



D Y PATIL
UNIVERSITY
PUNE | AMBI
॥ ज्ञानशीलं जगत् सर्वम् ॥

School of
**Engineering &
Technology**

Department of Computer Engineering/IT/AIDS

Date: 16/08/2023

B.Tech. Sem. VII Mini Project-II Guidelines **For Faculty members and Students**

B.Tech. Mini Project-II and Project can be application oriented and/or will be based on some innovative work in recent technologies like **IoT, Cloud Computing, Web Technologies, Bio-inspired Algorithms, Artificial Intelligence, Machine Learning, Natural Language Processing, Theoretical Computer Science fundamentals**. In Mini Project-II the student will undertake project over the academic year, which will involve the analysis, design of a system or sub system in the area identified earlier in the field of Information Technology and Computer Engineering. The project will be undertaken preferably by a group of 3-4 students who will jointly work and implement the project. The group will select a project based on their internship or Guide can suggest based on recent technologies / Industrial Applications.

Guidelines to Faculty and Students:

- 1) The Head of the department / Project coordinator shall constitute a review committee (preferably same committee needs to carry throughout the year) for project group; project guide would be one member of that committee by default.
- 2) For sponsored projects, an employee of the sponsoring organization may be one of the member of review committee.
- 3) There shall be TWO reviews in Mini Project –II (in Semester-VII) by the review committee.

- 4) The Project Review committee will be responsible for evaluating the timely progress of the projects. It is suggested to evaluate the skills learned by the students in their PBL (in their previous years).
- 5) Student should identify project of enough complexity, which has at least 4-5 major functionalities.
- 6) Student should adopt skills learned in Software Engineering / Software Architecture to identify stakeholders, actors, Architectural Styles etc and write detail problem statement for the system.
- 7) Review committee should finalize the scope of the project.
- 8) If change in project topic is unavoidable then the students should complete the process of Project approval by submitting synopsis along with the review of important papers which should be approved by review committee.
- 9) Every student of the project group shall make presentation on the progress made by them before the committee during each review. Each student/group is required to give presentation as part of review for 10 to 15 minutes followed by a detailed discussion and query session.
- 10) Students need to note down the queries raised during review(s) and comply the same in the next review session.
- 11) The record of the remarks/suggestions of the review committee (project dairy) should be properly maintained and should be made available at the time of university examination.
- 12) Project group needs to present / publish TWO papers (One in each semester, at least one paper should be in SCOPUS/ UGC – Care journal).
 - a) Paper must be checked for Plagiarism by any open software.
 - b) One paper during first semester which includes Literature Survey and Detailed design components of the Project Statement.
 - c) One paper during second semester which includes Methodologies / Algorithms implemented, Results obtained, Analysis of results and conclusion.
- 13) Project report must also be checked for Plagiarism.

- 14) The examinee will be assessed by a panel of examiners of which one is necessarily an external examiner. The assessment will be broadly based on work undergone, content delivery, presentation skills, documentation, question-answers, and report.

Review 1: Synopsis

Points to be covered:

- 1) The precise problem statement/title based on literature survey and feasibility study.
- 2) Motivation, objectives, and scope of the project.
- 3) List of required hardware, software, or other equipment for executing the project, test Environment/tools, cost and software measurement/human efforts in hours.
- 4) System overview- proposed system and expected outcomes.
- 5) Architecture and initial phase of design (DFD).

Review 2: Requirement and Design Specification

Points to be covered:

- 1) User and System Requirements.
- 2) Functional and Non-functional Requirements.
- 3) SRS Document, Writing structures SRS as per Problem Statement.
- 4) Requirement Analysis / Models.
- 5) UML/ER Diagrams.
- 6) Detail architecture / System design/ Algorithms with analysis / Methods / Techniques.
- 7) Need to discuss Design models and Component level designs.
- 8) Detailed Design (DFD levels as per the problem statement).
- 9) At least 30-40% coding documentation with at least 3 to 4 working modules.
- 10) Identification of test to be essential and appropriate (to be implement later).
- 11) Project plan.

Evaluation Criteria:

Following criteria and weightage is suggested for evaluation of Project-Phase I Term Work.

- 1) Originality of Problem Statement: 10% (05 Marks)
- 2) Depth of Understanding the Problem Statement: 10% (05 Marks)
- 3) Concreate Literature Survey with identified gaps in all referred papers: 10% (05 Marks)
- 4) Design and Analysis of Algorithm / Model / Architecture / System: 40% (20 Marks)
- 5) Representation of results using suitable tools like tabulation, graph etc: 10% (05 Marks)
- 6) Presentation Skill: 10% (05 Marks)
- 7) Report preparation and Paper publication: 10% (05 Marks)

Project report contains the details as Follows:

Project report must have:

- i. Certificate from the institute
- ii. Certificate sponsoring organization (If any)
- iii. Acknowledgement
- iv. Abstract
- v. Contents
- vi. List of Abbreviations (As applicable)
- vii. List of Figures (As applicable)
- viii. List of Graphs (As applicable)
- ix. List of Tables (As applicable)

Chapter 1. Introduction and aims/motivation and objectives.

Chapter 2. Literature Survey (with proper citation).

Chapter 3. Problem Statement/definition.

Chapter 4. Software Requirement Specification (In SRS Documentation only).

Chapter 5. Flowchart

Chapter 6. Project Requirement specification.

Chapter 7. Proposed system Architecture.

Chapter 8. High level design of the project (DFD,UML, ER Diagrams).

Chapter 9. System implementation-code documentation: Algorithm style, Description of detailed methodologies, protocols used etc..as applicable.

Chapter 10. Test cases.

Chapter 11. Proposed GUI/Working modules/Experimental Results (Module wise if available) in suitable format.

Chapter 12. Project Plan.

Chapter 13. Conclusions.

Bibliography in IEEE format.

Appendices:

A. Plagiarism Report of Paper and Project report from any open-source tool.

B. Base Paper(s) [If any].

C. Tools used / Hardware Components specifications [If any].

D. Published Papers and Certificates.

Use appropriate plagiarism tools, reference managers, Latex for efficient and effective project writing.

Project Coordinator

HOD CE/IT