

**School of Engineering
University of Guelph**

ENGG*2550 WATER MANAGEMENT

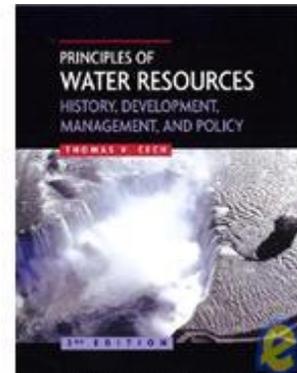
Course Description & Outline - Winter 2009

CALENDAR DESCRIPTION

The influence of fundamental engineering and hydrologic principles on the choices available for management of water on a watershed basis is demonstrated for representative techniques used in management for water supply, irrigation, flood control, drainage and water pollution control. Selected problems are studies to reveal the technical, environmental, legal, jurisdiction, political, economic and social aspects of water management decisions.

TEXTBOOK

Title: Principles of Water Resources: History, Development, Management, and Policy. 2nd Edition
Publisher: John Wiley & Sons, Inc.
Author: Cech, Thomas V. 2003.
ISBN: 0-471-48475-X



Available at the University of Guelph Bookstore

INSTRUCTOR

Dr. Zoe Zhu
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Telephone: (519)824-4120 Ext. 52972
Office Hours: Wednesday 9:00- 12:00 am or by appointment
Email: jizhu@uoguelph.ca
www: <http://www.uoguelph.ca/~jizhu/>

LECTURE TIMES & LOCATION

Tuesday 2:30-3:50pm MACK 238
Thursday 2:30-3:50pm MACK 238



COURSE OBJECTIVES:

At the successful completion of this course, the student will have demonstrated:

- An appreciation of watershed management principles and techniques
- The ability to identify and discuss the multiple dimensions of global water management issues
- The ability to perform quantitative analyses of water resources – groundwater, lakes, rivers, wetlands – and the effects of human activities on these water resources
- Knowledge of the tools and techniques used in water management and the ability to apply this knowledge to develop solutions to water management challenges
- An understanding of Ontario’s legislative framework for water management

MARK DISTRIBUTION:

Webpage	15%
Research Report +In Class Presentation	15%
Quizzes	20%
Midterm	15%
Final Examination:	35%
	100%

FINAL EXAMINATION:

Date: April 8, 2009

Time: 11:30 - 13:30pm

Location: To be announced

COURSE MATERIAL TO BE COVERED

Week	Date	Lecture Topic
1	Jan 5 to Jan 9	The Hydrologic Cycle
2	Jan12 to Jan16	Surface Water Hydrology
3	Jan19 to Jan23	Groundwater Hydrology
4	Jan 26 to Jan 30	Water Quality
5	Feb 2 to Feb 6	Municipal and Irrigation Water Development
6	Feb 9 to Feb 13	Dams
***	Feb16 to Feb 20	Winter break: no classes scheduled this week
7	Feb 23 to Feb 27	Water Allocation Law
8	Mar 2 to Mar 6	Water Management Agencies
9	Mar 9 to Mar 13	Drinking Water and Wastewater Treatment
10	Mar 16 to Mar 20	Water, Fish and Wild life
11	Mar 23 to Mar 27	The Economic of Water
12	Mar 30 to Apr 3	Water and Our Future

QUIZZES:

In total, four quizzes will be given according to the schedule shown in the following table. Each quiz is valued 5% of the total marks and the 4 quizzes combined are valued 20% of the total marks.

Week	Date	Quizzes
Week 4	TUE JAN. 27	Quiz 1
Week 6	TUE FEB. 10	Quiz 2
Week 8	TUE MAR. 3	Quiz 3
Week 10	TUE MAR. 17	Quiz 4

TERM PROJECT

Each group will complete a term project valued at 15% of the total mark, including 10% for the report itself and 5% for presentation of the project in class. A range of topics, methodology, software and data will be provided and discussed. The due date for submission of the hard copy of the report is Thursday March 26th at midnight, email to: zoe@cis.uoguelph.ca. However, the

presentations (15-min per group) are scheduled as indicated in the following table.

Week	Date	In Class Presentation
Week 11	THU MAR. 26	Group 1 to 4
Week 12	TUE MAR. 31	Rest of Group

UNIVERSITY POLICY ON ACADEMIC MISCONDUCT

Academic misconduct, such as plagiarism, is a serious offence at the University of Guelph. Please consult the Undergraduate Calendar and School of Engineering programs guide, for offences, penalties and procedures relating to academic misconduct.

<http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-amisconduct.shtml>

DISCLAIMER

The instructor reserves the right to change any or all of the above in the event of appropriate circumstances, subject to University of Guelph Academic Regulations