

**School of Engineering  
University of Guelph**

**ENGG\*2550 WATER MANAGEMENT**

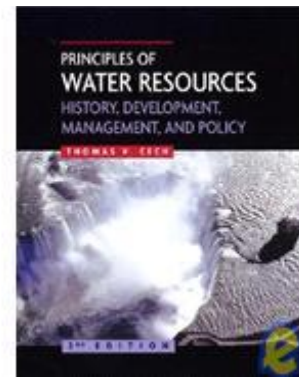
**Course Description & Outline - Winter 2008**

**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. 2<sup>nd</sup> 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](mailto:jizhu@uoguelph.ca)  
www: <http://www.uoguelph.ca/~jizhu/>



**LECTURE TIMES & LOCATION**

Tuesday 2:30-3:50pm MCLN 101  
Thursday 2:30-3:50pm MCLN 101

**Maclachlan=MCLN**

## **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	20%
Research Report +In Class Presentation	25%
Quizzes	20%
Final Examination:	35%
	100%

## **FINAL EXAMINATION:**

Date: April 7, 2008

Time: 7:00pm – 9:00pm

Location: To be announced

## COURSE MATERIAL TO BE COVERED

Week	Date	Lecture Topic
1	Jan7 to Jan11	The Hydrologic Cycle
2	Jan14 to Jan18	Surface Water Hydrology
3	Jan21 to Jan25	Groundwater Hydrology
4	Jan28 to Feb1	Water Quality
5	Feb4 to Feb8	Municipal and Irrigation Water Development
6	Feb11 to Feb15	Dams
***	Feb18 to Feb22	Winter break: no classes scheduled this week
7	Feb25 to Feb29	Water Allocation Law
8	Mar3 to Mar7	Water Management Agencies
9	Mar10 to Mar14	Drinking Water and Wastewater Treatment
10	Mar17 to Mar21	Water, Fish and Wild life
11	Mar24 to Mar28	The Economic of Water
12	Mar31 to Apr4	Water and Our Future

## QUIZZES:

In total, four quizzes will be given according to the schedule shown in the following table. Each quiz is offered in two versions (the A & B options). You need to write at least one of the A or B options for each quiz. The highest grade from the A & B options of each quiz will be considered. 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. 29	Quiz 1A
	THU JAN. 31	Quiz1B
Week 6	TUE FEB. 12	Quiz 2A
	THU FEB. 14	Quiz 2B
Week 8	TUE MAR. 4	Quiz 3A
	THU MAR. 6	Quiz 3B
Week 10	TUE MAR. 18	Quiz 4A
	THU MAR. 20	Quiz 4B

## TERM PROJECT

Each group will complete a term project valued at 25% of the total mark, including 15% for the report itself and 10% 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 27th at midnight, email to: [zoe@cis.uoguelph.ca](mailto: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. 28	Group 1 to 5
Week 12	TUE APR. 1	Group 5 to 10
	THU APR. 3	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