

## Seminar in Arthropod Phylogenetic Systematics

**ENY 6934  
Spring, 2018**

**Credits:** 1

**Schedule:** Wednesday, 5<sup>th</sup> Period (11:45-12:35)

**Location:** Entomology and Nematology Department room 1031

### **Instructors**

Dr. Chris Hamilton

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Office hours: By appointment or drop by office

### ***Prerequisites:***

There are no prerequisites.

### ***Course description:***

Systematic and phylogenetic methods have changed dramatically over the last several decades, the primary goal of this seminar is for students to read and discuss key literature in the development and application of modern phylogenetic methods, in particular, those that have influenced arthropod systematics. The course will focus on insects, which make up more than half of all species on the planet, and how studies of these groups have led to many important insights into evolutionary pattern and process. We will read classic papers on classification and nomenclature, gain a basic understanding of the types of data that have been and are currently being used and phylogenetic methods used for inference, to divergence dating, the comparative method, and macroevolution. Students will gain an appreciation of where our knowledge of biodiversity comes from by actively participating in ongoing systematics papers. The course will include brief lectures by instructors, discussion sessions and guidance of the topics by the instructors, and presentations by students.

### ***Required textbook:***

None, reading material will be supplied as needed.

### ***Grading and Exams:***

Grades will be based on attendance and active participation in all discussions. As part of the active participation, each student will give a 30-min presentation on one of the weekly topics (determined

during week one), summarizing the assigned readings and themes for that week (instructors will guide students).

#### Allocation of points

Attendance = 20%

Discussion = 30%

Presentation = 50%

#### **Attendance Policy:**

Students are expected to attend all classes. Absences will be excused with a doctor's note provided within 1 week or if previously arranged with the instructor.

#### **General outline for course (by week):**

1. Introductory meeting
2. Intro to Systematics & Phylogenetics
3. History of Systematics & Phylogenetics
4. Datasets
5. Methods (Neighbor-Joining; Maximum Parsimony)
6. Methods (Maximum Likelihood; Bayesian)
7. Species delimitation
8. Macroevolution
9. Comparative Methods
10. Divergence dating
11. Phylogeny of Arthropoda
12. Phylogeny of Insecta
13. Phylogeny of Arachnida

#### **University of Florida Policy Statements**

##### **Grades and Grade Points**

For information on current UF policies for assigning grade points, see:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

##### **Absences and Make-Up Work**

Requirements for class attendance and make-up exams, assignments and other work are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

##### **Online Course Evaluation Process**

Student assessment of instruction is an important part of efforts to improve teaching and learning. At the end of the semester, students are expected to provide feedback on the quality of instruction in this course using a standard set of university and college criteria. These evaluations are conducted online at <https://evaluations.ufl.edu>. Evaluations are typically open for students to complete during the last two or three weeks of the semester; students will be notified of the specific times when they are open. Summary results of these assessments are available to students at

<https://evaluations.ufl.edu/results>.

##### **Academic Honesty**

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on

all work submitted for credit at the University of Florida, the following pledge is either required or implied: *"On my honor, I have neither given nor received unauthorized aid in doing this assignment."*

It is assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>

### **Software Use**

All faculty, staff and students of the university are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against university policies and rules, disciplinary action will be taken as appropriate.

### **Campus Helping Resources**

Students experiencing crises or personal problems that interfere with their general wellbeing are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

- University Counseling & Wellness Center, 3190 Radio Road, 352-392-1575, [www.counseling.ufl.edu/cwc/](http://www.counseling.ufl.edu/cwc/)
  - Counseling Services
  - Groups and Workshops
  - Outreach and Consultation
  - Self-Help Library
  - Training Programs
- U Matter We Care, [www.umatter.ufl.edu/](http://www.umatter.ufl.edu/)
- Career Resource Center, First Floor JWRU, 392-1601, [www.crc.ufl.edu/](http://www.crc.ufl.edu/)

### **Services for Students with Disabilities**

The Disability Resource Center coordinates the needed accommodations of students with disabilities. This includes registering disabilities, recommending academic accommodations within the classroom, accessing special adaptive computer equipment, providing interpretation services and mediating faculty-student disability related issues. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

0001 Reid Hall, 392-8565, [www.dso.ufl.edu/drc/](http://www.dso.ufl.edu/drc/)

### **Student Complaints**

Each online distance learning program has a process for, and will make every attempt to resolve, student complaints within its academic and administrative departments at the program level. See <http://www.distance.ufl.edu/student-complaint-process> for more details.

### **Sexual Harassment**

It is the policy of The University of Florida to provide an educational and working environment for its students, faculty, and staff that is free from sex discrimination and sexual harassment. In accordance with federal and state law, the University prohibits discrimination on the basis of sex, including

sexual harassment. Sex discrimination and sexual harassment will not be tolerated, and individuals who engage in such conduct will be subject to disciplinary action. The University encourages students, faculty, staff, and visitors to promptly report sex discrimination and sexual harassment. If you believe you have been subjected to sex discrimination or sexual harassment please report the incident to me or any University official, administrator, or supervisor. The Office of Human Resource Services investigates all complaints. Incidents should be reported as soon as possible after the time of their occurrence ([larry-ellis@ufl.edu](mailto:larry-ellis@ufl.edu)).