

Lakehead University: Department of Geography

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

Seminars: Thursdays (13-01-10 to 13-04-04)

Time: 2:30 – 5:30

Room: RC 2003

Professor: Dr. Robert Stewart

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**Course content**

**Session: Winter 2013**

The objectives of this course are to explore the fundamental principles of water sustainability and water resources management and to introduce students to emerging water security problems and challenges 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.

**Required Textbook**

Jones, J. (2010). *Water Sustainability: A Global Perspective*. Hodder Education, London.

**Course Evaluation**

2 Assignments: Policy Briefings (15% each)	30%
Independent Research Project (Report 30%; Poster 10%)	40%
Group Project	30%

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

- January 10: Water Security and the Global Water Crisis (*Chapter 1 pg. 2-11*)  
- Introduce Case Studies (SWP, RAPs and NMCA)
- January 17: Integrated Watershed Management (*Chapter 2-3; Al Radif, 1999*)  
- Group Project / Assignments / Independent Research Project
- January 24: Water Privatization (*Chapter 4; Bakker, 2007: Part 3*) (Assignment 1 Due)
- January 31: Municipal Water Supply and Quality (*Chapter 5; Hrudey, 2002*) (Assignment 2 Due)
- February 7: Watershed Planning and Source Water Protection (*Chapters 6 & 7*)
- February 14: Tour of the Thunder Bay Water Treatment Plant (*Chapters 8 & 9*)
- February 21: **READING WEEK – NO CLASS**
- February 28: Restoration and Remedial Action Plans for the Great Lakes (*Chapter 15*)
- March 7: Lakewide Management and the Great Lakes (*Chapters 18 & 19*)
- March 14: Thunder Bay RAP Open House (Group Projects Due)
- March 21: Climate Change and The Water Sector (*Chapters 10, 11 and 12*)
- March 28: Climate Change Adaptations and the Great Lakes Basin (*Chapters 13, 14*)  
- (Independent Research Reports Due)
- April 4: Project Poster Presentations and Exam Review (Chapters 20, 21 and 22)