

# General Course Syllabus

Advanced Mosquito Identification

ENY – 6591C and 4590C; 3 Credits

**Instructor:** Nathan Burkett-Cadena – ADULT SECTION (week 1)

Florida Medical Entomology Laboratory (FMEL) Research & Education Center  
200 9<sup>th</sup> Street SE, Vero Beach, FL 32962

Tel. 772-778-7200 x. 141; Email: [nburkettcadena@ufl.edu](mailto:nburkettcadena@ufl.edu)

**Instructor:** Dr. Derrick Mathias – LARVAL SECTION (week 2)

Florida Medical Entomology Laboratory (FMEL) Research & Education Center  
200 9<sup>th</sup> Street SE, Vero Beach, FL 32962

Tel. 772-778-7200 x. 173; Email: [d.mathias@ufl.edu](mailto:d.mathias@ufl.edu)

**Office Hours:** By appointment, Skype or email

**Course Description:** This course will provide intensive lecture and hands-on training on the identification of adult and larval mosquitoes as well as a review of current and historical mosquito taxonomy topics.

The course is co-taught as a senior-level undergraduate and a first-year graduate level course. Graduate students are required to demonstrate advanced study beyond what is expected of the undergraduates through more rigorous test questions, additional readings in rotating reading assignments, participation in discussion sessions, and a review article.

**Course Objectives:** Students will demonstrate their understanding of mosquito morphology terminology and their ability to recognize morphological features on adult and larval mosquito species that occur in North America through identification exercises. The training will enable students to complete a comprehensive practical laboratory and written examination at the conclusion of the course. Graduate students will develop a review article suitable for publication in a refereed journal.

## Course Goals:

1. Train students to use mosquito taxonomic keys to identify adult female and larval mosquitoes.
2. Train students to recognize morphological features used to identify adult female and larval mosquitoes that occur in North America.
3. By the end of the course, students will have identified and recognize the 12 mosquito genera and a minimum of 50 species that occur in North America, north of Mexico.
4. (Graduate students) Produce a review paper as described in the syllabus.

**Required Textbook:** Identification and Geographic Distribution of the Mosquitoes of North America, North of Mexico. 2005. Richard F. Darsie and Ronald A. Ward. University Press of Florida. Gainesville, FL. This text is essential for the course and must be acquired in advance of the laboratory trainings in Vero Beach, FL.

**Course Location:** The course will be conducted through Canvas, email and in-person. The required lab will be offered at the Florida Medical Entomology Laboratory in Vero Beach, FL for a two-week period (spring break and following week).

**Prerequisites:** ENY 3005 or ENY 4161. Students must have basic knowledge of mosquito morphology; experience and familiarity with binocular and compound microscopes and the use of taxonomic identification keys.

**Grading:** There are two written exams and two lab exams. Exams covering adult mosquitoes (one written, one practical) are presented on Friday at the end of week 1 (spring break week). Exams covering larval mosquitoes (one written, one practical) are presented on Friday at the end of week 2. The written exams will be closed-book and include questions on mosquito morphology, larval habitats, mosquito taxonomy, assigned readings and lectures (including guest lectures). The lab practical exams will be open-book and will include multiple adult and larval mosquito specimens that must be identified to species in the allotted time frame; partial credit is given as long as the work is shown in detail. Lecture attendance is mandatory and accounts for 4% of the final grade.

#### **Graduate credit writing assignment for ENY 6591C**

Additional readings are required above what is expected of undergraduate students (provided through Canvas). Knowledge of the assigned readings will be assessed on the written exams.

Graduate students are required to write a paper on a topic provided by the instructors. The subject and criteria for the assignment change from year to year.

Letter grades correspond to the numerical score as follows:

|              |    |
|--------------|----|
| 90% - 100%   | A  |
| 87% - 89.99% | B+ |
| 80% - 86.99% | B  |
| 77% - 79.99% | C+ |
| 70% - 76.99% | C  |
| 67% - 69.99% | D  |
| 0 - 66.99%   | E  |

There will be no D+ and no minus (-) grades awarded.

| Component                | Undergraduate |                        | Graduate   |                        |
|--------------------------|---------------|------------------------|------------|------------------------|
|                          | POINTS        | PERCENT OF FINAL GRADE | POINTS     | PERCENT OF FINAL GRADE |
| LAB TEST – ADULT ID      | 100           | 25%                    | 100        | 20%                    |
| LAB TEST – LARVAL ID     | 100           | 25%                    | 100        | 20%                    |
| LECTURE TEST – ADULTS    | 100           | 23%                    | 100        | 15%                    |
| LECTURE TEST – LARVAE    | 100           | 23%                    | 100        | 15%                    |
| LECTURE ATTENDANCE       | 10            | 4%                     | 10         | 4%                     |
| Title of paper submitted | -             | -                      | 10         | 1%                     |
| Final draft of paper     | -             | -                      | 100        | 25%                    |
| <b>TOTAL</b>             | <b>410</b>    | <b>100%</b>            | <b>520</b> | <b>100%</b>            |

**Grades and Grade Points:** For additional information on current UF grading policies, see: <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> (Links to an external site.)Links to an external site.

**Class Attendance:** Class attendance for laboratory and lectures is mandatory. A large proportion of class time is spent at the microscope working through the steps of identification.

**Tests and Make-up tests:** The tests are given on Friday each week. The written test begins at 8:00 a.m. and ends promptly at 9:00 a.m. The lab practical begins at 9:00 a.m. and ends promptly at 12:00 p.m. No make-up tests will be provided except in the occurrence of a University-approved absence, family or medical emergency or court imposed legal obligations where the student must leave Vero Beach. In the event of such an emergency, arrangements will be made accordingly.

**Class Demeanor:** Students are expected to arrive on time for lectures, to refrain from using cell phones and text messaging during lectures; Students are expected to take cell phone

calls outside of the lab and to keep discussions to a minimum. Please minimize sounds that may make it difficult for others to concentrate.