

ECOR 1042: Data Management

Course Introduction and Expectations

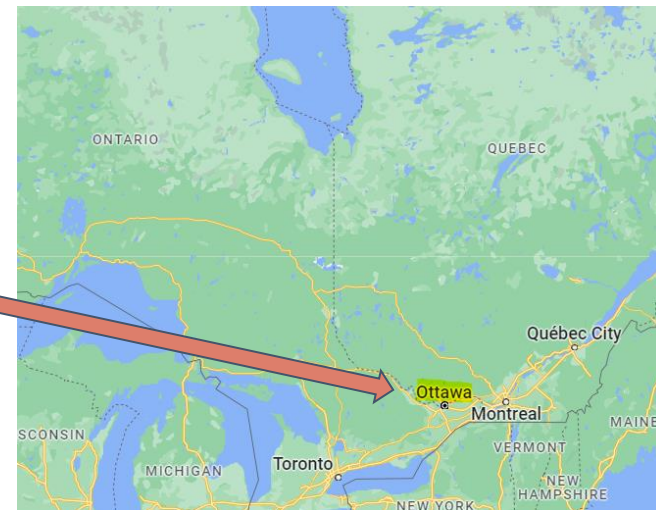
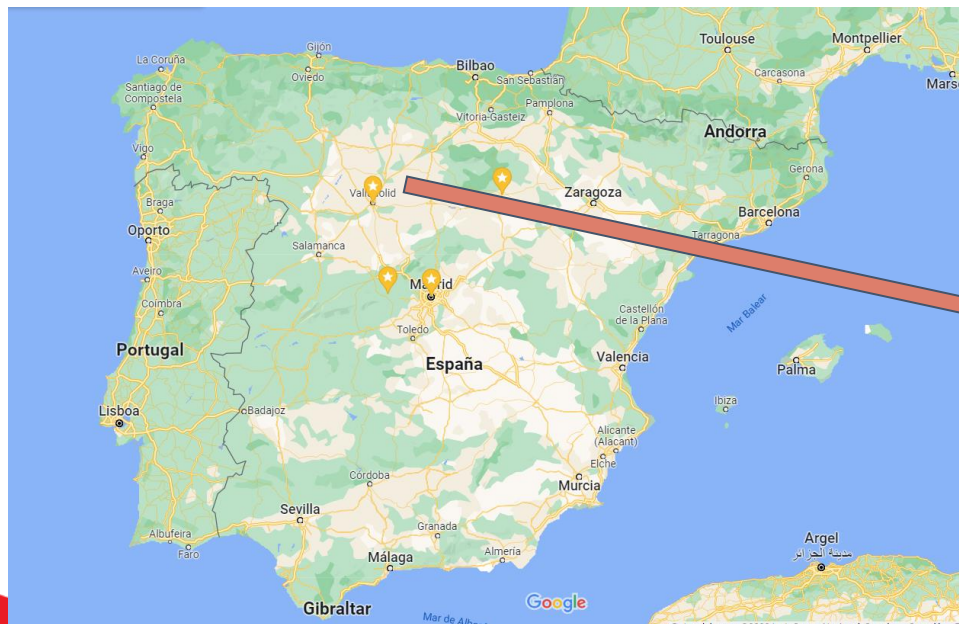
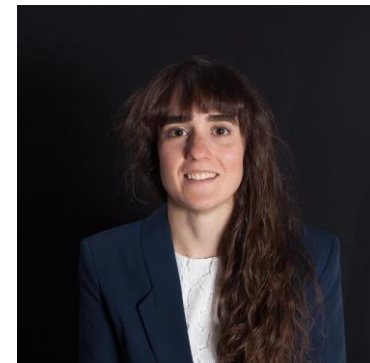
The Course Project

Land Acknowledgement

I would like to acknowledge that the land on which we gather is the **Traditional and Unceded Territory of the Algonquin Nation.**

Land Acknowledgement

I would like to acknowledge that the land on which we gather is the **Traditional and Unceded Territory of the Algonquin Nation.**



Objectives

- ❑ Review: "big picture" overview of the ECOR 104x courses
- ❑ Review what you must do in 1st year in order to progress to the 2nd and 3rd year of your degree program; projects in ECOR courses
- ❑ Introduce ECOR 1042
- ❑ Introduce ECOR 1042 Course Project

Understand the big picture of the ECOR104x courses

Credit courses

Systems

ECOR 1041
Computation & Prog.
(0.25 credit)

ECOR 1042
Data Management
(0.25 credit)

Electronics

ECOR 1043
Circuits
(0.25 credit)

ECOR 1044
Mechatronics
(0.25 credit)

Mechanical

ECOR 1045
Statics
(0.25 credit)

ECOR 1046
Mechanics
(0.25 credit)

Civil

ECOR 1047
Visual Comm.
(0.25 credit)

ECOR 1048
Dynamics
(0.25 credit)

Non-credit courses

ECOR 1055
Introduction to
Engineering
Disciplines I
(0.0 credit)

ECOR 1056
Introduction to
Engineering
Disciplines II
(0.0 credit)

ECOR 1057
Engineering
Profession
(0.0 credit)

Understand the big picture of the ECOR104x courses

- Take into account the pre-requisites (arrows in the previous slide)
 - Example: ECOR1042 requires at least C- in ECOR1041.
- 2nd Year Status: To take 2000-level (or higher) engineering courses, a student must complete all ECOR 104x courses with a minimum grade of C-

ECOR 104x Projects

Four ECOR courses (**1042**, 1044, 1046 and 1047) have group projects.

- Students will work in teams of four (with the intention of each team having one student from each department).
- The teams are formed by the course instructors.
- One member from each team will be the team leader.
 - For each course, as much as possible, the leader will be a student from the department in charge of the course.
 - **Leaders in ECOR 1042 will usually be students enrolled in programs for which Systems and Computer Engineering is the home department.**

ECOR1041 & ECOR 1042

Broadly speaking, these are your introductory programming courses.

- ECOR 1041: You learned the core concepts of computation and programming using Python as programming language.
- ECOR 1042: You will learn
 - Some of the container types provided by Python (and many other languages) for storing collections of data
 - How to use these containers when developing algorithms that manage data
 - How to develop modular programs
 - How to work on a team to design, code and test a reasonably complex data-management program

ECOR1042: Course Expectations

Same as ECOR1041!

ECOR1042: Course Expectations

- A deadline is final
 - Brightspace will not allow later submissions, even 1 second after the deadline
- Failure is real
 - I did badly in the course project, can I just use my final exam mark? → No
- Emails/Postings are professional correspondence
 - Your text must have capitalized letters at start of sentences and proper punctuation.
 - Use informative headings for both emails/postings
 - Emails: **ECOR1042@carleton.ca**
 - Refer to the detail document on Brightspace.

ECOR1042: Course Outline

- Contains: course objectives, list of topics, learning outcomes, evaluation and grading scheme, breakdown of course requirements (lectures, quizzes, course project/labs, final exam), important administrative information
- TASK: read the course outline
 - If you have questions, please post them on the discussion forum (other students may have the same questions)

Grading Schema

Component	Weight
Quizzes (3 quizzes equally weighted)	5%
Bonus: Class Participation	3%
Course Project (individual work)	20%
Course Project (teamwork)	15%
Final exam (during the exam period)	60%

Requirements to Pass the Course

Requirement for all students:

- At least 30/60 on the final exam

Requirements for students writing the deferred final exam:

- At least 30/60 on the final exam
- Quizzes: 2/5
- Course Project (individual work): 10/20
- Course Project (term work): 6/15
- Overall Term Grade: 20/40

ECOR1042 Course Project

Objectives

- ☐ Introduce the Course Project
- ☐ Help you understand our expectations for the course project with regard to lab attendance, time commitment, how to ask for help, and grading
- ☐ Provide guidance related to working with teams

The Course Project

Apply concepts learned during the lectures to load from a spreadsheet, manipulate the data, and display the results.

- Lab 1: Individual work. Review from ECOR1041.
- Lab 2: Meet your team, team building activities, team contract
- Lab 3: Manipulate and display data loaded from a spreadsheet
- Lab 4: Unit test the module developed in lab 3
- Lab 5: Sort the data, fit a curve to the data and plot the data
- Lab 6: develop simple interactive and batch interfaces, write a README file (user instructions) and record a video

Meet Your Team

On Brightspace: Course Project Module (To be posted before Lab 2 starts)

- ✓ PDF with the list of teams
- ✓ Instructions on how to join your team

During lab 2, teams with missing members will be adjusted.

Lab 2 is the first lab where you will work with your teammates

Expectations: Lab Attendance, Time Commitment

In-person attendance at the labs is mandatory

- ✓ Attend your labs and arrive on time. TAs will not give you credit for attendance if you arrive over 15 minutes late.
- ✓ TAs are available to answer questions: clarify project statement, help with technical questions, etc.
- ✓ You will not be able to finish all tasks during the lab time.
 - ✓ There is an expectation that you will work outside of the labs as a team.
 - ✓ Set up an extra regular weekly meeting time.

Expectations: Urgent Questions

- ✓ Technical help: show up at another scheduled lab time. Be mindful. Give priority to the students in that lab session.
- ✓ Clarifications about the lab/milestone requirements: post the question in the Brightspace Forum.
- ✓ Team Issues: Send an email to ECOR1042@carleton.ca.
- ✓ Grading issues: Follow the instructions posted on Brightspace.

Expectations: Grading

Individual work (20%)

- ✓ Individual submission → Individual mark

Team work (15%)

- ✓ One submission per team → Team mark
 - ✓ If you do not complete the individual submission for a milestone, you receive 0 for both the individual and team marks, even if you help with the team submission
 - ✓ If you do not attend the lab, your grade for the team submission associated with that lab is zero
- ✓ Whole team responsible for ensuring team submission is correct and on time.
 - ✓ Brightspace does not "know" the leader of each team
 - ✓ Any team member can submit on behalf of their team

Working in Teams

Let's talk ... How were teams during high school? In your previous ECOR104x courses?

What are the pros?

What are the cons?

Working in Teams

Let's look at the four categories of teams:

1. Working Teams
2. Diverse Teams
3. Incomplete Team
4. Malfunctioning Teams

Working Teams

The best kind. Enjoy the project!



Diverse Teams

- ✓ Some may be expert programmers while others are beginner programmers
- ✓ All members are present, communicating, willing and working
- ✓ This team should work things out themselves.
- ✓ With good attitudes, good scheduling and good communication, wonderful learning will happen
 - ✓ Advanced students must avoid the attitude “I will just do it myself, it will be quicker”



Incomplete Teams

- ✓ Part of the team is either Working or Diverse, but one person is absent
 - ✓ Does not come to lab or to meetings
 - ✓ Does not respond to emails
 - ✓ Does not do the work
- ✓ The rest of the team should
 - ✓ Invite the student (Send an initial email and a follow-up email)
 - ✓ Send an email to ECOR1042@carleton.ca to check if the student withdrew
 - ✓ Get on with the (**whole!**) job
 - ✓ The entire project can be done by 2 students who have at least a C- in ECOR 1041
 - ✓ Document authorship so the absent member does not get credit

Malfunctioning Teams

- ✓ Abusive, racist, sexist behaviors and harassment should be brought to the Instructional Support Coordinator's attention immediately.
- ✓ This will not be tolerated, and a formal complaint may be made to the Dean (Carleton's Academic Regulations, Section 10.2, Offenses of Conduct: Discrimination and Harassment)
- ✓ In a professional work setting, you want to make your colleagues feel comfortable and valued for their abilities and contributions
 - ✓ Do not use foul language
 - ✓ Do not comment on a person's appearance
 - ✓ Do not comment on personal/private life
 - ✓ Do not comment on how a person talks or behaves

**BE
PROFESSIONAL**

Your First Deliverable

- In Lab 2, the team will collectively decide how to work together and will write a contract that states this information
- Be thoughtful and proactive during the creation of this contract
- The ISC will use this contract when addressing any issues that arise during the project

Closing Remarks

Engineering is a team-based profession

The course project is an opportunity to learn about responsible participation within a team

ECOR 1042: Data Management

Course Introduction and Expectations

The Course Project