

# NRE 2215E INTRODUCTION TO WATER RESOURCES

## Syllabus – Winter 2022

Excluding materials for purchase, syllabus information may be subject to change. The most up-to-date syllabus is located within the course in HuskyCT.

### Course and Instructor Information

**Course Title:** Introduction to Water Resources (NRE 2215)

**Credits:** 3

**Schedule:** As indicated in the schedule

**Location:** online

**Prerequisites:** Recommended Preparation: Environmental Science (NRE 1000), Earth and Life through Time (GSCI 1050 or 1051)

**Professor:** [Gary A. Robbins](#), Professor of Natural Resources and Geosciences, Dept. of Natural Resources and the Environment

Office: Online class website on HuskyCT

Email: [gary.robbs@uconn.edu](mailto:gary.robbs@uconn.edu) (Use my email for communications and not the HuskyCT message board)

**Office Hours/Availability:** Unless otherwise noted, I will check into the course at a minimum two times per weekday, and once a day on the weekend, to monitor discussions, clarify expectations, and respond to HuskyCT email (Messages) within 24 hours. If I expect to be unavailable due to illness, travel or family obligations, I will make every attempt to notify you in advance.

Professor Webex site: <https://uconn-cmr.webex.com/join/Robbins>

### Course Materials

**Readings and Video:** The course uses only online materials (see course module content)

### Course Description

Introduction to surface water and groundwater resource assessment, development and management. Integration of scientific, legal, environmental and human factors that enter into developing and maintaining sustainable water resources. Examines current and future plight of water shortages and water quality issues here and abroad.

The goals of this course are to provide students with a solid background to confidently take more advanced water resource courses and to form a foundation of knowledge to build upon for students whose careers in science, technology, communication, education, law and business relate to water resource management,

Two virtual field trips during the class period will be required for the course.

### Course Objectives

By the end of the semester, students should be able to:

1. Describe scientific and technical terms and concepts related to surface water and groundwater, water quality, water usage, water treatment, sewage treatment and water in context of environmental protection;
2. Be able to analyze and evaluate scientific reports dealing with water related issues;
3. Discuss legal and economic concepts dealing with water resource protection, usage and conflicts;
4. Obtain water data from such sources as the USGS, EPA, FEMA and the scientific literature;
5. Recognize water pollutants and sources of pollutants;

### Course Outline (and Calendar if Applicable)

**See Course Schedule on HuskyCT**

## Course Requirements and Grading

### Requirements

The lectures each week are reinforced by annotated lecture notes, readings, videos and homework quizzes accessible on the HuskyCT website. With respect to the open book homework quizzes, students are to do their own work. Assisting other students or receiving assistance from another students or anyone else, but the instructor, will constitute a violation of the student code of conduct. Class participation in discussions is also an essential element of the course.

### Summary of Course Grading:

The final grade will be determined based on the numerical score calculated using the following:

Final numerical grade =  $100 \times \text{total number of points} / 300$

The letter grade will then be based on the chart below.

Course Components	Point Value	% of total score
Homework Quizzes	70	23.33
Virtual Field Trips	30	10
Midterm	60	20
Final Exam	100	33.33
Class Discussion	40	13.33
Total	300	100

### Quizzes

Lectures within each module have an associated open book review quiz that must be completed within the allotted time scheduled. **See course schedule on the HuskyCT website.**

### Virtual Field Trips

For the winter 2022 semester, students will be taking two virtual field trips. Following the field trips, students are required to address a series of questions based on material covered during the field trips.

### Exams

Two close book exams (midterm and final) will be given using the Lockdown browser. Typically, exams consist of multiple-choice questions which may require calculations be performed to derive an answer.

### Final Exam

A comprehensive, close book, in class final exam using the Lockdown browser will be given and is required to be taken to pass the class.

### Discussions

(Students are required to participate in several focused discussions on a variety of key topics. See course HuskyCT Discussion Webpage).

### Student Authentication

The University of Connecticut is required to verify the identity of students who participate in distance learning or online courses and to establish that students who register in these courses are the same students who participate in and complete the course activities and assessments and receive academic credit. Verification and authentication of student identity in this course will include:

Method 1 All instruction will be through HuskyCT requiring students use their NetID and Password

Method 2 You will need to record your picture and ID before you take each exam and submit them to the instructor.

## Grading Scale:

Grade	Letter Grade	GPA
>90-100	A	4.0
88-89	A-	3.7
86-87	B+	3.3
82-85	B	3.0
80-81	B-	2.7
76-79	C+	2.3
72-75	C	2.0
70-71	C-	1.7
66-69	D+	1.3
62-65	D	1.0
60-61	D-	0.7
<60	F	0.0

## Due Dates and Late Policy

The Course Schedule in HuskyCT lists all due dates for the course. All course deadlines are based on Eastern Daylight Time (UTC-4); if you are in a different time zone, please adjust your submittal times accordingly. This course is delivered over a condensed timeframe (3 weeks). Due dates are firm, absent extenuating and unforeseen circumstances or unless alternative arrangements have been made in advance. To help you assure the due dates are met, I encourage you to print a hard copy of the course schedule, and insert the due dates/reminders into your calendars on your smart phone and computers. The instructor reserves the right to change dates accordingly as the semester progresses. All changes will be communicated in an appropriate manner.

**Late Policy:** Students are required to strictly adhere to all deadlines. Any unexcused late quiz or other work will face a 30% deduction in score, if completed within 12 hours of the schedule due date and time. After 12 hours of the due date and time, the quiz or other work will be given a grade of 0%.

## Feedback and Grades

I will make every effort to provide feedback and grades within 48 hours. To keep track of your performance in the course, refer to My Grades in HuskyCT. Click on the arrow on the right to review feedback.

## Student Responsibilities and Resources

This section provides a brief overview to important standards, policies and resources.

### Student Code

As a member of the University of Connecticut student community, you are held to certain standards and academic policies. In addition, there are numerous resources available to help you succeed in your academic work. Review these important [standards, policies and resources](#), which include:

- The Student Code

- Academic Integrity
- Resources on Avoiding Cheating and Plagiarism
- Copyrighted Materials
- Netiquette and Communication
- Adding or Dropping a Course
- Academic Calendar
- Policy Against Discrimination, Harassment and Inappropriate Romantic Relationships
- Sexual Assault Reporting Policy

## Copyright

Copyrighted materials within the course are only for the use of students enrolled in the course for purposes associated with this course and may not be retained or further disseminated.

## Adding or Dropping a Course

If you should decide to add or drop a course, there are official procedures to follow:

- Matriculated students should add or drop a course through the [Student Administration System](#).
- Non-degree students should refer to [Non-Degree Add/Drop Information](#) located on the registrar's website.

You must officially drop a course to avoid receiving an "F" on your permanent transcript. Simply discontinuing class or informing the instructor you want to drop does not constitute an official drop of the course. For more information, refer to the:

- [Undergraduate Catalog](#)
- [Graduate Catalog](#)

## Academic Calendar

Find important dates and deadlines for the semester

- [Winter Semester](#)

## Academic Support Resources

[Technology and Academic Help](#) provides a guide to technical and academic assistance.

## Students with Disabilities

Students needing special accommodations should work with the University's [Center for Students with Disabilities \(CSD\)](#). You may contact CSD by calling (860) 486-2020 or by emailing [csd@uconn.edu](mailto:csd@uconn.edu). If your request for accommodation is approved, CSD will send an accommodation letter directly to your instructor(s) so that special arrangements can be made. (Note: Student requests for accommodation must be filed each semester.)

Blackboard measures and evaluates accessibility using two sets of standards: the WCAG 2.0 standards issued by the World Wide Web Consortium (W3C) and Section 508 of the Rehabilitation Act issued in the United States federal government." (Retrieved March 24, 2013 from [Blackboard's website](#))

## Software and Technical Requirements and Technical Help

The technical requirements for this course include:

- HuskyCT/Blackboard (HuskyCT/ Blackboard Accessibility Statement, HuskyCT/ Blackboard Privacy Policy)
- Adobe Acrobat Reader (Adobe Reader Accessibility Statement, Adobe Reader Privacy Policy)
- Google Apps (Google Apps @ UConn Accessibility, Google for Education Privacy Policy)
- Microsoft Office (free to UConn students through [uconn.onthehub.com](http://uconn.onthehub.com)) (Microsoft Accessibility Statement, Microsoft Privacy Statement)
- Dedicated access to high-speed internet with a minimum speed of 1.5 Mbps (4 Mbps or higher is recommended).

- Word and spreadsheet processing software
- Reliable Internet access

[Technical and Academic Help](#) provides a guide to technical and academic assistance.

This course is completely facilitated online using the learning management platform, [HuskyCT](#). If you have difficulty accessing HuskyCT, students have access to the in person/live person support options available during regular business hours through [HuskyTech](#). Students also have [24x7 Course Support](#) including access to live chat, phone, and support documents.

### Minimum Technical Skills

To be successful in this course, you will need the following technical skills:

- Use electronic mail with attachments.
- Save files in commonly used word processing program formats.
- Copy and paste text, graphics, or hyperlinks.
- Use Microsoft Word and Excel.
- Open and access PDF files.

University students are expected to demonstrate competency in Computer Technology. Explore the [Computer Technology Competencies](#) page for more information.

### Evaluation of the Course

Students will be provided an opportunity to evaluate instruction in this course using the University's standard procedures, which are administered by the [Office of Institutional Research and Effectiveness](#) (OIRE).

Additional informal formative surveys may also be administered within the course as an optional evaluation tool.

**See Winter Schedule below**

NRE 2215 Winter 2022					
Lectures	Lecture Dates	Homework Quiz due date (all at 11:59PM)	Field Trip due date (all at 11:59 PM)	Exams	Discussion Due date (all at 11:59 PM)
Water Challenges in the 21 <sup>st</sup> Century 1-Historical Perspective on Water Use 2-Hydrologic Cycle and Water Budgets	12/27	Quizzes 1 & 2- 12/28			
3-Surface Water Hydrology Overview 4-Reservoir Assessment and Development	12/28	Quizzes 3 & 4 12/29			<b>Discussion 1 assigned</b>
5-Ground Water Hydrology Overview	12/29	Quiz 5 12/30	<b>Virtual Field Trip Due 12/29</b>		
6-Water Quality Overview 7-Nature of Surface Water and Ground Water Pollution	1/3	Quizzes 6 & 7 1/4			<b>Discussion 1 Due 1/3</b>
8-Surface and Ground Water Development and Management, Water Treatment Processes 9-Water System Case Studies	1/4	Quizzes 8 & 9 1/5			
10 Irrigation, Desalination and Wastewater Treatment	1/5	Quiz 10 1/6		<b>Midterm 1/6 (1.5 hours) Covers 1-9, closed book</b>	
11-Legal Aspects of Water Resources Development 12-Water Allocation Law, Federal Law	1/6	Quiz (11 and 12 combined) 1/7			<b>Discussion 2 assigned</b>
13-Water, Fish and Wildlife 14-Local Water Jurisdiction (state and city level)	1/7	Quizzes 13 & 14 1/10			
15-Water Use Conflict Resolution,	1/10	<b>Quizzes 15 1/11</b>			
16-Economics of Water Use	1/11	No quiz for lecture 16	<b>Virtual Field Trip 2 Assignment Due 1/11</b>		
17-Emerging Water Issues, Regional, US	1/12	No quiz for lecture 17			
	1/13				<b>Discussion 2 Due 1/13</b>
<b>Final Exam (covers the entire term with emphasis on material from 9-17)</b>	1/14	2 hour exam		<b>Final 1/14 2hours, closed book</b>	