

CTC 450
Water and Wastewater Systems
Fall 2020

Coordinator: Jayne Baran
Classroom: Class to be held online
Time: TR 10 am to 11 am (synch)

Synchronous—use Blackboard Collaborate
Asynchronous activities-Use Blackboard

Course Description:

Course covers water quality, water supply systems, wastewater systems, solid waste management, and pollution control. Prerequisite: Coursework in hydrology and hydraulics. Corequisite: CHE 110T/L

Credit Hours: 4

Learning Outcomes:

Each student will demonstrate the ability to:

1. Determine the resultant hydrostatic force on a submerged, inclined gate
2. Apply Bernoulli's equation and draw an Energy/Hydraulic Grade Line
3. Determine detention time, overflow rate, weir loading rate and percent solids removal of a clarifier
4. Use computer software to solve open channel flow problems

Required Text and Materials:

Nathanson, Jerry A. and Schneider, Richard A., Basic Environmental Technology, Pearson, 2015, 6th edition, ISBN 13:978-0-13-284014-9

On Reserve:

Course: CTC450 / Section: 01 - Water & Wastewater Systems

Book Title: COMPUTER APPLICATIONS IN HYDRAULIC ENGINEERING

Available as a book on reserve available at the circulation desk with a call number of: Reserve L#124

Office Hours and Contact Info:

see <https://people.sunyit.edu/~barans/schedule.htm>

(Or by appointment)

Email: Jayne.Baran@sunypoly.edu

Donovan Hall, 1197

Phone: (315) 792-7542

Topics and Projects:

Topics:	Description	Hrs	Assignments/Projects
1	Introduction	2	Review/Download Bentley Software
2	Chemistry	2	
3	Biology	2	
4	Hydraulics & Hydrology	16	Software Application Project
5	Water Quality	2	
6	Water Distribution Systems	2	
7	Water Processing & Operations	4	
8	Wastewater Flows & Characteristics	2	
9	Wastewater Collection Systems	2	
10	Wastewater Processing	2	
11	Wastewater Operations	2	
12	Advanced Wastewater Treatment	2	
13	Water Reuse	2	
14	Sustainability and Carbon Footprint	2	Sustainability Report & Presentation
	Project Presentations/Activities	6	
	Mid-Term/Final/Reviews	8	

Methods of Evaluation:

Homework:

Homework shall be typed or neatly handwritten in pencil on engineering graph paper. Submit via PDF on Blackboard. There is no provision for make-up of homework assignments. A missed homework assignment is a zero and will be factored into the final grade.

Quizzes:

Online quizzes are available on Blackboard as asynchronous activities

Examinations:

There will be one midterm and one final exam scheduled during the semester. Students are expected to take the exams at the scheduled times. Generally, no make-up test will be given except for medical emergencies or other valid reason for which prior approval has been obtained.

Projects:

Applied design projects and reports emphasize teamwork and communication, as well as the application of industry-standard hydraulic, word-processing, spreadsheet, and presentation software. The need for professionalism and excellence is reinforced through the requirement for assignments to be completed on time and in a neat and well-organized manner

Attendance/Participation:

Students are expected to attend every synchronous class period and have homework and project assignments completed and ready to present unless arrangements have been made with the instructor. A missed class does not excuse responsibility for the work covered in class and the homework assignments. Students will be held to the standards set forth in the *Student Handbook*, stated as the College's "Code of Academic Conduct."

Homework	20%
Asynchronous Quizzes	10%
Computer Applications (Flowmaster)	20%
Mid-Term Exam	25%
Final Exam	25%
TOTAL	100%

Code of Conduct:

Students are referred to the Student Handbook for SUNY Poly’s current Code of Academic Conduct regarding plagiarism and other inappropriate academic activities.

Cancellation of Classes:

SUNY Poly has a 24-hour hotline to inform students, faculty and staff when severe winter weather prompts the cancellation of all classes. On-campus, you can call the “Snowline” by dialing ext. 7669 (“SNOW”). Off-campus, Snowline can be reached by calling 315-792-7385. Snowline cards are available at various locations on campus.

In the event of severe weather, Snowline will announce only the cancellation of ALL classes. The cancellation of all classes will also be posted online, at sunypoly.edu, and will be broadcast on radio and television stations in the Utica-Rome, Syracuse, and Albany areas. Individual class cancellations are always available at sunypoly.edu/apps/canceled_classes .

COVID-19

"Students are referred to regulations, rules, policies and standards specified in SUNY Polytechnic's current Student Handbook and Student Code of Conduct (<https://sunypoly.edu/student-life/community-standards.html>). They apply to all student conduct relevant to the operations of this course. This includes, among others, 1) academic integrity, 2) conduct in the classroom / lab and on the course website, and 3) adherence to policies regarding COVID-19 safeguards.

For this semester specifically, please be aware that face coverings that cover both the nose and mouth are required at all times on campus. This includes all buildings, classrooms, shared laboratory areas, conference rooms, restrooms, elevators, hallways, corridors, entrances, common areas, lobbies, offices, etc., and outdoors when in crowded areas such as walkways, entrances, during fire drills, etc.

Accommodations for Students with Disabilities registered at SUNY Polytechnic Institute

In compliance with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act, SUNY Polytechnic Institute is committed to ensuring educational access and accommodations for all registered students seeking access to meet course requirements and fully participate in programs and activities. Students with documented disabilities or medical conditions are encouraged to request these services by registering with the Office of Disability Services. For information related to these services or to schedule a virtual appointment, please contact the Office of Disability Services using the information provided below and visit <https://sunypoly.edu/student-life/diversity-inclusion/disabilities-services.html>

Megan Wyett Lennon, Interim Director
Office of Disability Services
ds@sunypoly.edu

(315) 792-7170
Peter J. Cayan Library, L145