

Carleton University
Department of Civil and Environmental Engineering
ECOR 1055 – Introduction to Engineering Disciplines I
Environmental Engineering – Fall 2020
Draft Course Outline

Instructor Information

Paul Van Geel paul.vangeel@carleton.ca 6210 Canal Building

Lecture Time

Wednesdays 1:05-2:25pm On-line

Elsie MacGill Learning Centre : TBA

Calendar Information

ECOR 1055 – Introduction to Engineering Disciplines I

Calendar description: Overview of professional activities oriented to the student's discipline of study: Architectural Conservation and Sustainability. Civil and Environmental. Aerospace and Mechanical. Electrical. Engineering Physics. Computer systems/network, Communications and Software. Biomedical (Electrical and Mechanical). Sustainable and Renewable Energy

<http://calendar.carleton.ca/undergrad/courses/ECOR/>

Course Objectives and Learning Outcomes

By the end of this class students should understand the scope and impact of their chosen Engineering discipline, and be able to distinguish between different specialties within their field of study.

Sections Schedule

ECOR 1055	A	Civil Engineering
ECOR 1055	B	Software Engineering
ECOR 1055	C	Computer Systems Engineering
ECOR 1055	D	Architectural Conservation & Sustainability Engineering
ECOR 1055	E	Environmental Engineering
ECOR 1055	F	Communications Engineering
ECOR 1055	G	Aerospace Engineering
ECOR 1055	H	Mechanical Engineering
ECOR 1055	I	Electrical Engineering and Engineering Physics
ECOR 1055	J	Biomedical and Electrical Engineering & Biomedical and Mechanical Engineering
ECOR 1055	K	Sustainable and Renewable Energy Engineering (A/B)

Evaluation and Grading Scheme

This course is graded SAT/UNS and all students are expected to attend all the sessions. In order to be given a SAT grade in the course, you must attend at least 10 of 12 sessions.

Tentative Lecture Topics

Lecture #	Topic	Speaker
1 Sept 9	Welcome, overview of resources for engineering students, overview of the environmental engineering program	Prof Van Geel
2 Sept 16	Climate Change and Environmental Engineering Green energy – biomass to energy alternatives	Prof Walker Prof Hussain (V)
3 Sept 23	From Buckets to Rainbarrels; the Tanzania project COVID-19 monitoring in wastewater	Prof Basu Prof Ormeci (V)
4 Sept 30	Air Quality, applications and issues	Prof Hakami
5 Oct 7	Water Resources Engineering and the 100-year storm. Waste and/or Resource Management	Prof Van Geel Prof Simms
6 Oct 14	Environmental Engineering Career Panel	Enviro Eng Alumni
7 Oct 28	High Level Radioactive Waste Disposal and Deep Geological Repository – overview of NWMO's current concepts for DGR	Dr. Karina Lange (CNCS)
8 Nov 4	Overview of Architectural Conservation and Sustainability Engineering	Prof Bucking (V)
9 Nov 11	Case Study – Kanata West Pump Station; overview of how the enviro program supported him in his design of this facility	Mr. David Steward-Williams (Stantec)
10 Nov18	Overview of Civil Engineering	Prof Sadeghian (V)
11 Nov25	Case Studies – leachate treatment at Trail Road Landfill and new water intake for Lemieux Island Water Treatment Plant Case Study – cleaning up contaminated sites	Mr. Jordan Smyth (Jacobs) Mr. James Doyle (Golder)
12 Dec 2	4 th year capstone design projects; invite 4 th year capstone teams to present their feasibility studies or interim design reports and end with a panel discussion or question period	Prof Van Geel and 4 th year capstone design groups
TBD	Environmental Engineering Career Panel	Enviro Eng Alumni

(V) is a video

General Regulations

Attendance: Students are expected to attend all lectures. The University requires students to have a conflict-free timetable. For more information, see the current *Undergraduate Calendar, Academic Regulations of the University, Section 1.2, Course Selection and Registration and Section 1.5, Deregistration*.

Appeal of Grades : The processes for dealing with questions or concerns regarding grades assigned during the term and final grades is described in the *Undergraduate Calendar, Academic Regulations of the University, Section 2.7, Informal Appeal of Grade and Section 2.8, Formal Appeal of Grade*.

Academic Integrity: Students should be aware of their obligations with regards to academic integrity. Please review the information about academic integrity at: <https://carleton.ca/registrar/academic-integrity/>. This site also contains a link to the complete Academic Integrity Policy that was approved by the University's Senate.

Plagiarism: Plagiarism (copying and handing in for credit someone else's work) is a serious instructional offense that will not be tolerated.

Academic Accommodation: You may need special arrangements to meet your academic obligations during the term. You can visit the Equity Services website to view the policies and to obtain more detailed information on academic accommodation at <http://www.carleton.ca/equity/>. For an accommodation request, the processes are as follows:

- **Pregnancy or Religious obligation:** Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details see <https://carleton.ca/equity/wp-content/uploads/Student-Guide-to-Academic-Accommodation.pdf>
- **Academic Accommodations for Students with Disabilities:** The Paul Menton Centre for Students with Disabilities (PMC) provides services to students with Learning Disabilities (LD), psychiatric/mental health disabilities, Attention Deficit Hyperactivity Disorder (ADHD), Autism Spectrum Disorders (ASD), chronic medical conditions, and impairments in mobility, hearing, and vision. If you have a disability requiring academic accommodations in this course, please contact PMC at 613-520-6608 or pmc@carleton.ca for a formal evaluation. If you are already registered with the PMC, contact your PMC coordinator to send me your *Letter of Accommodation* at the beginning of the term, and no later than two weeks before the first in-class scheduled test or exam requiring accommodation (*if applicable*). **Requests made within two weeks will be reviewed on a case-by-case basis.** After requesting accommodation from PMC, meet with me to ensure accommodation arrangements are made. Please consult the PMC website (www.carleton.ca/pmc) for the deadline to request accommodations for the formally-scheduled exam (*if applicable*).
- **Survivors of Sexual Violence:** As a community, Carleton University is committed to maintaining a positive learning, working and living environment where sexual violence

will not be tolerated, and where survivors are supported through academic accommodations as per Carleton's Sexual Violence Policy. For more information about the services available at the university and to obtain information about sexual violence and/or support, visit: <https://carleton.ca/sexual-violence-support/>.

- **Accommodation for Student Activities:** Carleton University recognizes the substantial benefits, both to the individual student and for the university, that result from a student participating in activities beyond the classroom experience. Reasonable accommodation must be provided to students who compete or perform at the national or international level. Please contact your instructor with any requests for academic accommodation during the first two weeks of class, or as soon as possible after the need for accommodation is known to exist. For more details, see <https://carleton.ca/senate/wp-content/uploads/Accommodation-for-Student-Activities-1.pdf>

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