

SWS 6448

BIOGEOCHEMISTRY OF WETLANDS & AQUATIC SYSTEMS

Fall 2023, Credits: 3

INSTRUCTOR

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<http://soils.ifas.ufl.edu>

OFFICE HOURS:

Communication related to the course will be primarily via Canvas email. Questions can be sent via email using the course website, please allow up to 48 hours for a response. Please post all material-related general questions on the discussion board.

Students are also welcome to come in Person (or zoom for those out of town) office hours.

COURSE DESCRIPTION:

This course will cover the basic biogeochemical processes and properties of wetlands and aquatic systems.

Environmental and ecological significance of these processes in relation to elemental cycling and as related to water quality, carbon sequestration, greenhouse gas emissions, sea level rise and climate change will be discussed.

Overall course objectives: 1) To provide students with the basic concepts of biogeochemical cycling of macro and secondary elements including carbon, nitrogen, phosphorus, iron and sulfur. 2) To engage students in discussions relating to the application of biogeochemical processes regulating water quality, carbon sequestration, greenhouse gases, climate change, and sea level rise.

COURSE WEBSITE:

All Instructional lectures and material will be presented in Canvas learning system at

<http://elearning.ufl.edu/> . You need your UF Gatorlink account and password to login.

FREQUENCY TAUGHT: Every Fall Term

COURSE FORMAT

This course is offered in a web-based environment. The course consists of 8 modules, an outline can be found at the end of the syllabus. Each module consists of recordings and associated texts presented as book chapters or other assigned reading material. This combination represents the bulk of the class material; additional resources will be provided in the supplementary section. Make your own notes on each module. The course modules will be released on a set schedule. At the beginning of each week, the instructor will assign the material to be studied over the period of that week. For you to remain on schedule, the study of this material **must be** completed during that week. Even though the entire module is released and available, we strongly recommend you limit yourself to the material assigned by the instructor to gain a reasonable understanding of the material. Associated

with each module will be required readings and activities that will need to be completed. Extra resources are provided under supplementary material.

COURSE POLICIES

Online discussion session attendance and participation is *strongly encouraged*. These sessions are intended to mimic classroom discussions where applications of the concept/facts learned in the module are discussed. *Students are expected to notify the instructors a day in advance if he/she is not able to attend the chat session.* Expectations will be discussed during the first chat session. A required post on the Discussion Board will be based on the material discussed in these chat sessions and lectures.

There will be **no makeup exams/assignments** given. All due dates (as in the schedule) need to be adhered to unless changed by the instructors. Students are responsible for all information in the assigned texts and information presented in class materials and during chat sessions.

Students are expected to read all assigned materials prior to contributing to discussion boards or completing related assignments/activities.

Students should always consider the possibility of technology failure, and complete assignments to allow adequate time to correct for potential technology problems.

TECHNOLOGY CHECKLIST:

In order to successfully participate in distance education courses offered by the Soil, Water and Ecosystem Sciences Department, it is the responsibility of each student to have access to a personal computer (or laptop), the Internet, and other equipment to maintain the functionality of peripherals (e.g. Functional microphone). For more help with e-learning the students need to review the information found at

Review the [Student Computing Requirements](#) for policy, hardware, and software information.

STUDENT EVALUATION SYSTEM

Final grades will be calculated based on completion and quality work in 5 categories. 10% of points will be deducted for each day the assignment is late after the due date/time. Assignments are not accepted after 48 hours of due date. Since ample time is provided for the assignments and exam, make up work/assignments are not offered and are at the discretion of the instructor. Any requests for make-ups due to technical issues **MUST** be accompanied by the ticket number received from LSS when the problem was reported to them for consideration. The ticket number will document the time and date of the problem. You **MUST** e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Assignments are based on points system with total 600 points

Quiz (140 points): With each of the 8 modules, you are expected to complete a short quiz.

Discussion Board Posts (140 points) Students are expected to respond to a prompt or question posted on the discussion board associated with select modules. Due dates for all assignments will be provided in the course schedule.

Participation (50 points) Students are expected to actively participate in the discussions in class/synchronous meeting sessions.

Group Project (70 points) In groups, students will be preparing a short presentation on application of the concepts studied in class.

Exams: (200 points): Understanding of the material covered in this course will also be assessed with **two exams** during the semester. Exam format will be discussed in class at appropriate time.

CHAT DISCUSSION LINK: provided on course website.

COURSE GRADING POLICY: Grades will be determined based on your performance in the above-mentioned categories. The grading scale is as follows. To understand the passing grades and grade points review [Frequently Asked Questions for Passing Grades and Grade Points](#).

GRADING SCALE

93-100% = A	80- 84% = B	65- 69% = D+
89- 92% = A-	75- 79% = C+	60- 64% = D
85- 88% = B+	70- 74% = C	<60% = E

**Note: Please keep a copy of all class communication in case you have a question regarding your final grade.

TEXTBOOK (Highly recommended but not required)

Reddy, K. R., DeLaune, R., & P. W. Inglett. (2022). *Biogeochemistry of Wetlands: Science and Applications*. CRC Press. E-book version is available at the University Library. You will need to log in via the VPN system. Please contact the University of Florida Marston library. <https://cms.uflib.ufl.edu/msl/about/location>. Additionally any reading assignments assigned will be provided as pdfs on course page.

ONLINE COURSE EVALUATION: We welcome feedback relating to the course material from the students. 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 weeks of the semesters, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results>.

UNIVERSITY OF FLORIDA POLICIES

University policy on accommodating students with disabilities

Students requesting accommodation for disabilities must first register with the Dean of Students Office (<http://www.dso.ufl.edu/drc/>). The Dean of Students Office will provide documentation to the student who must then provide this documentation to the instructor when requesting accommodation. You must submit this documentation prior to taking assignments or taking the quizzes or exams. Accommodations are not retroactive; therefore, students should contact the office as soon as possible in the term for which they are seeking accommodations.

University policy on academic misconduct

Academic honesty and integrity are fundamental values of the University community. Students should be sure that they understand the UF Student Honor Code at <http://www.dso.ufl.edu/students.php>. You are expected to exhibit behavior consistent with this commitment to the UF academic community, and on all work submitted for credit 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." It is the responsibility of students to be aware of all university policies and procedures regarding academic integrity and the Student Honor Code. ANY violation of the Honor Code at the University of Florida is not to be tolerated and will be reported to the Dean of Students Office for consideration of disciplinary action. For more information regarding the Student Honor Code, please see: <http://www.dso.ufl.edu/SCCR/honorcodes/honorcode.php>

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.

Student Privacy

When possible, our chat sessions are audio visually recorded for students in the class to refer back to and for students who are unable to attend synchronous meetings. These sessions are only accessed by the enrolled students in class. Students who participate are agreeing to have their video and audio recorded. All chat session recordings are maintained for the duration of the course and are erased at the end of the course.

****NETIQUETTE: COMMUNICATION COURTESY:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats. **Failure to do so** can lead to disciplinary action to be taken as decided by the instructor.

OTHER HELPFUL RESOURCES

For issues with technical difficulties for Canvas, please contact the UF Help Desk at <http://helpdesk.ufl.edu> or (352) 392-HELP (4357).

Web related.

Information related to the e-learning can be found at <http://elearning.ufl.edu/>. Look for the **Student Help** or **Help Desk** located on top of the page.

For issues with technical difficulties for E-learning in Canvas, please contact the UF Help Desk either by going to <http://elearning.ufl.edu> and use the “**Message Us**” link (located on top right) or by contacting them at (352) 392-4357 x 2

** Any requests for make-ups due to technical issues **MUST** be accompanied by the ticket number received from LSS when the problem was reported to them. The ticket number will document the time and date of the problem. You **MUST** e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Personal

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

Counseling and Wellness resources at

- University Counseling & Wellness Center, 3190 Radio Road, 352 -392-1575, www.counseling.ufl.edu/cwc

Library Help Desk support can be found at <http://www.ufl.edu/academics/libraries/>

Career Resource Center, Level 1 J Wayne Reitz Union, 392-1601, www.crc.ufl.edu

Resources for handling student concerns and complaints: Should you have any complaints with your experience in this course please visit <http://www.distance.ufl.edu/student-complaint-process> to submit a complaint.

Disclaimer: This syllabus represents my current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

COURSE TOPICS

Module – I:	Biogeochemical characteristics of wetland soils
Module– II:	Electrochemical properties of wetland soils
Module- III:	Biogeochemistry of carbon
Module- IV:	Biogeochemistry of oxygen
Module- V:	Biogeochemistry of nitrogen
Module-VI:	Biogeochemistry of phosphorus
Module-VII:	Biogeochemistry of iron and manganese
Module-VIII:	Biogeochemistry of sulfur