ENTM 4005 – INSECT TAXONOMY
Spring 2020

Lecture: T, Th. 10:30–11:50 AM, 110 Life Sciences Building
Lab: Th., 2:00–4:50 PM, 110 Life Sciences Building

Instructor: Dr. Nathan Lord
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Office hours: By appointment, but I'll always make time!

COURSE DESCRIPTION (From LSU Catalogue):

A collection is required. 2 hrs. lecture; 4 hrs. lab. Identification, nomenclature, phylogenetic relationships, and life histories of insects at the family level.

COURSE PRE-REQUISITES:

Undergraduate: ENTM 2001 – Insects in the Environment
Graduate: ENTM 7001 – General Entomology

COURSE SUMMARY:

Undergraduate Students: This course is required for an Entomology Minor and/or for concentrations in Agricultural Pest Management and Urban Entomology.

Graduate Students (Dept. of Entomology): This is a required course for students that began their degree program prior to Fall 2019, or for students whose advisors/committees deem this a required course. This course may not be required for students who began their degree program on or after Fall 2019, but please consult the departmental degree requirements for verification.

This course is intended to build upon major principles from several areas of biology, including topics normally covered in such courses as Invertebrate Taxonomy, Insect Morphology, Insect Identification, Evolution, and Phylogenetics/Systematics/Taxonomy.

Unlike a traditional Insect Identification/Insect Taxonomy course whose focus is to learn hundreds of insect families and their diagnostic characters, the focus of this course is to lay the proper foundations for understanding where/why insects reside amongst the arthropods and provide a *moderate* introduction to major insect families and their characters.

COURSE LEARNING OUTCOMES:

Upon successful completion of this course, students will:

1. Understand basic principles of taxonomy, classification, systematics and phylogenetics
2. Understand morphology, taxonomy, and classification of the major arthropod groups, with an emphasis on hexapods
3. Understand key innovations of the major insect lineages; reconstruct a phylogeny of the hexapods
4. Be able to name and sight-ID most insect orders and many of the families commonly found in Louisiana
5. Understand insect collection and curation techniques; build and submit a research-quality insect collection

COURSE STRUCTURE AND SCHEDULE:

This course will be based on both traditional lectures and group learning/active learning methods. Throughout the semester, we will have classes that require the completion of readings ***prior to*** attending class. This will allow for increased time in lecture for in-depth group discussion and debates.

The schedule for this course is not fixed, as our progression through the material and/or scheduling conflicts may dictate re-arrangements. Any major shifts in assignment/exam/project dates will be discussed thoroughly, with a goal of 2 weeks' notice given.

COURSE TOPICS, LECTURE:

- Introduction to classification, taxonomy, phylogenetics, and systematics
- The role of natural history collections
- Evolution and the tree of life, early arthropods, fossils, the migration to land
- General arthropod and insect morphology
- Non-pterygote Hexapoda
- The origin of wings, Paleoptera
- Polyneoptera
- Acercaria / Condylognatha
- Holometabolous development, Hymenoptera
- Neuropterida
- Strepsiptera & Coleoptera
- Antliophora
- Amphiesmenoptera

COURSE TOPICS, LAB:

- Insect collections: creation, maintenance, data
- Insect field work, collecting field trips (dates and locations TBD)
- Insect preparation, relaxation, slide mounting, preservation
- Insect identification, keys
- Insect dissection and illustration
- Phylogenies, characters, tree construction
- Taxon-specific identification labs

TEXTBOOK AND RESOURCES:

There is no required textbook for this course. Helpful resources will be provided for both in-class and out-of-class use (on a permission basis).

ASSIGNED READINGS:

Readings will be assigned in class and posted to Moodle. It is expected that the students complete the readings prior to the next class period in order to facilitate lecture and group discussions. All readings are testable material.

ATTENDANCE POLICY:

Attendance is the responsibility of the student. Due to the amount of material, building progression of concepts, and particular course design, it will be very difficult for students to achieve an adequate grade if class or lab is missed.

CLASSROOM CONDUCT:

This class will be an interactive, engaged learning environment. Therefore, any implements that detract from the classroom experience (cell phones, laptops, tablets, school newspapers) will not be permitted during lecture. However, some class activities will require the use of computers/phones. If so, I will let you know.

NOTABLE SEMESTER DATES:

Wednesday, 22 January: Final date for dropping courses without receiving a grade of "W," 4:30 p.m., deadline
Tuesday, 24 February: No class, Mardi Gras Holiday
Tuesday, 10 March: Mid-semester grades due, 9:00 a.m.
Tuesday, 24 March: Spring Break
Thursday, 26 March: Spring Break
Thursday, 30 April: Final day of class. Collections due
Wednesday, 06 May: Final Lab Exam. 12:30–2:30 p.m.
Wednesday, 06 May: Final Lecture Exam. 3:00–5:00 p.m.
Tuesday, 12 May: Final grades due for degree candidates, 9:00 a.m.
Wednesday, 13 May: Final grades due for non-degree candidates, 9:00 a.m.

GRADING SCALE:

A+ = 97–100%	B+ = 87–89.9%	C+ = 77–79.9%	D+ = 67–69.9%
A = 93–96.9%	B = 83–86.9%	C = 73–76.9%	D = 63–66.9%
A- = 90–92.9%	B- = 80–82.9%	C- = 70–72.9%	D- = 60–62.9%
			F = < 60%

GRADING CRITERIA:

Your grade is calculated as a percent of total points you earn over the total points possible. Scores on your assignments will be available on Moodle. Prior to mid-semester, you will receive feedback on your academic performance in this course.

ASSIGNMENT	POINTS
Mid-term exam:	100 pts.
Final exam:	100 pts.
Lab Exam 1:	100 pts.
Lab Exam 2:	100 pts.
Lab Assignments (4 tot., 25 pts. ea.)	100 pts.
Collection Checks (2 tot., 25 pts. ea.)	50 pts.
Final Collection	200 pts.
ID Journal	50 pts.
TOTAL:	**800 pts.**

MID-TERM AND FINAL EXAMS:

These will be cumulative and contain a mixture of question types.

LAB EXAMS:

These will be based on morphology, sight-ID, and collection and curatorial methods.

LAB ASSIGNMENTS:

Four laboratory-based assignments will be given throughout the course. These are subject to change each semester. Past assignments have included dichotomous key construction, exercises on rules of the ICZN, morphological drawings, mock species descriptions, etc. Assignment particulars and due dates will be discussed in class.

COLLECTION CHECKS:

Two collection checks will be performed at regular intervals throughout the semester. More details are provided in the collections assignment document.

FINAL COLLECTION:

This is your major project of this semester. More details are provided in the collections assignment document.

IDENTIFICATION JOURNAL:

Each student will be expected to keep a detailed identification journal throughout class. These entries will be linked to your specimen label data. A complete list of requirements is provided separately.

LSU REQUIRED SYLLABUS STATEMENTS

Assistance for Student Needs Related to Disability

Louisiana State University is committed to providing reasonable accommodations for all persons with disabilities. The syllabus is available in alternate formats upon request.

Students with disabilities: If you are seeking classroom accommodations under the Americans with Disabilities Act, you are required to register with Disability Services in 115 Johnston Hall. Their phone number is 225-578-5919 and website is **www.lsu.edu/disability**. To receive academic accommodations for this class, please obtain the proper Disability Services forms and meet with me at the beginning of the semester.

General Statement on Academic Integrity

Louisiana State University adopted the Commitment to Community in 1995 to set forth guidelines for student behavior both inside and outside of the classroom. The Commitment to Community charges students to maintain high standards of academic and personal integrity. All students are expected to read and be familiar with the LSU Code of Student Conduct and Commitment to Community, found online at www.lsu.edu/saa. It is your responsibility as a student at LSU to know and understand the academic standards for our community.

Students who are suspected of violating the Code of Conduct will be referred to the office of Student Advocacy & Accountability. For undergraduate students, a first academic violation could result in a zero grade on the assignment or failing the class and disciplinary probation until graduation. For a second academic violation, the result could be suspension from LSU. For graduate students, suspension is the appropriate outcome for the first offense.

Plagiarism and Citation Method

As a student at LSU, it is your responsibility to refrain from plagiarizing the academic property of another and to utilize appropriate citation method for all coursework. In this class, it is recommended that you use the Entomological Society of America Style Guide for citing references (https://www.entsoc.org/Pubs/Publish/Submit#References_Cited). Ignorance of the citation method is not an excuse for academic misconduct. Remember there is a difference between paraphrasing and quoting and how to properly cite each respectively.

One tool available to assist you in correct citations is the "References" function in Microsoft Word. This program automatically formats the information you input according to the citation method you select for the document. This program also has the ability to generate a reference or works cited page for your document. The version of Microsoft Word with the "References" function is available in most University computer labs. A demonstration of how to use this tool is available online at www.lsu.edu/saa.

Group Work and Unauthorized Assistance

All work must be completed without assistance unless explicit permission for group or partner work is given by the faculty member. This is critical so that the professor can assess your performance on each assignment. If a group/partner project is assigned, the student may still have individual work to complete. Read the syllabus and assignment directions carefully. You might have a project with group work and a follow up report that is independently written. When in doubt, e-mail the faulty member or ask during a class session. Seeking clarification is your responsibility as a student. Assuming group/partner work is okay without permission constitutes a violation of the LSU Code of Student Conduct.