

Module Title	: Project Work
Module Code	: PRW404
Programme	: B.E. Power Engineering
Credit	: 36
Module Tutor	: All tutors of Department of Electrical Engineering
Module Coordinator	: Mr. Hemlal Bhattarai

General Objective

This module will expose the students to the processes of conceptualization of engineering problem through proper planning, designing, resources mobilization, execution and result verification. It will enable the students to integrate and consolidate the conceptual knowledge acquired through theory, and practice the skill in executing the project work and will develop interpersonal communication skills and managerial skills.

Learning Outcomes

On completion of the module, learners will be able to:

- State/foresee engineering problems.
- Apply proper planning procedures in solving such problems.
- Design small engineering discrete works /projects.
- Relate theoretical concept into practice.
- Develop confidence to work in groups or independently.
- Execute any job from its inception to completion.
- Cite the importance of limit of time compression in this world of today- is able to effectively do jobs within prefixed time limit.
- Learn to quickly respond to changes in the working environment in an agile manner.
- Learn real time monitoring and performance monitoring.
- Demonstrate engineering report writing skills.
- Develop presentation skill

Learning and teaching approach

Student will be made into groups to take up a particular project work of their interest out of many possible areas. The staff appointed as Instructor and Mentors will provide timely guidance and supervise the students.

Contact	: 3 hour/week
Individual works	: 7 hour/week

Learning Objectives

- Critically review the philosophy and principles underpinning PBL to work on real life problems.
- Lead, collaborate and work in a multi-cultural multi-disciplinary team environment

- Apply proper planning procedure in solving problems creatively.
- Disseminate research skills.
- Design small scale engineering discrete works/prototypes.
- Relate theoretical concept into practice through findings.

Assessment approach: (Details shown in Table)

Continuous assessment : 75 marks
Semester End : 25 marks

Note: Refer assessment format for project work for details.

Roles and Responsibilities:

Instructors

- Minimized lecture sessions in order to facilitate student-centred learning (PBL process)
- Encourage students to explore challenges in learning
- Play the role of supervisor/guide.
- Listen to students attentively to their challenges and also fund that are taking place in the team.
- Ask questions that triggers students thinking
- Challenge students to think critically thereby enabling students to link theoretical knowledge with real life problems.
- Evaluate and validate resources required by the students.
- Facilitate a platform for students to debate over major issues and provide reflections on their learning.

Mentors

- Act as link between students and instructors
- Encourage equal participation from all the stakeholders
- Be logical in composing the team
- Make the team to set clear action plan
- Ensure all the teams to be on the same boat.
- Ensure timely feedback from tutor/student.
- Ensure that all logistics are put in place.

Support Staff:

- Where applicable, e.g., Laboratory Technicians/Assistants if the use of laboratory is required. Administrative staff for logistic arrangements etc.

Subject matter:

Problem Identification and Preparation phase

Part A: Orientation/information disseminations (Week 1 – 2)

- Awareness
- Motivation
- Interdisciplinarity

Part B: Group formations/allocation of responsibilities (Week 1 – 2)

- Report writing
- Evaluation process

Part C: Topic selection (Week 3)

- Brain storming
- Problem identification

Part D: Demonstration/Site visit based on selected topics (Week 3 – 4)

- Observations
- Review the status
- Feasibility analysis of the topic/ Amendment of topic if required
- Work distribution

Part E: Proposal presentations to the department (Week 5)

- Methodology
- Time line/work plan/Amendment
- Learning outcome
- Finalizations

Part F: Literature review / Feasibility study (Week 5 – 6)

- Understanding background concept
- Review of earlier work

Part G: Course work implementation (Week 6 onward)

- Design, simulate/fabrication/prototyping/modelling/analyzing

Part H: Progress presentations/reporting (Week 8, 11, 18 & 25)

- Evaluation of students' ongoing work
- Feedback on contents/ presentation/ reporting

Part I: Finalization of course work (Week 28)

- Preparation and finalization
- Final report including prototype / model/simulation
- Conference paper
- Evaluation of students' project report/prototype/model by panel members

Table –: Project Marking Scheme

Areas to be evaluated		Marks
CA		75.00
1	Regular Work [By project Instructor and Mentor (s)]	60.00
	i Actual work involvement	10.00
	ii Team spirit & work culture	5.00
	iii Conceptual understanding	5.00
	iv Analysis & interpretation capability	10.00
	v Literature Review	5.00
	vi Planning & execution/ compliance in carrying out Instructor and Mentors instruction	5.00
	vii Time Management	5.00
	viii Technical writing skills	10.00
	ix Conference paper writing	5.00
2	Mid Term Review	15.00
Semester End		25.00
3	Report Evaluation	10.00
	i Theme of the project/ originality of the idea	2.00
	ii Realisability/ Practicality	1.50
	iii Format & presentation/description style	1.00
	iv Abstract/ Introduction	0.50
	v Reasons for specific mode of implementation	1.50
	vi Information content	2.00
	vii Conclusion/ analysis & finding	1.50
4	Presentation	15.00
	i Introduction	1.50
	ii Presentation Techniques	1.50
	iii Content	1.50
	iv Language	1.50
	v Confidence	1.50
	vi Response to questions	7.50
Total Marks		100

Evaluation Team and Methodology:

- Peer feedback and Instructor and Mentors' evaluation.
- Presentation and panel members evaluation.
- Report evaluation by relevant department(s).

Final deliverables and Dissemination Events:

- Proposal presentations,
- mid-term review,
- presentations,
- final report,

- posters,
- conference papers, and
- prototypes where applicable.

Reading list:

All the relevant reading materials from library, Internet or from any other sources.

Date: October, 2020.

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