

CTC 260
Hydrology
Instructor: Jayne Baran

Time: Tuesday & Thursday 10:00-10:50 am
Classroom: Donovan B242
Semester: Spring 2024

Course Description:

Introductory course in surface water hydrology. Topics include applied hydrology concepts such watershed delineation, unit hydrographs, IDF curves, time of concentration and routing. The rational and TR-55 methods will be used to determine peak flows.

Credit Hours: 2

Student Learning Outcomes:

1. Learn fundamental principles of hydrology and apply technical concepts to the solution of problems.
2. Perform standard analysis and design using hydrology principles.

Required Text and Materials:

Nathanson, Jerry A. and Schneider, Richard A., *Basic Environmental Technology*, 6th edition, Pearson, 2015, ISBN-10: 0-13-284014-6; ISBN-13: 978-0-13-284014-9

Urban Hydrology for Small Watersheds, US Department of Agriculture Soil Conservation Service Technical Release (TR55), June 1986. [Download](#)

Office Hours and Contact Info:

Tuesday 1-2 pm; Wednesday 10-Noon
(Or by appointment)
Email: jayne.baran@sunypoly.edu

Donovan Hall 1197
Phone: (315) 792-7542
Website: <http://www.sunypoly.edu/~barans/>

Topics and Projects:

Topics:	Description	Hrs	Projects
1	Hydrology-Overview and Definitions	2.0	
2	Watersheds-Characteristics and Delineation	2.0	
3	Precipitation/IDF Curves	3.0	1. Prepare IDF curve
4	Hydrographs/Hyetographs	3.0	
5	Time of Concentration (Tc), Manning's Equation	2.0	
6	Peak flows-Rational Method	2.0	2. Design stormwater system
7	Peak flows-TR-55 Method	6.0	3. Determine peak flows
8	Routing	2.0	4. Design a detention basin
	Mid-Term/Final and Reviews	6.0	
	Project presentations	3.0	

Methods of Evaluation:

Homework:

Homework shall be typed or neatly handwritten in pencil on engineering graph paper. 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.

Projects:

Applied design projects and reports emphasize teamwork and communication, as well as the application of industry-standard word-processing and spreadsheet software.

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 reasons for which prior approval has been obtained.

Attendance/Participation:

Students are expected to attend every class period and have homework and project assignments completed and ready to present. 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. A missed class does not excuse responsibility for the work covered in class and the homework assignments.

Homework	25%
Projects	25%
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 Due to Inclement Weather or Other Emergency:

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/cancelled_classes.

Accommodations for Students with Disabilities:

Your access in this course is important to me. In compliance with the Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act, SUNY Polytechnic Institute is committed to ensuring comprehensive 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 Student Accessibility Services. Please request accommodations early in the semester, or as soon as you become registered with the Office of Student Accessibility Services, so that we have adequate time to arrange your approved academic accommodation/s. Once Accessibility Services creates your accommodation plan, it is your responsibility to provide me a copy of the accommodation plan. If you experience any access barriers in this course, such as with printed content, graphics, online materials, etc., reach out to me or Accessibility Services right away. For information related to these services or to schedule an appointment, please contact the Office of Student Accessibility Services using the information provided below.

Office of Student Accessibility Services

SAS@sunypoly.edu

(315) 792-7170

Peter J. Cayan Library, L113

References:

Maidment, David R., *Handbook of Hydrology*, McGraw Hill, ISBN 0-07-39732-5, 1993.

Wanielista, Martin, et al, *Hydrology*, 2nd Edition, Wiley, ISBN 0-478-07259-1, 1997.