Scheme for VIII Semester B.E. (Mechanical Engineering)

S No	Course		Course Title	Teaching Department	Teaching hours/week			Examination				Credits
	Type	Code			Theory Lecture L	Tutorial T	Practical/Drawing P	Duration in Hours	CIE Marks	SEE Marks	Total marks	
1.	Proj	MVJ20MEP81	Project Phase-2	ME				3	50	50	100	8
2.	Int	MVJ20MEI82	Internship	ME				3	50	50	100	3
3.	Sem	MVJ20MES83	Seminar	ME				3	50	50	100	1
4.	CRT	MVJ20MEC84	Certification	Industry/Institute								2
				Total	-	-	-	9	150	150	300	14

Note: 1. **PCC: Professional Core Course , PE: Professional Elective, OE: Open Elective, Proj: Project Work, Int.: Internship, Sem : Seminar, CRT: Certification Course (Can be carried out during the program period but same will reflect in the final semester grade card).**

2. The certification course of a minimum duration of 30 hours completed by the students will be considered for 2 credits, and reflected in VIII semester.

Course Title	PROJECT PHASE-2	**Semester**	VIII
Course Code	MVJ20MEP81	**CIE**	50
Total No. of Contact Hours	-	**SEE**	50
No. of Contact Hours/week	-	**Total**	100
Credits	8	**Exam. Duration**	03 Hrs

Course Learning Objectives:

- To provide an opportunity and atmosphere in which students may test theory learned in the classroom in an actual working situation and discover the value of work and the rewards of accomplishment.
- As a part of a team, the students will make a project, that emphasizes, hands-on experience, and integrates analytical and design skills.
- To provide an opportunity to the students to apply what they have learned throughout the course of graduate program by undertaking a specific problem.

Sl. No	PHASES FOR PROJECT WORK
1	Introduction and Problem Definition
2	Summary of literature survey
3	Formulation of revised project objectives
4	Proposed Methodology and implementation
5	Results and discussion
6	Project report documentation
7	Oral presentation

Course outcomes:	
CO1	Perform literature review on par with international journal standards
CO2	Identify literature gap and define the problem.
CO3	Design experiments scientifically/perform numerical analysis/develop analytical models and interpret the results and apply advanced tools/techniques for solving the problem.
CO4	Compile the results, discuss the findings and draw the conclusions for the project.
CO5	Prepare quality document of project work.

Reference Books:	
1.	J. P. Holman, "*Experimental Methods For Engineers*", McGraw-Hill Companies, Eighth edition, 2012.
2.	Prasanna Chandra, "*Projects- Appraisal, Preparation, Budgeting and Implementation*", McGraw-Hill Companies, 1987.
Scheme of Examination:	

1.	Relevance of the topic: 10 marks
2.	Report: 20 marks
3.	Evaluation by Guide: 25 marks
4.	Presentation: 30 marks
5.	Viva – Voce: 15 marks

CO-PO Mapping												
CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	1	1	1	2	2	2
CO2	2	2	2	2	3	2	1	1	1	2	2	2
CO3	2	2	2	3	3	2	1	1	1	2	2	2
CO4	2	2	2	3	3	2	2	1	1	2	2	2
CO5	2	2	3	3	3	2	2	1	1	2	2	2

High-3, Medium-2, Low-1

Course Title	INTERNSHIP	Semester	08
Course Code	MVJ20MEI82	CIE	50
Total No. of Contact Hours	-	SEE	50
No. of Contact Hours/week	-	Total	100
Credits	03	Exam. Duration	3hrs

Course objective is to:

- Get an inside view of an industry and organization/company
- Gain valuable skills and knowledge
- Make professional connections and enhance student's network
- Get experience in a field to allow the student to make a career transit

Guidelines

1. Students have to undergo this training for a period of 6 weeks (minimum) during the vacation between even and odd semesters of II and III year or III and IV year.
2. Those students who are unable to complete during these periods will have to undergo the internship after VIII semester and VIII semester grade card will be issued only after the successful completion of internship by that student
3. The department shall nominate a faculty as a mentor for a group of students to prepare and monitor the progress of the students
4. The students shall report the progress of the internship to the mentor/guide at regular intervals and may seek his/her advice.
5. After completion of Internship, students shall submit a report to the department with the approval of both internal and external guides/mentors.
6. Evaluation of Internship shall be conducted during VIII semester by internal and external examiners for 100 marks.
7. The external examiner shall be from the industry where the student carried out the internship. In case of non-availability of external examiner, the concerned head of the department shall appoint an external examiner from the nearby college or a senior faculty member from outside the department in consultation with respective BOE and approved by Principal
8. The internship carries three credits. A student has to get a minimum of 40% marks for a pass. If the student fails to complete the same then internship has to be repeated in its entirely
9. The breakup of marks for the evaluation of training is as in table.

Evaluation by the supervisor under whom the training was carried out	25 marks
Evaluation by DSEC	
i. Relevance of the Field training/Industrial Internship	10 marks
ii. Report	25 marks
iii. Evaluation	40 marks
Total	100 marks

Course outcomes:

CO1	To experience a 30 days' internship training, enabling the student for onsite visits, study projects and practical training.
CO2	To develop a skill for handling multiple situations, practical problems, analysing team work and communication abilities
CO3	To integrate theory with practice and carry out performance objectives on strong work ethics, persistence, adaptability and critical
CO4	To analyse work environment and create solution to problems.
CO5	To build a record of work experience and construct a good relationship with the employers.

Reference Books:

1.	T1.Pamela Myers Kiser, "Human Services Internship: Getting the Most From Your Experience", Cengage Learning, 4th Edition, 2016. (ISBN13: 978-1305087347)
2.	T3.H. Frederick Sweitzer, "Successful Internship", Brooks/Cole Publishing Co., 5th Edition, 2019.
3.	R1. Bill Hobbs, Zach Schleien, "Hacking the Internship Process (Work)", La Plata Press, Paperback, 2017.

CO-PO Mapping

CO/PO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	2	2	2	2	3	2	1	1	1	2	2	2
CO2	2	2	2	2	3	2	1	1	1	2	2	2
CO3	2	2	2	3	3	2	1	1	1	2	2	2
CO4	2	2	2	3	3	2	2	1	1	2	2	2
CO5	2	2	3	3	3	2	2	1	1	2	2	2

High-3, Medium-2, Low-1

Course Title	SEMINAR	Semester	VI
Course Code	MVJ20MES83	**CIE**	50
Total No. of Contact Hours	-	**SEE**	50
No. of Contact Hours/week	-	**Total**	100
Credits	01	**Exam. Duration**	03 hrs

Course Objectives is to:

1. To equip students for making a technical presentation based on a thorough research review on any contemporary area of Engineering and Management fields.
2. Offering the student an opportunity to interact with faculty and peer group and to build the ability to making independent presentation.

STAGES OF SUBJECT SEMINAR

i) Identification of seminar topic related to area of interest in the field of advanced Mechanical Engineering.

ii) Case studies related to selected topics.

iii) Final seminar will start from 6th week of the semester in the department before the Departmental Evaluation Committee constituted by HOD.

iv) The seminar marks are to be awarded by the committee.

v) Students shall submit the seminar report in the prescribed standard format.

COURSE OUTCOMES: On completion of the course, student should be able to:

CO1: Conduct literature survey on a current topic based on peer reviewed literature and identify research gap in the literature

CO2: Develop methodologies to resolve the identified problem(s)

CO3: Develop presentation slides / report arranging the material coherently and discuss the topic with clarity and confidence.

CO4: Summarize the presentation, submit the report and identify scope for further work.

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CO1	3	2	3	3	3	3	2	3	3	3	3	3
CO2	3	3	2	3	3	3	2	3	3	3	3	3
CO3	3	3	3	3	3	3	2	3	3	3	3	3
CO4	3	3	2	1	3	3	3	3	3	3	3	3

High-3, Medium-2, Low-1

SCHEME OF EVALUATION				
	MARKS ALLOTED			
PARTICULARS	MAX MARKS	EVALUATOR 1	EVALUATOR 2	AVERAGE
Report	15			
Relevance of topic with the program	10			
Oral presentation & Etiquette	15			
Viva Voce	10			
TOTAL	50			

Note: All the students are required to be present for the presentations given by individual students.