

**" WATER "**  
**(EES A07)**

**Instructor:** Dr. Jovan R. Stefanovic

**Office:** EV 402

**Lecture:** Monday 7 –10pm (SY 110)

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**Phone:** 416-287-7224

**Office hours:** Tuesdays 3:00-4:00 pm

**T.A. : Sandra Cadena**

Office: TBA on Blackboard soon

Office hours: TBA on Blackboard soon

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

<b>Grading:</b>	Assignments (2 assignments x 12.5%):	25%
	Mid-term Examination:	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. 1st
2. Water Circulation Through Environment (Reading: Ch.s 2.1-2.2)..... Sep. 12<sup>th</sup>  
(DVD: Last Call at the Oasis (Scene 1 &2))
3. Water Availability and Water Use (Reading : Chapter 3)..... Sep. 19<sup>th</sup>
4. Water Pollution: Sources, Impacts & Solutions  
(Walkerton case study). Reading: Ch.s : 2.3; 9.1-9.5; 10.4..... Sep. 26<sup>th</sup>  
DVD: Last Call at the Oasis (Scene 6) or  
Senegal: Water Treatment and Distribution  
**Assignment #1 – Discussion**
5. Dealing with Floods and Water Scarcity (Reading: Ch.s 4&5)..... Oct. 3<sup>rd</sup>
- 6.Thanksgiving Day- Reading week - University closed** ..... Oct. 10<sup>th</sup>
7. Water in an Environment of Global Change: Impacts of Climate  
Change and Land Use (Reading: Chapter 6)..... Oct.17<sup>th</sup>  
DVD: When the Water Tap Runs Dry or Last Call at the Oasis (Scenes 4&5)  
**Due Assignment #1 Oct.18**
8. Midterm examination ..... Oct.24<sup>th</sup>
9. Soft and Hard: Technologies for Sustainable Water Management  
Reading: Chapter.7.....Oct.31<sup>st</sup>  
**Assignment #2 – Discussion**
10. Humans and Aquatic Ecosystems :Finding the Right Balance;  
Water and Energy.( Reading: Chapters 8 and 11.1)..... Nov. 7<sup>th</sup>
11. Canadian's and Ontario's Waters: Case Studies and Applications  
to Water Management..... Nov. 14<sup>th</sup>  
DVD: Water Under Fire: The Great Lakes  
**Due Assignment #2**
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. 21<sup>st</sup>
13. Course review ..... Nov.28<sup>th</sup>

## **ASSIGNMENTS**

There are no tutorials in this course. TA will hold office hours to help with assignments. I would suggest you to attend office hours of TA regularly since she will mark your assignments. Students are encouraged to actively consult with the TA regarding any problems or questions about the preparation of the assignment. You will have two assignments during the term, assignment #1 worth 12.5% and assignment #2 worth 12.5% 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 (location will be announced) by **5 pm** on the dates shown. More details on the assignments will be circulated during the term.

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

***ASSIGNMENTS 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 three 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.

	<b>On the Blackboard</b>	<b>Submission Due</b>
Assignment #1	Sept. 26 <sup>th</sup>	Oct. 18 <sup>th</sup>
Assignment #2	Oct. 31 <sup>st</sup>	Nov. 14 <sup>th</sup>

### ***MID-TERM EXAMINATION***

The 1-hour mid-term examination will be held on October 24 (7 to 8pm). 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 for the exam.

### ***MISSED TEST***

**Make-ups will not be given for the mid-term test.** If you miss the test 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), the weight of the mid-term will be added to the weight of your final exam. If you simply "miss" the mid-term, you will receive a mark of zero for it. 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.utoronto.ca/~registrar/resources/pdf\\_general/UTSCmedicalcertificate.pdf](http://www.utoronto.ca/~registrar/resources/pdf_general/UTSCmedicalcertificate.pdf). You must submit

appropriate documentation within **three** business days of your absence.

### ***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](mailto: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.