



Behavioral Ecology

PCB 4414

Fall 2016



Pre requisite/co-requisite PCB 3043

Instructor: Dr. Mario H. Perez

Office: OE 240

Email: perezmh@fiu.edu

Office Hours: T, Thr, F afternoons

We meet in GL 100B, M,W, and F at 4pm – Do not be late!

COURSE GOALS and LEARNING OUTCOMES:

The goal of this course is for you to learn the basics of the science of behavioral ecology by studying the fundamentals of how the organisms evolved behavior as an adaptive trait. To that end you will conduct your own behavioral study, it is my intention for this study to be not only insightful, but also provocative and if I dare say “fun”. Behavioral ecology emerged from ethology after Niko Tinbergen outlined four questions to address when studying animal behavior, which are the *proximate causes, ontogeny, survival value, and phylogeny of behavior*. Special attention will be given to the evolution of *altruism, group behavior and selfish gene theory* with a consideration of behavior *other* than animal behavior, i.e., the other Kingdoms. How do fungi, plants, bacteria, protista and even viruses exhibit behavior?

TEXTBOOK:

- An Introduction to Behavioral Ecology by Davies, Krebs and West, 4th Ed. PDFs of published papers will be provided. Selected papers: TBA

Optional but useful:

- Jan Pechenik, A Short Guide to Writing About Biology

Optional if you really want to learn to write:

- Joseph Williams, Style: Lessons in Clarity and Grace
- Elements of Style by Strunk and White

The reading sequence is provided in the schedule.

ASSESSMENT:

There will be on-line quizzes at the end of each week and a final exit assessment.

There will also be a term project using actual data collected by YOU in a study of your own design. Students will analyze their own data and write up their findings in the form of a scientific paper worthy of submitting to a peer review journal. This will be a term long endeavor and will require time spent in the field gathering your data. You will be compensated for your time in the form of some of the Friday afternoon class time. You **WILL not blow off** this

compensated time, you will regularly report the progress of your data collection to me in Wednesday's class.

Class Format –

Monday - Traditional lecture by me on the topic of the week.

Wednesday – Students will bring in and present papers on behavior other than animal behavior, an important objective of this course is to develop an appreciation of behavior in all Kingdoms.

Most Fridays - will be dedicated to working on our term project, i.e., experimental design, literature searches, online exercises, and field work.

Grade Scheme	Letter (A: 95-100, A-: 90-94.9, B+: 85-89.9, B: 80-84.9 C: 70-79.9, D: 60-69.9, F: ≥ 59) Midterm 25% Final Exam 25% Term Project 40% (5% for each of 2 outlines and the 1st submission, 25% for final submission) Attendance/Participation 10% (iclicker if needed)
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Attendance Policy: Attendance is mandatory, as is class participation. **Only two** unexcused absences will be allowed. Attendance and participation will be assessed *via* iclicker. This is a small class, I will know who is here and what you are contributing.

Honor Code: All students are bound by an academic honor code that includes serious sanctions for academic dishonesty (including but not limited to plagiarism and cheating, a Turnitin.com submission of your term paper is mandatory). We will follow the university code (www.fiu.edu/~jms, follow link to student code of conduct) when a student is suspected of academic dishonesty. In addition, students will be expected to behave in a professional manner in and out of class. ***You are expected to behave as the professionals you are preparing to become.***
Term project due last Friday of class.

This syllabus is tentative and subject to change because of the creative and flexible format of the experimental design you will be carrying out. I will have the final say on whether you have satisfied the requirements for your behavioral study and write up.

Grade Appeals:

Requests for recalculation of exam scores or reevaluation of grade must be made in writing and accompanied by the item in question. Recalculation of a grade is simple. To request an increase in an assigned score, submit a typed explanation of how and why your grade deserves to be changed. If you don't agree with my reevaluation, come talk to me in my office. To request a decrease in an assigned score please follow the same procedure.

I look forward to sharing this class with you, Remember, this is YOUR class. I am just your guide. It is what YOU make it.

MHP

Outline Example

Title

- Should inform the reader of what the paper is about.
- When constructing a title, choose informative over cute.

- I. Introduction:** Topic sentence that states the basic idea/premise of your paper. For example, if you are examining the role of neuropeptides in parental behavior, your first sentence might introduce parental behavior and its significance in species survival (Reference).
- a. Introduce your system and explain why it is important
 - i. Define the system, its function, types present, etc. (Reference)
 - ii. If you are comparing organisms, briefly introduce the organisms (Reference)
 - iii. Provide the scientific reasoning as to why this is interesting
 - b. State the main focus of the paper (e.g.: In this article I will review/explore/examine/investigate/etc the role of various neuropeptides involved in parental behavior)
 - c. State your hypothesis at the end of your Introduction
 - d. Be brief and concise

II. Your paper is to include all section of a scientific paper

1. Materials and Methods
2. Results
3. Discussion

III. Conclusion

- a. Summary
- b. Significance

IV. References (see below)

Should include at least 10 references. All from peer-reviewed publications.

Draft and final Paper format

- **8-10 pages** (not including bibliography, tables or figures)
 - Outline with my comments (for draft version)
 - Draft with my comments (for final version)
 - Cover page with your name and title
 - Please do not use fancy plastic covers or folders
 - Body of the paper - In text citations are required
 - Abstract (150-200 words)
 - Introduction
 - Content sections
 - Conclusions
 - Bibliography/reference page with **at least 15 references from peer-reviewed** publications, 10 of which must be primary source literature (See the section entitled “Citing References”)
- Times New Roman 12pt font, double spaced, 1 inch margins

Grading criteria:

Title (5%): Clear connection to the main focus expressed in body of the paper.

Abstract (10%): Expresses the significance of the topic, indicates what the main focus of the article is. Summarizes all main points of the article. Articulates the overall conclusion of the article.

Introduction (15%): Articulates the significance of problem/question to be addressed in the body. Clearly states what the main focus of the article will be (*In this article I will...*). Provides sufficient background to understand the relevance of the question/problem.

Main Body (25%): Good quality of information. Information is all relevant and directly related to the problem/question stated in the introduction. Main focus of the paper is clearly stated. Appropriate content depth. Ideas are well organized, good flow.

Conclusions (15%): Main ideas in the body expressed in the body are well summarized. No new information is introduced in the conclusions. Main questions in the field are addressed.

Language/Grammar (10%): Clarity. Keep wordiness to a minimum. Minimum use of passive voice. Good transition between paragraphs. Only one idea expressed per paragraph. Good paragraph structure. Proper grammar and spelling.

In-text citations (5%): No quotes. All ideas and facts that are not your own are paraphrased and cited. Followed instructions for in-text citation format.

References (5%): Followed instructions for formatting references. References are listed in alphabetical order with no numerals or bullets. Every reference listed in-text is listed here. Correct reference number: 15 peer-review minimum (journal articles)