New Jersey Institute of Technology

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Fall 2024

CE 621 - 101: APPLIED HYDROLOGY

Yuan Ding

CE 621 - Hydrology   **Fall 2024**

Text:

Applied Hydrology by V. T. Chow, D. R. Maidment and L.W. Mays, McGraw-Hill
ISBN 0-07-010810-2
Reference: Hydrology and Floodplain Analysis, 5th edition by Bedient, Huber, and Vieux.
Pearson, ISBN 10: 0-273-77427-1. ISBN 13: 978-0-273-77427-3

Instructor:

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Prerequisite: undergraduate fluid mechanics. The statistical nature of precipitation and runoff data are considered with emphasis on floods and droughts. The flow of groundwater is analyzed for various aquifers and conditions. Flood routing, watershed yield, and drainage problems are considered.

Week	Chapter	Topics
1	1	Introduction
2	2,3	Hydrologic processes, atmospheric water
3	3	Atmospheric water
4	4	Subsurface water (infiltration)
5	5-6	Surface water, Hydrologic measurement
6	Exam 1	Details on canvas
7	7	Unit hydrograph
8	8	Lumped flow routing
9	8, 9	Lumped flow routing, Distributed flow routing
10	9	Distributed flow routing
11	11-12	Frequency analysis
12	Exam 2	Details on canvas
13	handout	Flow net, Well
14	handout	Well field, image well
15	Final exam	Details on canvas

GRADING:

HW	18 points
Academic Engagement	1 point
Exam 1	27 points
Exam 2	27 points
Final exam	27 points

The grade scheduling:

A = 90 to 100	C = 70 to 74
B+ = 85 to 89	D = 60 to 69
B = 80 to 84	F = 59 or less
C+ = 75 to 79	W = Voluntary before deadline (school schedule)

EXAMs:
Generally, calculator is needed for all exams. No other electronic devices, storage media, or accessories of any kind, are allowed during any exam.

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