

MCB 6457, Sections 2E66 and 3183: Regulation of Metabolism

Dates: Jan 06, 2022 to Jan 27, 2022

Time: Tuesdays and Thursdays; 8:30 AM to 10:10 AM

Location: Virtual at: <https://ufl.zoom.us/j/3136207510>

Instructors:

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Office hours may be scheduled by email.

Course Description:

This module will focus on two important themes in bacterial physiology and metabolism, transcriptional and post-transcriptional regulation of gene expression. It will allow students to gain knowledge in these areas and experience in preparing and delivering a formal scientific presentation. In advance of each class session, students will have read one or more assigned reviews to provide perspective for the assigned topic. Each Ph.D. student will present an original research article for group discussion and critique. Students will take turns presenting papers, to assure that everyone contributes equally. The presentations will resemble those of a Journal Colloquium course. The class size will be small enough to permit everyone to contribute to the discussions. Presenters will discuss background information, the important hypotheses, approaches, results and conclusions for the experiments of

their papers. Powerpoint slides are required for the presentations, and the sessions will be available by video for attendance by off-site students in real time. Presenting students will be responsible for distributing their slide presentations to the entire class at least one day before their presentation. All students are required to have read and understood each paper and to contribute to each of the discussions.

Additional tips for presentations:

1. Slides should be legible and to the point.
2. Presentations should be clear and focused around central concepts and hypotheses.
3. Communicating the implications of results is critical.
3. Encourage audience participation and discussion.
4. Briefly summarize the important findings and how they affect knowledge in the field.
4. Be prepared to answer questions.

Student learning outcomes: At the successful completion of this course, the student will be able to:

1. Prepare and deliver an oral science presentation using Powerpoint slides,
2. Critically evaluate manuscripts from the primary literature in the topic areas of bacterial transcriptional and posttranscriptional regulation.
3. Explain how RNA polymerase structure and accessory factors mediate transcriptional control mechanisms.
4. Describe the role of sigma factors in bacterial developmental processes.
5. Compare and contrast regulation by different types of regulatory sRNAs.
6. Explain how RNA binding proteins affect gene expression.
7. Describe the basic structural elements and function of riboswitches.

Grading: No exams will be given in this course. Grades will be assigned based on presentations and participation in the discussions.

Punctuality and class etiquette: The class will begin promptly at 8:30 AM. Please be on time and in place. Please do not forget to turn cell phones off.

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.

Accommodations for Students With Disabilities: Students requesting classroom accommodation must first register with the Dean of Students Office. This office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation.

UF Counseling Services:

- [University Counseling Center](#), 301 Peabody Hall, 392-1575, personal and career counseling
- [Student Mental Health](#), Student Health Care Center, 392-1171, personal counseling.
- [Sexual Assault Recovery Services \(SARS\)](#), Student Health Care Center, 392-1161, sexual assault counseling
- [Career Resource Center](#), Reitz Union, 392-1601, career development assistance and counseling

2022 Class Email Addresses:

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