

" WATER "
(EES A07)

Instructor: Dr. Jovan R. Stefanovic

Office: EV 340

Lecture: Monday 7 –10pm (AC 223)

Email: jovan.stefanovic@utoronto.ca

Phone: 416-287-7224

Office hours: Mondays 1 - 2 pm

Course TA: Sandra Cadena
email: sandrapacaro@hotmail.com

Office: TBA on Quercus soon
Office hours: TBA on Quercus soon

Textbook: *Water Resources*, Shimon Anisfeld, 2010, Island Press

Grading:	Assignment	15%
	Quizzes (2 x 5%)	10%
	Mid-term Examination (Oct.28):	30%
	Final Examination:	45%

Intent of the course:

This course consists of a survey of the planet's water resources and the major issues facing the use of water. The intention of the course is to familiarize students with the current water crisis and with present approaches for managing this essential resource more effectively in the face of mounting environmental challenges and natural resource pressures. Thus, one of the goals of this course is to give you a comprehensive view of water resources and provoke you to think on how to achieve the sustainable use of this resource. Topics include: Earth, the watery planet; water the last great resource; Canada's waters; Ontario's waters; social and ecological problems: including water scarcity, pollution, flooding, conflicts over water; water in an era of global change and protecting our waters. Case studies such as the Walkerton tragedy will be studied.

COURSE LEARNING OBJECTIVES:

1. Understand the importance of the freshwater and marine environments.
2. Appreciate the ecosystem services that freshwater provides.
3. Recognize the uneven distribution of fresh water and its implications on humans.
4. Discuss human uses of fresh water and their impacts on freshwater environments
5. Be aware of water as a source of conflict and hazard.
6. Understand the challenges to a sustainable future for water resources.

Week

LECTURE TOPICS

1. **Perspectives on Water and Environmental Issues**..... Sep. 9th
Conservation Ontario (DVD): The Ripple Effect, The Role of
Conservation Authorities In Protecting Ontario's Drinking Water
2. **Water Circulation Through Environment (Reading: Chapters 2.1-2.2)**... Sep. 16th
(DVD: Last Call at the Oasis (Scene 1 &2)
Assignment introduction
3. **Water Availability and Water Use (Reading: Chapter 3)**.....Sep. 23th
Assignment introduction
4. **Water Pollution: Sources, Impacts & Solutions**
(Walkerton case study). Reading: Chapters: 2.3; 9.1-9.5; 10.4..... Sep. 30
DVD: Last Call at the Oasis (Scene 6) and/or
Senegal: Water Treatment and Distribution
5. **Dealing with Floods and Water Scarcity (Reading: Chapters 4&5)**..... Oct. 7th
QUIZ #1 (online)
- Thanksgiving Day- Reading week - University closed Oct. 14th**
6. **Water in an Environment of Global Change: Impacts of Climate
Change and Land Use (Reading: Chapter 6)**.....Oct.21st
DVD: When the Water Tap Runs Dry or Last Call at the Oasis (Scenes 4&5)
7. **MIDTERM EXAM**..... Oct.28th
8. **Soft and Hard: Technologies for Sustainable Water Management**
Reading: Chapter.7.....Nov. 4th
Assignment is Due on NOV.4
9. **Humans and Aquatic Ecosystems: Finding the Right Balance;
Water and Energy. (Reading: Chapters 8 and 11.1)**..... Nov. 11th
10. **Canadian's and Ontario's Waters: Case Studies and Applications
to Water Management**..... Nov. 18th
DVD: Water Under Fire: The Great Lakes
QUIZ #2 (online)
11. **Economics in Water Management and Water as a Source of Conflict**
(Reading: Chapters 12&13)
DVD: Water Wars: Struggle in the Holy Land..... Nov. 25th
12. **Course review** Dec. 2nd

I will follow this schedule as closely as possible, but things being what they are, some of these topics may "overflow" over into other time slots and slight alterations to the schedule may occur.

There are no tutorials in this course. Teaching Assistant will hold office hours to help with the assignment and quizzes. I would suggest you to attend office hours of TA since she will mark your assignment. Students are encouraged to actively consult with the TA regarding any problems or questions about the preparation of the assignment. You will have one assignment (group assignment named "Best in Class") during the term, the assignment is worth 15% of the final grade. You will be able to access the problem sheets on Quercus at the time shown below. Completed exercises must be submitted online (the assignment format will be announced on Quercus) on the date shown. More details on the assignment and quizzes will be circulated during the term.

ASSIGNMENT SUBMITTED LATE WILL NOT BE ACCEPTED. EXTENSION WILL BE GRANTED ONLY WITH OFFICIAL UTSC MEDICAL NOTE or under some very serious circumstances. You must submit appropriate documentation within five business days of your absence.

	On Quercus	Submission Due
Assignment	Sept. 16 th or 23 rd	Nov.4 th

Two Quizzes: October 7 and November 18
(online, multiple choice and true/false questions)

MID-TERM EXAMINATION

The 1.5-hour mid-term examination will be held on October 28 at 7pm. The midterm exam rooms will be announced. The exam will consist of multiple-choice and true-false questions and will be worth 30% of the final grade. DVDs are also for the exam (if played during the lectures) .

MISSED TEST and QUIZZES

If you miss the test and any of two quizzes for a verifiable reason (i.e. you have a Doctor's note or have made provisions for a VERY good reason with the professor **PRIOR** to the mid-term) please submit appropriate documentation within 5 business days. If you simply "miss" the mid-term and quizzes, you will receive a mark of zero for them. If the reason is medical, an official UTSC medical note must be completed by a doctor who examined you while you were ill/injured. The medical note can be downloaded at:

http://www.utsc.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf.

All collected documents will be submitted to DPES Chair's office for consideration.

FINAL EXAMINATION

The 2-hour final examination will be held during the final examination period, exact time, date and rooms TBA. **The final exam will cover the lecture material after midterm plus two lectures from the midterm material (these two lectures will be announced after the midterm exam).** The exam is worth 45% of the final grade. It will be a combination of multiple choice, and true-false questions. DVDs are also for the exam.

ACCESSIBILITY STATEMENT

Students with diverse learning styles and needs are welcome in this course. In particular, if you have a disability/health consideration that may require accommodations, please feel free to approach me and/or the AccessAbility Services Office as soon as possible. I will work with you and AccessAbility Services to ensure you can achieve your learning goals in this course. Enquiries are confidential. The UTSC AccessAbility Services staff (located in SW302) are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. (416) 287-7560 or ability@utsc.utoronto.ca.

STUDENT CODE OF CONDUCT

Please arrive promptly for lecture and do not forget to turn off cell phones. You are fully expected to abide by the Code of Student Conduct as set out by The Governing Council at the University of Toronto (<http://www.utoronto.ca/govcncl/pap/policies/studentc.html>). This document defines the standards by which students are to conduct themselves within class and within the University community at large. Please be advised that misconduct of any form will not be tolerated in this class. This includes plagiarism on tests, assignments, and exams, which will be strictly enforced and is easily detected. If you have further questions regarding what constitutes plagiarism or other academic offenses, feel free to speak with Prof. Stefanovic or your TA.

FURTHER READINGS

Cech [Thomas V.2009](#). *Principles of water resources: history, development, management, and policy*
John Wiley and Sons.

Christopherson, R.W.&Mary-Lousie Byrne.2006. *Geosystems An Introduction to Physical Geography*, Canadian Ed. Pearson, Practice Hall.

Grover [Velma I.](#) 2007. *Water: a source of conflict or cooperation?* Science Publishers.

Grover [Velma I.](#) 2006. *Water: global common and global problems*. Science Publishers

Kumar Arvind. 2004. *Water pollution*. S.B. Nangia. A.P.H. Publishing Corporation.

Robert Lenton and Mike Muller.2009.*Integrated Water Resources Management in Practice*.Earthscan.

Smith,K. and Ward,R.1998. *Floods*. New York: John Wiley & Sons

Tarback [Edward J.](#), Lutgens [Frederick K.](#), Tasa [Dennis](#).2010. *Earth Science*. Pearson Education, Limited.

Note:

Check Quercus regularly. All announcements, lecture notes, assignment /quizzes due dates, midterm marks and other information will be posted on Quercus.