Major Project Log Book

Department of Computer Engineering

Terna Engineering College

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Major Project Log Book

Terna Engineering College, Nerul, Navi Mumbai

Department of Computer Engineering

Academic Year: 2024-2025

Class	B.E.VII/VIII	Division:	

Project Title	_____

Project Area	

Group Id	

Sr. No.	College ID	Roll No. *(eg A24)*	Name of the Student	Contact No.	e-mail
1					
2					
3					
4					

Name of the Guide:	
Signature of the Guide	

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering

Institute Vision

To deliver value added quality education to the aspiring students, meeting stringent requirements of the changing technology, industry, business and society as a whole.

Institute Mission

To provide an environment of academic excellence and to adopt appropriate teaching- learning processes to produce competent and skilled engineers ready to meet global challenges.

Department Vision

To produce trained computer professionals who can successfully meet the demands of academia, IT Industry and research by building a strong teaching and research environment.

Department Mission

To provide industry and research oriented quality education to UG and PG students and train them to apply this knowledge for solving real world Problems and make them competitive in the ever-changing and challenging global work environment.

Terna Engineering College, Nerul, Navi Mumbai

Department of Computer Engineering

Program Educational Objectives

1. To prepare students for developing excellence in Professional Career, Research & Development and in Higher Education by having deep understanding of Mathematics, Computing and Engineering principles.

2. To enable students to meet real life challenges, designing appropriate computing systems that are technically sound, economically feasible and socially acceptable in current time changing environment by using modern tools.

3. To encourage, motivate and prepare Learner's for Lifelong-learning.

4. To develop the ability among students to scrutinize the social and human context of computing as it impacts individuals, team work, organizations and society including ethical, legal, security and global policy issues.

5. To train students with innovative ideas, entrepreneurship skills with best learning, teaching and leadership qualities.

PROGRAM OUTCOMES (POs)

Engineering Graduates will be able to:

1. **Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. **Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. **Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. **Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. **Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.

6. **The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. **Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. **Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. **Individual and team work:** Function effectively as an individual, and as a member or leader in 7diverse teams, and in multidisciplinary settings.

10. **Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. **Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

PROGRAM SPECIFIC OUTCOMES (PSOs)

1. Inculcate skills to recognize, analyse the problems related to databases, computing, networks and any other domain specific application and provide solutions.

2. Ability to develop efficient, secure, user friendly and cost-effective software systems.

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering Academic
Academic Year: 2024-2025

Course Outcomes

B.E. Computer Sem. : VII/VIII

Subject : Major Project

Project-I

1. To develop the understanding of the problem domain through extensive review of literature.
2. To Identify and analyze the problem in detail to define its scope with problem specific data.
3. To know various techniques to be implemented for the selected problem and related technical skills through feasibility analysis.
4. To design solutions for real-time problems that will positively impact society and environment.
5. To develop clarity of presentation based on communication, teamwork and leadership skills.
6. To inculcate professional and ethical behavior.

Project-II

1. Implement solutions for the selected problem by applying technical and professional skills.
2. Analyze impact of solutions in societal and environmental context for sustainable development.
3. Collaborate best practices along with effective use of modern tools.
4. Develop proficiency in oral and written communication with effective leadership and teamwork.
5. Nurture professional and ethical behavior.
6. Gain expertise that helps in building lifelong learning experience.

Program Structure for Fourth Year Computer Engineering
UNIVERSITY OF MUMBAI (With Effect from 2022-2023)
Semester VII

Course Code	Course Name	Teaching Scheme (Contact Hours)		Credits Assigned		
		Theory	Pract. Tut.	Theory	Pract.	Total
CSC701	Machine Learning	3	--	3	--	3
CSC702	Big Data Analytics	3	--	3		3
CSDC 701X	Department Level Optional Course-3	3	--	3	--	3
CSDC 702X	Department Level Optional Course-4	3	--	3	--	3
ILO 701X	Institute Level Optional Course-1	3	--	3	--	3
CSL701	Machine Learning Lab	--	2	--	1	1
CSL702	Big Data Analytics Lab	--	2	--	1	1
CSDL 701X	Department Level Optional Course-3 Lab	--	2	--	1	1
CSDL 702X	Department Level Optional Course-4 Lab	--	2	--	1	1
CSP701	Major Project 1	--	6#	--	3	3
Total		**15**	**14**	**15**	**7**	**22**

Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract. & oral	Total
		Internal Assessment			End Sem Exam	Exam. Duration (in Hrs)			
		Test 1	Test 2	Avg					
CSC701	Machine Learning	20	20	20	80	3	--	--	100
CSC702	Big Data Analysis	20	20	20	80	3	--	--	100
CSDC 701X	Department Level Optional Course-3	20	20	20	80	3	--	--	100
CSDC 702X	Department Level Optional Course-4	20	20	20	80	3	--	--	100
ILO 701X	Institute Level Optional Course-1	20	20	20	80	3	--	--	100
CSL701	Machine Learning Lab	--	--	--	--	--	25	25	50
CSL702	Big Data Analytics Lab	--	--	--	--	--	25	25	50
CSDL 701X	Department Level Optional Course-3 Lab						25	-	25
CSDL 702X	Department Level Optional Course-4 Lab	--	--	--	--	--	25	-	25
CSP701	Major Project 1	--	--	--	--	--	50	25	75
Total		--	--	**100**	**400**	--	**150**	**75**	**725**

Course Code	Course Name	Credit
CSP701	Major Project 1	03

Course Objectives:	
The project work facilitates the students to develop and prove Technical, Professional and Ethical skills and knowledge gained during graduation program by applying them from problem identification, analyzing the problem and designing solutions.	
Course Outcomes: Learner will able	
1	To develop the understanding of the problem domain through extensive review of literature.
2	To Identify and analyze the problem in detail to define its scope with problem specific data.
3	To know various techniques to be implemented for the selected problem and related technical skills through feasibility analysis.
4	To design solutions for real-time problems that will positively impact society and environment..
5	To develop clarity of presentation based on communication, teamwork and leadership skills.
6	To inculcate professional and ethical behavior.

Guidelines:

1. Project Topic Selection and Allocation:

- Project topic selection Process to be defined and followed:
    - Project orientation can be given at the end of sixth semester.
    - Students should be informed about the domain and domain experts whose guidance can be taken before selecting projects.
    - Student's should be recommended to refer papers from reputed conferences/ journals like IEEE, Elsevier, ACM etc. which are not more than 3 years old for review of literature.
    - Students can certainly take ideas from anywhere, but be sure that they should evolve them in the unique way to suit their project requirements. Students can be informed to refer Digital India portal, SIH portal or any other hackathon portal for problem selection.

- Topics can be finalized with respect to following criterion:
    - **Topic Selection:** The topics selected should be novel in nature (Product based, Application based or Research based) or should work towards removing the lacuna in currently existing systems.
    - **Technology Used:** Use of latest technology or modern tools can be encouraged.
    - Students should not repeat work done previously (work done in the last three years).

- Project work must be carried out by the group of at least 2 students and maximum 4.
- The project work can be undertaken in a research institute or organization/Industry/any business establishment. (out-house projects)
- The project proposal presentations can be scheduled according to the domains and should be judged by faculty who are expert in the domain.
- Head of department and senior staff along with project coordinators will take decision regarding final selection of projects.
- Guide allocation should be done and students have to submit weekly progress report to the internal guide.
- Internal guide has to keep track of the progress of the project and also has to maintain attendance report. This progress report can be used for awarding term work marks.
- In case of industry/ out-house projects, visit by internal guide will be preferred and external members can be called during the presentation at various levels

2. Project Report Format:

At the end of semester, each group needs to prepare a project report as per the guidelines issued by the University of Mumbai.

A project report should preferably contain at least following details:
- Abstract
- Introduction
- Literature Survey/ Existing system
- Limitation Existing system or research gap
- Problem Statement and Objective
- Proposed System
  - Analysis/Framework/ Algorithm
  - Design details
  - Methodology (your approach to solve the problem) Proposed System
- Experimental Set up
  - Details of Database or details about input to systems or selected data
  - Performance Evaluation Parameters (for Validation)
  - Software and Hardware Set up
- Implementation Plan for Next Semester
  - Timeline Chart for Term1 and Term-II (Project Management tools can be used.)
- References

Desirable

Students can be asked to undergo some Certification course (for the technical skill set that will be useful and applicable for projects.)

3. Term Work:

Distribution of marks for term work shall be done based on following:
- Weekly Log Report
- Project Work Contribution
- Project Report (Spiral Bound) (both side print)
- Term End Presentation (Internal)

The final certification and acceptance of TW ensures the satisfactory performance on the above aspects.

4. Oral and Practical:

Oral and Practical examination (Final Project Evaluation) of Project 1 should be conducted by Internal and External examiners approved by University of Mumbai at the end of the semester.

Suggested quality evaluation parameters are as follows:

- Quality of problem selected
- Clarity of problem definition and feasibility of problem solution
- Relevance to the specialization / industrial trends
- Originality
- Clarity of objective and scope
- Quality of analysis and design
- Quality of written and oral presentation
- Individual as well as team work

Program Structure for Fourth Year Computer Engineering
UNIVERSITY OF MUMBAI (With Effect from 2022-2023)
Semester VIII

Course Code	Course Name	Teaching Scheme (Contact Hours)		Credits Assigned		
		Theory	Pract. Tut.	Theory	Pract.	Total
CSC801	Distributed Computing	3	--	3	--	3
CSDC 801X	Department Level Optional Course -5	3	--	3	--	3
CSDC 802X	Department Level Optional Course -6	3	--	3	--	3
ILO 801X	Institute Level Optional Course -2	3	--	3	--	3
CSL801	Distributed Computing Lab	--	2	--	1	1
CSDL 801X	Department Level Optional Course -5 Lab	--	2	--	1	1
CSDL 802X	Department Level Optional Course -6 Lab	--	2	--	1	1
CSP801	Major Project 2	--	12#	--	6	6
Total		12	18	12	9	21

Course Code	Course Name	Examination Scheme							
		Theory					Term Work	Pract & oral	Total
		Internal Assessment			End Sem Exam	Exam Duration (in Hrs)			
		Test 1	Test 2	Avg					
CSC801	Distributed Computing	20	20	20	80	3	--	--	100
CSDC 801X	Department Level Optional Course -5	20	20	20	80	3	--	--	100
CSDC 802X	Department Level Optional Course -6	20	20	20	80	3	--	--	100
ILO 801X	Institute Level Optional Course -2	20	20	20	80	3	--	--	100
CSL801	Distributed Computing Lab	--	--	--	--	--	25	25	50
CSDL 801X	Department Level Optional Course -5 Lab	--	--	--	--	--	25	25	50
CSDL 802X	Department Level Optional Course -6 Lab						25	25	50
CSP801	Major Project- 2	--	--	--	--	--	100	50	150
Total		--	--	80	320	--	175	125	700

Major Project 1 and 2 :
- Students can form groups with minimum 2 (Two) and not more than 4 (Four)
- Faculty Load : In Semester VII – ½ hour per week per project group
                In Semester VIII – 1 hour per week per project group

Course Code	Course Name	Credit
CSP801	Major Project 2	06

Course Objectives::	
The Project work facilitates the students to develop and prove Technical, Professional and Ethical skills and knowledge gained during graduation program by applying them from problem identification to successful completion of the project by implementing the solution.	

Course Outcomes: Student will able to	
1	Implement solutions for the selected problem by applying technical and professional skills.
2	Analyze impact of solutions in societal and environmental context for sustainable development.
3	Collaborate best practices along with effective use of modern tools.
4	Develop proficiency in oral and written communication with effective leadership and teamwork.
5	Nurture professional and ethical behavior.
6	Gain expertise that helps in building lifelong learning experience.

Guidelines:

1. Internal guide has to keep track of the progress of the project and also has to maintain attendance report. This progress report can be used for awarding term work marks.

2. **Project Report Format:**

   At the end of semester, each group needs to prepare a project report as per the guidelines issued by the University of Mumbai. Report should be submitted in hardcopy. Also, each group should submit softcopy of the report along with project documentation, implementation code, required utilities, software and user Manuals.

   A project report should preferably contain at least following details:
   - Abstract
   - Introduction
   - Literature Survey/ Existing system
   - Limitation Existing system or research gap
   - Problem Statement and Objective
   - Proposed System
     - Analysis/Framework/ Algorithm
     - Design details
     - Methodology (your approach to solve the problem) Proposed System
   - Experimental Set up

- o Details of Database or details about input to systems or selected data
- o Performance Evaluation Parameters (for Validation)
- o Software and Hardware Set up
- o Results and Discussion

- o Conclusion and Future Work

- o References

- o Appendix – List of Publications or certificates

Desirable:

Students should be encouraged -
- o to participate in various project competition.
- o to write minimum one technical paper & publish in good journal.
- o to participate in national / international conference.

3. **Term Work:**

Distribution of marks for term work shall be done based on following:
a. Weekly Log Report
b. Completeness of the project and Project Work Contribution
c. Project Report (Black Book) (both side print)
d. Term End Presentation (Internal)

The final certification and acceptance of TW ensures the satisfactory performance on the above aspects.

4. **Oral & Practical:**

Oral &Practical examination (Final Project Evaluation) of Project 2 should be conducted by Internal and External examiners approved by University of Mumbai at the end of the semester.

Suggested quality evaluation parameters are as following:
a. Relevance to the specialization / industrial trends
b. Modern tools used
c. Innovation
d. Quality of work and completeness of the project
e. Validation of results
f. Impact and business value
g. Quality of written and oral presentation
h. Individual as well as team work

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering
Academic Year 2024-2025

Letter of Acceptance

I undersigned, Prof._____working in department of

Computer Engineering, willing to guide the project titled _____

_____

_____

for the Major Project-I Semester VII /VIII respectively for the academic year 2023-2024

The names of the students are:

Sr. No	Div	Roll No	Name of the Student
1			
2			
3			
4			

_____   _____   _____

(Project Guide)   (Project Coordinator)   (HOD Computer)

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering
Academic Year 2024-2025

Major Project I   CO-PO-PSO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1														
CO2														
CO3														
CO4														
CO5														
CO6														

Major Project II   CO-PO-PSO MAPPING

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1														
CO2														
CO3														
CO4														
CO5														
CO6														

Guide: Prof._____   Signature of the Guide_____

Weekly Attendance and Progress Report

Week No	Date	Roll No	Attendance	Progress / Suggestions	Mapping			Marks / 10	Sign of Guide
					CO	PO	PSO		

Weekly Attendance and Progress Report

Week No	Date	Roll No	Attendance	Progress / Suggestions	Mapping			Marks / 10	Sign of Guide
					CO	PO	PSO		

Weekly Attendance and Progress Report

Week No	Date	Roll No	Attendance	Progress / Suggestions	Mapping			Marks / 10	Sign of Guide
					CO	PO	PSO		

Weekly Attendance and Progress Report

Week No	Date	Roll No	Attendance	Progress / Suggestions	Mapping			Marks / 10	Sign of Guide
					CO	PO	PSO		

Weekly Attendance and Progress Report

Week No	Date	Roll No	Attendance	Progress / Suggestions	Mapping			Marks / 10	Sign of Guide
					CO	PO	PSO		

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering

Academic Year 2024- 2025
Evaluation of UG Major Projects by Internal Experts
Major Project Evaluation I

Group No:_____   Date: _____

Title of the Project: _____

Sr. No	Roll No	Name of the student	Signature
1			
2			
3			
4			

SN	Criteria	Weightage	Roll Numbers				Overall Project Marks
			Student wise Contribution Marks				
1	Clarity of Problem Definition	10					
2	Objectives and Scope	10					
3	Review of Literature & Report on the Investigation	10					
4	Depth of Analysis and Design	10					
5	Software Engineering Standards Followed	10					
6	Relevance of the Project to Industry and Society	10					
7	Implementation tools or status	10					
8	Log book	10					
9	Presentation	10					
10	Questions - Answers	10					
Total		100					

Remarks:_____

Name and Signature of the internal experts

1 Panel Member   2 Panel Member   3 Panel Member   4 Panel Member

_____   _____   _____   _____

Guides Comment: _____

Name and Signature of the Guide _____

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering

Academic Year 2024- 2025
Evaluation of UG Major Projects by Internal Experts
Major Project Evaluation II

Date: _____

Group No:

Title of the project:

Sr. No	Roll No	Name of the student	Signature
1			
2			
3			
4			

SN	Criteria	Weightage	Roll Numbers				Overall Project Marks
			Student wise Contribution Marks				
1	Clarity of Objectives and Scope	10					
2	Depth of Analysis and Design	10					
3	Implementation tools and status	10					
4	User-friendliness of the software	10					
5	Any Standards Followed (Software Engineering Practices)	10					
6	Relevance of the Project to Industry and Society	10					
7	Review Paper Publication Status	10					
8	Presentation and log book	10					
9	Questions – Answers(individual contribution)	10					
10	Certification course and Publications	10					
Total		100					

Remarks:_____

Name and Signature of the internal experts

1 Panel Member   2 Panel Member   3 Panel Member   4 Panel Member

_____   _____   _____   _____

Guide Comments:
Name and Signature of the Guide _____

Terna Engineering College, Nerul, Navi Mumbai
Department of Computer Engineering

Academic Year 2024- 2025
Evaluation of UG Major Projects by Internal Experts
Major Project Evaluation III

Date: _____

Group No:
Title of the project: _____

Sr. No	Roll No	Name of the student	Signature
1			
2			
3			
4			

SN	Criteria	Weightage	Roll Numbers				Overall Project Marks
			Student wise Contribution Marks				
1	Clarity of objective and scope	10					
2	Depth of design	10					
3	Relevance of the project to Industry and Society	10					
4	standards followed and how (Software Engineeringpractices)	10					
5	Implementation status	20					
6	User-friendliness of the software	10					
7	Presentation and Layout	10					
8	Paper Publication / Project Competition Participation	10					
9	Questions – Answers(individual contribution)	10					
Total		100					

Remarks: _____

Name and Signature of the internal experts

1 Panel Member   2 Panel Member   3 Panel Member   4 Panel Coordinator

_____   _____   _____   _____

Guides Comment: _____

Name and Signature of the Guide _____

Terna Engineering College, Nerul, Navi Mumbai

Department of Computer Engineering

Year 2024- 2025

Evaluation of UG Major Projects by Industry Expert
Major Project Evaluation IV

Date:_____

Group No:

Title of the Project: _____

Name of the Guide:_____

Sr. No	Roll No	Name of the student	Signature
1			
2			
3			
4			

SN	Criteria	Weightage	Roll Numbers				Overall Project Marks
			Student wise Contribution Marks				
1	Problem definition	8					
2	Objectives of project / Clarity of scope	10					
3	The existing System/Literature Survey	8					
4	Design, Methodology and Implementation	15					
5	Software and hardware requirements	7					
6	Project Deliverables	10					
7	Academic publication, project competition	15					
8	Relevance of the project to Industry and Society	10					
9	Presentation and Layout	7					
10	Questions – Answers(individual contribution)	5					
11	Students on the project received good supervision	5					
Total		100					

Remarks:_____

Name and Signature of the Industry Expert: _____

Designation and Name of Industry: _____

Guides Comment: _____

Name and Signature of the Guide: _____

Terna Engineering College, Nerul, Navi Mumbai

Certification Course Completion Details

Div, Roll No	Name of the Student	Course Details	Duration

Name and Signature of the Guide: _____

Terna Engineering College, Nerul, Navi Mumbai

Department of Computer Engineering

Academic Year 2024 - 2025

Publication Details

Paper 1: Name of Authors: _____

_____

Title: _____

_____

Name of Publisher: _____

Date of Publication: _____

Volume:_____   Issue: _____

Page Nos.: _____

Paper 2: Name of Authors: _____

_____

Title: _____

_____

Name of Publisher: _____

Date of Publication: _____

Volume:_____   Issue: _____

Page Nos.: _____

Name and Signature of the Guide: _____

Terna Engineering College, Nerul, Navi Mumbai

Department of Computer Engineering Academic
Year 2024 - 2025

TPP / Project Competition Participation Details

Technical paper presentation:

Name of TPP competition: _____

Name of organization: _____

Date of TPP: _____

Title: _____

Name of participants: _____

_____

Prize : _____

Project Competition:

Name of project competition: _____

Name of organization: _____

Date of Project Competition: _____

Title: _____

Name of participants: _____

_____

Prize : _____

Name and Signature of the Guide: _____