

Lakehead University: Department of Geography and the Environment

**Geography/Environmental Studies 4411: Water Sustainability and Water Resources Management**

Seminars: Mondays and Wednesdays (20-01-06 to 20-04-03)  
Time: 5:30-7:00pm  
Room: RC 2003

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**Course content                      Session: Winter 2020**

The objectives of this course are to explore the fundamental principles of water resources management and to introduce students to emerging water security problems and the application of sustainable approaches to water resource management in Canada. The student will gain an understanding of modern principles for water resource management, contemplate the role of science in making sound environmental decisions, and explore Integrated Water Resource Management strategies through a range of case studies that draw from readings, seminars, field trips, group exercises and student presentations. The course attempts to integrate resource science contexts with historic-, development-, management-, and policy-related contexts of water. Adaptive management and the ecosystem approach provide preliminary theoretical foundations for the understanding of socio-ecological dimensions of water resource use and water security.

**Course Evaluation**

4 Policy Briefings	40%
Independent Course Project	40%
• Research Statement (5 marks)	
• Research Proposal (5 marks)	
• Research Report (20%)	
• Research Presentation (10%)	
Final Exam (Exemption at 75%)	20%

### **Schedule of Seminars and Due Dates:**

January 6/8: Water Security and the Global Water Crisis

January 13/15: Integrated Watershed Management - **Research Topics DUE!!**

January 20/22: Climate change impacts - **Policy Briefing #1 DUE!!**

January 27/29: Hydro Dams and other River Barriers (TH) - **Research Statement DUE!!**

February 3/5: Remedial Action Planning (RS/MW) - **Research Proposal DUE!!**

February 10/12: Water Quality treatment (field trip) – **Policy Briefing #2 DUE!!**

February 17/19: **READING WEEK – NO CLASS**

February 24/26: Lake Eutrophication – **Policy Briefing #3 DUE!!**

March 2/4: Floodplain management (RS)

March 9/11: Watershed management – **Policy Briefing #4 DUE!!!**

March 16/18: Stormwater (BM) – **Research Reports DUE!!**

March 23/25: Stream monitoring

March 30/1: Final Exam Review and **Research Presentations**

### **Policy Briefings (40% of Final Mark)**

1. Watershed Delineation and Planning
2. AOC Restoration project
3. Walkerton Incident
4. Privatization

### **Independent Course Project (40% of Final Mark)**

- Research Statement (5 marks)
- Research Proposal (5 marks)
- Final Paper (20%)
- Research Presentation (10%)