

E210 Course Syllabus
Winter Quarter 2020
Fridays 1PM

Instruction: Donovan German
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Steinhaus Hall 267

Review Article

The focal points of this quarter's 210 project are

- 1) a literature review and synthesis
- 2) the peer-review process for scientific papers.

The project is intended to:

- Give you the opportunity to review, think deeply about, and synthesize the literature most relevant to your research interests
- Aid you in developing your ideas for possible research projects
- Introduce you to the review process, as reviewers and authors
- Help you develop your scientific writing

Paper assignment

Each student will write a short "review" paper, which will be submitted to the course coordinator (Dr. German), who will act as the editor of the journal, *Integrative Approaches in Comparative Physiology*. This fictitious journal specializes in publishing relatively short papers that provide thought-provoking reviews of intriguing questions in evolution, biomechanics, and physiology. These reviews should emphasize synthesis and/or the development of new approaches, rather than exhaustive summaries of past research. To the extent possible, aim for an integrative approach to the problem (rather than a more conventional focus). Good examples of the flavor of paper we are looking for are some of the review & synthesis papers published in the journal *Trends in Ecology and Evolution*. Go to the course website to download several example papers.

We encourage you to select a topic that you expect to pursue (or are pursuing) for your graduate studies. We are hopeful that this exercise will benefit the development of your research ideas and grant proposals. You might want to think of this paper as the introduction to a NSF grant proposal: i.e., summarize the state of the field, point out the holes and limitations of current knowledge and approaches, and delineate the new approaches that are needed to best advance the field (and highlight how these advances might be facilitated by drawing from other fields).

Remember, the process of publication is not a private one. The preparation of a manuscript is greatly facilitated by discussions with colleagues, including comments on previous drafts of your paper from your advisor and peers (prior to submission). Indeed, you should talk over your ideas and your manuscript with your advisor (and other folks). If at any time during the project you need advice or assistance, feel free to contact the course instructors or other members (faculty and students) of the department -- many of whom have experience as authors, reviewers, and editors. This "pre-submission" process is lengthy -- allow time for the development of your ideas,

writing of a draft, feedback from others, and revision (perhaps followed by more feedback and more revision)...all before the final version must be submitted to the "journal".

Paper format

- The manuscript should be double-spaced.
- Include page numbers and line numbers to facilitate review.
- The first page should provide the title, the author's name, affiliation, and email address.
- An abstract, of not more than 250 words, should precede the body of the paper.
- The body of the manuscript should be no more than 10 pages in length (~3,000 words); the body of the manuscript need not follow the conventional Intro-Methods-Results-Discussion format, but you should use a style for facilitates the organization and presentation of the paper.
- Literature cited should follow the format of the journal *Trends in Ecology and Evolution* (the course website provides links to the instructions for authors page) and is limited to no more than 35 citations.
- Order sections: title page, abstract, body, acknowledgements, literature cited, boxes, tables, figure legends, figures. Do not embed the figures, tables or boxes into the body of the manuscript.

A PDF of the paper should be submitted along with a PDF of a cover letter addressed to the Editor-in-Chief (dgerman@uci.edu) stating the title and nature of the paper, and the number of tables and figures (ask graduate students and faculty for examples of cover letters). You should also indicate if any of this material has been submitted or published elsewhere (journals frown on "double" publication). It should represent original work. You should also feel free to suggest possible reviewers and to indicate persons who you feel might have a conflict of interest, which might prevent them from providing a fair review.

The submitted papers are **not** drafts, but complete, polished versions of the manuscript. All manuscripts should be spell- and grammar-checked (not just by your computer software), and proofread. Poorly written manuscripts may be rejected without review by the Editor-in-Chief. So, take this seriously.

Peer Review & Revision

The papers will be peer-reviewed by students in the course and by faculty and graduate students in the Department of Ecology and Evolutionary Biology (and possibly in related departments at UCI). Reviews will provide the basis for the editorial decision. A decision letter and the reviews will be provided to the authors. Editorial review will determine if the papers are ready for publication or require further revision (you should anticipate the latter; it is extremely rare for a paper to be accepted "as is"). Review (constructive criticism from one's scientific peers) and revision (in light of that criticism) are the

components of the publication process that maintain high standards of quality and significance in the scientific literature.

We will devote class time to a discussion of the mechanics of manuscript preparation and revision, as well as the review process. It is hoped that by participating in this process in the course of writing your papers, you will develop greater insight into the nature of scientific publication, both from the viewpoint of a producer and a consumer of that literature.

<u>Date</u>	<u>Class focus</u>	<u>Assignment due</u>
10 January	Review article assignment	Read assignment instructions
17 January	What is a review article?	Read Nespolo et al. (2011)
14 February	Guest Lecture Dr. Christian Hubicki: "Unifying bipedalism Across robotics & biology"	
17 February		Review Article due by 5PM (Reviewers assigned this week)
21 February	How to perform a good review	None, discuss reviewing manuscripts
28 February		Reviews due by 5PM (decisions returned by next week)
6 March	Share review experiences	Discuss reviewing process and reviews received
13 March		Final version of Review Article due by 5PM