

CWR 4542 – Water Resources Engineering
CGN 6905 – Advanced Water Resources Engineering
University of Florida
Department of Civil and Coastal Engineering

1. **Catalog Description:** (3 credits) Study of water resources engineering applications including hydrology and statistics, groundwater, hydraulic machinery, dams and reservoirs, water quality, water quantity/quality modeling, water and waste-water treatment and water law and institutions.
2. **Pre-requisites and Co-requisites:** CWR 4202 (Hydraulics) or consent of instructor.
3. **Course Objectives:** Students are expected to gain an in-depth understanding of water resources engineering by applying methods from hydrodynamics, hydraulics, and hydrology in order to perform analysis and design of systems that control the quantity, quality, timing, and distribution of water.

4. **Instructor:**

Dr. Mark A. Newman

Office location: 580A Weil Hall

E-mail address: mark.newman@essie.ufl.edu

Web site: <http://www.essie.ufl.edu/~markn/>

Office hours: Monday, Wednesday, Friday 1:30PM-2:30PM (or by appointment).

Email communication is highly encouraged as it allows information to be shared more readily with the entire class. The class email list is automatically generated based upon the class roll maintained by the Registrar's Office.

5. **Meeting Times:** Monday, Wednesday, and Friday 5th Period, 11:45 PM – 12:35 PM
6. **Meeting Location:** WEIM, Room 1084
7. **Course material and assignments**

All course material (reading, homework, and supplemental information) will be provided through UF e-Learning site (Canvas) <http://elearning.ufl.edu/>.

Textbook (Recommended) The text is listed as *recommended*. It should be noted that several homework will be assigned from this text which may require additional reading. Also, this book is a useful reference for the PE exam.

Chin D.A. *Water Resources Engineering*. Pearson Education, Inc., Upper Saddle River, NJ. 2006 (Second Edition).

8. **Recommended Reading:** Important websites for this course include the U.S. Geological Survey (USGS) site: Water Resources of the United States <http://water.usgs.gov/>; and the St. Johns River Water Management District site: <http://sjrwmd.com/>. Other sites will also be referenced throughout the semester.

9. Course Outline:

Weeks	Topics	Chapter
1-2	Introduction, hydrologic cycle, precipitation	1
3 – 6	Probability and statistics in water resources	4
7 – 8	Surface-water hydrology: rainfall, runoff, infiltration	5
9 – 11	Groundwater hydrology	6
12 - 13	Water law and institutions	7
14 – 15	Water-supply development and sustainability	7

10. Attendance and Expectations: There is no specific penalty for missing a class; however, students are responsible for the content of each lecture, which may or may not be contained in the course notes.

11. Grading: Grading will be based on homework, mid-term project, and a final project weighted as follows:

Homework	30 %
Mid-Term Project	30
Final Project	<u>40</u>
	100 %

12. Grading Scale:

Final Average	Course Grade
94-100	A
90-93	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
< 60	E

13. Make-up Exam Policy: Make-up exams are to be scheduled with the instructor.

14. Honesty Policy: All students admitted to the University of Florida have signed a statement of academic honesty committing themselves to be honest in all academic work and understanding that failure to comply with this commitment will result in disciplinary action. This statement is a reminder to uphold your obligation as a UF student and to be honest in all work submitted and exams taken in this course and all others.

- 15. Accommodation for Students with Disabilities:** Students requesting classroom accommodation must first register with the Dean of Students Office. That office will provide the student with documentation that he/she must provide to the course instructor when requesting accommodation.
- 16. UF Counseling Services:** Resources are available on-campus for students having personal problems or lacking clear career and academic goals. The resources include:
- University Counseling Center, 301 Peabody Hall, 392-1575, Personal and Career Counseling.
 - SHCC mental Health, Student Health Care Center, 392-1171, Personal and Counseling.
 - Center for Sexual Assault/Abuse Recovery and Education (CARE), Student Health Care Center, 392-1161, sexual assault counseling.
 - Career Resource Center, Reitz Union, 392-1601, career development assistance and counseling.
- 17. Software Use:** All faculty, staff and student 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. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.