

Trent University
Environmental and Resource Studies 4530H
Site Remediation and Reclamation

The use and consumption of natural resources continues at an unprecedented rate. Owing to improved understanding of our ecosystems in Canada, environmental awareness has increased, and environmental regulations now require resource users and polluters, or those that inherit damaged sites to make improvements to these lands. Remediation and reclamation of these environments involve the integration between ecosystem science and management principles. This course will investigate some of the most commonly degraded ecosystems in Canada, with an emphasis on the theory and techniques being used to guide these systems to a more natural or alternative state.

Instructor

Dr. Colin Whitfield
ESB A104
748-1011 ext. 7341
cwhitfield@trentu.ca

Program Office

Secretary: Deb Mills
ESB B202
748-1011 ext. 7199
ers@trentu.ca

Course Timetable

Lectures: Thursdays, 12:00 – 13:50, GCS 105
Seminars: Thursdays, 14:00 – 14:50, OCA 109
 Thursdays, 15:00 – 15:50, OCA 109

Office hours

Thursdays, 14:00 – 17:00, ESB A104
(NB: I will attend seminars from time to time, so if I am not in, I at the seminar that day)

Teaching Assistant

Toni Zbieranowski
antonizbieranowski@trentu.ca
Office hours by appointment, SC 104

Textbooks

There are no required textbooks. Course readings will instead be assigned in association with related lectures. Readings will be available online (through TOPCAT) or posted on WebCT.

Seminars

The seminars will be held weekly and will be used primarily for student presentations. The purpose of these seminars is to allow you to investigate topical issues in the fields of Remediation and Reclamation. These seminars should provide a forum for discussion and debate of the approaches used in environmental remediation and reclamation practices, allowing individual perspectives on these techniques to develop. A small component of your grade will be awarded for your participation in the seminars.

Expectations

Attendance:

It is expected that you will arrive prepared for lectures and seminars. As this is a 4th year course, your assignments and exams should reflect the skills you have gained thus far in your post-secondary education (e.g. referencing, researching, time management, etc.).

The lecture slides posted on WEBCT will not be as detailed those presented in class. Accordingly, it is strongly recommended that you attend the lectures in order to augment the online resources with the information provided in class. In addition, there will be two short (3–5 question) pop quizzes held at the start of the lecture time period. In order to receive any credit for the quiz, you must be present when it is held.

A minor component of the overall grade will also be assigned based on participation; of course participation is dependent on attendance. In order to achieve a strong mark, it is important that you attend both seminars and lectures, and participate in the discussions taking place in these forums. As a courtesy to your fellow students, please arrive to seminar on time in order to avoid disrupting the presentations.

Assignments:

Assignments are due at the start of class (12:00) on the date listed below. It is important that assignments are submitted on time, as they will be returned the following week whenever possible. A late penalty of 5% per day to a maximum of 7 days will be assessed after which the assignment will receive a grade of zero. Late assignments should be submitted to the course instructor, or to the instructor's mailbox in the ERS program office. No assignments will be accepted after graded assignments have been returned. Overwhelming course loads are not a valid reason to request an extension, and the expectation is that you will manage your time accordingly; extensions will not be granted. Do not include a title page with your assignments – use a header instead.

Evaluation

Assignments:

1. Due: October 7	8%
2. Due: November 4	10%
3. Due: December 2	<u>12%</u>
	30%

Seminars:

Participation	10%
Presentation	<u>10%</u>
	20%

Exams:

Quizzes (2 X 2.5%)	5%
Midterm	15%
Final Exam	<u>30%</u>
	50%

TOTAL **100%**

Lecture Topics

Remediation and Reclamation
Surface water eutrophication
Mining and acid drainage
Brownfields
Acidified ecosystems
Artificial wetlands

Risk assessment
Oil spill sites
Reclamation following strip mining
Nuclear waste
Metals in the environment

Important information:

Academic Integrity:

Academic dishonesty, which includes plagiarism and cheating, is an extremely serious academic offence and carries penalties varying from a 0 grade on an assignment to expulsion from the University. Definitions, penalties, and procedures for dealing with plagiarism and cheating are set out in Trent University's *Academic Integrity Policy*. You have a responsibility to educate yourself – unfamiliarity with the policy is not an excuse. You are strongly encouraged to visit Trent's Academic Integrity website to learn more – www.trentu.ca/academicintegrity.

Access to Instruction:

It is Trent University's intent to create an inclusive learning environment. If a student has a disability and/or health consideration and feels that he/she may need accommodations to succeed in this course, the student should contact the Disability Services Office (BL Suite 109, 748-1281, disabilityservices@trentu.ca) as soon as possible. Complete text can be found under Access to Instruction in the Academic Calendar.

Dates:

September 16 – Lectures begin
September 30 – Seminar presentations begin
October 7 – Assignment 1 due
October 21 – Midterm (during lecture period)
October 28 – No classes (reading break)
November 4 – Assignment 2 due
December 2 – Assignment 3 due
December 9 – Lectures end
TBA – Final exam