Information Session
SYSC-4907

- Getting Started: Registration and Selection
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Information and Resources

- All information about the project is on the web.
  - www.sce.carleton.ca/courses/sysc-4907
  - Links : Notices, FAQ, Forms and Deadlines
  - Read the website before asking questions.
- Periodic email reminders will be sent to your cmail account, the one you used for registration.

Getting Started: Prerequisites

- **4th Year Engineering Standing** and ECOR 4995
- **No projects during the co-op work term**
- You must be able to graduate in the current year in order to take the project (enforced by the Dean's office).

Getting Started: Registration

- **Please** ensure you are in the correct course.
- SYSC-4907 or ELEC-4907 ??
  - SE and BioMed: SYSC-4907, even if project is external to department.
  - CSE and CE: It matters who your SUPERVISOR is.

    SYSC-4907: ANY student with a SYSTEMS supervisor

    ELEC-4907: ANY student with an ELECTRONICS supervisor
    - (PS. You're in the wrong meeting!)
- Must register both fall and winter
  - Oral presentation/poster fair not scheduled and marks not released unless all fees are paid.
- Incorrect registration = delayed graduation

Getting Started: Selection Process

- Thank-you to all those who have registered!
- You also need to select and register a project on the SCE website.

  www.sce.carleton.ca/courses/sysc-4907

- Steps to select/register a project
  - Read the web (in particular for faculty proposals) for project.
  - Form a group
  - Talk to potential supervisors and obtain approval.
  - Submit the online Project Selection Form
  - Make an appointment with your supervisor to kick off the project.

Getting Started: Selection Process

- Deadline of project selection: **Wednesday September 12th**
- If no project selected by that date, but need SYSC 4907, department (i.e., 4th year project coordinator) will assign you to a project before the end of registration **Tuesday September 18th**

Getting Started: Group Numbers

- All communications with the coordinator must be done using **your cmail email account**.
- Please include your group identifier assigned when you joined a project, in all correspondence.

Deadlines: The Year in Brief

- Fall Term
  - Tuesday, Sept 18th: Project Selection and Registration on Carleton Central
  - Monday, Sept 24th**: Proposal** (Submit on-line and the supervisor)
  - Friday, Dec 7th: **Progress Report** (Submit to Supervisor)
  - Wednesday, Sept. 21st – Friday**,** Dec 7th 2018: **Oral Presentation choice made on-line**

- Winter Term (dates mostly tentative)
  - Monday, Jan 28th - Friday, Feb 2nd 2019 **(Oral presentation)**
  - Friday, March 8th: **Final Report Draft** (Submit to Supervisor)
  - Monday, March 11th (3hr block): **Poster Fair in Unicentre Galleria**
  - **Tuesday, April 9th:** Final Report (**Submit on-line.**) **Missed deadline means F.**

Supervisor versus Coordinator

- Coordinator (non-technical)
  - Looks after overall administration of the projects
  - Organizes departmental-wide events
  - Has no involvement in the project itself (not a co-supervisor)

- Supervisor (technical)
  - Responsible for regular supervision of progress
  - Responsible for informing student of all project requirements
  - Governs the format of the project deliverables, within the guidelines stated for the project.
  - **Responsible for providing any resource required by project**
  - Responsible for evaluating student and the project deliverables

Supervisor versus Coordinator

- Submit to supervisor:
  - Why? Drafts, for review. Final, for grading
  - How? Ask your supervisor

- Submit online:
  - Why? Collation, distribution to second readers
  - How? **Use account on 4th year project website**

Project Resources

- Computer accounts are the same SCE-accounts used in your other Systems courses.
  - You may have to re-activate it.
  - Tied to your Connect account.

- Special requests regarding your account must be made by your **supervisor** to Daren Russ
  - Extra memory, group or administrator rights
  - Create a ticket: service@sce.carleton.ca
  - Learn a valuable lesson early: Treat your support staff well!

Project Resources

- **ME4386** is the 4th year project room
  - Only 4th year project students are allowed.
  - If you allow in others, they … and you … will be removed from the room.
  - Respect each other – Keep it clean and quiet; others are working.
- To get a key for ME4386:
  - Get a permission form available from the Systems department office (ME4456).
  - Get it signed by your **supervisor.**
  - Write a cheque to Carleton University for $40. **No cash**
  - Submit the form and cheque to the Systems office from 1:30-2:30 daily only.

Project Resources

- EngSoc Project: Web accounts, space
  - www.engsoc.carleton.ca
- Engineering Society: Server machines, ca$h.
  - http://www.engineering.carleton.ca/student_life/lifecontact.html
- All students of Carleton are able to have free copies of Microsoft programs, under an Academic License
  - http://msdnaa.carleton.ca/.
  - Any problems with registration, download, installation are **not** handled by SCE staff.

Project Resources

- What is a Proposal?
- What is a Progress Report?
- How big should my Final Report be?

- For expectations and formats of deliverables :
  1. **General** guidelines and suggestions are posted on the project website called “Resources”
  2. Your **supervisor** has the final say. S/he is marking it.

Project Grading

- Two facets of Performance:
  - Technical achievements
  - Professional conduct
- Different procedure from other courses
  - No course breakdown is given; grade is an amalgam of your year's performance.
  - Grade assigned by whole department
  - You have two representatives
    - Supervisor: Biased "insider"
    - Second Reader: Objective "outsider"; largely technical evaluation
- Governed by published departmental Grade Expectations

Project Grading

- A Summary of the Project's Deliverables
  - Project Proposal (Revised)
  - Progress Report
  - Oral Presentation
  - Poster Fair
  - Final Report (See below)
  - Project-Specific Deliverables (other items that the supervisor has required)

Faculty Grading Guidelines: Project

Quality of Engineering Project	D	C	B	A
Engineering Techniques Used				
Design (the application of engineering sciences)				
Implementation				
Testing				
Analysis				

Grading Guidelines: Final Report

- Statement of Objectives
- General Organization (title page, sequence of chapters, references, appendices, etc.)
- Technical Writing and Illustrations (correct English, spelling, clarity, conciseness, accurate and complete)
- Adequate Background Information (preparatory information, literature survey)
- Conclusions and recommendations
- Quality of Final Engineering Product
- Engineering Techniques Used (use of modern concepts and methods, systematic engineering methods)
- Engineering Design (quality of design, functional, adaptable)
- Implementation
- Testing/Experimental Data Used (completeness and accuracy)
- Engineering Analysis (Analysis of the problem & deriving requirements, analysis of data presented, critical review of final product)

Final Grading: Student

Individual Performance Assessment	D	C	B	A
Initiative				
Organization				
Conduct of Work				
Learning Experience				
Teamwork				

Grade Expectations (Posted)

A: Outstanding achievement

B: Good, solid professional engineering work.

B+ Expected “typical” grade for a successful project.

C: Below-average performance

C- minimal acceptable grade average for graduation.

D: Performance is below graduation standards

D- simply a passing mark for the course credit.

F: is given to those must repeat the course.

“I’ve worked long and hard. I deserve an A”

Getting Down to Work

- How much work is expected from me?
  - Rough rule of thumb: **minimum 8 hours per week**.
- How can I earn a good mark on the project?
  - Must contain all engineering elements: requirements analysis, design, implementation, testing and documentation.
  - Must reflect the methodologies taught in courses.
  - The best projects are marked by creativity and initiative.
- Bottom Line: The project is your responsibility.
  - Supervisors can only remind/criticize you.

Getting Down to Work

- How often should/can I meet with my supervisor?
- What do I do in our meeting?
- I’ve got 3 midterms, 5 labs. I can’t work on my project.

Getting Down to Work

- I can’t get hold of my supervisor.
  - Come talk with me.
- My partner is stupid/lazy …
  - This is part of the team experience.
  - Talk with your supervisor but in a professional manner.
    - Wait until you have calmed down.
    - Prepare concrete examples.
    - Prepare constructive solutions (re-allocate duties, devise a plan for you to continue despite missing your partner’s piece)
    - Show leadership by communicating, compromising.

Deliverables: Group Projects

- For all deliverables, there is a choice between individual and group reports
  - Each individual may write their own OR
  - A common group portion is prepared and shared by all members, followed by individual contributions.
- It is the **supervisor's** decision with the following stipulations:
  - **Each individual must contribute an equal portion**.
  - **The author of each portion must be clearly evident.**

Fall Deliverable: Project Proposal

- Purpose:
  - To convey the major objectives and the engineering challenges of the proposed project
  - To present an initial plan for the work to be done by each member.
- Typical format
  - 3-4 pages long
  - Sections: Objectives, Background, Tasks, Methods, Timetable and Facilities

Fall Deliverable: Project Proposal

- Think of your proposal as a sales document presented to your client.
- Writing a persuasive proposal requires that you understand what the project is about.
  - THIS is the real value of writing a proposal!
- Don’t repeat same information just to have the “proper” format.
- Please indicate if you think you can **commercialize** your project!

Sample Proposal Guidelines

- Title, name, number, supervisor
- Clear statement of objectives
- Brief background
- Brief description of what you are going to do.
- Description of the method(s) you are going to use in solving the problem.
- Proposed timetable.
- List of special components and facilities that you require.

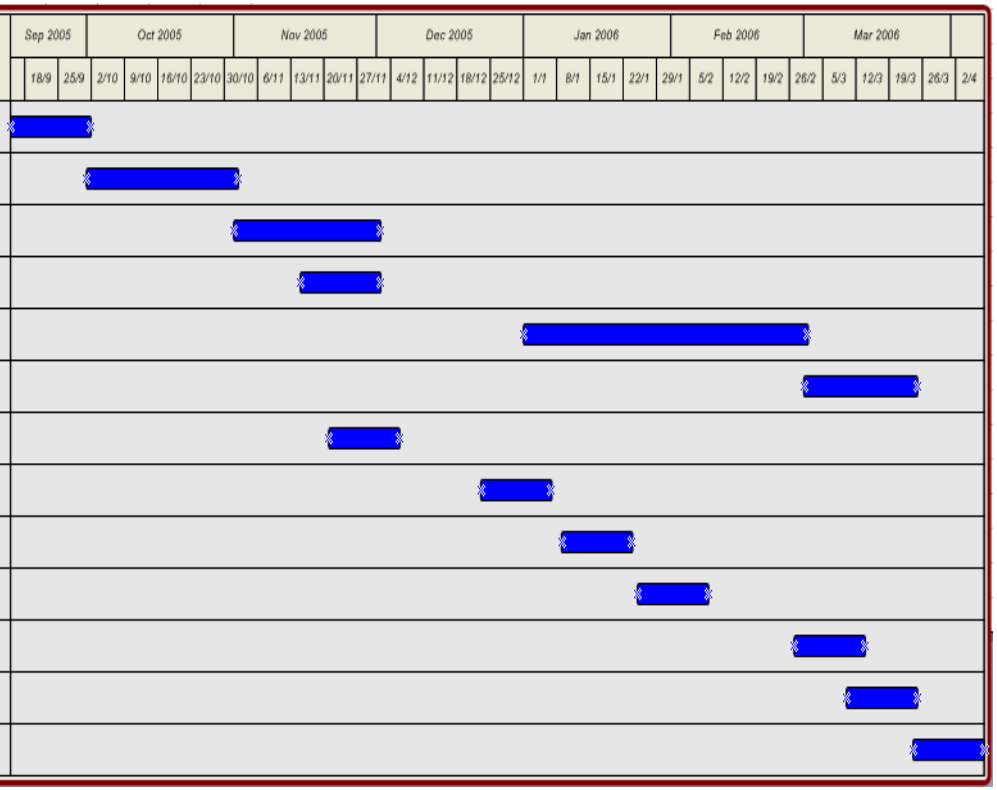
Proposal: Sample Milestones

1. Load and run last year's code into FPGA
2. Finish design for O/S changes.
3. Debug and test O/S changes.
4. Finish design of performance test cases.
5. Analyse results

Now… assign expected completion times and…

Proposal: Sample Schedule

ID	Task Name	Start	Finish	Duration
1	Requirements Elicitation	15/09/2005	01/10/2005	17d
2	Requirements Analysis	01/10/2005	01/11/2005	32d
3	System Design	01/11/2005	01/12/2005	31d
4	Object Design	15/11/2005	01/12/2005	17d
5	Implementation	01/01/2006	01/03/2006	60d
6	Testing	01/03/2006	24/03/2006	24d
7	Progress Report	21/11/2005	05/12/2005	15d
8	Changes to Oral Presentations Info Sheet	23/12/2005	06/01/2006	15d
9	Oral Presentation	09/01/2006	23/01/2006	15d
10	Changes to Poster Fair Info Sheet	25/01/2006	08/02/2006	15d
11	Poster Fair	27/02/2006	13/03/2006	15d
12	Draft of Final Report	10/03/2006	24/03/2006	15d
13	Final Project Report	24/03/2006	07/04/2006	15d



Fall Deliverable: Progress Report

- Purpose:
  - A mid-point checkup on the progress achieved, with reference to the original proposal.
  - A chance to re-define your project, now that you know more.
  - A (refined) plan for the final term.
  - It should include parts of the proposal, your related work, your requirements analysis and your design!
  - Copy and paste all of this into your final report.

Progress Report Structure

- Purpose : A mid-point checkup on the progress achieved, with reference to the original proposal.
- Other purpose: An exercise in writing
  - Can also be used as initial step in oral presentation
  - Idea: Present a draft of your background and design
- Typical format: About 2 pages long.
  - Background and design chapters would be nice!

Progress Report Structure (cont.)

- Must make reference to your proposal
- Show clearly how much progress has been made
- Make a prediction as to how the rest of the project is likely to develop
  - Refine your schedule for the final term
- State any variation from the project proposal that now seems necessary.
  - A chance to re-define your project, now that you know more

Opportunities

- Competitions
  - IEEE Student Design Competition in late March
  - Wesley Nicol Business Plan Competition
  - Innovative Designs for Accessibility (IDeA) Competition.
  - The Ontario Engineering Competition (See CSES)
  - The Canadian Engineering Competition (See CSES)
- Patents
  - The Dean has money for commercialization work (in the summer)
- Departmental Toystore
  - We're looking for off-the-shelf demos on a CD that we can use in University Open Houses

Cautionary Notes

- Plagiarism
  - Review your Professional Practice notes
  - If in any doubt, consult your supervisor before submitting any work (documents or code) that includes references.
- Health and Safety
  - This project will not cause RSI.
  - Projects involving human subjects require approval!

Next Meeting

- TBD, but expect it to be late Fall/very early in January
  - An email reminder will be sent
- Agenda
  - Oral Presentations
  - Poster Fair
- All questions will be answered, once!

A Suggestion

- September is a light month
  - No midterms
  - Labs just starting up.
  - You have lots of energy.

- Use the next two weeks to do a **sincere background study** so that when you write your proposal, you have a firm handle on the project
  - You have started to take ownership.
  - Let it be more than a simple restatement of your supervisor's own words.