

PGEOG 33200 and 70152/EES 745 - Hydrology
Fall 2021(Fully Online)
Monday and Wednesday 4:10 pm-5:25 pm

Contact Information

Instructor:	Dr. Wenge Ni-Meister
Email:	Wenge.Ni-Meister@hunter.cuny.edu
Office:	HN1029
Office Phone	212-772-5321
Office hours	Wednesday: 3:00 pm-4:00 pm or by appointment
Depart. Information	HN1006, Phone: 212-772-5265

Prerequisites: PGEOG13000 -Weather and Climate or permission from the instructor

Textbooks:

(Required) Fundamentals of Hydrology, Tim Davie ISBN 9780415858700
Published May 7, 2019 by Routledge.

(Optional) **Applied Principles of Hydrology** (3rd Edition), John C. Manning,
(Prentice Hall Earth Science Series) (Paperback), ISBN-10: 0135655323, #
ISBN-13: 978-0135655320. (JCM)

Course Description:

The course is designed to provide the basic understanding of how water on the Earth moves, distributes, circulates and interacts with the environment. We will introduce the hydrological processes including precipitation, evapotranspiration (evaporation and transpiration), soil water, ground water, and runoff which form the complete water cycle at global, regional and watershed scales. We also discuss the measurement and analytical assessment of important hydrological parameters such as streamflow and water quality. The final topics include urban hydrology particularly focusing on New York City, how water responds to the environmental changes and strategies of integrated water resources management.

Learning Outcomes

At the end of this course, students will

- Identify and define the basic terms and concepts of hydrological processes, water cycle and climate effect on water resources
- Access, manipulate and analyze hydrological data using Excel or geospatial tools
- Transform their hydrology knowledge learned in class to analyze current research observations in hydrology and present and summarize their findings

Course Materials All the course materials will be distributed through Hunter's Blackboard.

Grading

Homework	70%
Final Exam	30%

Homework: There will be almost one assignment for each chapter. The assignment can be an essay question or can be a question involved data analysis. Students can use any software for data analysis.

Final Exam will be in research project presentation format. Graduate students are required to conduct independent research project on hydrology and climate. Undergraduate students have the choice to conduct your own research project or summarize research work published in peer-reviewed journals.

On the exam day, each student is required to give a 3-5 minutes presentation to the class and to submit a term paper of 5-10 pages in length, 12 point font/double spaced, including figures. Both the paper and the presentation should include the following components:

- Introduction – Statement of the problem
- Data sets/study area
- Research method
- Research results
- Conclusion and discussion
- Bibliography

Final project presentation and final paper carry equal weight of grade. Missing your presentation or missing your paper results in losing half of your final project grade. **DO NOT MISS YOUR FINAL PROJECT PRESENTATION. The final papers and presentations are due the date of the final exam. No late work will be accepted after the final exam date unless with documented excuse.**

You need to submit all the required work to BB. I do not take any submission by email.

Grading Policy

Grading will following Hunter College policy as outlined in the online undergraduate catalog that can be found [at http://catalog.hunter.cuny.edu/](http://catalog.hunter.cuny.edu/).

I do not give incompletes (IN) except under the most extraordinary, and documented, circumstances. You must contact me within 48 hours of the final exam and request IN as a grade. At that time you will schedule a date to meet with me at the college and complete a Contract to Resolve Incomplete Grades. Otherwise, I will average the grades I have for you and record you the grade you have earned.

Only undergraduate students are eligible for credit/no credit (C/NC) as a final course grade. Please see the college's policy on C/NC at

<http://catalog.hunter.cuny.edu/content.php?catoid=37&navoid=10489>. You must meet submit your CR/NC form no later than 15 minutes before the final presentation period.

Resources (include all that apply)

- All class material will be posted on Bb.

Essential Policy Information:

- Attendance/lateness policy: It is extremely important to attend the regular lectures and labs and take detail notes. Students who attend classes regularly are much more successful than those who are not.
- Email Policy
 - Please use **PGEOG 33200 and 70152 – Hydrology** in the subject line when you email me. I do not answer email with insufficient subject lines.
 - Email me from your @myhunter account.
 - Please sign your full name as it appears in CUNYfirst to any message. I do not answer unsigned email messages.
 - Student's email will be responded within 24 hours. Please note there will be a delay for messages sent over the weekend or during non-business hours.

Zoom meeting recording policy

Students who participate in this class with their camera on or use a profile image are agreeing to have their video or image recorded solely for the purpose of creating a record for students enrolled in the class to refer to, including those enrolled students who are unable to attend live. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live.

Hunter College Statement on Academic Integrity

Hunter College regards acts of academic dishonesty (e.g., plagiarism, cheating on examinations, obtaining unfair advantage, and falsification of records and official documents) as serious offenses against the values of intellectual honesty. The College is committed to enforcing CUNY Policy on Academic Integrity and will pursue cases of academic dishonesty according to the Hunter College Academic Integrity Procedures. Plagiarism, dishonesty, or cheating in any portion of the work required for this course will be punished to the full extent allowed according to Hunter College regulations.

ADA Policy

In compliance with the American Disability Act of 1990 (ADA) and with Section 504 of the Rehabilitation Act of 1973, Hunter College is committed to ensuring educational parity and accommodations for all students with documented disabilities and/or medical conditions. It is recommended that all students with documented disabilities (Emotional, Medical, Physical, and/or Learning) consult the Office of AccessABILITY, located in Room E1214B, to secure necessary academic accommodations. For further information and assistance, please call: (212) 772- 4857 or (212) 650-3230.

Hunter College Policy on Sexual Misconduct

In compliance with the CUNY Policy on Sexual Misconduct, Hunter College affirms the prohibition of any sexual misconduct, which includes sexual violence, sexual harassment, and gender-based harassment retaliation against students, employees, or visitors, as well as certain intimate relationships. Students who have experienced any form of sexual violence on or off campus (including CUNY-sponsored trips and events) are entitled to the rights outlined in the Bill of Rights for Hunter College.

- a. Sexual Violence: Students are strongly encouraged to immediately report the incident by calling 911, contacting NYPD Special Victims Division Hotline (646-610-7272) or their local police precinct, on contacting the College's Public Safety Office (212-772-4444)
- b. All Other Forms of Sexual Misconduct: Students are also encouraged to contact the College's Title IX Campus Coordinator, Dean John Rose (jtrose@hunter.cuny.edu or 212-650-3262) of Colleen Barry (colleen.barry@hunter.cuny.edu or 212-772-4534) and seek complimentary services through the Counseling and Wellness Services Office, Hunter East 1123.

CUNY Policy on Sexual Misconduct Link:

<http://www.cuny.edu/about/administration/offices/la/Policy-on-Sexual-Misconduct-12-1-14-with-links.pdf>

Syllabus Change Policy

- Except for changes that substantially affect implementation of the evaluation (grading) statement, this syllabus is a guide for the course and is subject to change with advance notice.
- Any changes will be updated through Bb.

Tentative Daily Schedule and Readings

Week	Date	Topic	Homework/Readings
Week 1	Feb. 1	Overview of the course	
	Feb. 3	Hydrology as a Science	FH-Ch1
Week 2	Feb. 8	Basic Properties of Water	FH_Ch1
	Feb. 10	Precipitation	FH-Ch2
Week 3	Feb. 15	Presents' Day – College is Closed	
	Feb. 17	Precipitation	FH-Ch2
Week 4	Feb. 22	Evapotranspiration	FH-Ch3
	Feb. 24	Evapotranspiration	FH-Ch3
Week 5	Mar. 1	Interception and Surface Storage	FH-Ch4

	Mar. 3	Interception and Surface Storage	FH-Ch4
Week 6	Mar. 8	Infiltration and Soil Water	FH-Ch6
	Mar. 10	Infiltration and Soil Water	FH-Ch6
Week 7	Mar. 15	Infiltration and Soil Water	FH-Ch6
	Mar. 17	Infiltration and Soil Water	FH-Ch6
Week 8	Mar. 22	Ground Water	FH-Ch5
	Mar. 24	Ground Water	FH-Ch5
Week 9	Mar. 29	Spring Recess (3/27-4/4/2021)	
	Mar. 31	Spring Recess (3/27-4/4/2021)	
Week 10	Apr. 5	Surface Water – Runoff	FH-Ch7
	Apr. 7	Surface Water – Runoff	FH-Ch7
Week 11	Apr. 12	Measuring Stream Flow	FH-Ch8
	Apr. 14	Measuring Stream Flow	FH-Ch8
Week 12	Apr. 19	Stream Flow and Analysis	FH-Ch9
	Apr. 21	Stream Flow and Analysis	FH-Ch9
Week 13	Apr. 26	Water Quality	FH-Ch10
	Apr. 28	Water Quality	FH-Ch10
Week 14	May 3	Urban Hydrology – NYC Water	
	May 5	Urban Hydrology – NYC Water	
Week 15	May 10	Hydrological Responses to Environmental Change	FH-Ch11
	May 12	Hydrological Responses to Environmental Change	FH-Ch11
Week 16	May 17	Final Project Presentation	
	May 19	Final Exam (3 pm – 5 pm)	