week** of class, students will submit their draft proposal for peer-review to a panel selected by the instructor. After receiving these reviews, students will prepare written responses to these comments and then submit a final proposal in **Week 14**.

### GRADES

Grades will be determined by your performance on one 50-min lecture exam (25%), a comprehensive final exam (30%), preparation (20%) and review (5%) of a research proposal and **participation** in weekly discussions (20%).