

SWS 4303/5305 Soil Microbial Ecology

Fall, 20116

Course Description Lectures and laboratory exercises will cover the soil as a habitat for microorganisms, the taxonomy and biology of soil microorganisms, and the fundamentals of the microbial ecology of nutrient cycles, symbiotic associations, and bioremediation.

Students in the graduate course (SWS 5305) will be required to demonstrate a deeper understanding of fundamental concepts and details than is required of SWS 4303 students. SWS 5305 exams differ in content by at least 30% from SWS 4303 exams.

Objective: To provide students with the physiological bases for microbial activities in soil, and translate those to ecological interactions and processes.

Instructor:

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Laboratory Instructor:

Abid Al-Agely
2170 McCarty Hall
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Office Hours: By appointment.

Format: Two lectures per week; one laboratory session per week.

Time and Location:

Lectures: 3rd period (9:35 am-10:25 am) Tuesdays and Thursdays;
G-001 McCarty Hall D.

Laboratory sessions: Either Mondays or Wednesdays (2 pm), 3108
McCarty Hall B.

Textbooks:

Paul, Eldor. 2015. Soil Microbiology, Ecology, and Biochemistry, 4th Ed. Academic Press. ISBN: 978-0-12-415955-6. NOTE: This text will be available free of charge via the UF Libraries ARES Course Reserve System for registered students. ***There is no need to buy the text unless you want a hardcopy or unless you would like access after the course ends.***

Laboratory Manual (available as a PDF file from the course web site).

Materials and Supplies Fees: \$50 per student

Class Attendance, Make-up Exams, and Missed Assignments:

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>

SWS4303 Grading System:

Lecture component:

○ Three exams @ 200 points each	600 pts
○ Quizzes 12 quizzes @ 20 pts each	240 pts
○ Lab Quizzes: 10 @ 10 pts each	100 pts
○ Lab Problem sets: 3 @ 50 pts each	150 pts
○ Final Presentation:	200 pts
<i>Total:</i>	<i>1290 pts</i>

SWS5305 Grading System:

Lecture component:

○ Three exams @ 200 points each	600 pts
○ Quizzes 12 quizzes @ 20 pts each	240 pts
○ Discussion Questions: 12 @ 20 pts each:	240 pts
○ Lab Quizzes: 10 @ 10 pts each	100 pts
○ Lab Problem sets: 3 @ 50 pts each	150 pts
○ Final Presentation:	200 pts
<i>Total:</i>	<i>1530 pts</i>

Grading Scale:

100-92% = A; 91-90% = A-; 89-87% = B+; 86-82% = B; 81-79% = B-; 78-75% = C+; 74-70% = C; 69-65% = D+; 64-60% = D; ≤59% = E

Current UF grading policies for assigning grade points:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx> .

Basis for grades:

Exams

- Based on lectures and assigned readings
- Combination of multiple choice, short answer, short essay.
- Closed book!
- Distance students: Exams will be administered with Proctor U
(<http://www.dce.ufl.edu/Data/Sites/29/media/proctoru-student-handout1---december-2013.pdf>) .

Optional Final Exam

The regularly scheduled final exam is optional and may be taken by students who are not satisfied with their exam average for the three regular exams.

Only students who have four or fewer unexcused absences will be allowed to

take the optional final. The optional final may replace the low exam, or it may be used as a makeup exam. For students who wish to replace a low exam grade, there will be no penalty: the top three grades of the four will be counted. The optional final will be cumulative.

Quizzes

Approximately 10 quizzes based on lecture material and assigned readings, and 10 quizzes based on laboratory material will be administered on-line throughout the semester. They are open book and may be taken up to two times.

Participation:

- On campus students are encouraged to attend class. Attendance will be taken every class period. Students who have more than 4 unexcused absences will not be allowed to take the optional final exam.

Laboratory Problem Sets:

Three laboratory problem sets will be assigned throughout the semester. These problem sets require analysis of data and will ask questions related to general concepts.

Final Lab Presentation:

At the end of the semester, each student (on-campus and on-line) will be present a summary of the findings on the microbial ecology of a particular biogeochemical cycle based on the results obtained throughout the semester. For more information on this presentation and the structure of the laboratory, see the information beginning on p. 6 of this document.

Online Course Evaluation

Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at <https://evaluations.ufl.edu>. Evaluations are typically open during the last two or three of the semester, but students will be given specific times with they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

Accommodations for Students with Disabilities

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible in the semester.

Academic Honesty

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 Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

UF Counseling Services

Contact information for the Counseling and Wellness Center:

<http://www.counseling.ufl.edu/cwc/Default.aspx> ; (352)392-1575.

University Police Department: (352)392-1111 or 9-1-1 for emergencies.