Genetically Modified Insects
ENY 6934 Selected Studies in Entomology, 1 credit

Course instructors:
Eric Caragata  e.caragata@ufl.edu
Yoosook Lee  yoosook.lee@ufl.edu

Office hours:
In-person (at FMEL) or virtual on Thursdays 10:30-11:30 am.

Virtual office hours will be conducted by the course instructor on the e-Learning in Canvas system using the Chat Room tab. Please contact the course instructor to arrange the time.

Venue and time:
Thursday 9:35-10:25 am. Schedule may be changed by mutual agreement. This course will be both in-person (at FMEL, conference room) and by zoom (individual or group in Steinmetz Hall room 1027). Course materials will be managed by e-Learning in Canvas (a broadband internet connection is strongly suggested).

https://ufl.zoom.us/j/94029824263?pwd=SVQ0d0NmWVBTWUpUT2pxVHZyMVNqZz09
Meeting ID: 940 2982 4263
Passcode: 771384

Course description:
This course is one of the seminar courses offered each semester in the Department of Entomology & Nematology to meet the core course requirements. The purpose of these seminars is for students to get familiar with the current research related to genetically modified insects and to practice in presenting a 15-minute seminar on a research paper related to the course topic. Master’s students are required to take one credit of seminar and PhD students take two credits.

Course objectives:
1) Learn terminology used in genetically modified insect research
2) Be familiar with different aspect/disciplines involving GM insect research
3) Understand the complex nature of GM insect application involving molecular, organismal, ecological, regulatory, and community engagement aspects.
4) Investigate current topics in GM insect research.
5) Learn to read scientific journal articles critically.
6) Gain practice in organizing and delivering a 15-minute seminar and responding to Q&A following presentation.
### COURSE SCHEDULE

**ENY 6934 Selected Studies in Entomology, 1 credit**
Thursdays 9:35-10:25 am, or as mutually arranged

<table>
<thead>
<tr>
<th>Topic</th>
<th>Week</th>
<th>Date</th>
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<tbody>
<tr>
<td><strong>Introduction</strong> (Lee/Caragata)</td>
<td>1</td>
<td>12 Jan 2023</td>
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<tr>
<td>Overview, organization, presentation scheduling</td>
<td></td>
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<tr>
<td>GM mosquito field trial considerations</td>
<td>2</td>
<td>19 Jan 2023</td>
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<tr>
<td>GMO regulations (Das – invited speaker)</td>
<td>3</td>
<td>26 Jan 2023</td>
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<tr>
<td>Microbiome and biocontrol (Caragata)</td>
<td>4</td>
<td>02 Feb 2023</td>
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<td>Genetic engineering of mosquitoes (Kojin)</td>
<td>5</td>
<td>09 Feb 2023</td>
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<tr>
<td>Extension related to Oxitec mosquito trials (Buckner)</td>
<td>6</td>
<td>16 Feb 2023</td>
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<tr>
<td><strong>Student presentations and/or additional topics</strong></td>
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<tr>
<td>Student presentation</td>
<td>7</td>
<td>23 Feb 2023</td>
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<tr>
<td>Student presentation</td>
<td>8</td>
<td>02 Mar 2023</td>
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<tr>
<td>Student presentation</td>
<td>9</td>
<td>09 Mar 2023</td>
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<tr>
<td>-- Spring break --</td>
<td>10</td>
<td>23 Mar 2023</td>
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<tr>
<td>Student presentation</td>
<td>11</td>
<td>30 Mar 2023</td>
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<tr>
<td>Student presentation</td>
<td>12</td>
<td>06 Apr 2023</td>
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<td>Student presentation</td>
<td>13</td>
<td>13 Apr 2023</td>
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<tr>
<td><strong>Final week – overall topic discussion</strong></td>
<td>14</td>
<td>20 Apr 2023</td>
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General course information:
During the first two-three weeks of class, the instructors will lecture to introduce students to the field of GM insects. Reading material will be provided on the course website in Canvas. Students will be expected to submit 3 new things they learn, and 3 questions for each paper prior to the presentation of the corresponding paper to facilitate discussion. One guest speaker or recorded seminar will be presented on the 4th week (subject to change) and discussion will follow. Students will present one assigned paper and one other paper relevant to the course topic and lead discussion for the remaining weeks until the end of semester. General topics includes

- Tips in critical reading of scientific literature and presentations
- Development of GM insects in laboratory
- Microbiota-interaction with hosts
- Studies involving semi-field or field trials
- Hybridization and vector evolution
- Modeling of GM insect dispersal
- Community engagement/works in GM insect regulation
- Ethical concerns or criticism from non-scientific community against GM insects

Prerequisites:
None

Required and recommended textbooks:
Required reading materials will be posted on the e-Learning Canvas site, along with suggestions for further reading, usually in the form of primary literature. There is no required textbook for the course.

Evaluation:
Grading will be based on student performance in presentations and discussion using the following scale.

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<thead>
<tr>
<th>Grade</th>
<th>Score</th>
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<tbody>
<tr>
<td>A</td>
<td>93-100</td>
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<tr>
<td>A-</td>
<td>90-92</td>
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<tr>
<td>B+</td>
<td>87-89</td>
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<tr>
<td>B</td>
<td>83-86</td>
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<tr>
<td>B-</td>
<td>80-82</td>
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<tr>
<td>C+</td>
<td>77-79</td>
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<td>C</td>
<td>73-76</td>
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<tr>
<td>C-</td>
<td>70-72</td>
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<tr>
<td>D</td>
<td>60-69</td>
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<tr>
<td>E</td>
<td>&lt;60</td>
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Policy related to class attendance:
Class attendance is required. Presentations and discussion participation is mandatory and will be considered in grading.

Policy related to make-up exams or other work:
In general, acceptable reasons to make-up course related work is limited to serious illness, family emergencies, military obligation, or court imposed legal obligations. Students who have excused absences for University sponsored groups must arrange for missed classes in advance with the
instructor. Other reasons may also be approved but will be taken into consideration on a case-by-case basis.

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.

Grades and Grade Points:
Although the following link is for the undergraduate catalog, it applies to graduate students.

For information on current UF policies for assigning grade points, see https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx

Class Demeanor
Students are expected to behave in a manner that is respectful to the instructor and to fellow students. Opinions held by other students should be respected in discussion, and conversations that do not contribute to the discussion should be held at minimum, if at all.

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://sccr.dso.ufl.edu/process/student-honor-code/.

University of Florida students are responsible for reading, understanding, and abiding by the entire Student Honor Code (https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/)

In-Class Recording
Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures
A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without the permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct 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 well-being 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/

Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Training Programs
Community Provider Database

Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/
Services for Students with Disabilities
The Disability Resource Center (https://disability.ufl.edu/) 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. Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation (352-392-8565, www.dso.ufl.edu/drc/)

Plagiarism:
Plagiarism is a serious violation of the Student Honor Code. The Honor Code prohibits and defines plagiarism as follows: Plagiarism. A student shall not represent as the student’s own work all or any portion of the work of another. Plagiarism includes (but is not limited to):
   a. Quoting oral or written materials, whether published or unpublished, without proper attribution.
   b. Submitting a document or assignment which in whole or in part is identical or substantially identical to a document or assignment not authored by the student. (University of Florida, Student Honor Code, 15 Aug. 2007 <http://www.dso.ufl.edu/judicial/honorcode.php>)

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.