

The World of Water

SWS 2007

Time: Monday, Wednesday, Friday 5th period or
Monday, Wednesday, Friday 8th period

Instructor: James Bonczek, Ph.D. Soil and Water Science Department
Office: 2195 McCarty Hall A
Phone: 352-294-3112
E-mail: bonczek@ufl.edu (use SWS 2007 in subject line)

Office Hours: Monday, Wednesday, Friday 4:00-4:45 pm

Canvas Website: <http://lss.at.ufl.edu>

Course Description:

This is an introductory course intended to acquaint students with many of the essential roles of water in the environment. Topics range from fundamental properties of water to the importance of water and water quality to society. Course topics also will include water in oceans, lakes, rivers, soils, and the atmosphere as well as the importance of water in various physical and chemical processes.

Each student who successfully completes the course should have a practical knowledge of the following:

- The scale and distribution of global water resources
- Vocabulary to communicate fundamental concepts related to water science.
- The varied and unusual properties of water
- The varied roles of water in many environmental processes including new and historic scientific developments in relation to water in the environment.
- The fundamentals of water quality, vocabulary and criteria for evaluating water quality, and how water quality is impacted by humans

Course Objectives:

This course satisfies the (P) designation for the physical sciences general education requirement.

Physical Sciences (P) **A grade of C or higher is required for general education credit.**

Physical science courses provide instruction in the basic concepts, theories and terms of the scientific method in the context of the physical sciences. Courses focus on major scientific developments and their impacts on society, science and the environment, and the relevant processes that govern physical systems. Students will formulate empirically testable hypotheses derived from the study of physical processes, apply logical reasoning skills through scientific criticism and argument, and apply techniques of discovery and critical thinking to evaluate outcomes of experiments.

These general education objectives will be accomplished through:

1. Evaluation of how the properties of water influence its function in human, organism, and environmental systems.
2. Analysis of how water and chemicals interact and how this influences aquatic system, environmental, and organism health.
3. Formulation and critical evaluation of relationships between water's availability, quality, and distribution.
4. Application of basic scientific methodologies to the study of water science and foster new perspectives on the role of water and water quality in the environment.

Student Learning Outcomes

This course also will assess Student Learning Outcomes which can be defined as.

Student Learning Outcomes: Content and Skills

Content: Students demonstrate competence in the terminology, concepts, and methodologies used within the discipline

Communication: Students communicate knowledge, ideas, and reasoning clearly and effectively in written and oral forms appropriate to the discipline.

Critical Thinking: Students analyze information carefully and logically from multiple perspectives using discipline-specific methods and develop reasoned solutions to problems.

The Student Learning Outcomes will be assessed through ongoing evaluation. Content will be tested using three objective exams, five multiple choice and True/False quizzes, and six written Assignment incorporating fundamental concept knowledge relevant to course material. Communication will occur through discussion during assigned meeting times, web-based discussion posts, and short answer/essay homework assignments. Critical thinking will be assessed through analysis, and application issues related to water quality, consumption and use, distribution, and abundance.

Course Schedule

Prior to Week 1 – Syllabus, Course Guidelines, Expectations (Canvas)

Module 1	Introduction to the World of Water Assignment I due Wednesday 8-27 Quiz I due Wednesday 9-3
Module 2	Water, Humans, and Civilization Assignment II due Wednesday 9-10 Quiz II due Wednesday 9-10
Module 3	Water, Economic Development, Energy Quiz III due Wednesday 9-17
Module 4	Surface and Groundwater Overview Quiz IV Due Wednesday 9-24
Module 5	Exam I and Preparation Review Monday 9-22 Exam I Wednesday 9-24
Module 6	Introduction to Florida's Water Resources Quiz V Due Wednesday 10-8 Assignment III Due Wednesday 10-8
Module 7	Sinkholes, Lakes, Aquifer Recharge, and Springs Quiz VI Due Wednesday 10-15 Assignment IV Due Wednesday 10-15
Module 8	Water, Weather, and Climate Assignment V Due Wednesday 10-22 Quiz VII Due Wednesday 10-22
Exam II	Exam II and Review: Modules 6 through 8 Review Monday 10-20 Exam II Wednesday 10-22
Module 9	Water Quality: Parameters and Sources
Module 10	Biological Water Contaminants
Module 11	Inorganic Chemical Pollutants/Contaminants Assignment VI Due Wednesday 11-19 Quiz VIII Due Wednesday 11-19

Module 12 **Organic Chemicals/Contaminants: Sources, Fate, Toxicity**
Assignment VII Due **Wednesday 12-3**
Quiz IX Due **Wednesday 12-3**

Exam III Exam III Modules 9-12
Review Monday 12-1
Exam III Wednesday 12-3

Textbook:

There is no required textbook.

However, topic-related readings may be assigned. Appropriate text excerpts also will be provided.

Additionally, online discussion topics will be posed.

Evaluation of Grades

Grading will be based on three in-class examinations, homework assignments, quizzes, and written questions posed during lecture. Opportunities for bonus points also will be provided throughout the semester.

<u>Assignment</u>	<u>Point Value</u>	<u>Percentage of Grade</u>
Exams	600	60%
Quizzes	150	15%
Assignments	150	15%
Lecture Quizzes	100	10%
TOTAL	1000	100%

<u>Letter Grade</u>	<u>Numerical Grade</u>	<u>GPA Points</u>
A	92-100	4.0
A-	90-91.9	3.67
B+	86-89.9	3.33
B	83-85.9	3.0
B-	79-82.9	2.67
C+	77-78.9	2.33
C	72-76.9	2.0
C-	70-71.9	1.67
D+	66-69.9	1.33
D	63-65.9	1.0
D-	59-62.9	0.67
E	<59	0

BASIC COURSE REQUIREMENTS:

1. **Exams** consist of objective and interpretive multiple choice and true/false questions. Study guides and review sessions will be provided prior to each exam.
2. **Assignments** will address current and historic topics of soils in the environment as well as basic assignments related to class lectures and problem solving. Assignment due dates are indicated above. Submission will be on the course management site; emailed assignments are not permitted. **One Assignment drop is permitted.**
3. **Quizzes** will be conducted online in the course management system. Each quiz will consist of 10 questions randomly selected from a large bank of questions.
You are permitted 2 quiz drops without penalty.
4. **Lecture Quizzes** will be provided prior to the commencement of each lecture. These questions will be answered during the course of the lecture; therefore, attendance is required. Students may miss 7 lecture question assignments without penalty.

GENERAL POLICIES

Lecture notes will be posted on the course management site.

Assignment submissions: Assignments submissions must be clearly presented **and the product of each individual student's work. Copying information verbatim from the web, books, articles, etc. requires appropriate citation, but is strongly discouraged.**

Late Work: Submission of assignments is expected on time. Late work will not be accepted. Students may apply for an exception to this rule by supplying appropriate documentation.

Make-up Exams: Contact the instructor or teaching assistant as early as possible if you must legitimately miss a scheduled exam. If an emergency arises immediately before an exam, notify the instructor or teaching assistant as soon as the emergency is resolved. Make-up exams are scheduled as indicated in the course schedule above.

Class Demeanor: Students are expected to arrive and be prepared to commence on time. Please be considerate to the instructor and your fellow students and avoid talking, texting, or other disruptive behavior. Students also are expected to remain in class for the duration of the lecture. If you must leave early, inform the instructor prior to commencement of class.

Students Requiring Accommodations

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.

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 semester, 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/>.

Academic Honesty

As a student at the University of Florida, you have committed yourself to uphold the Honor Code, which includes the following pledge: *"We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honesty and integrity."* 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 assumed that you will complete all work independently in each course unless the instructor provides explicit permission for you to collaborate on course tasks (e.g. assignments, papers, quizzes, exams). Furthermore, as part of your obligation to uphold the Honor Code, you should report any condition that facilitates academic misconduct to appropriate personnel. It is your individual responsibility to know and comply with all university policies and procedures regarding academic integrity and the Student Honor Code. Violations of the Honor Code at the University of Florida will not be tolerated. Violations 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.

Campus Helping Resources

Students experiencing crises or personal problems that interfere with their general well-being are encouraged to utilize the university's counseling resources. The Counseling & Wellness Center provides confidential counseling services at no cost for currently enrolled students. Resources are available on campus for students having personal problems or lacking clear career or academic goals, which interfere with their academic performance.

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

Counseling Services
Groups and Workshops
Outreach and Consultation
Self-Help Library
Training Programs
Community Provider Database

Career Resource Center, First Floor JWRU, 392-1601, www.crc.ufl.edu/