

" WATER "
(EES A07)

Instructor: Dr. Jovan R. Stefanovic

Office: EV 402

Lecture: Monday 7 –10pm (AA112)

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Phone: 416-287-7224

Office hours: Thursdays 11:00am-12:00 pm

T.A. : Sandra Cadena

Office: TBA on Blackboard soon

Office hours: TBA on Blackboard soon

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

Grading:	Assignment	20%
	Quizzes (4 x1.25%)	5%
	Mid-term Examination (Oct.23):	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 familiarizes 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. 11th
2. Water Circulation Through Environment (Reading: Ch.s 2.1-2.2)..... Sep. 18th
(DVD: Last Call at the Oasis (Scene 1 &2))
3. Water Availability and Water Use (Reading: Chapter 3)..... Sep. 25th
4. Water Pollution: Sources, Impacts & Solutions
(Walkerton case study). Reading: Ch.s : 2.3; 9.1-9.5; 10.4..... Oct. 2nd
DVD: Last Call at the Oasis (Scene 6) and/or
Senegal: Water Treatment and Distribution
Assignment discussion
- 5.Thanksgiving Day- Reading week - University closed** Oct. 9th
6. Dealing with Floods and Water Scarcity (Reading: Ch.s 4&5)..... Oct. 16th
7. **Midterm examination** Oct.23rd
8. Water in an Environment of Global Change: Impacts of Climate
Change and Land Use (Reading: Chapter 6)..... Oct.30th
DVD: When the Water Tap Runs Dry or Last Call at the Oasis (Scenes 4&5)
9. Soft and Hard: Technologies for Sustainable Water Management
Reading: Chapter.7.....Nov. 6th
Assignment Due date
10. Humans and Aquatic Ecosystems: Finding the Right Balance;
Water and Energy. (Reading: Chapters 8 and 11.1)..... Nov. 13th
11. Canadian's and Ontario's Waters: Case Studies and Applications
to Water Management..... Nov. 20th
DVD: Water Under Fire: The Great Lakes
12. Economics in Water Management and Water as a Source of Conflict
(Reading: Chapters 12&13)
DVD: Water Wars: Struggle in the Holy Land..... Nov. 27th
13. Course review Dec. 4th

ASSIGNMENT

There are no tutorials in this course. TA 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 during the term, the assignment is worth 20% of the final grade. You will be able to access the problem sheets on the Blackboard at the times shown below. Completed exercises must be placed in the assignment box (ESC Building) by **5 pm** on the date shown. More details on the assignment will be circulated during the term.

Feel free to discuss the assignment with your classmates, but be sure to write the assignment using your own individual words and ideas. **Each student is expected to write independently and submit the assignment as their own work**, and to acknowledge with **citations** any personal communications which contributed ideas for their assignment. Please use the **APA reference format**.

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.

You should use a word processor for your written responses. Your document should conform to the following: 25.4 mm margins, single-spaced, 12-point print size. The document must bear a name, signature, student number, date and TA name. Calculations may be handwritten.

	On the Blackboard	Submission Due
Assignment	Oct. 2 nd	Nov.6th

Four Quizzes: **Tentative dates:** October 2, 30 and November 13, 27
(in class and/or online)

MID-TERM EXAMINATION

The 1-hour mid-term examination will be held on October 23. 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.

FINAL EXAMINATION

The 2-hour final examination will be held during the final examination period, exact time, date and rooms TBA. 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.

MISSED TEST and QUIZZES

If you miss the test and any of four 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 five 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.

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 S302) 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 and laptops. 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

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

Note:

Check Blackboard regularly. All announcements, lecture notes, assignments and midterm marks and other information will be posted on the Blackboard.