

## **GGR 206: Introduction to Hydrology, 2017 Fall**

### **Instructor Information**

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**Instructor:** Jane Liu

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**Teaching assistant:** Cheryl Rogers

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TA office hours will be posted on the Blackboard site after the term starts.

### **Course Description**

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Course title: Introduction to Hydrology

Course code: GGR206H

Hydrology is the science dealing with the waters of the earth, their occurrence, distribution and circulation, their chemical and physical properties and their interaction with the environment". This course encompasses major hydrological processes, including precipitation, evaporation, transpiration, rainfall interception, soil water, ground water, and runoff. The emphasis of this course will be on the basic principles of these physical processes forming the complete hydrological cycle at global, regional and watershed scales. A series of 4 assignments are given for students to gain practical skills in hydrological analysis.

### **Course Structure**

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**Lecture:** Tuesday, 12-2 pm, classroom: SS 2102

**Tutorial:** Students can select one of the two sections:

Wed., 11-12, SS 561

Thu., 17-18, SS 561

## Lecture and Lab Schedule

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Week	Lecture	Lecture Topics	Assignment/Tutorial
1	Sep 12	Introduction	No tutorial
2	Sep 19	Atmospheric water (1)	Assignment 1,10%, due Oct 3
3	Sep 26	Atmospheric water (2)	
4	Oct 3	Atmospheric water (3)	Assignment 2, 10% due Oct 17
5	Oct 10	Soil water (1)	
6	Oct 17	Soil water (2)	No tutorial
7	Oct 24	Midterm Soil water (3)	Midterm 20% Assignment 3,10%, due Nov 14
8	Oct 31	Ground water (1)	
9	Nov 7	Reading week	No tutorial
10	Nov 14	Ground water (2)	Assignment 4,10% due Nov. 28
11	Nov 21	Surface water (2)	
12	Nov 28	Surface water (2)	No tutorial
13	Dec 5	Final examination review	No tutorial

Note: A list of lecture topics and assignments will be posted on the Blackboard website.

### Textbook/Reference

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#### Textbook

Hendriks, M. R., 2010, Introduction to Physical Hydrology, Oxford, ISBN: 9780199296842.

#### Reference

Ward, R. C. and M. Robinson, 2000, Principles of Hydrology, 4<sup>th</sup> Edition, McGraw-Hill, ISBN:0077095022.

### **Additional Readings**

To be provided in class in advance.

### **Required Preparations**

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Hydrological analyses require some basic mathematical skills from simple summations to logarithmic functions. Logarithmic functions would be the most complex functions used in this course. Calculus is not required. If you are not sure, please come to consult with me.

### **Evaluation**

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Assignment 1	10%	Due: Oct. 3 2017
Assignment 2	10%	Oct. 17, 2017
Midterm	20%	Oct. 24, 2017
Assignment 3	10%	Nov. 14, 2017
Assignment 4	10%	Nov. 28, 2017
Final exam	40%	Examination period

All assignments should be submitted on the due day online through Blackboard before 6:00 pm.

**Note:** If you feel that you are having difficulty keeping up with class assignments or in understanding the material we are covering, please see me as soon as possible.

### **Academic Integrity**

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It is your responsibility, as a student at the University of Toronto, to familiarize yourself with, and adhere to, both the Code of Student Conduct and the Code of Behaviour on Academic Matters. This means, first and foremost, that you should read them carefully.

Plagiarism is an academic offense at the University of Toronto. Plagiarism is quoting (or paraphrasing) the work of an author (including the work of fellow students) without proper use of citation (and quotations marks when using an author's words). Students also should not be submitting any academic work for which credit has previously been obtained or is being sought, without first discussing with the instructor. Please consult the "Rules and Regulations" section of the Arts and Science Calendar ([http://www.artsandscience.utoronto.ca/ofr/calendar/Rules\\_&\\_Regulations.html](http://www.artsandscience.utoronto.ca/ofr/calendar/Rules_&_Regulations.html)) for further information and check the 'How not to plagiarize' website at: <http://www.writing.utoronto.ca/advice/using-sources/how-not-to-plagiarize>.

## **Accessibility**

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The University of Toronto is committed to accessibility. If you require accommodations for a disability, or have any accessibility concerns about the course, the classroom or course materials, please contact Accessibility Services as soon as possible: [disability.services@utoronto.ca](mailto:disability.services@utoronto.ca) or <http://studentlife.utoronto.ca/accessibility>

## **Geography Math Help Centre**

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Another resource for this course is the department's new Math Help Centre. Geography TAs will be available to help refresh and explain mathematical concepts and techniques that may come up in your GGR courses. This includes working with formulas, graphing data, completing calculations, and so forth. It does not matter how basic your questions are! No appointment is required, just drop by. There will also be table space available in the room, allowing students to get math help as they work through assignments. Details on location and TA times posted here: <http://geography.utoronto.ca/undergraduate/math-help/>

## **Policy on Missed Term Work and Term Tests/Quizzes**

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### **Missed Term Work**

Late assignments will be subject to a late penalty of 10% per day (including each day of the weekend) of the total marks for the assignment. Assignments submitted five calendar days beyond the due date will be assigned a grade of zero.

Academic accommodation can be made when an assignment is late or a student is unable to write a term test/quiz for University accepted, verifiable reasons beyond one's control.

### **Term Tests/Quizzes**

There will be no re-writes for term tests/quizzes missed for University accepted, verifiable reasons. Instead the final project will be re-weighted by the value of the term test/quiz.