Engineering Design Projects

EEE/GEF 455/457 - INTRODUCTION

Royal Military College of Canada

Electrical and Computer Engineering

Outline

- Aim of the Project
- Project Organization
- Web site
- Course Schedule
- Course Evaluation
- Past difficulties
- Next Steps

Contact Information

Fall and Winter Term

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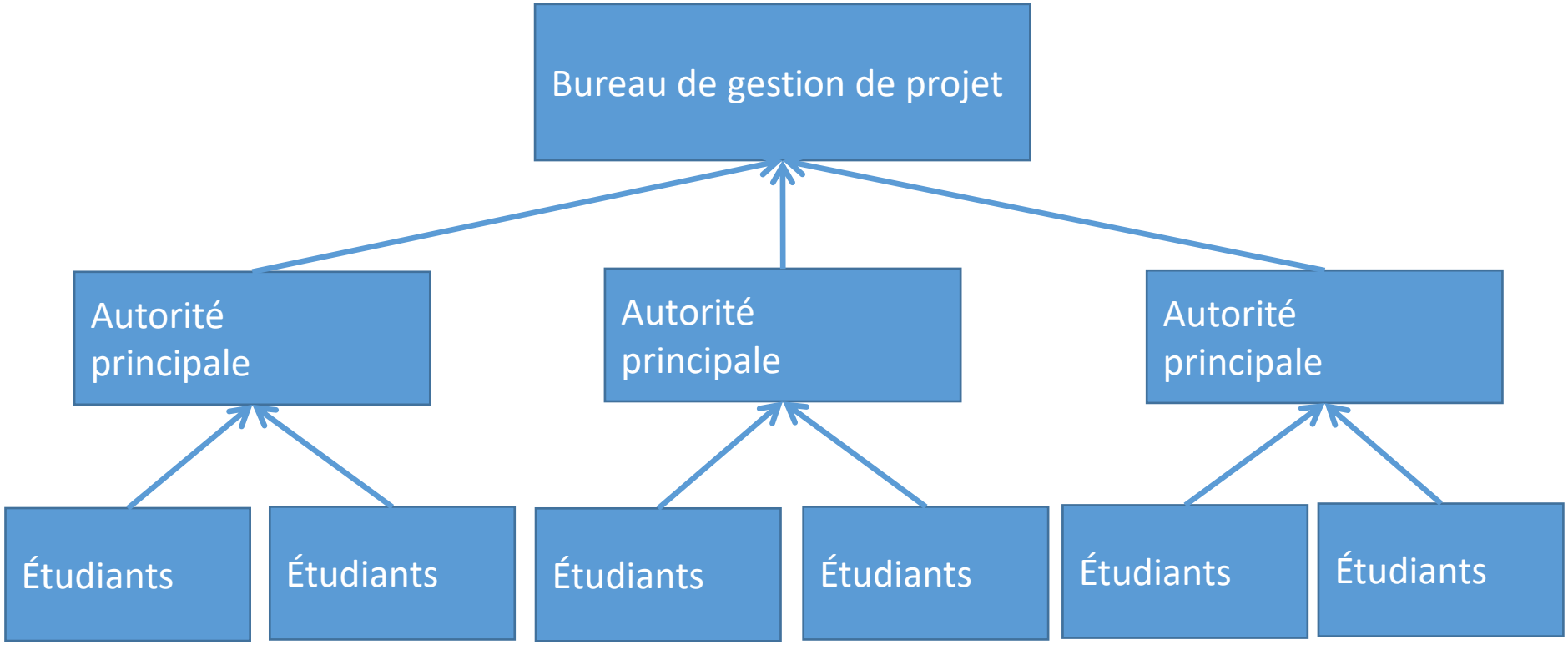
Aim of the Project

- Define a Problem in Engineering Terms
- Design Solution to Problem
- Implement Prototype of Design
- Measure Product Performance
- Communicate Results

Organisation des projets



http://projects.segfaults.net

Current Projects

http://projects.segfaults.net/current-projects/

Course Website

http://projects.segfaults.net

Horaire

http://projects.segfaults.net/schedule/

Evaluation

Deliverable	Weight	PMO	Supervisor Panelist	Note
PDC (DID-01)	5%	100%		Pass or Fail, -5% if not submitted
SOR (DID-03)	10%	40%	60%	
PDS (DID-04)	5%	40%	60%	
DR (DID-05)	5%		100%	
DDD (DID-07)	40%	40%	60%	
FPP (DID-08)	20%		100%	
FPD (DID-09)	5%		100%	
Overall	10%	100%		
Total	**100%**			

Evaluation: Graduate Attributes

- The RMC engineering programs are accredited by Engineers Canada. During their studies, graduates must demonstrate certain attributes that are measured by indicators. At the end of EEE455/7, students should be able to:….
- Les programmes de génie du CMR sont agréés par Ingénieurs Canada. Pendant leurs études, les diplômés doivent démontrés certaines qualités qui sont mesurées par des indicateurs. À la fin du cours GEF455/7, les étudiants devraient être capable de…

Evaluation: Graduate Attributes

Indicator: 202-2CO/2EL

Description: Is able to analyze problem, divide it into sub-tasks and plan their execution.

Indicator: 203-2CO/2EL

Description: Is able to collect data and quantitative/qualitative models/theory required for a solution.

Indicator: 205-1CO/1EL

Description: Is able to recognize weaknesses in the technique and critique solution(s).

Indicator: 401-1CO/1EL

Description: Is able to elicit and interpret the customer's needs in the context of an open-ended engineering problem.

Indicator: 401-3CO/3EL

Description: Is able to elicit and interpret the customer's needs in the context of an open-ended engineering problem.

Indicator: 401-5CO/5EL

Description: Is able to elicit and interpret the customer's needs in the context of an open-ended engineering problem.

Indicator: 402-1CO/1EL

Description: Is able translate these needs into a set of measurable technical requirements, cognizant of the relevant ethical, social, environmental, economic, legal and regulatory influence.

Indicator: 402-2CO/2EL

Description: Is able translate these needs into a set of measurable technical requirements, cognizant of the relevant ethical, social, environmental, economic, legal and regulatory influences.

Evaluation: Graduate Attributes

Indicator: 403-1CO/1EL

Description: Is able to develop a series of conceptual design solutions and compare the relative merits of each with respect to technical requirements.

Indicator: 404-1CO/1EL

Description: Is able to use engineering concepts and tools to support a preferred option and to create a design that best meets the requirements.

Indicator: 404-3CO/3EL

Description: Is able to use engineering concepts and tools to support a preferred option and to create a design that best meets the requirements.

Indicator: 404-5CO/5EL

Description: Is able to use engineering concepts and tools to support a preferred option and to create a design that best meets the requirements.

Indicator: 404-7CO/7EL

Description: Is able to use engineering concepts and tools to support a preferred option and to create a design that best meets the requirements.

Indicator: 405-1CO/1EL

Description: Is able to critique the design with respect to the technical requirements, cognizant of the relevant ethical, social, environmental, economic, legal and regulatory influences.

Indicator: 501-2CO/2EL

Description: Is able to interpret relevant technical literature.

Indicator: 503-2CO/2EL

Description: Can use and interpret the results of measurement tools while remaining cognizant of the associated limitations.

Evaluation: Graduate Attributes

Indicator: 601-3CO/3EL

Description: Is able carry-out assigned tasks and allow the team to achieve its objective.

Indicator: 701-4CO/4EL i to iv

Description: Is able to use correct grammar and punctuation to organize ideas and formulate logical and persuasive arguments.

Indicator: 702-3CO/3EL i to v

Description: Is able to present ideas orally in a logical and persuasive argument.

Indicator: 703-1CO/1EL i and ii

Description: Is able to select and correctly present technical support documents.

Indicator: 901-3CO/3EL i to v

Description: Is able to analyze the social and environmental impacts of engineering activities.

Indicator: 1002-3CO/3EL

Description: Is able integrate professional ethics and accountability into decisions involving engineering problems.

Indicator: 1101-2CO/2EL

Description: Is able to evaluate engineering decisions using concepts such as the time value of money, cash flow and depreciation.

Indicator: 1102-2CO/2EL

Description: Is able to explain and demonstrate the role of project and risk management in the practice of engineering.

Indicator: 1201-1CO/1EN

Description: Ability to identify and apply concepts not taught in the curriculum.

Weekly Reports (DID-12)

Weekly Progress Report:

Project Name:
Project Number:
Student Names:
Supervisor:
Date:

1: Accomplishments:
2: Difficulties:
3: Next Week:

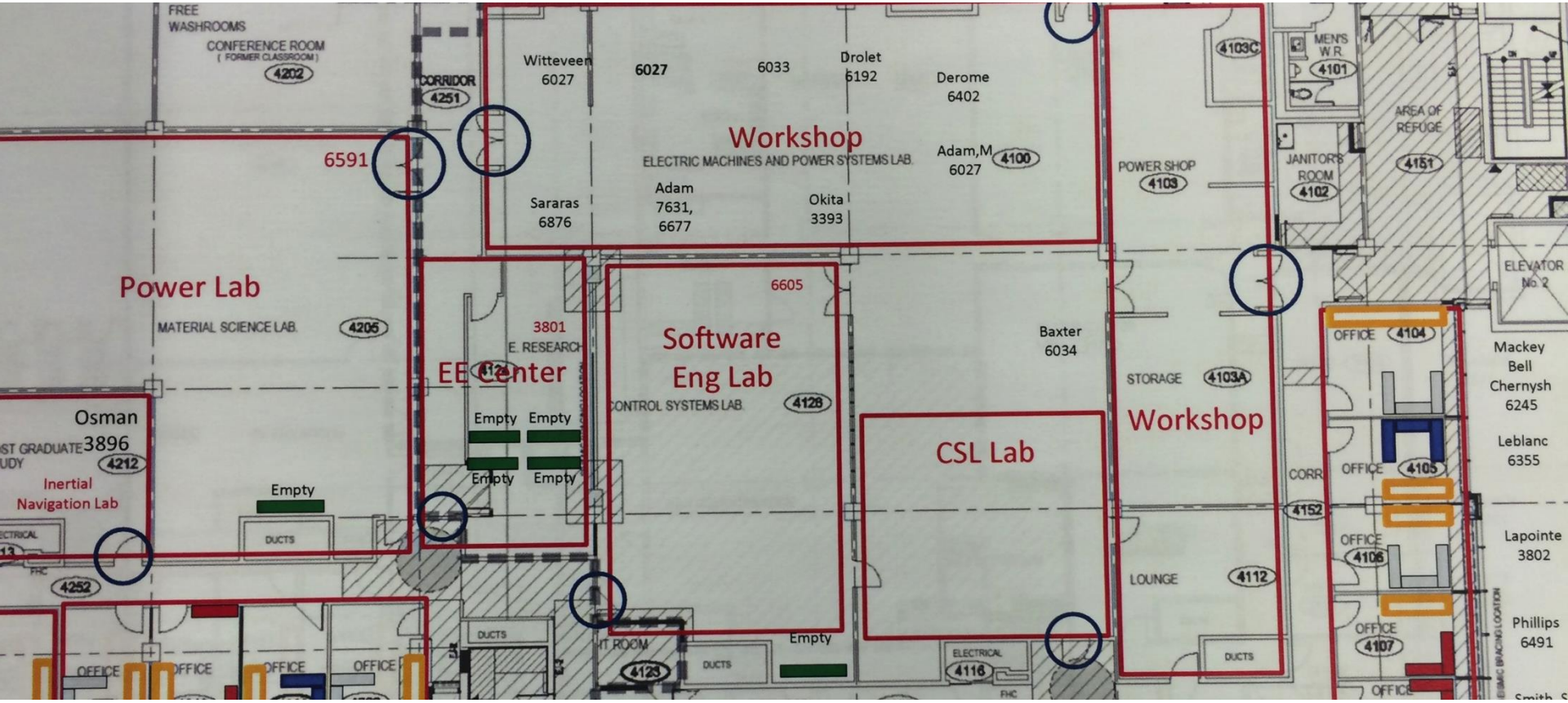
Past Difficulties

- Project Scope
- Following an Engineering Process
- Documenting the Engineering Process
- Technical Challenges
  - Interfacing, Timing, etc.
- Late ordering of parts!
  We will not sign anything unless approved by your supervisor first

Que faire maintenant

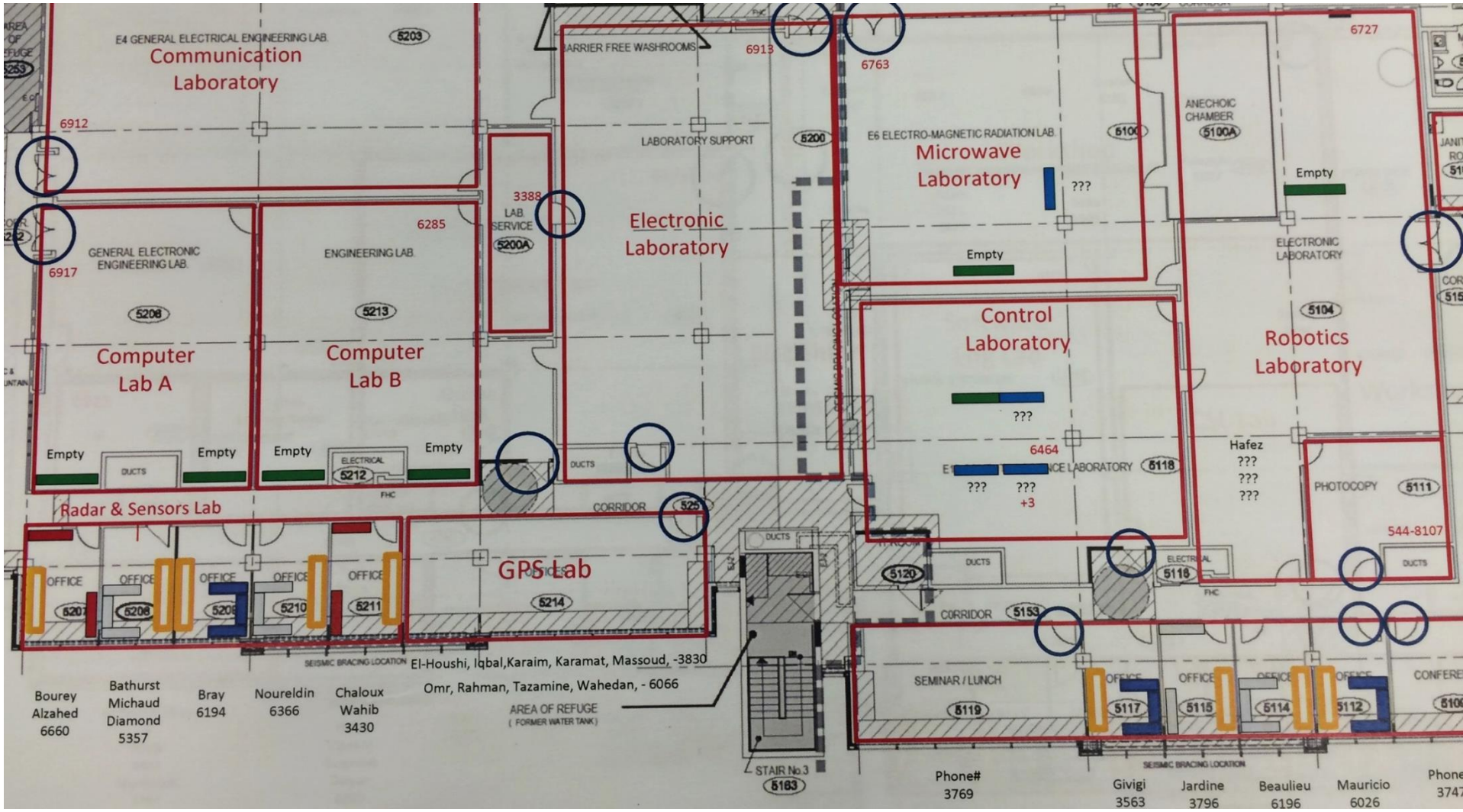
- Choisissez votre site de travail
- Rencontrez votre superviseur
  - Vous devriez le faire à chaque semaine!
  - Avisez le BP des problèmes
- Lisez le description du cours
  - La semaine prochaine, vous devez être familiers avec le description du cours
- Commencez l'ébauche de votre EB (DID-03) aujourd'hui!

Picking a Lab Space (4th floor)



- Green boxes indicate project space availability

Picking a Lab Space (5th Floor)



Next

- Engineering Processes Presentation
- Afterwards, coordinate lab space

- Next Week
  - Requirements Presentation

Questions?