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جامعة العلمين الدولية

Graduation Project Guidelines

Computer Science

CSE Graduation Project Committee

Graduation Project Guidelines at CSE

Pre-Registration Kick-off Meeting

Outline

- Introduction
- Project Pre-Registration
- Project Coordination
- Project Roadmap
- Project Grading
- Discussion

Introduction

Your graduation project is the **capstone** of your undergraduate curriculum:

- It is your chance to **apply the knowledge and skills you gained to solve** a *realistic* problem.
- It should **reflect** that you achieved **most program outcomes**
- It should prepare you **for a successful professional career.**

Additional Benefits (for best projects):

- Nomination for internal graduation project awards
- Participation in competitions representing the university
- Presentation in conferences, workshops or publications
- Can result in creative commercial products or services
- Community engagement and community service
- Sponsorship from industry partners and collaborators
- Increased job prospects

Overview

- The CSE graduation project is conducted over two consecutive semesters: **Semester 7 and 8 for CS**
- You must have passed at least 75% of program credit hours.
- It is done in **groups** under the close guidance of a **supervisor** (who can also nominate co-supervisors).
- **Pre-registration** process starts now.
- Project **Proposal + First Prototype** is completed in the 7th semester. **AIE493/CSE493: Graduation Project 1**
- Project **Full Design and Implementation** is completed in the 8th semester. **AIE494/CSE494: Graduation Project 2**

Pre-Registration (Now)

- Building Teams: of 3 or 4 students
  - The Graduation Project Committee has the right to reform the groups in certain cases.
- Project Selection
  - Idea Selection and Discussion with Potential Supervisor
  - Submission of project title, Abstract, and requirement
  - Topic Approval
- Supervisor Appointment
  - Then discussion with supervisor in more detail and finalizing selection
- Filling Pre-registration Form and submitting for approval by program director.

Multi-disciplinary (from more than one field) and externally sponsored projects are encouraged!

Topics can be proposed by students, faculty members or external partners.

Project Selection

Your project should:

- Be suitable for a startup: Have a unique and novel idea, solve a real-world problem and have an impact on society .
- Include significant realistic challenges and constraints
- Need an integration of knowledge from various courses in the curriculum and beyond
- Emphasize design, experimentation and hands-on skills using recent trends in technology.
- Require planning, analysis, design, implementation, comparisons and validation
- Reflect scientific and technical methodology and approach throughout
- Require significant efforts corresponding to the credit requirement
- Include acceptable and measurable deliverables as agreed by both the supervisors and committee members
- Be realizable within two semesters with given knowledge and resources.

Your role

We expect from you to:

- Actively progress through each milestone of your graduation project under the guidance of your supervisor and committee
- Do the real work in the project and submit all requested deliverables at every milestone on time!
- Independently acquire new skills as necessary to cope with new challenges
- Seek advice and feedback from your supervisors and apply changes to improve the quality of your work in every milestone.

Our role

We will help you by:

- Tacking your progress and helping with problems.
- Organizing weekly meetings to guide you.
- Providing necessary resources and support when needed.
- Promoting good projects to be showcased in events.

Weekly Meetings

- Your team should meet with your supervisor every week.
- The attendance of this meeting is obligatory following the university attendance policy of lectures of regular courses. If you are absent twice you get 1st warning, 3 times 2nd warning, then the course is withdrawn.
- If you have a medical condition you should submit an official excuse for absence.

Project Roadmap: 7th Semester

AIE493/CSE493: Graduation Project 1

Pre-registration: Now

Initial Proposal Presentation: Week 2

Milestone 1: Week 4

Milestone 2: Week 6

Midterm Presentation: Week 8

Milestone 3: Week 10

Milestone 4: Week 12

Final Report: Week 14, Final Presentation + Demo: Week 15

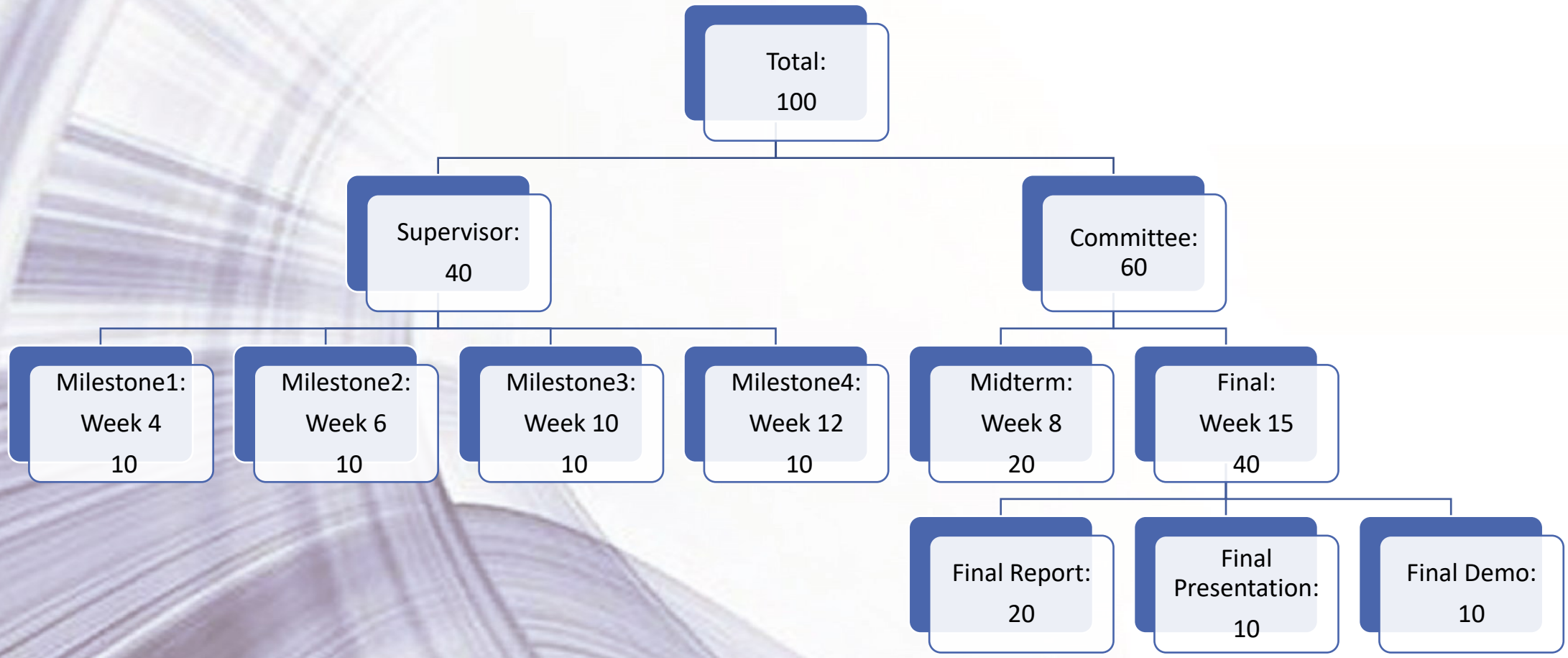
If you fail to meet any deadline without prior delay approval, the supervisors and the committee members reserve the right to deduct grades according to the severity of the delay.

Project Roadmap: 7th Semester

Project Proposal

- 4 milestones for project proposal + Midterm/Final
- At the end of each milestone, you will submit a report and make a presentation to your supervisor including a prototype demo.
- At the midterm and final presentation you will present in front of the committee:
  - Present your idea, clarify the project motivation, problem statement, define the project scope, requirements and expected outcomes + show a demo.
  - Analyze alternative solutions and justify your choices.
  - Follow the recommended formatting and style in preparing their reports and presentations using the prescribed templates and check the grading rubrics.
- At the end of this semester, you should have a comprehensive analysis and design of your project **+ show a first prototype.**
- **Check Report, Demo and Presentation Rubrics for Requirements**

Grading (7th Semester)



Project Roadmap: 8th Semester

Project Implementation

- Same time roadmap in terms of milestones and same main grading weights but may have more rubric weights for implementation.
- During this semester, you should show your ability to implement and evaluate a computer-based solution by using appropriate tools and techniques.
- At the end of this semester, you must provide a complete product that performs all pre-defined functions efficiently.
- Both the supervisors and the committee members will evaluate the final project implementation using relevant evaluation forms.

Minimum Passing Criteria

- The workload should roughly correspond with credit-hour multiplied by the number of students in the group.
- The achievement and deliverables should be acceptable by both the supervisor and the committee members.
- The project comprises of original work with no evidence of plagiarism and other academic misconducts.

(Project will be awarded grade F if plagiarism or any other academic misconduct can be proven with enough evidence!)

Copyright and IP

- At the completion of the graduation project, you are required to return all university properties back to your supervisor. You must also submit all deliverables and outputs of the projects (software, hardware and data used and produced by the project; source codes with carefully written readme or how-to instructions, etc.) so that others can easily reproduce your work or reuse all or part of their work in future.
- You should copy the final version of your report and presentation on a CD and pass it to the supervisor for electronic archival.
- Any tangible and intangible benefits (including publications, financial proceeds) from your project should be shared among students, faculty and the university based on the university intellectual property regulations (50% university – 30% students – 20% supervisor) (if industry → according to industrial research collaboration policy)

Helpful Documents

For more details you should check our:

- Graduation Project Handbook
- Report Template
- Evaluation Forms:
  - Supervisor Evaluation Form
  - Report Evaluation Form
  - Presentation Evaluation Form
  - Demo Evaluation Form

Current Suggested Topics

Some topics suggested by CSE faculty members:

- Smart Class Balancer (SCB): A Data Pre-Processing Tool for Imbalanced Datasets
- IAPP: An Intelligent Author Publisher Platform
- TryPy: An Online Platform for Interactive AI Coding Education based on Jupyter Notebooks

+ Suggest your own Topic to get approval

Discussion


thank you