BIOGEOCHEMISTRY OF WETLANDS & AQUATIC SYSTEMS
SWS 6448, Distance Education
Fall 2019, Credits: 3

INSTRUCTORS
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OFFICE HOURS:
All communication related to the course will be via Canvas email. Questions can be sent via email using the course website, please make sure your email is addressed to both the instructors and allow up to 48 hours for the response. Please post all material related general questions on the discussion board.

COURSE DESCRIPTION:
This course will cover the basic biogeochemical processes and properties of wetlands and aquatic systems. Environmental and ecological significance of these properties 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 trace elements including carbon, nitrogen, phosphorus, iron and sulfur. 2) To engage them in discussions relating to the application of biogeochemical processes affecting the environmental elemental cycling, water quality, carbon sequestration, 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 Gatorlink account and password to login.

FREQUENCY TAUGHT: 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 information can be obtained in the references. Make your own notes on each module.
The course modules will be released on a set schedule. You will have access to one module at a time. At the beginning of each week, the instructor will assign the number of slides to be studied over the period of that week. In order 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 so as to gain a reasonable understanding of the material. Associated to each module will be the reading material that may elucidate the material in the texts or slides.

COURSE POLICIES
Chat session attendance and participation is strongly encouraged. During this time, the applications of the concept learned in the class 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.

There will be no make up 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 and Water 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 of work and accumulation of points in 2 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: (37% of final grade): Assignments are associated with the 8 modules. These include Quizzes and response to discussion questions on the board. Quizzes can be taken up to three times and the highest score will be considered. Also, associated with each module will be one question posted on the Discussion board, that the students are expected to respond to. Due dates for all assignments are provided in the course schedule.
**Project:** (13% of final grade): Each student will be provided a topic (related to the course subject matter) by the instructor and will be required to complete a term paper 3-4 page (single space). First submission of project will be with Exam 1, and final submission will be with Exam 2.

**Exams:** (50% of final grade; 25% per exam): Your understanding of the material will be assessed with two exams during the semester. Exam format can include short objective type questions (multiple choice, fill in the blanks), short answers (4-5 sentences) and long discussion type questions. However, this can be modified as per the discretion of the instructor and will be explained at appropriate time.

**CHAT DISCUSSION LINK:** provided on course website. All online discussions will be recorded and will be available to students to review. However, students should always consider the possibility of technology failure and should not depend on recorded sessions for all course discussions.

**COURSE GRADING POLICY:** Grades will be determined based on your performance on the following activities:

<table>
<thead>
<tr>
<th>Graded Items</th>
<th>Percentages</th>
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</thead>
<tbody>
<tr>
<td>Module 1 Assignments</td>
<td>3%</td>
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<tr>
<td>Module 2 Assignments</td>
<td>4%</td>
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<tr>
<td>Module 3 Assignments</td>
<td>5%</td>
</tr>
<tr>
<td>Module 4 Assignments</td>
<td>5%</td>
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<tr>
<td>Module 5 Assignments</td>
<td>5%</td>
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<tr>
<td>Module 6 Assignments</td>
<td>5%</td>
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<td>Module 7 Assignments</td>
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<tr>
<td>Module 8 Assignments</td>
<td>5%</td>
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<tr>
<td>Project</td>
<td>13%</td>
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<tr>
<td>Exam 1</td>
<td>25%</td>
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<tr>
<td>Exam 2</td>
<td>25%</td>
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</tbody>
</table>

**GRADING SCALE**

100 - 93% = A ; 92- 90% = A- ; 89- 87% = B+ ; 86- 84% = B ; 83- 80% = B- ; 79- 77% = C+ ;
76- 74% = C; 73- 70% = C- ;69- 65% = D+; 64- 60% = D; <60% = E

GRADING SCALE: For more information, review Frequently Asked Questions for Minus Grades.

**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)


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 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.
**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/](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](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](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](http://www.counseling.ufl.edu/cwc)
- Library Help Desk support can be found at [http://www.ufl.edu/academics/libraries/](http://www.ufl.edu/academics/libraries/)
- Career Resource Center, Level 1 J Wayne Reitz Union, 392-1601, [www.crc.ufl.edu](http://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](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**

<table>
<thead>
<tr>
<th>Module</th>
<th>Topic</th>
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<tbody>
<tr>
<td>I</td>
<td>Biogeochemical characteristics of wetland soils</td>
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<tr>
<td>II</td>
<td>Electrochemical properties of wetland soils</td>
</tr>
<tr>
<td>III</td>
<td>Biogeochemistry of carbon</td>
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<tr>
<td>IV</td>
<td>Biogeochemistry of oxygen</td>
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<td>V</td>
<td>Biogeochemistry of nitrogen</td>
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<td>VI</td>
<td>Biogeochemistry of phosphorus</td>
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<tr>
<td>VII</td>
<td>Biogeochemistry of iron and manganese</td>
</tr>
<tr>
<td>VIII</td>
<td>Biogeochemistry of sulfur</td>
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