

SOIL ECOLOGY

11:375:453 and 16:375:573

Fall 2018, 3 credits

Monday & Wednesday 2:15 – 3:35 pm

Room 103 Cook Douglass Lecture Hall, Cook-Douglass Campus

Contact Information:

Instructor: **Dr. Jeffra Schaefer**

Office Location: Room 356, Environmental & Natural Resource Sciences Building (ENR)

Phone: 848-932-5779

Email: jschaefer@envsci.rutgers.edu

Office Hours: most mornings 9 – 11 am; appointment recommended

For all emails: please include “Soil Ecology” in the subject line, and give your full name

Course Materials:

Website: All lecture notes and homework assignments will be available on the class Sakai site (www.sakai.rutgers.edu). Please use the forums section on Sakai to ask questions related to course content in order to enhance discussions.

Textbook: There is no textbook in this course. All reference material is on Sakai.

Course Description:

This course will introduce the field of soil microbiology and provide an understanding of how microbial processes in soil impact ecosystem sustainability and resilience.

Our specific objectives are to:

1. Gain an appreciation for the role of soil biological processes in current global concerns, such as global warming, soil degradation, and food production.
2. Improve scientific literacy in soil ecology and microbiology and to think critically about experimental design and data interpretation.
3. Gain insight into how improved understanding of soil biological processes can influence ecosystem stewardship and management of soil ecosystems.

Environmental Science Learning Goals:

This class will contribute toward students’ ability to:

1. apply knowledge from the sciences and mathematics to environmental problems and solutions
3. think critically about how to design and conduct experiments, and analyze and interpret data
7. understand contemporary environmental science issues and the impact of environmental science in a global and societal context

Assignments & Assessments:

11:375:453:

1. **Three exams:** 300 points total (non-cumulative)
2. **Problem Sets and Quizzes:** 100 points total.
Problem Sets will be posted on Sakai, under the Resource Tool
Due Dates are usually on Mondays, see schedule (*late assignments not accepted*).

Total points = 400

16:375:573:

1. **Two exams (Exam 1 and Exam 3):** 200 points total
2. **Project: 100 points total**
 - a. Presentation (in pairs): 50 points
 - b. Term paper (individual): 50 points
3. **Problem Sets/Quizzes:** 100 points total (same as 11:375:453)

Total points = 400

Your final grade will be calculated by dividing the total number of points earned by the total (400) to obtain a percentage. The letter grade will be based on that percentage using the Rutgers grade scale, which may be lowered (453 students only) at the end of the semester, depending upon the grade distribution.

Graduate students only (573): the Rutgers grade scale will be strictly applied; there is no curve for graduate students.

Late Assignments and Make-Ups:

Meeting deadlines and completing assignments on time are important parts of this class. Thus, late assignments will **not** be accepted without a University-approved excuse. Likewise, exam make-ups will only be given for a University-approved absence.

Email me *immediately* if you will not be able to attend one of the exams such that arrangements can be made for you to take the exam *ahead of time*. Instructor approval is required for this and arrangements must be made at least one month in advance.

Extra Credit:

A maximum of 20 points extra credit (5% of final grade) is available by participating in online discussions using the "Assignments" and "Forums" tools on the Sakai course webpage.

Final Exam:

Final exam schedule: <http://finalexams.rutgers.edu>. The third exam is Dec. 19 at 8:00 am and is not cumulative.

Absence Policy:

Students are expected to attend all classes; if you expect to miss one or two classes, please use the University absence reporting website <https://sims.rutgers.edu/ssra/> to indicate the date and reason for your absence. An email is automatically sent to me.

Please note: If you miss a class, you are responsible for all materials, including announcements. Arrange (now!) with a classmate to pick up any handouts and take notes for you – I recommend exchanging email addresses with at least 2-3 other students to ensure that you can acquire any missed information. There will be no make-up exams without an acceptable excuse.

Course Schedule:

See attached schedule and check Sakai course website regularly for any changes.

Accommodations for Students with Disabilities:

Students with a disability: please see me immediately so that we may make any necessary arrangements to support a successful learning experience. For more information, please follow the procedures outlined at <https://ods.rutgers.edu/students/registration-form>. Full policies and procedures are at <https://ods.rutgers.edu/>

Academic Integrity:

Cheating will be taken very seriously in this class. Homework are all individual assignments and must be written in your own words. All suspected cases of cheating will be automatically referred to the Office of Judicial Affairs, and we will recommend penalties appropriate to the gravity of the infraction.

The university's policy on Academic Integrity is available at <http://academicintegrity.rutgers.edu/academic-integrity-policy>. The principles of academic integrity require that a student:

- properly acknowledge and cite all use of the ideas, results, or words of others.
- properly acknowledge all contributors to a given piece of work.
- make sure that all work submitted as his or her own in a course or other academic activity is produced without the aid of impermissible materials or impermissible collaboration.
- obtain all data or results by ethical means and report them accurately without suppressing any results inconsistent with his or her interpretation or conclusions.
- treat all other students in an ethical manner, respecting their integrity and right to pursue their educational goals without interference. This requires that a student neither facilitate academic dishonesty by others nor obstruct their academic progress.
- uphold the canons of the ethical or professional code of the profession for which he or she is preparing.

Adherence to these principles is necessary in order to ensure that

- everyone is given proper credit for his or her ideas, words, results, and other scholarly accomplishments.
- all student work is fairly evaluated and no student has an inappropriate advantage over others.
- the academic and ethical development of all students is fostered.
- the reputation of the University for integrity in its teaching, research, and scholarship is maintained and enhanced.

Failure to uphold these principles of academic integrity threatens both the reputation of the University and the value of the degrees awarded to its students. Every member of the University community therefore bears a responsibility for ensuring that the highest standards of academic integrity are upheld.

Student Wellness Services:

Just In Case Web App <http://codu.co/cee05e>

Access helpful mental health information and resources for yourself or a friend in a mental health crisis on your smartphone or tablet and easily contact CAPS or RUPD.

Counseling, ADAP & Psychiatric Services (CAPS)

(848) 932-7884 / 17 Senior Street, New Brunswick, NJ 08901/ www.rhscaps.rutgers.edu/

CAPS is a University mental health support service that includes counseling, alcohol and other drug assistance, and psychiatric services staffed by a team of professional within Rutgers Health services to support students' efforts to succeed at Rutgers University. CAPS offers a variety of services that include: individual therapy, group therapy and workshops, crisis intervention, referral to specialists in the community and consultation and collaboration with campus partners.

Violence Prevention & Victim Assistance (VPVA)

(848) 932-1181 / 3 Bartlett Street, New Brunswick, NJ 08901 / www.vpva.rutgers.edu/

The Office for Violence Prevention and Victim Assistance provides confidential crisis intervention, counseling and advocacy for victims of sexual and relationship violence and stalking to students, staff and faculty. To reach staff during office hours when the university is open or to reach an advocate after hours, call 848-932-1181.

Disability Services

(848) 445-6800 / Lucy Stone Hall, Suite A145, Livingston Campus, 54 Joyce Kilmer Avenue, Piscataway, NJ 08854 / <https://ods.rutgers.edu/>

Rutgers University welcomes students with disabilities into all of the University's educational programs. In order to receive consideration for reasonable accommodations, a student with a disability must contact the appropriate disability services office at the campus where you are officially enrolled, participate in an intake interview, and provide documentation: <https://ods.rutgers.edu/students/documentation-guidelines>. If the documentation supports your request for reasonable accommodations, your campus's disability services office will provide you with a Letter of Accommodations. Please share this letter with your instructors and discuss the accommodations with them as early in your courses as possible. To begin this process, please complete the Registration form on the ODS web site at: <https://ods.rutgers.edu/students/registration-form>.

Scarlet Listeners

(732) 247-5555 / <http://www.scarletlisteners.com/>

Free and confidential peer counseling and referral hotline, providing a comforting and supportive safe space.