

University of Western Ontario  
Department of Geography  
Geography 9103 Environmental Monitoring  
Course Outline

Location: SSC3254a/b  
Days: Tuesday (provisional)  
Hours: e.g.12:30-3:30

***Instructor Information***

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***Course Description***

Approaches to characterizing the environment are explored through principles of monitoring strategies and practicalities of instrumentation. Provides practical experience in design, development, testing and deployment of environmental sensors and or environmental data analysis. A practical report on environmental monitoring is expected, often directly related to planned thesis research.

***Course Syllabus***

This is a practical course on the nature of the (aquatic) environment and the means of characterizing the environment through measurement and monitoring systems. The intention is to develop practical monitoring strategies based on defining the objective of the monitoring program, an understanding of the processes of interest and the technology available, and through evaluation of the monitoring results. The topics covered reflect student interest and experience. Topics may be drawn from or added to the following.

1. The nature of the environment
2. Environmental monitoring objectives
3. Monitoring strategies
4. Sampling and data capture
5. Data Loggers
6. Data management
7. Data Analysis
8. Mapping and visualisation

***Course Materials and Operations***

Materials as assigned. Class meets once per week for one term for 2-3h. Depending on experience, some students may prefer weekly instruction while others may adopt a project focus. Students will bring work and understanding based on tasks assigned in the previous class or project status. In class, hands on instrumentation, data management, analysis and visualization will lead to a take home assignment for the next week. For projects, class presentation and consultation will be expected. A final report is generated based on the work in class and or independent research on monitoring.

### ***Methods of Evaluation of Assignments***

Each week readings, exercises or project goals will be assigned. Completion and comprehension of these tasks will be computed with in term participation to make up 40% of the final mark. The remaining 60% will be based on the original research paper on a selected topic in environmental monitoring.

### **Prerequisite**

Permission of instructor. Normally the student will have undergraduate or graduate experience in aspects of environmental processes, and planning on undertaking a thesis or research paper involving an aspect of environmental monitoring.

“Unless you have either the requisites for this course or written special permission from your Dean to enroll in it, you may be removed from this course and it will be deleted from your record. This decision may not be appealed. You will receive no adjustment to your fees in the event that you are dropped from a course for failing to have the necessary prerequisites.”

### **Statement on Academic Offences**

“Scholastic offences are taken seriously and students are directed to read the appropriate policy, specifically, the definition of what constitutes a Scholastic Offence, at the following Web site: <http://www.uwo.ca/univsec/handbook/appeals/scholoff.pdf> .”

“All required papers may be subject to submission for textual similarity review to the commercial plagiarism detection software under license to the University for the detection of plagiarism. All papers submitted for such checking will be included as source documents in the reference database for the purpose of detecting plagiarism of papers subsequently submitted to the system. Use of the service is subject to the licensing agreement, currently between The University of Western Ontario and Turnitin.com (<http://www.turnitin.com> ).”

### **Support Services**

Registrarial Services: <http://www3.registrar.uwo.ca/index.cfm>

Student Development Services: <http://www.sdc.uwo.ca/>