

Lakehead University: Department of Geography and the Environment

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

Seminars: Mondays and Wednesdays (21-01-11 to 21-04-15)  
Time: 10:00-11:30am  
Online

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**Course content                      Session: Winter 2021**

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, 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**

Assignments	30%
Participation	20%

Independent Course Project	50%
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- Research Statement (5%)
- Research Proposal (5%)
- Research Report (25%)
- Research Presentation (15%)

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

January 11/13: Water Security and the Global Water Crisis - **Assignment #1 DUE!!**

January 18/20: Integrated Watershed Management

January 25/27: Climate change impacts - **Research Topics DUE!! And Assignment #2 DUE!!**

February 1/3: Hydro Dams and other River Barriers (TH) - **Research Statement DUE!!**

February 8/10: Remedial Action Planning (MW) - **Research Proposal DUE**

February 15/17: **READING WEEK – NO CLASS**

February 22/24: **Extended Reading Week - NO CLASS**

March 1/3: Floodplain management – **Assignment #3 DUE!!!**

March 8/10: Water Quality treatment-**Assignment #4 DUE!!**

March 15/17: Lake Eutrophication – **Assignment #5 DUE!!**

March 22/24: Stormwater (BM) – **Research Reports DUE!!**

March 29/31: Stream monitoring - **Assignment #6 DUE!!**

April 5/7: No Class on the 5th. **Research Presentations**

April 12/15: **Research Presentations**

### **Participation (20% of Final Mark)**

### **Policy Briefings (30% of Final Mark)**

1. Introduction
2. Watershed Planning
3. Great Lakes Video
4. Walkerton Incident
5. Privatization
6. TBD

### **Independent Course Project (50% of Final Mark)**

- Research Statement (5 marks)
- Research Proposal (5 marks)
- Final Paper (25%)
- Research Presentation (15%)