

The University of Georgia-Griffin Campus
MIBO 4110. Plant-Microbe Interactions. 3 credit hours
Fall Semester 2020
2:00-3:15 PM Tues/Thur, Room 215 – Student Learning Center

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770-229-3380

Office Hours: 10:45 – 11:45 AM Mon/Wed. Please e-mail me, so a Zoom meeting can be set up. To comply with the Family Educational Rights and Privacy Act (FERPA), all communication must be through a secure medium (UGAMail or eLC). Instructors are not allowed to respond to messages that refer to individual students or student progress in the course through non-UGA accounts.

Course Overview

The course is designed to introduce the students to the study of molecular biology and genetics of plant-microbe interactions including infection processes by plant pathogens, initial signaling, signal transduction, and plant responses, *Rhizobium*-legume symbiosis, *Agrobacterium*-mediated plant transformation, and molecular genetics of transgenic plants. The course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary.

Pre or Corequisite: MIBO 3500 or MIBO 3500E

Textbook:

There is no textbook for this course. Class materials will be available on eLC, including; lecture slides, scholarly journal articles (primary literature), class exercises, etc. Students are responsible for printing their own copies, and should do so in advance of needing them.

Attendance:

Students are expected to attend all lectures. Lecture slides will be available on the web via eLC to simplify note-taking. However, the lecture notes on eLC should not be regarded as a substitute for attending class. Having my slides with you will make note-taking easier, but additional material and examples are given in class. You should be prepared to take notes on blank paper (or slide handout or laptop) at any time. You will be responsible for all content and instructions given during the lecture and announcements made in class (including on days when you miss a class). **Please turn off all cell phones and pagers during class.**

eLC:

We will be using eLC throughout the term. Class material including the syllabus, lecture slides, course announcements, etc. will be posted on the eLC course page. To get to the course page, go to <https://uga.view.usg.edu>
Login with your UGA MyID

Exams:

Your grade will be based on four exams, a comprehensive final exam, oral presentation, and on four assignments/quizzes. **Late submissions will not be accepted.** Make-up exams will come from a test bank and may not reflect the material emphasized in lecture. A WRITTEN EXCUSE is REQUIRED for all make-up exams. In the case of severe illness or family emergency, you must inform and email the instructor prior to the exam. In addition, presentation of a signed letter from your doctor, etc., will be required. An unexcused absence will result in a grade of zero. An absence will be counted as unexcused if the instructor is not notified before the exam is given. If you believe there has been a grading error on your exam, questions about grading must be submitted in writing within one week of the return of the exam.

Grades:

4 Exams (100 pts each)	400
Final exam	100
Journal Paper Presentation	25
<u>Quizzes/Assignments</u>	<u>40</u>
Total possible points to earn	565

Grading Scale: The letter grade will be determined according to the scale shown below.

A 93 to 100%, **A-** 90 to 92%, **B+** 87 to 89%, **B** 83 to 86%, **B-** 80 to 82%, **C+** 77 to 79%,
C 73 to 76%, **C-** 70 to 72%, **D** 60-69%, **F** below 60

If your pre-final grade is greater than or equal to 70%, and you are satisfied with your grade, you have the option to not take the final exam and your grade will be based on the points listed below. (Make sure you check your minimum grade requirement if this course counts toward your major.) If you missed an exam, you need to take the final exam.

Grade Distribution (if not taking the final exam)

4 Exams (100 pts each)	400 pts
Journal Paper Presentation	25 pts
<u>Assignments/Quizzes</u>	<u>40 pts</u>
Total possible points to earn	465 pts

Academic Honesty and the Honor Code: As a University of Georgia student, you have agreed to abide by the University's academic honesty policy, "A Culture of Honesty," and the Student Honor Code. All academic work must meet the standards described in "A Culture of Honesty" at www.uga.edu/honesty. Students are responsible for informing themselves about those standards before performing any academic work. Academic work includes, but is not limited to, course assignments, quizzes, exams, in-class questions, and course evaluations.

Mental Health and Wellness Resources:

If you or someone you know needs assistance, you are encouraged to contact Student Care and Outreach in the Division of Student Affairs at 706-542-7774 or visit <https://sco.uga.edu>. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.

- UGA has several resources for a student seeking mental health services (<https://www.uhs.uga.edu/bewelluga/bewelluga>) or crisis support (<https://www.uhs.uga.edu/info/emergencies>).
- If you need help managing stress anxiety, relationships, etc., please visit BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.
- Additional resources can be accessed through the UGA App.

UGA Griffin Campus Specific Resources

Mental Health and Wellness Resources:

- If you or someone you know needs assistance, you are encouraged to contact Student Affairs at 770-412-4096. They will help you navigate any difficult circumstances you may be facing by connecting you with the appropriate resources or services.
- UGA Griffin Campus Counseling Services serves as a resource for a student seeking mental health services, and can be contacted at 706-612-8792 or via email at griffincounseling@uga.edu.
 - Students can schedule an appointment, here: <https://bit.ly/3dAWO9d>
- If you need help managing stress anxiety, relationships, etc., you can also contact BeWellUGA (<https://www.uhs.uga.edu/bewelluga/bewelluga>) for a list of FREE workshops, classes, mentoring, and health coaching led by licensed clinicians and health educators in the University Health Center.

Documented Disability Statement for Griffin Campus: If you are a student with a documented disability, you must inform the instructor of this fact at the close of the first class meeting. You will be referred to the Office of Student Affairs in Room 105, Flynt Building, 770-412-4096, for consultation regarding evaluation, documentation of your disability, and a recommendation as to the accommodation to be provided.

Coronavirus Information for Students

Face Coverings:

Effective July 15, 2020, the University of Georgia—along with all University System of Georgia (USG) institutions—requires all faculty, staff, students and visitors to wear an appropriate face covering while inside campus facilities/buildings where six feet social distancing may not always be possible. Face covering use is in addition to and is not a substitute for social distancing. Anyone not using a face covering when required will be asked to wear one or must leave the area. Reasonable accommodations may be made for those who are unable to wear a face covering for documented health reasons. Students seeking an accommodation related to face coverings should contact Disability Services at <https://drc.uga.edu/>.

DawgCheck:

Please perform a quick symptom check each weekday on DawgCheck—on the UGA app or website—whether you feel sick or not. It will help health providers monitor the health situation on campus: <https://dawgcheck.uga.edu/>

What do I do if I am notified that I have been exposed?

Students who learn they have been directly exposed to COVID-19 but are not showing symptoms should self-quarantine for 14 days consistent with Department of Public Health (DPH) and Centers for Disease Control and Prevention (CDC) guidelines. Please correspond with your instructor via email, with a cc: to Student Care & Outreach at sco@uga.edu, to coordinate continuing your coursework while self-quarantined. If you develop symptoms, you should contact the University Health Center to make an appointment to be tested. You should continue to monitor your symptoms daily on DawgCheck.

What do I do if I test positive?

Any student with a positive COVID-19 test is required to report the test in DawgCheck and should self-isolate immediately. Students should not attend classes in-person until the isolation period is completed. Once you report the positive test through DawgCheck, UGA Student Care and Outreach will follow up with you.



Clean your hands often.



Avoid touching your eyes, nose and mouth.



Stay at home if you are sick.



Wear a cloth face covering to help slow the spread of COVID-19.



Clean and disinfect frequently touched surfaces daily.

STUDENTS: If you need healthcare assistance, the following community partner can help:
McIntosh Family Practice/McMed Urgent Care
726 S 8th St., Griffin, GA 30224 | 770-450-8878.

ALL OTHERS: Consult your community healthcare provider.

For UGA updates and prevention, visit www.uga.edu/coronavirus.



Approximate schedule for Fall 2020 (F2F Instruction)

	Topics
Unit 1 Thu, Sept. 10	Plant Cell and Microbial Cell Architecture Biochemistry of Cells Pathogenesis in Plants: Fungi, Virus, Bacteria Plant Diseases EXAM 1
Unit 2 Thu, Oct. 8	Environmental Factors Affecting Plant-Microbe Interactions Types of Signal Molecules and Receptors Signal Transduction Plant Immunity Elicitors Phytotoxins EXAM 2
Unit 3 Thu, Nov. 5	<i>Rhizobium</i> -Nodulation and Nitrogen Fixation <i>Agrobacterium rhizogenes</i> and Hairy Roots <i>Agrobacterium tumefaciens</i> and Crown Gall Formation EXAM 3
Unit 4 Nov. 19 Nov. 24	<i>Agrobacterium</i> -mediated Plant Transformation Vector Construction and Generation of Disease-Resistant Transgenic Plants Molecular Analysis of Transgenic Plants Biotechnological Applications of Plant-Microbe Interactions EXAM 4 Journal Paper Presentation
Dec. 15, Tuesday 3:30-6:30 pm	FINAL EXAM (Comprehensive)