

Biology 675: Evolution Seminar Series (updated 29 October 2012)

Thursdays 12:00-2:00 PM

Fall 2012 Syllabus

**Course Synopsis and Goals:** The Evolution Seminar Series (ESS) features a different speaker each week that will discuss their research into some aspect of evolutionary biology. Speakers are selected by a committee that is comprised primarily of graduate student members of the J. F. Crow Institute for the Study of Evolution, not by the instructor. Reading assignments are recommended by the speaker with some guidance from the instructor. Speakers come from diverse departments and backgrounds and include visitors from other institutions, graduate students, postdoctoral researchers, and professors. Undergraduate students enrolled in Biology 675 for credit will attend the hour-long seminar and participate in an hour-long roundtable discussion afterwards, usually with just the speaker and course members present. The main goals of the course are to expose students to areas of active research in evolutionary biology, to standard research approaches, and to both the formal scientific literature and more informal research discussions. Students will also learn what it is like to be an evolutionary biologist at various career stages. Critical thinking and the scientific method will be integrated throughout the course. Students will develop and practice written and oral science communication skills.

**Expectations and Evaluation:** Each week, students will prepare for the discussion by reading the assigned paper(s). Students will attend both the seminar and discussion and will be evaluated based on the quality and consistency of their participation. For example, students will participate by asking the speaker questions about the talk or paper, commenting on the research, and asking questions about life as a scientist. For full credit, you should ask at least two questions (or make comments), at least one of which must substantively address the science. One week's participation score will be dropped. Each student will moderate one discussion during the semester and prepare a written summary and critique on that area within 2 weeks (or the end of final exams for students covering the last 2 topics). The critique portion can cover the data in the talk, the presentation style, the discussion, and other literature. A critique is your opinion of what has or has not been demonstrated, whether the presentation and discussion were effective, and why you have concluded that; it should be professional in tone and grounded in scientific reasoning. The critique portion should be less than half of your total paper and is usually best to include after your summary. The summary and critique should be 6-8 pages (double-spaced, 12 pt font) and include at least 10 references, including at least 5 from the primary literature. The bibliography does not count toward the page limit. Note that a primary literature reference is a peer-reviewed journal article presenting original research. Secondary literature references are review articles, books, chapters, and (not to be used excessively) science journalism or websites. Final grades will be based on: 40% written report, 40% participation during discussions, and 20% preparation and performance while moderating your week's discussion. Grades are on the following scale 0-0.49 = F, 0.5-1.49 = D, 1.5-2.24 = C, 2.25-2.74 = BC, 2.75-3.49 = B, 3.5-4.49 = AB, and 4.5-5.0 = A and may be curved once the class distribution is clear.

**Literature:** Reading assignments are listed by their PubMed ID (PMID) numbers on the spreadsheet emailed at the beginning of the semester, and can be accessed here: [http://www.ncbi.nlm.nih.gov/pubmed](http://www.ncbi.nlm.nih.gov/pubmed). Many scientific journals require subscriptions, so you will need to be on campus to access them via UW’s digital subscriptions. If you have trouble downloading a paper, please contact or visit Steenbock Library. Some evolutionary journals are not indexed in PubMed or the speaker assigned special material. In these cases, a link to a website is included, instead of a PMID. All students should read the required material **before** attending that week’s discussion. This background reading is particularly important when preparing to moderate and will also provide a valuable list of potential references for the written report. PubMed searches with key terms and authors are also useful ways to find additional references.