

Professor JJ Lee

Water Resources Engineering

How well did you learn?				
Not at all → Very Well				
1	2	3	4	5
CIRCLE YOUR RATINGS				
↓ BELOW ↓				

Course Objectives and Outcomes

Objective. To study and analyze problems associated with hydrological engineering.

Outcome. How well did this course increase your ability to understand and/or do the following?

1	General classification of problems in water resources engineering	1	2	3	4	5
2	Hydrologic cycles, rainfall, runoff, evaporation & transpiration	1	2	3	4	5
3	Quantitative hydrology. hydrograph analysis, rainfall-runoff relation	1	2	3	4	5
4	Unit hydrograph, rational formula, flood routing, river routing	1	2	3	4	5
5	Ground water hydrology, well hydraulics, aquifer characteristics	1	2	3	4	5
6	Probability concepts in water resources planning – extreme events	1	2	3	4	5
7	Reservoir Engineering – storage, yield, sediments control, wind waves, reservoir oscillations	1	2	3	4	5
8	Dam types, analysis and design criteria, adv./disadvantages of earth/concrete dams, environmental	1	2	3	4	5
9	Spillways, gates and outlet works, energy dissipater, scour control	1	2	3	4	5
10	Analyze flow in open channels, hydraulic jumps, critical and subcritical flows	1	2	3	4	5
11	Water related issues worldwide - floods, landslides, tsunamis	1	2	3	4	5
12	Describe issues involved faced in hydrological cycles, precipitation, runoffs, floods.	1	2	3	4	5
13	Perform ground water well hydraulics analysis.	1	2	3	4	5

Objective. To study and analyze problems in hydraulic engineering common for water resources projects.

Outcome. How well did this course increase your ability to understand and/or do the following?

14	Determine the capacity needed in reservoir design, safe water yield, sediment control	1	2	3	4	5
15	Design dams, hydraulic jumps, energy dissipators	1	2	3	4	5

Objective. To study and analyze water resources projects involving risk.

Outcome. How well did this course increase your ability to understand and/or do the following?

16	Understand uncertainty in water resources projects worldwide.	1	2	3	4	5
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Relationship of Civil Engineering Program Course Objectives to Outcomes

Objective. The Civil Engineering program is designed to teach beyond the technical content of the projects and research activities enlist skills and demonstrate ability to understand the subject matter and communicate in a proficient manner. This course contributes to the overall program goals in the following ways.

Outcome. How well did this course increase your ability to understand and/or do the following?

(a)	an ability to apply knowledge of mathematics, science, and engineering.	1	2	3	4	5
(e)	an ability to identify, formulate, and solve engineering problems.	1	2	3	4	5
(i)	a recognition of the need for, and an ability to engage in life-long learning.	1	2	3	4	5
(k)	an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.	1	2	3	4	5