Course Objectives

This course will provide students with the conceptual and theoretical framework within the field of plant biology (especially ecology) and conservation. This seminar-style class focuses on reading and discussion of historical and contemporary primary literature. It will provide you with the opportunity to think critically and discuss your thoughts within a structured yet informal setting and will provide you with a basic background in reading and writing scientific papers. This course is designed to help you:

1. Read and discuss primary literature critically.
2. Learn important skills for writing scientific papers.
3. Become comfortable presenting and discussing papers with your peers.
5. Write a critical review of a manuscript.
6. Write a review paper on the topic of your choosing.

Course Responsibilities

In preparation for each class, you are expected to read the assigned primary literature articles and accompanying background material. To facilitate discussion and ensure that everyone is prepared to participate, you will be responsible for bringing three discussion questions to class. These questions should be well thought out and focus on the content of the article(s), not the details of a particular method, for example.

In addition, each student will lead the discussion for one class over the course of the quarter. The student leading the discussion is responsible for providing an introduction on the topic for that particular day, a short synopsis of the paper(s) and will initiate and guide the discussion. This is an opportunity for you to be the class expert for the day and to become comfortable speaking in front of an audience. Your introduction should last 20 – 30 minutes and should provide background information necessary for understanding the topic of the primary literature. This may include the following: definitions to important words and the context within which they are used, historic information that may be helpful for understanding the paper in the larger context of the field, diagrams to help explain particular methods or experimental designs, flow charts to understand the motivation of the paper or conceptual flow charts, websites with interesting content, graphics, photos of study sites, experiments, etc. The introduction should be made in PowerPoint and brought to class on a thumbdrive or CD – you will have this in and your grade for presenting will be based partially on your powerpoint presentation. You may also provide handouts for the class with particularly important information – definitions, diagrams, etc.
Course Assessments

Weekly - 10 weeks, 40 points/week……………………………………………………. 20%
  Attendance (5 points)
  Participation in discussions (10 points)
  3 prepared questions for discussion (5 points)

Discussion Leader ………………………………………………………………………. 20%
  Powerpoint Presentation (hand in at end of class)
    Introduce authors & their institutions
    Introduce topic
    Summary of paper (no longer than 10-15 minutes)
      Briefly overview introduction, methods, results and discussion/conclusion
    Pose initial questions for discussion
  Supplementary Information (handouts, etc.)
  Discussion Facilitation
    Are you able to keep the discussion going if the group hits a lull?
    Are you prepared for this and how well do you succeed?

Seminar Summary Report ………………………………………………………………… 5%
  Due on or before March 14th, 9:00am* (email your completed Seminar Review form)
  Fill out the Seminar Review Form for at least one PBC seminar (or an outside seminar on a topic relevant to this class)

Mid-term Manuscript Review ………………………………………………………. 25%
  Due Thursday, Feb. 3rd, 1:00pm* (in class or emailed prior to class)
  Details on Jan. 27th

Final Paper – literature review on a subject of your choice …………………….. 30%
  Due Monday, March 14th, 9:00am* (emailed prior to 9:00am)
  Details on Feb 3rd
  Graduate Students: 12-14 pages (double spaced, Times or Times New Roman size 12, 1-inch margins on all sides), excluding references

* 5% of your final score will be deducted for each day that your assignment is late.

Seminars

January 13, 2011
Title: TBA – on the topic of Plant-Animal Interactions: Conservation and Ecological Genomics
Speaker: Steven Hendrix, Professor, Department of Biology, University of Iowa

February 10, 2011
Title: Phylogeography, diversification, and conservation of carnivorous Pitcher Plants
Speaker: Maggie Koopman, Assistant Professor, Biological Sciences, Eastern Michigan University
More info: http://sites.google.com/site/maggiekoopman/home

March 10, 2011
Title: TBA, on the topic of the causes and consequences of abundances and distributions of rare and invasive plants
Speaker: Tiffany Knight, Assistant Professor, Washington University, Department of Biology