



## CE 618 - 102 Applied Hydrogeology

Spring 2025

**Text:** Hydrogeology Applied by **C. W. Fetter and David Kreamer**, Fifth edition

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*Prerequisite: Undergraduate course in fluid mechanics*

WEEK	TOPIC	
1	Chapter 1, handout	
2	Chapter 2, handout	
3	Chapter 2-3, handout	
4	Chapter 3, handout	
5	Chapter 4, handout	
6	Chapter 4-5, handout	
7	Exam 1	Details on canvas
8	Chapter 5, handout	
9	Chapter 5-6, handout	
10	Chapter 6, handout	
11	Exam 2	Details on canvas
12	Chapter 7, handout	

13	Field trip? (tentative, Saturday or Sunday around that time)	Details on canvas
14	Student presentation	
15	Final exam	Details on canvas

### TUTORIAL HELP:

Tutorial schedule (in person and Webex link) is on Canvas under "Pages".

<b>GRADING:</b>		<b>The grade schedule:</b>	
Homework	15 %	A = 90+	C = 70
Presentation	10%	B+ = 85	D = 60
Exam-1	25 %	B = 80	F = 59 or less
Exam-2	25%	C+ = 75	W
Final Exam	25%		
Total	100%		

Incomplete is given in rare instances where the student is unable to attend or otherwise do the work of the course due to illness, etc. The grade must be made up in the next semester by completing all of the missed work.

### EXAMS:

Generally, a calculator is needed for all exams. Other electronic devices, storage medium, or accessories of any kind are NOT allowed during any exam.

### HOMEWORK:

To obtain full credit, you must submit the work on time and in the proper form. A minimum of 70% of the homework must be submitted to receive a passing grade in the course. Late homework will get reduced points (5% off for each day). The following are required for homework:

1. (for pdf file) On the top of the first page, PRINT your name, date.
2. The problems must be presented in numerical order as assigned. Writing be neat, clear and legible.
3. Box the final answer(s) with unit(s) (and direction if needed).
4. **All HW submissions will be on canvas. Do not email HW.**

### Academic Integrity

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Cheating is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the academic code of integrity policy that is found at: <http://www5.njit.edu/policies/sites/policies/files/academicintegrity-code.pdf>.

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or dismissal from the university. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at [dos@njit.edu](mailto:dos@njit.edu)

**AI statement:** The use of artificial intelligence (AI) is permitted in this course only when explicitly stated in assignments. If students use AI for any course-related work, they must cite it according to the guidelines provided on the [NJIT Library AI Citation page](#). If you have any questions about AI use in this course, please contact the course instructor before submitting any assignments. In cases where AI use is not allowed, students are expected to complete work without AI assistance to develop their skills in this subject area.

### **Program Educational Objectives**

Our **Program Educational Objectives** are reflected in the achievements of our recent alumni:

- **Engineering Practice:** Alumni will successfully engage in the ethical practice of civil engineering within industry, government, and private practice, working towards safe, practical, resilient and sustainable solutions in a wide array of technical specialties including construction, environmental, geotechnical, structural, transportation, and water resources.
- **Professional Growth:** Alumni will advance their technical and interpersonal skills through professional growth and development activities such as graduate study in engineering, research and development, professional registration and continuing education; some graduates will transition into other professional fields such as academia, business, and law through further education.
- **Service:** Alumni will perform service to society and the engineering profession through membership and participation in professional societies, government, educational institutions, civic organizations, charitable giving and other humanitarian endeavors.

### **Student Outcomes**

Our **Student Outcomes** are what students are expected to know and be able to do by the time of their graduation:

- an ability to identify, formulate and solve complex engineering problems by applying principles of engineering, science and mathematics
  - an ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety and welfare, as well as global, cultural, social, environmental and economic factors
  - an ability to communicate effectively with a range of audiences
  - an ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental and societal contexts
  - an ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks and meet objectives
  - an ability to develop and conduct appropriate experimentation, analyze and interpret data and use engineering judgment to draw conclusion
  - an ability to acquire and apply new knowledge as needed, using appropriate learning strategies
- Updated 1/6/2025