

# ERS 340: Ecosystem Assessment

## Environment and Resource Studies

### Course Facilitator

Dr. Colin N. Yates, PhD  
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226-220-0133

### Course Instructor:

Session 1 - Dr. Colin N. Yates, PhD  
[cyates@uwaterloo.ca](mailto:cyates@uwaterloo.ca)

Session 2 – TBA

### Teaching Assistant(s):

TBA

### Course Dates:

Daily May 4 – May 29 or June 1 to June 26th (at Waterloo Summit Centre for the Environment, Huntsville)

You are responsible for finding your own transportation to and from the facility. You will be expected to arrive between 2-4pm on Sunday May 3<sup>rd</sup>, and May 30th between 2-4pm. (see attached calendars for detailed schedule)

**Course Fee:** \$2250 (\$1,991.15 + 258.85tax)

\*includes all certifications, accommodations, lunches and dinners, transportation for field trips.

\*\*there will be no refunds of the course fee if the course is dropped. The reason for this is that provincially recognized certifications require a guaranteed number of students present to run, and accommodations are booked months in advance. If extenuating circumstances apply, refunds will be decided by the Environment and Resource Studies Department Chair.

### Course Description:

Today's environmental practitioner requires a comprehensive skill set of advanced environmental assessment techniques. In ERS 340 students will be trained by in-field professionals in respective fields of forestry, aquatic biology, water quality, vegetation and landscape ecology to become independent environmental technicians. Students will participate in field trips, conduct numerous field and lab analyses, as well as receive certification(s) in provincially recognized environmental assessment protocols\*. Students will also be exposed to a number of guest presenters and networking opportunities during the course. You will be expected to take part in long days in both laboratory and outdoor environments.

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### **Course Objectives:**

1. Develop advanced skills in the collection and analysis of environmental data.
2. Acquire professional certification(s) in provincially recognized assessment protocols.
3. Learn to expertly record and manage environmental data.
4. Practice networking skills while meeting professional environmental practitioners.

### **Certifications Courses:**

1. OMNR Vegetation Sampling Protocol
2. OMNR Class II Backpack Electrofishing\*
3. Ontario Benthic Biomonitoring\*
4. Boat Safety\*
5. Bushwacking/Orienteering
6. Introduction to Tree Marking

\*Need to pass in-course test to be certified

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### Course Evaluation:

#### Term Report

1. Bi-weekly Assignments	15%
2. Tests/Certifications	45%
3. Field Notes	20%
4. Lab Notes	20%
Total	100%

\*Receipt of certification(s) is dependent upon meeting expectations set out by each certification program. Results of the certifications do not influence the success of the of the ERS 340 course grade.

### Course Process:

While this course is officially listed as term-long, only the weekly assignments will be completed throughout the length of the term. Field and lab exercises will not commence until May 6<sup>th</sup> and proceed to May 31<sup>st</sup>. It is expected that much of the Term Report will be completed during the month-long field and lab component at the University of Waterloo Summit Centre for the Environment at Huntsville ON.

### Evaluation:

#### Bi-Weekly Assignments – 15%

On LEARN students will complete bi-weekly assignment for ten weeks (5 responses total). Each assignment is worth 3% (15% total). Students will read a provided research article or report which you will describe in short written response (max. 300 words). The response should include such things as appropriate given the article provided; the research objective/purpose, a list of parameters used in the study, a description of the research design in 2-3 sentences, key regulatory standards, measures of performance, context for where regulatory standards are pertinent and the ecosystem types systems analyzed.

#### Ontario Benthic Biomonitoring Test – 15%

At the end of the OBBN course each student will be required to take a written test as well as an in lab ID test delivered by the OBBN instructors.

#### Class II Backpack Electrofishing Test – 15%

Each student is required to complete an in-field practical exam, as well as an in class written test delivered by the electrofishing instructors.

#### Vegetation Sampling Protocol (VSP) – 5%

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Each student must complete each of the exercises as delivered by the VSP team.

#### Boat Safety Training – 10%

Each student must undertake an in class test as well as in boat practical exam.

#### Term Report

The term report consists of three components contained within a single submission report: Field Notes and Lab Notes.

*Field Notes – 20%* (Due Date: Session 1 - June 12, 2015/Session 2- July 10, 2015)

Each student is required to create and maintain a comprehensive set of field notes which will be submitted as part of the final report. Field notes should include data on weather conditions, geographic locations, dates, environmental data collected. Field notes should also include points from field trips. Any other pertinent information should also be recorded. Notes will be marked on their comprehensiveness and effectiveness. Notes can be submitted as original handwritten notes with digital format if illegible to grader.

It is expected that you include field notes from the certification courses you take.

*Lab Notes – 20%* (Due Date: Session 1 - June 12, 2015/Session 2- July 10, 2015)

Each student is required to create and maintain a comprehensive set of lab notes which will be submitted as part of the final report. Lab notes should include information on data analysis, results, and methodology. Any other pertinent information should also be recorded. Notes will be marked on their comprehensiveness and effectiveness. Notes can be submitted as original handwritten notes with digital format if illegible to grader.

#### **Handing in Assignments:**

Bi-Weekly Assignments: All assignments will be submitted through LEARN starting May 8<sup>th</sup> and ending July 3<sup>rd</sup> Each student is responsible for handing in this assignment

Submission of Field lab notes: All term reports should be submitted to the course instructor by 4pm Friday June 12, 2015 (Session 1) or July 10, 2015 (Session 2). Alternatively the report can be submitted to Patti Bester by 4pm Friday June 12, 2015(Session 1) or July 10, 2015 (Session 2). Make sure that you attach Academic Integrity Form appended at the bottom of the course outline.

Citation Format for Assignments: The citation format adopted for this course is the APA (American Psychological Association) style. The complete style outline can be found in the Publication Manual of the American Psychological Association, located in the reference section in Dana Porter Library, call number BF76.7.P83 1994. On the web you can find some quick references at the following URLs.

APA essentials - [http://www.vanguard.edu/faculty/ddegelman/index.aspx?doc\\_id=796](http://www.vanguard.edu/faculty/ddegelman/index.aspx?doc_id=796) and <http://www.apastyle.org/>

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APA Crib Sheet - <http://www.wooster.edu/psychology/apa-crib.html>

Citing Electronic References - <http://www.apa.org/journals/webref.html#Email>

Frequently asked Questions - <http://www.apa.org/journals/faq.html>

### **Student Accommodations:**

Students with disabilities: The Office for Persons with Disabilities (OPD), located in Needles Hall, Room 1132, collaborates with all academic departments to arrange appropriate accommodations for students with disabilities without compromising the academic integrity of the curriculum. If you require academic accommodations to lessen the impact of your disability, please register with the OPD at the beginning of each academic term. Then see the course Instructor, Colin Yates, in confidence, during office hours to discuss your needs.

Religious Observances: Please inform the instructor at the beginning of term if special accommodation needs to be made for religious observances that are not otherwise accounted for in the scheduling of classes and assignments.

### **Student Responsibilities:**

Late Penalties: Students are responsible for handing their work in on time. 15% deduction is given per calendar day (of the total marks available) up to three days\*. Following the third day the assignment will be graded as a zero. Only in unavoidable circumstances will extensions be granted, and must be given by the course instructor.

\*Bi-weekly assignments will be graded as zero if they are handed in after the due date.

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### Academic Integrity:

*A student is expected to know what constitutes academic integrity, to avoid committing academic offences, and to take responsibility for his/her actions. A student who is unsure whether an action constitutes an offence, or who needs help in learning how to avoid offences (e.g., plagiarism, cheating) or about “rules” for group work/collaboration should seek guidance from the course professor, academic advisor, or the Undergraduate Associate Dean. When misconduct has been found to have occurred, disciplinary penalties will be imposed under Policy 71 – Student Discipline. For information on categories of offences and types of penalties, students should refer to Policy 71 - Student Discipline, <http://www.adm.uwaterloo.ca/infosec/Policies/policy71.html>*

*Within ENV, those committing academic offences (e.g. cheating, plagiarism) will be placed on disciplinary probation and will be subject to penalties which may include a grade of 0 on affected course elements, 0 on the course, suspension, and expulsion.*

*Students who believe that they have been wrongfully or unjustly penalized have the right to grieve; refer to Policy #70, Student Grievance, <http://www.adm.uwaterloo.ca/infosec/Policies/policy70.htm>*

Plagiarism: In particular, you should not plagiarize the work of others. Policy 71 defines plagiarism as: “The act of presenting ideas, words or other intellectual property of another as one’s own. The use of other people’s work must be properly acknowledged in all written material such as...essays, laboratory reports, design projects, statistical data, computer programs and research results. The properly acknowledged use of sources is an accepted and important part of scholarship. Use of such material without complete and unambiguous acknowledgement, however, is an offence under this policy.” Students are expected to keep a copy of all materials used to prepare assignments in case of disputed work and should be able to provide working notes and original data for any assignment within 4 hours of this being requested.

In the context of this course, plagiarism includes (among other activities) submitting without appropriate acknowledgement any report (or part thereof, including software, designs, photos, computer images, models, drawings, maps, statistics, samples, results of lab or field work etc.) which has been submitted previously to any course anywhere by any person, submitting a report in which the production has been shared by more than one student and each has submitted it as their own without acknowledgement of the other’s contributions, submitting any work created in whole or in part by another without the usual acknowledgement. Policy 71 states that one should not submit “an essay, report or assignment when a major portion has been previously submitted or is being submitted for another course with the express permission of all the instructors involved”. **If**

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**in doubt, ask the course instructor or the teaching assistant if your intended assignment submission is acceptable.**

All suspected academic infractions are investigated and formally reported to the Associate Dean, Undergraduate of FOE.

Appeals: A student may appeal the finding and/or penalty in a decision made under Policy 70 - Student Petitions and Grievances (other than regarding a petition) or Policy 71 - Student Discipline if a ground for an appeal can be established. Read Policy 72 - Student Appeals.

Grievance: A student who believes that a decision affecting some aspect of his/her university life has been unfair or unreasonable may have grounds for initiating a grievance. Read Policy 70 - Student Petitions and Grievances, Section 4.