MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY,
JAMSHORO, SINDH PAKISTAN

INSTITUTE OF ENVIRONMENTAL ENGINEERING AND MANAGEMENT

FINAL YEAR PROJECT

&

COMMUNITY SERVICE

SECTION

STANDARD OPERATING PROCEDURES

Prepared By

Prof. Dr. Sheeraz Ahmed Memon
Convener FYP Committee
Engr. Waheed Ali Khokhar
Secratary FYP Committee
Engr. Danish Ahmed Khokhar
Member FYP Committee

The Standard Operating Procedures (SOPs) for **Final Year Project I & II** and **Community Service** were discussed during the 8th meeting of the Industrial Advisory Board (IAB), held on November 15, 2023 (Wednesday), at 12:00 PM in the Seminar Hall of the Institute of Environmental Engineering & Management (IEEM). The discussion took place under **Item No. 5** and was formally approved under **Resolution No. 8.5**.

The following members attended the meeting:

1. Prof. Dr. Abdul Razaque Sahito – Director/Convener
2. Prof. Dr. Sheeraz Ahmed Memon – Member
3. Dr. Muhammad Safar Korai – Member
4. Dr. Arshad Memon – Member
5. Mr. Muhammad Ashraf Mallah – Member
6. Mr. Ibtasam Khan – Member
7. Prof. Dr. Abdul Khalique Ansari – Special Invitee
8. Engr. Barkatullah Kandhro – Member/Secretary

CONTENTS

1. INTRODUCTION

The Institute of Environmental Engineering and Management (IEEM) is committed to conducting high-quality research and generating publications that combine robust theoretical knowledge with practical and experimental work. To enhance technical expertise among students and staff, the Institute actively collaborates with industries and firms, fostering research and development initiatives.

In alignment with this commitment, a committee has been established to streamline the process of Final Year Projects (FYPs) and thesis write-ups. This committee consists of a Convener, a Secretary, and a dedicated faculty member, with their primary responsibility being the development of a transparent procedure serving as a guiding framework for students engaged in these academic pursuits.

Creating a Standard Operating Procedure (SOP) is pivotal in achieving this goal. This SOP is a comprehensive guide designed to assist engineering students, faculty supervisors, and project teams at IEEM, MUET, Jamshoro in successfully executing FYPs. The intention is to reduce errors, enhance productivity, and ensure regulatory compliance by providing a standardized framework.

By adhering to these SOPs, the Institute aims to instil cohesion and efficiency within its staff and student body. The procedures act as guidelines and create a cohesive and efficient work environment at IEEM. This coherent approach further supports the Institute's overarching mission of advancing technical expertise through collaborative research and development initiatives.

2. SCOPE AND PURPOSE

The IEEM has a dual-fold scope and purpose. Regarding scope, IEEM is committed to conducting high-quality research and collaborating with industries to advance technical expertise, combining robust theoretical knowledge with practical work. Additionally, IEEM extends its scope to the academic domain, focusing on FYPs and thesis write-ups. A dedicated committee has been established to facilitate these academic pursuits, aiming to develop a transparent procedure as a guiding framework for students. The purpose of IEEM is thus two-pronged: firstly, to contribute to environmental engineering and management through research

and development initiatives, and secondly, to streamline academic processes by creating a SOP. This SOP serves as a comprehensive guide, reducing errors, enhancing productivity, ensuring regulatory compliance, and fostering a cohesive and efficient work environment within IEEM.

3. AIM

This initiative aims to enhance the quality and efficiency of academic pursuits, specifically FYPs and thesis write-ups, within the IEEM. This will be achieved by implementing a SOP that provides a transparent and standardized framework, fostering collaboration and ensuring regulatory compliance.

4. OBJECTIVES

The SOP document has the following objectives:

- Develop a comprehensive SOP for FYPs and thesis write-ups, covering all aspects of project execution.
- Ensure the SOP guides students, faculty supervisors, and IEEM, MUET, Jamshoro project teams.
- Streamline FYP processes to minimize errors, enhance project efficiency, and establish a transparent workflow.
- Strengthen collaboration between IEEM and industries by integrating practical components into academic projects.
- Implement guidelines within the SOP to uphold regulatory standards, ethical considerations, and regular compliance reviews, fostering a cohesive and efficient work environment.

5. DEFINITIONS

5.1. Final Year Project

A Final Year Project (FYP) is a significant academic or research project students undertake in their final year undergraduate studies. It is often a culmination of their educational journey and serves as a capstone experience that integrates and applies the knowledge and skills they have acquired throughout their program of study.

5.2. FYP-I

The term "FYP-I" likely refers to the first part or phase of an FYP conducted during the seventh semester of an academic program.

5.3. FYP-II

"FYP-II" typically refers to the second part or phase of a FYP. The "II" signifies the project's second stage, often conducted in a subsequent semester following the initial phase (FYP-I).

5.4. FYP Group

The term "FYP Group" typically refers to students collaborating on an FYP during their final year of undergraduate. Instead of working individually, students may be organized into groups to tackle a more complex or larger-scale project that benefits from group members' diverse skills and expertise. Each group consists of *not more than 3* students. Group formation must occur early in the 7^{th} semester to allow sufficient time for research and collaboration.

5.5. Supervisor

A supervisor is an individual who provides guidance, mentorship, and oversight to a FYP group. Ensure a good fit between your research topic and the supervisor's expertise. The supervisor should be able to provide guidance and support throughout the research process. Once you've found a suitable supervisor who agrees to mentor your group, formalize the appointment through your department or program's administrative process.

5.6. Co-supervisor

A co-supervisor is an additional individual who shares supervisory responsibilities with the primary supervisor for a particular project or group. The co-supervisor typically works with the main supervisor to guide, mentor, and oversee the progress of the individuals or groups they supervise. In this context, a co-supervisor must be from the *industry or Industrial Advisory Board (IAB)*.

5.7. Sustainable Development Goals

The Sustainable Development Goals (SDGs) are 17 global goals established by the United Nations (UN) in 2015. These goals address various global challenges and guide international efforts towards sustainable development.

5.8. Community Service

"Community service" refers to voluntary, unpaid activities that individuals or groups undertake to address community needs, improve the well-being of others, or contribute to the betterment of society.

5.9. Research Topic

"Research Topic" refers to the specific subject or area of interest that a researcher or a group of researchers aims to investigate, explore, and study. It represents a research project's main focus or theme, guiding the questions asked, the hypotheses formulated, and the methods employed in the research process. The chosen research topic should demonstrate a clear link to Community Service and align with the SDGs.

5.10. Literature Review

A literature review is a critical and systematic analysis of existing scholarly research, articles, books, and other sources relevant to a particular topic or research question. It is a key component of academic and research papers, theses, and dissertations, providing a comprehensive overview of the existing body of knowledge in a given field.

5.11. Research Proposal Development

Research proposal development refers to creating a detailed and well-structured document outlining the plan for conducting a research study. This document is a formal request for approval and support, providing a clear overview of the research project's objectives, methods, significance, and feasibility. Research proposal development is a crucial step in the research process, as it helps researchers clarify their ideas, demonstrate the merit of their study, and secure the necessary resources and approvals.

5.12. Progress Seminar FYP-I

The "Progress Seminar FYP-I" refers to a seminar to assess and discuss students' progress in their FYP-I. It must be held after the mid-term exam of the 7^{th} semester as per the university guidelines.

5.13. Final Seminar FYP-I

A "Final Seminar FYP-I" refers to a culminating seminar held at the end of the first phase (FYP-I) after the final examination of the 7^{th} semester. The Final Seminar FYP-I typically marks the

conclusion of the FYP-I phase, allowing students to present the outcomes, progress, and insights gained during this initial stage of their research or project.

5.14. Progress Seminar FYP-II

The "Progress Seminar FYP-II" refers to a seminar to assess and discuss students' progress in their FYP-II. It must be held after the mid-term exam of the 8th semester as per the university guidelines.

5.15. Final Seminar FYP-II

A "Final Seminar FYP-II" refers to a culminating seminar held at the end of the second phase of a FYP-II after the final examination of the 8th semester. The Final Seminar FYP-II is a platform for students to present their completed research or project work's outcomes, findings, and conclusions.

6. RESPONSIBILITIES

6.1. Director

As the Director of the IEEM overseeing FYPs, the Director has the following responsibilities:

i. The Director is responsible for forming the FYP Committee, which typically comprises three faculty members. It's essential to inform the concerned Dean about the constitution of this committee.
ii. From the FYP Committee, the Director appoints a convener and a secretary. These individuals play essential roles in overseeing the day-to-day operations and coordination of the FYP.
iii. With input from the FYP Committee, the Director approves the Activity Plan for the FYP. This plan outlines the tasks, timelines, and milestones for completing the projects.
iv. The Director is responsible for appointing FYP Examiners for the evaluations conducted at the end of the 7th and 8th semesters. These examiners play a key role in assessing the projects and providing valuable feedback.
v. In case of any discrepancies in the awards given by Supervisors and Examiners, the Director is responsible for resolving these issues. This ensures fairness and consistency in the evaluation process.

vi. The Director is involved in the evaluation process, performing assessments at the end of the 7th and 8th semesters. This may include reviewing project reports, presentations, and other relevant materials.

vii. The Director has the authority to propose changes for improvements in the FYP SOP or any related documents. This contributes to the ongoing enhancement of the program.

6.2. FYP Committee

The FYP Committee plays a significant role in ensuring the success and quality of the FYPs. Here are the responsibilities of the FYP Committee:

i. Develop, execute, oversee, and control the Activity Plan for the FYP, outlining tasks, timelines, and milestones for successful project execution.

ii. Organize and manage an orientation session for FYP students at the end of the 6th semester to provide essential information and guidelines.

iii. Gather project titles and synopses from students and prospective supervisors (faculty members) to facilitate the project selection.

iv. Evaluate project proposals submitted by students and faculty members to ensure they meet the required standards and criteria.

v. Select projects based on technical feasibility, relevance, innovation, and educational value criteria.

vi. Allocate appropriate faculty members as project supervisors based on their expertise and availability.

vii. Address and initiate the resolution of any issues related to FYP, such as changes in project title or group composition.

viii. After approval from the Director, publicize the FYP List on the noticeboard and the departmental webpage.

ix. Allocate necessary resources, including laboratory facilities, equipment, software, and funding, to support project execution.

x. Monitor the progress of each project, ensuring adherence to defined timelines and milestones.

xi. Conduct periodic reviews to assess project adherence to objectives, quality of work, and compliance with standards.

xii. Facilitate collaboration between the department, industry partners, and relevant professional bodies.

xiii. Ensure projects adhere to ethical guidelines and standards relevant to the field of study.

xiv. Promote responsible conduct in research, experimentation, data collection, and project implementation.

xv. Address any ethical concerns or issues that arise during projects and guide students and supervisors in handling them appropriately.

xvi. Ensure proper documentation practices are followed for each project, including proposals, progress reports, and final reports.

xvii. Maintain records of all documents throughout the FYP.

xviii. Continuously assess and improve the FYP process based on feedback from students, supervisors, and industry partners.

6.3. Supervisor/Co-supervisor

The Supervisor/Co-Supervisor assumes a pivotal role by offering guidance and supervision to students engaged in their FYPs. This role is instrumental in mentoring and supporting students throughout the FYP duration. The primary responsibilities of the Supervisor/Co-Supervisor include:

i. Before the projects are allocated, the Supervisor/Co-Supervisor should assist students in refining their project ideas, ensuring they are relevant, feasible, and aligned with the goals of the FYP.

ii. If an Industry Advisor is involved, the Supervisor/Co-Supervisor should maintain regular communication with them to ensure industry relevance, gather insights, and facilitate collaboration between academia and industry.

iii. Submission of project proposals to the FYP Committee is a key administrative responsibility to ensure proper project allocation and approval.

iv. Throughout the project duration, the Supervisor/Co-Supervisor is responsible for providing ongoing guidance to the student groups, covering academic, research, technical, and resource-related aspects.

v. Monitoring and recording attendance ensure that students are actively engaged in the project and can identify any issues or challenges early on.

vi. Regularly checking project progress ensures that students stay on schedule, meet milestones, and adhere to deadlines, promoting a successful project outcome.

vii. Conducting evaluations at specific intervals allows for assessing students' progress and understanding their achievements and challenges.

viii. Ensuring the quality of the final reports and presentations involves reviewing technical content, checking for plagiarism, and ensuring adherence to formatting guidelines. This step is crucial in maintaining academic integrity and the overall professionalism of the projects.

6.4. Industrial Advisor

An Industrial Advisor plays a crucial role in enhancing the practical relevance and industry applicability of a student's FYP. The responsibilities outlined are integral to bridging academic knowledge and real-world industry practices. Let's delve into each responsibility in more detail:

i. Identify and propose real-world problems or challenges the industry faces that align with the academic goals of the FYDP.

ii. Ensure that the suggested problems are currently relevant and offer opportunities for innovative solutions.

iii. Collaborate with students to guide them in the practical implementation of their project in a way that reflects industry standards and best practices.

iv. Work with the academic Supervisor/Co-Supervisor to align project objectives with academic and industry requirements.

v. Offer access to industry-specific data, information, or resources that can aid students in their research and project development.

vi. Ensure the provided data is accurate, up-to-date, and relevant to the project requirements.

vii. Organize visits to relevant industrial sites to give students a firsthand understanding of real-world operations and challenges.

viii. Facilitate interactions between students and industry professionals to encourage networking and exchange of ideas.

ix. Act as a liaison between students and industry representatives, addressing any concerns or questions that may arise during the FYP.

x. Provide insights into industry practices, regulations, and standards that can impact the project.

6.5. FYP External Examiner

The role of an FYP External Examiner is crucial in maintaining academic standards and ensuring the fair and thorough evaluation of students' FYPs. By providing detailed assessments and constructive feedback, the examiner improves educational quality and develops students' research and project management skills. The specific responsibilities of an FYDP External Examiner are

i. Assess the performance of FYP students/groups based on provided rubrics during the evaluations at the end of the 7^{th} and 8^{th} semesters.
ii. Consider various aspects such as project design, implementation, problem-solving, methodology, and other criteria specified in the evaluation rubrics.
iii. Thoroughly examine the FYP Reports submitted by the groups.
iv. Evaluate the formatting of reports, ensuring that they meet academic standards and guidelines.
v. Scrutinize technical content to ensure it aligns with the project objectives and demonstrates high academic rigour.
vi. Assess the quality of English usage, including grammar, spelling, and overall clarity of communication within the reports.
vii. Offer constructive feedback to individual students or groups based on the evaluation, highlighting strengths and areas for improvement.
viii. Guide how students can enhance the quality of their work and address any shortcomings identified during the assessment.
ix. Collaborate with other evaluators and evaluation committee members to ensure a comprehensive and fair assessment process.
x. Engage in discussions regarding students' overall performance and contribute to determining final grades.
xi. Verify that the FYP work submitted is the student's original work and complies with academic integrity standards.

xii. Report any plagiarism or academic misconduct instances if identified during the evaluation process.

xiii. Adhere to the timelines specified for the evaluation process to ensure timely feedback to students and the academic institution.

xiv. Attend the defence presentations of FYP groups, if part of the evaluation process, and actively participate in questioning and discussions.

6.6. FYP Group/Students

The responsibilities outlined for the FYP group or students are crucial for the successful planning, execution, and completion of their project. Let's break down each responsibility:

i. Attend the orientation session arranged by the FYP Committee to get acquainted with the project requirements and guidelines.

ii. Form a group of up to three students to collaborate on the project.

iii. Project Planning:
    a. Identify project objectives,
    b. Define the project scope,
    c. Set realistic timelines and milestones
    d. Develop a project plan outlining tasks, responsibilities, and required resources.

iv. Research and Analysis:
    a. Conduct literature reviews.
    b. Collect and analyze data.
    c. Interpret research findings using appropriate methodologies.
    d. Critically evaluate existing knowledge in the field.

v. Documentation:
    a. Document project work in a clear, organized manner.
    b. Ensure documentation effectively communicates the project work.

vi. Provide regular progress updates to the academic supervisor, industrial advisor (if applicable), and other stakeholders involved in the project.

vii. Actively collaborate and communicate within the project group to achieve specified project objectives.

viii. Efficiently manage time and resources throughout the project.

ix. Professionalism and Ethical Guidelines:
    a. Demonstrate professionalism.
    b. Adhere to ethical guidelines throughout the project.

x. Timely Submission:
    a. Submit the Project Proposal to the Supervisor.
    b. Submit Reports/Presentations at the end of the 7th semester.
    c. Submit the Final Thesis and Presentation for evaluation at the end of the 8th semester.

xi. Thesis Compliance:
    a. Ensure compliance of reports submitted at the end of the 7th and 8th semesters with the prescribed format.
    b. Use proper English.
    c. Maintain originality (similarity index less than or equal to 19 percent).

xii. Appear before examiners to present their work at evaluations conducted at the end of the 7^{th} and 8^{th} semesters.

xiii. Incorporate the comments of supervisors/examiners in the FYP to be submitted to the department.

7. GUIDELINES

7.1. Guidelines for FYP-I Final Seminar

7.1.1. Presentation of Research Work

Requirement: Hard and soft copies of the research work must be presented.

Implication: Students must prepare and submit two tangible documents (hard copy) printed in black and white and an electronic version (soft copy) of their research work. Students typically prepare formal presentations that cover the key aspects of their FYP-I, including the background, objectives, research questions, methods employed and findings up to the FYP-I

7.1.2. Completion of Experimental Work

Requirement: At least 60% of experimental work must be completed by the end of the 7th semester.

Implication: There is a specific expectation for the level of completion of experimental work by a certain point in the academic timeline. This ensures that students make substantial progress in the practical aspects of their research by the specified milestone.

7.1.3. Functional Prototype, Equipment, or Model

Requirement: If there is any prototype, equipment, or model in the research, it must be functional.

Implication: Any physical components of the research, such as prototypes or models, should not only be present but also operational. This emphasizes the importance of practical applicability and functionality.

7.1.4. Examination According to Rubrics

Requirement: The FYP-I will be examined according to the rubrics developed by the department.

Implication: The assessment process will follow the department's specific rubrics or criteria. This ensures a standardized evaluation method and clear expectations for students and evaluators.

7.1.5. Consultation and Incorporation of Comments

Requirement: Comments from the evaluation panel (internal, external, and Director) must be consulted with the supervisor and incorporated into FYP-II.

Implication: After the evaluation, students are expected to review and discuss feedback from the evaluation panel. The comments should be considered during the subsequent phase of the project (FYP-II), indicating a continuous improvement and learning process.

7.2. Guidelines for FYP-II Final Seminar

7.2.1. Presentation of Research Work

Requirement: A soft copy of the research work and 2 hard copies of the thesis draft must be submitted.

Implication: Students typically prepare formal presentations that cover the key aspects of their FYP-II, including the background, objectives, research questions, methods employed, findings, conclusions, and any recommendations for future work.

7.2.2. Completion of Experimental Work

Requirement: 100% of experimental work must be completed by the end of the 8th semester.

7.2.3. Examination According to Rubrics

Requirement: The FYP-II will also be examined according to the rubrics developed by the department.

Implication: The assessment process will follow the department's specific rubrics or criteria. This ensures a standardized evaluation method and clear expectations for students and evaluators.

7.2.4. Consultation and Incorporation of Comments

Requirement: Comments from the evaluation panel (internal, external, and Director) must be consulted with the supervisor and incorporated into the final submission of the thesis.

Implication: After the evaluation, students are expected to review and discuss feedback from the evaluation panel. The comments must be considered in the final thesis submission.

7.3. Guidelines for Thesis Write-up

7.3.1. Understand University Guidelines

Begin by thoroughly understanding and following the university's guidelines for thesis preparation. These guidelines typically cover formatting, structure, and submission requirements.

7.3.2. Citation Style

Follow a standard citation style, such as Harvard, consistently throughout your thesis for all references. Ensure you are familiar with the specific rules and guidelines of the chosen citation style.

7.3.3. Seminar Participation

Attend the seminar organized for thesis writing, formatting, and referencing using software like EndNote or Mendeley. This will help you understand how to effectively use these tools for managing your references.

7.3.4. Research Findings and Conclusions

Focus on presenting your research findings and conclusions clearly and in order. Use appropriate headings and subheadings to enhance the readability of your thesis.

7.3.5. Revision and Editing

Revise and edit your work multiple times for clarity, coherence, and consistency. Check for grammatical errors and typos, and ensure your ideas flow logically.

7.3.6. Formatting According to Guidelines

Format your thesis according to the institution's guidelines. Pay attention to font size, margins, page numbering, and other formatting requirements specified in the guidelines.

7.3.7. Submission Preparation

Prepare your thesis for submission by the specified deadline. Ensure that you have addressed all the requirements mentioned in the guidelines.

7.3.8. Turnitin Report

Attach a Turnitin report to the FYP-II draft. Ensure that the similarity index is less than 19%. Include the Turnitin report on the front pages of the final thesis.

7.3.9. Hard Copies and Soft Copy Submission

Submit a minimum of two hard copies of the final year thesis. One copy should go to the seminar library, and the other to the central library. Include a CD containing the soft copy of the thesis and the presentation.

7.3.10. Incorporate Panel Feedback

Incorporate feedback from the evaluation panel (internal, external, and Director) into your thesis before the final submission. Address their comments and suggestions to improve the overall quality of your work.

7.3.11. Final Submission

Submit the final version of your thesis to your department, following all necessary procedures outlined by the university.

7.4. Guidelines for the Community Services Section

Adding a Community Services Section as an integral component of the final year project was decided. Including a dedicated Community Services Section within the final year project can provide students with opportunities to apply their knowledge and skills to real-world community challenges.

A comprehensive Community Services Section within an educational institution involves defining clear objectives and learning outcomes, establishing criteria and guidelines for project selection and execution, implementing assessment and evaluation mechanisms, allocating resources and support, and aligning the initiative with the institution's broader mission and goals. Here's a breakdown of each aspect:

7.4.1. Objectives and Learning Outcomes

Objectives: The primary goals of the Community Services Section should be to foster social responsibility, civic engagement, and personal growth among students while providing valuable service to the community.

Learning Outcomes: These may include:

- Increased awareness of community issues and needs.
- Enhanced problem-solving and critical thinking skills.
- Improved communication and teamwork skills.
- Increased empathy and cultural sensitivity.
- Enhanced leadership and organizational skills.

7.4.2. Criteria and Guidelines for Project Selection and Execution

Criteria:

- Relevance to community needs.

- Educational value.
- Feasibility and sustainability.
- Safety and ethical considerations.

Guidelines:

- Establish a project proposal and approval process.
- Develop partnerships with local organizations.
- Ensure proper training and supervision for students.

7.4.3. Assessment and Evaluation Mechanisms

Assessment Methods

- Pre- and post-project surveys to measure changes in knowledge, attitudes, and skills.
- Feedback from community partners.
- Portfolio assessments showcasing students' work.

Evaluation Metrics

- Student satisfaction and engagement.
- Impact on the community.
- Academic performance and retention rates.
- Long-term civic engagement of alumni.

Alignment with the Institution's Mission and Goals

- Ensure the Community Services Section aligns with the institution's mission and strategic goals. For example, if the institution emphasizes community engagement and social responsibility, the Community Services Section should be a prominent component.
- Develop key performance indicators (KPIs) demonstrating how the initiative contributes to the institution's mission and goals.

APPENDIX A

RUBRICS OF FINAL YEAR PROJECT -I FOR EXTERNAL EXAMINER, DIRECTOR, INTERNAL EXAMINER AND SUPERVISOR

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	EXTERNAL EXAMINER	Date

Group	**Supervisor**	**Roll No.**	**Topic**	*CLO-1 Introduction to Project 03*	*CLO-2 Literature Review 05*	*CLO-3 Problem Statement & Objectives 05*	*CLO-4 Research Methodology & Work Plan 06*	*CLO-5 Presentation Skills 03*	*CLO-6 Individual/ Teamwork 03*	*Total 25*

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	Director	Date

Group	Supervisor	Roll No.	Topic	*CLO-1 Introduction to Project 03*	*CLO-2 Literature Review 05*	*CLO-3 Problem Statement & Objectives 05*	*CLO-4 Research Methodology & Work Plan 06*	*CLO-5 Presentation Skills 03*	*CLO-6 Individual/ Teamwork 03*	*Total 25*

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	INERNAL EXAMINER	Date

Group	Supervisor	Roll No.	Topic	*CLO-1 Introduction to Project 03*	*CLO-2 Literature Review 05*	*CLO-3 Problem Statement & Objectives 05*	*CLO-4 Research Methodology & Work Plan 06*	*CLO-5 Presentation Skills 03*	*CLO-6 Individual/ Teamwork 03*	*Total 25*

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	Supervisor	Date

Group	Supervisor	Roll No.	Topic	*CLO-1 Introduction to Project 03*	*CLO-2 Literature Review 05*	*CLO-3 Problem Statement & Objectives 05*	*CLO-4 Research Methodology & Work Plan 06*	*CLO-5 Presentation Skills 03*	*CLO-6 Individual/ Teamwork 03*	*Total 25*

APPENDIX B

RUBRICS OF FINAL YEAR PROJECT -II FOR EXTERNAL EXAMINER, DIRECTOR, INTERNAL EXAMINER AND SUPERVISOR

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	EXTERNAL EXAMINER	Date

Group	**Supervisor**	**Roll No.**	**Topic**	*CLO-1 Individual/ Teamwork 03*	*CLO-2 Analysis of Results & Discussion 06*	*CLO-3 Conclusion & Recommendation 03*	*CLO-4 Organization & Content of Manuscript 04*	*CLO-5 Presentation & Delivery 03*	*CLO-6 Viva Voce 06*	*Total 25*

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	Director	Date

Group	Supervisor	Roll No.	Topic	*CLO-1 Individual/ Teamwork 03*	*CLO-2 Analysis of Results & Discussion 06*	*CLO-3 Conclusion & Recommendation 03*	*CLO-4 Organization & Content of Manuscript 04*	*CLO-5 Presentation & Delivery 03*	*CLO-6 Viva Voce 06*	*Total 25*

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	INERNAL EXAMINER	Date

Group	Supervisor	Roll No.	Topic	*CLO-1 Individual/ Teamwork 03*	*CLO-2 Analysis of Results & Discussion 06*	*CLO-3 Conclusion & Recommendation 03*	*CLO-4 Organization & Content of Manuscript 04*	*CLO-5 Presentation & Delivery 03*	*CLO-6 Viva Voce 06*	*Total 25*

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO	
	Supervisor	Date

Group	Supervisor	Roll No.	Topic	*CLO-1 Individual/ Teamwork 03*	*CLO-2 Analysis of Results & Discussion 06*	*CLO-3 Conclusion & Recommendation 03*	*CLO-4 Organization & Content of Manuscript 04*	*CLO-5 Presentation & Delivery 03*	*CLO-6 Viva Voce 06*	*Total 25*

APPENDIX C

RUBRICS OF COMMUNITY SERVICES COURSE

Students will be able to	Mastering 4	Advancing 3	Developing 2	Beginning 1
Value Diversity of Communities and Cultures	Demonstrates evidence of adjustment in own attitudes and beliefs as a result of working within and learning from diverse communities and cultures. Promotes others' engagement with this deffering perspectives.	Reflects on hwo own attitudes and beliefs are different from those of other cultures and communities. Exhibits curiosity about what can be learned from diverse communities and cultures.	Demostrates awareness that own attitude and beliefs are different from those of other cultures and communities. Exhinits little curiosity about what can be learned from those with differing perspectives.	Expresses attitudes and beliefs from a one-sided personal view. Is indifferent or resistant to what can be learned from those with differing perspectives.
Make Connections between New Knowledge and Community Experiences	Connects and extends knowledge from co-curricular and curricular experiences to community engagement and to their participation in the community.	Analyzes knowledge (facts, theories, etc.) from co-curricular and curricular experiences making relevant connections to community engagement and to their participation in the community.	Begins to connect knowledge (facts, theories, etc.) to community engagement and to their participation in the community.	Begins to identify knowledge (facts, theories, etc.) that is relevant to community engagement and to their participation in the community.
Understand Civic Identity and Commitment	Provides evidence of experience in community engagement activities and describes what they've learned about themselves in relations to a reinforced and clarified sense of civic identity and continued commitment to public action (i.e. active citizen).	Provides evidence of experience in community engagement activities and describes what they've learned about themselves in relations to a growing sense of civic identity and commitment (i.e. conscientious & committed citizen).	Provides evidence that involvement in community engagement activities is generated from a well-intentioned place, but not a well informed place. Does not connect experiences to a sense of civic identity (i.e. volunteer type status).	Provides little evidence of experience in community engagement activities and does not connect experiences to civic identity (i.e. a membership status – not concerned with own role in community, social issues).
Complete Community Action and Reflection	Demonstrates independent experience with and shows initiative in leading group process for complex or multiple community engagement activites, accompanied by reflective insights or analysis about the aims and accomplishments of one's actions. Demonstrates ability and commitment to collaboratively work across and within community contexts and structures to impact change.	Demonstrates independent experience with and participates actively in the group process for community engagement activites, with reflective insights or analysis about the aims and accomplishments of one's actions. Demonstrates ability and commitment to work actively within community contexts and structures to impact change.	Participations in some community focused actions and begins to reflect or describe how these actions may benefit individual(s) or communities. Demonstrates experience identifying intestional ways to participated in community contexts and structures.	Exeriments with some community activities but shows little internalized understanding of their aims or effects and little commitment to future action. Experiments with community cotnexts and structures (i.e. tries out a few to see what fits).

	MEHRAN UNIVERSITY OF ENGINEERING AND TECHNOLOGY, JAMSHORO				
	INSTITUTE OF ENVIRONMENTAL ENGINEERING AND MANAGEMENT				
Subject	**COMMUNITY SERVICES**		**Date**		
Code	**EE405**	**Batch**		**Semester**	**8th**

Group	Supervisor	Roll No.	Topic	Remarks

FYP Committee Coordinator
IEEM, MUET, Jamshoro

Director,
IEEM, MUET, Jamshoro

INSTITUTE OF ENVIRONMENTAL ENGINEERING & MANAGEMENT

19EE FINAL YEAR PROJECT – II (FYP -II)

COMMUNITY SERVICE EVALUATION

WEDNESDAY

Project Title			
Supervisor Name (s)			
Students (Group 1)			
Students should be able to	**Unsatisfactory**	**Average**	**Satisfactory**
Value Diversity of Communities and Cultures			
Make Connections between New Knowledge and Community Experiences			
Understand Civic Identity and Commitment			
Complete Community Action and Reflection			
Remarks			

Supervisor **Director** **External Examiner**