COURSE SYLLABUS FOR MCB7922: journal colloquy "Genome editing in crop plants"
1 credit
Spring semester 2026

1. COURSE MEETING TIMES AND LOCATION:
Labs will be held in room (TBA) in the Microbiology and Cell Science Bldg. on Fridays, period 7 as follows:

MCB7922 section 0023 class number 26352 (campus section; in person)
MCB7922 section 0024 class number 26353 (REC section; online via Zoom:
https://ufl.zoom.us/j/91758070292?pwd=kxWqbOfXlqUMrJyVqtQ9J8fsoBWD10.1

A detailed schedule of activities is available on the last page of this syllabus.

2. COURSE DESCRIPTION
This course is a journal colloquy on genome editing in plants, with a focus on CRISPR/Cas9, and agronomically relevant plant species. During weekly meetings two students will each present one article from the scientific literature that highlight different experimental approaches. The focus will be on seminal publications that inspired adoption in a variety of plant species. The practical consideration leading to the selection of specific experimental approaches will be an important aspect of the course.

3. PRE-REQUISITES:
Undergraduate and graduate courses in plant molecular genetics.

4. CONTACT INFORMATION:
Instructors:
Dr. Wilfred Vermerris   wev@ufl.edu
Dr. Kevin Begcy   kbegcy.padilla@ufl.edu

5. COURSE OBJECTIVES:
Upon successful completion of this course, students will:
1. Understand the theoretical basis of genome editing in plants
2. Understand the different experimental approaches to accomplish genome editing in plants, given constraints in transformation technology, availability of the genome sequence, and regulations related to the release of genome-edited crops

6. REQUIRED TEXTBOOK/ SOFTWARE/ COMPUTER
No textbook is required. All course materials, including reading materials for this course will be available through the Canvas Learning Support System homepage [http://elearning.ufl.edu/]. To review the privacy policy of Canvas, please visit https://www.instructure.com/policies/privacy. For details on the accessibility of Canvas, please visit https://www.instructure.com/canvas/accessibility. You will need to enter your Gatorlink username and password to access the system. If you do not have an active GatorLink ID, cannot remember your GatorLink login information, or if your ID does not work, please refer to the GatorLink website [http://gatorlink.ufl.edu] or to the UF Computing Help Desk (The Hub, 392-HELP) for assistance.

You will need to bring a WiFi-enabled computer or tablet to class in order to access course materials.

7. ATTENDANCE POLICY
Attendance and participation are mandatory, and attendance at each session will be recorded. Absences are excused if they are due to a religious observance, UF-sponsored event, professional meeting (conference), illness, or bereavement (documentation/proof for the latter three categories will be required).

8. GRADES

Final letter grades will be based on the quality of the quality of the in-class presentation(s) (50%) and in-class participation (50%), using the following grading scale:

A = 90-100 points
B = 80-89 points

C = 70-79 points
D = 60-69 points
E = <60 points

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

9. 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 without the written consent of the instructor. 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 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.

10. Academic Honesty, Software Use, Campus Helping Resources, Services for Students with Disabilities

Academic Honesty
In 1995 the UF student body enacted an honor code and voluntarily committed itself to the highest standards of honesty and integrity. When students enroll at the university, they commit themselves to the standard drafted and enacted by students.

UF students are bound by The Honor Pledge, which states: "We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students 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." The Conduct Code specifies a number of behaviors that are in violation of this code and the possible sanctions. Click here to read the Conduct Code. If you have any questions or concerns, please consult with the instructor or TA's in this class. Students should report any condition that facilitates dishonesty to the instructor, department chair, college dean, Student Honor Council, or Student Conduct and Conflict Resolution in the Dean of Students Office.

It is assumed all work will be completed independently unless the assignment is defined as a group project, in writing by the instructor. **Violations will be reported and will result in penalties**.
PLEASE NOTE THAT ALL UNAUTHORIZED DISTRIBUTION OR ONLINE POSTING OF MCB4034L COURSE MATERIALS IS CONSIDERED A FORM OF ACADEMIC DISHONESTY AND SUCH ACTIONS WILL BE TREATED ACCORDINGLY. The course materials (lecture notes, lab protocols, assignments, etc.) are assembled and intended for students taking MCB4034L ONLY, this is why they are only available for student use from the secure Canvas MCB4034L course website. Unauthorized posting of course materials infringes on UF's copyright policies and the "Fair Use" Act (http://www.generalcounsel.ufl.edu/faq/Copyright.pdf). This policy will be vigorously upheld at all times in this course.

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
352-392-1601
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. 0001 Reid Hall, 352-392-8565, www.dso.ufl.edu/drc/

It is important for students to share their accommodation letter with the instructor and discuss their access needs as early as possible in the semester.

Office of Academic Support Services:
https://oas.aa.ufl.edu/services/

Student Life Success Services:
https://www.ufl.edu/student-life/success-services/

To find and contact your Academic Advisor:
http://www.ufadvising.ufl.edu/college-remote-advising-contacts/

11. TENTATIVE COURSE SCHEDULE

This schedule is subject to change
Please monitor announcements from the instructor sent via Canvas with due dates and times for assignments

Date	Topic
16-Jan	Organizational meeting (introductions, planning)
23-Jan	History of CRISPR/Cas9, TALENS and ZFN
30-Jan	History of CRISPR/Cas9, TALENS and ZFN
6-Feb	Early applications in plants (NHEJ to knock out genes)
13-Feb	Homology-directed repair
20-Feb	Homology-directed repair
27-Feb	Base editing and prime editing
6-Mar	Base editing and prime editing
13-Mar	Transgene-free genome editing using DNA
20-Mar	Spring break (no class)
27-Mar	Transgene-free genome editing using DNA
3-Apr	Transgene-free genome editing using RNA (including RNA viruses)
10-Apr	Transgene-free genome editing using RNA (including RNA viruses)
17-Apr	Transgene-free genome editing using RNPs or grafting