Guidelines for CSE 499 students

Preamble

The Final Year Project/Internship (CSE 499) is a subject that must be completed by final year student as a requirement to receive a Bachelor of Science (BSc) degree in Computer Science and Engineering. In this subject the student will be given one semester to work on a task that is related to their field of interest. Students are expected to do their work independently most of the time. But their progress will be monitored closely by their supervisors. At the end of the project/internship, students should document their work in a thesis which must be hard bounded and submitted to the department.

Aim

The aim of the Project/Internship is to give students opportunity to apply the knowledge that they have gained while studying in ULAB to solve practical engineering problems. By doing so, it is hoped that the students will gain knowledge and experience in solving problems systematically thus when they graduate, they will be ready to work as reliable and productive graduates/engineers.

Objectives for Project Students

Objectives of the Final Year Project for students are:

1. To develop basic skills of research.
2. To have insight into the research methodology and to develop analytical and problem-solving ability in any topics in areas of interest.
3. To acquire skills in reviewing appropriate and relevant literature from research materials such as books, journals, online resources, etc.
4. To achieve the research objectives, formulate problem statements, solve engineering problems and to defend such statements.
5. To act independently in carrying out experimental projects and to analyze primary and secondary data using relevant tools in achieving the objectives within the stipulated time frame.
6. To produce an acceptable research proposal, final year report and technical paper applicable in the specific engineering discipline.

7. To achieve sufficient skills in communication, presentation and writing of a scientific work and to manage time efficiently.

Objectives for Intern Students

Objectives of the Final Year Internship for students are to:

1. To gain industry exposure and learn generic skills to work in industry.

   o To have detail understanding about the organization approach, functionality, services and working methodology.

   o To acquire in-depth knowledge and good understanding about their task, working process, company structure, company services, ethics, etc.

   o To understand his/ her value of work and the aims and objectives of the assigned work.

2. To acquire in-depth knowledge of the tools and technologies used by the intern student. An intern student may not get proper manual or training on the technologies from the company, however, the intern is expected to be self-motivated, independent and take initiative to acquire detailed knowledge of the technologies by studying and familiarizing with the relevant resources. To cite an example, if any intern working in the Bank and using software based on oracle database system, he or she must need to explore and learn in-depth about oracle database.

3. To act effectively as an individual in carrying out project(s) and analyze data using the relevant tools to achieve objectives of the company within project timeframe.

4. To produce an acceptable solution or idea that demonstrate how the present system can be improved or how to make the current system user friendly and involved more automation process, which can be applied in the specific engineering discipline. As for an example, if an intern is using software only for opening bank account for the customer, then she/he may propose an automated system which will replace manual task with the assistance of modern technologies like IoT, apps, website, data science, etc.

5. To achieve sufficient skills in communication, presentation and writing of a scientific work and to manage time efficiently.

Project Report Layout

To construct the title of a thesis:

    I.   Must mirror the content
   II.   Must reflect problem solution
 III.   Usage of technology name in title only needed if technology is novel

Chapter 1:   Introduction
Chapter 2:   Literature review
Chapter 3:   Methodology
Chapter 4:   Proposed System Design (System Development Based) / Experimental setup (Research Based)
Chapter 5:   Results, Testing and Discussion (System development Based)/ Results, Analysis and Discussion (Research Based)
Chapter 6:   Conclusion
References   IEEE style
Appendixes   Uses a Gantt Chart (one Gantt Chart per project per page).   Any of these can be included accordingly: Organizational Chart   Sample of Interview with Questionnaire   Activity Diagram   Use case Diagram   Sequence Diagram   Collaboration Diagram   Entity Relational Diagram   Database Design Diagram   Testing Cases   User Manual   Every appendix must have a title.

Intern Report Layout

To construct the title of a thesis:

    I.   Must mirror the content
   II.   Must reflect problem solution
 III.   Usage of technology name in title only needed if technology is novel
 IV.   Could include the name of organization or company where the internship is conducted

Chapter 1:   Introduction
Chapter 2:   Company Profile (Working Department/ Roles and Responsibilities)
Chapter 3:   Description of the Technologies (Hardware/ Software/ Research Methodology)
Chapter 4:   Description of the Working Project (s)
Chapter 5:   Proposed Project(s) Design
Chapter 6:   Discussion
Chapter 7:   Conclusion
References   IEEE style
Appendixes   Uses a Gantt Chart (one Gantt Chart per project per page).   Any of these can be included accordingly: Organizational Chart   Sample of Interview with Questionnaire   Activity Diagram   Use case Diagram   Sequence Diagram   Collaboration Diagram   Entity Relational Diagram   Database Design Diagram   Testing Cases   User Manual   Every appendix must have a title.

Tips

I. Before starting to write the report, always plan its structure by creating a content outline and get the supervisor to review the outline.

II. It is a good practice to consult with the academic supervisor weekly once (at least) to get their feedback. This will aid in producing a good and relevant report.

III. It is not the task of the supervisor to be the editor or proof-reader. However, the supervisor will examine and comment in details on the drafts provided that the drafts are given to the supervisor well ahead of time.
Do not start writing at the last minute as it will only result in poor quality report.

Evaluation Criteria

1. Midterm presentation of the project/internship has to be presented in front of the panel to evaluate their progress. The attendance is mandatory all CSE 499 students. However, the session may not be marked.

2. An induction session for all CSE 499 students will be conducted by the department. Attendance to this induction session is mandatory for all.

3. The intern/project students are required to face final defense in front of the panel.

Report Check-list By Supervisor

Student Name:

………

Thesis Title:

………

Please check whether the student has compiled with the format of writing that has been set (ULAB Thesis Structure) and check √ on the boxes accordingly.

1. Cover Page with Title	
2. Declaration	
3. Dedication	
4. Certification of Approval	
5. Acknowledgement Page	
6. Abstract	
7. Content Title (including list of Appendices)	
8. List of Tables	
9. List of Figures	
10. List of Acronyms	
11. List of Symbols	
12. Chapters	
13. References	
14. Appendices	

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Name and Signature of the Supervisor with Date