Department of Industrial and Production Engineering

Scheme of Teaching and Evaluation
(Academic Year 2022 - 2023)

VIII Semester BE

Sl. No	SUBJECT	CREDITS	HOURS/ WEEK			EXAMINATION MARKS		
			L	T	P	CIE	SEE	TOTAL
1	Elective: IV	3	3	0	0	50	50	100
2	Elective: V	3	3	0	0	50	50	100
3	Elective: VI	3	3	0	0	50	50	100
4	Project Phase-II	12	0	0	24	50	50	100
	Total	21	9	0	24	200	200	400

UIP804P	PROJECT PHASE-II	Credits: 12
L : T : P - 0 : 0 : 24		CIE Marks: 50
Total Hours / Week: 24		SEE Marks: 50

UNIT - I	384 Hrs.

Continuous Internal Evaluation (CIE): 50 marks

The CIE will be based on a project diary and two evaluations of 15 marks each .

Continuous Evaluation by guide: 20 marks

Evaluation 1 will include (along with CIE -I):15 marks

- **Design methodology and planning of project work**
- **Description of Concepts and Technical Details**
- **Demonstration and presentation**

Evaluation 2 will include (along with CIE -II):15 marks

- **Incorporation of Suggestions made in the previous review**
- **Discussion and Conclusion**
- **Demonstration and Presentation**

Evaluation by Guide will include:

- **Technical Knowledge gained through project work**
- **Regularity and Attendance**
- **Incorporation of Suggestions made in the previous review**
- **Organization and structure of Project Report**

All three evaluation are done by

- **HOD or his Nominee**
- **Guide**
- **Project Coordinator**

Semester End Examination (SEE):50 marks

The evaluation will be based on **project paper, project presentation, viva-voce and report submitted by project associates**. Evaluation committee consists of

- **HOD or his nominee**
- **External Examiner**
- **Project Coordinator**

Rubrics for Project Phase - I and II (VII + VIII Semester)

SEMESTER VII

Rubrics for	Phase	Period (Duration)	Rubric #	Marks	Evaluation by
CIE	Evaluation - I	Before the end of first month in VII semester of BE Program	R1	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
	Evaluation - II	Before 15 days from the last working day of VII semester of BE Program	R2	15	
	Evaluation by guide	In the last week of working days of VII semester	R3	20	Guide(s)
SEE	Semester End Examination	During SEE of VII semester of BE Program	R4	50	Committee consisting of HOD/Nominee + Project Coordinator + External Examiner

SEMESTER VIII

Rubrics for	Phase	Period (Duration)	Rubric #	Marks	Evaluation by
CIE	Evaluation - I	Before the end of first month in VIII semester of BE Program	R5	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
	Evaluation - II	Before 15 days from the last working day of VIII semester of BE Program	R6	15	
	Evaluation by guide	In the last week of working days of VIII semester	R7	20	Guide(s)
SEE	Semester End Examination	During SEE of VIII semester of BE Program	R8	50	Committee consisting of HOD/Nominee + Project Coordinator + External Examiner

The evaluation criteria may vary marginally (maximum of 5%) from the perspective of different disciplines but the structure/stages of evaluation and allotted marks for each stage of evaluation in both 7th and 8th semesters must be same for all the branches across the institute.

R1. Synopsis presentation (Before the end of first month in VII semester of BE Program): Total Marks of 15

Evaluation Criteria	Score/Marks			Total Marks	Evaluation By
	Poor (Needs improvement) (1)	Average (Acceptable) (3)	Very good (Proficient) (5)		
Motivation and Rationale behind the work	Less motivated and has less desire to achieve a goal, accomplish a task, or work Need for the process /product which offers viable solutions to accomplish a work towards expectations in a challenging and interesting area is not good	Moderately motivated and has some interest to achieve a goal, accomplish a task, or work Need for the process /product which offers viable solutions to accomplish a work towards expectations in a challenging and interesting area is okay and acceptable	Highly motivated and desirous to achieve a goal, accomplish a task, or work Need for the process /product which offers viable solutions to accomplish a work towards expectations in a challenging and interesting area is good	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s) Each will evaluate for 15 marks and average of all three is the marks awarded
Literature review	Less technical papers are reviewed and less relevant	Few technical papers are reviewed and moderately relevant	At least 3 technical papers from reputed journals are made and reviews are quite relevant to the project work		
Presentation	Slides contain some errors, Not legible, flow is okay, body language is minimal, Response to the audience questions and comments are not good	Slides are error free, flow is good, body language is acceptable, Responds to the audience questions and comments	Slides are error free, quite legible, flow is good, body language is good, Responds accurately to the audience questions and comments		

R2. Internal Evaluation (Before 15 days from the last working day of VII semester of BE Program): Total Marks of 15

Evaluation Criteria	Score/Marks			Total Marks	Evaluation By
	Poor (Needs improvement) (1)	Average (Acceptable) (3)	Very good (Proficient) (5)		
Proposed design methodology	Division of problem into modules but improper selection of design approaches and design methodology and not properly justified	Division of problem into modules with proper selection of design approaches and design methodology but not properly justified	Division of problem into modules and good selection of design approaches, appropriate design methodology with proper justification	15	Committee consisting of HOD/Nominee + Project Coordinator + Guide(s)
Preliminary/Conceptual Design work	Very less efforts are made towards preliminary and conceptual design works to accomplish the work	Efforts are made towards preliminary and conceptual design works to accomplish the work but some are not clear	Preliminary and conceptual design works are carried and are in proper direction to accomplish the project work		Each will evaluate for 15 marks and average of all three is the marks awarded
Presentation and Report	Slides are not organized, and Question-answer is poor, report has errors and not systematic	Slides are good but not neatly arranged, delivery is good, Question-answer is average Report is not organized systematically	Slides are neat, delivery is good, Question-answer is very good, gestures and body languages are perfect Report is organized, and is according to the specified format References and citations are appropriate		

R3. Evaluation by the guide (In the last week of working days of VII semester): Total Marks of 20

Evaluation Criteria	Score/Marks			Total Marks	Evaluation By
	Poor (1)	Average (3)	Excellent (5)		
Objectives and Feasibility study	Many possible objectives are left out and very few are stated Design steps are not feasible to accomplish all the objectives	Some objectives are stated clearly and some possible objectives are left out Design steps are less feasible to accomplish all the objectives	All the objectives are clearly and neatly stated Design steps to be followed to solve the defined problem are feasible to accomplish all the objectives	20	Guide(s)
Survey and Problem identification	Topics are surveyed randomly and less relevant to societal and environmental problem	Topics are surveyed and not fully relevant to society and environment problem	Extensive survey is made and socially and environmentally relevant problem is identified		
Involvement in the work and ability to work in team	Less involved in the work	Would have involved still more	Sincerely involved in the work and very hard working and has good interest		
Individual Contribution and Peer/Guide interaction	Lesser involvement and contribution Rarely met the guide and met on guide's call	Contributed to the work to some extent Met the guide for interaction and sincere and obedient to the guide's call and suggestions	Good interaction and contributed in a big way Met the guide for interaction and sincere and obedient to the guide's call and suggestions More frequently met the guide for interaction and Sincere and obedient to the guide's call and suggestions		

R4: SEE Evaluation for Project Phase-I (During SEE of VII semester of BE Program): Total Marks of 50

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (4)	Acceptable (Average) (6)	Satisfactory (Good) (8)	Proficient (Excellent) (10)		
Identification of Problem Domain and Detailed Analysis of Feasibility	Moderate explanation of the purpose and need of the project Explanation of the specifications and the limitations of the existing systems not very satisfactory; limited information	Average explanation of the purpose and need of the project; Moderate study of the existing systems; collects some basic information	Good explanation of the purpose and need of the project Collects a great deal of information and good study of the existing systems	Detailed and extensive explanation of the purpose and need of the project	50	HOD/nomination + Project coordinator + External examiner Each will evaluate for 50 marks and average of all three is the marks awarded
Objectives and Methodology of Project Proposal	Only some objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are not specified properly	Incomplete justification to the objectives proposed; Steps are mentioned but unclear; without justification to objectives	Good justification to the objectives; Methodology to be followed is specified but detailing is not done	All objectives of the proposed work are well defined; Steps to be followed to solve the defined problem are clearly specified Detailed and extensive explanation of the specifications and the limitations of the existing systems		
Design Methodology	Partial division of problem into modules and inappropriate selection of computing framework Design methodology not defined properly	Division of problem into modules but inappropriate selection of computing framework Design methodology not defined properly	Division of problem into modules and good selection of computing framework Design methodology not properly justified	Division of problem into modules and good selection of computing framework Appropriate design methodology and properly justified		
Planning of Project Work	Time frame not properly specified	Time frame properly specified, but not being followed	Time frame properly specified but being followed partly	Time frame properly specified and being followed		
Presentation	Contents of presentations are not appropriate and not well arranged Very less eye contact and unclear voice	Contents of presentations are appropriate but not well arranged Eye contact with few people and unclear voice	Contents of presentations are appropriate but not well arranged Satisfactory demonstration, clear voice with good spoken language but eye contact not proper	Contents of presentations are appropriate and well arranged Proper eye contact with audience and clear voice with good spoken language		

R5: Project work progress review-I (Before the end of the first month in VIII semester of BE Program): Total Marks of 15

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Design methodology and planning of project work	Division of problem into modules and improper selection of computing framework Design methodology not properly justified Time schedule is not clear	Division of problem into modules and improper selection of computing framework Design methodology not properly justified Time schedule is specified	Division of problem into modules and good selection of computing framework Design methodology not properly justified, Time schedule is specified	Division of problem into modules and good selection of computing framework, Appropriate design methodology and proper justification Time frame properly specified	15	HOD (or nomination) + Project coordinator + Guide(s) Each will evaluate for 15 marks and average of all three is the marks awarded
Description of Concepts and Technical Details	Inappropriate explanation of the key concepts and poor description of the technical requirements of the project	Incomplete explanation of the key concepts and in-sufficient description of the technical requirements of the project	Complete explanation of the key concepts but in-sufficient description of the technical requirements of the project	Complete explanation of the key concepts and strong description of the technical requirements of the project		
Demonstration and presentation	Contents of presentations are not appropriate and Demonstration not satisfactory	Contents of presentations are appropriate but not well arranged, eye contact with few people and unclear Voice	Contents of presentations are appropriate but not well arranged, satisfactory demonstration, clear voice with good spoken language but eye contact not proper	Good demonstration of work so far carried-out, Contents of presentations are appropriate and well arranged, Proper eye contact with audience and clear voice with good spoken language		

R6: Project work progress review -II (Before 15 days from the last working day of VIII semester): Total Marks of 15

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Incorporation of Suggestions made in the previous review	Some changes are made as per modifications suggested during previous evaluation	All major changes are made as per modifications suggested during previous evaluation	Changes are made as per modifications suggested during previous evaluation and good justification	Changes are made as per modifications suggested during the previous evaluation and new innovations added	15	HOD (or nomination) + Project coordinator + Guide(s)

Each will evaluate for 15 marks and average of all three is the marks awarded |
| Discussion and Conclusion | Results are not presented properly, Project work is not summarized and concluded Future extensions in the project are not specified | Results presented are not much satisfactory, Project work summary and conclusion not very appropriate Future extensions in the project are not specified | Results are presented in good manner, Project work summary and conclusion not very appropriate Future extensions in the project are specified | Results are presented in very appropriate manner, Project work is well summarized and concluded, Future extensions in the project are well specified | | |
| Demonstration and Presentation | Modules are not in proper working form that further leads to failure of integrated system, Contents of presentations are not appropriate and not well delivered Poor eye contact with audience and unclear voice | Modules are working well in isolation and properly demonstrated, Modules of project are not properly integrated, Contents of presentations are appropriate but not well delivered Eye contact with only few people and unclear voice | Each module working well and properly demonstrated, Integration of all modules not done and system working is not very satisfactory, Contents of presentations are appropriate and well delivered, Clear voice with good spoken language but less eye contact with audience | Each module working well and properly demonstrated, All modules of project are well integrated and system working is accurate, neatly presented with proper eye contact with audience and clear voice with good spoken language | | |

R7: Evaluation by the guide (In the last week of working days of VIII semester): Total Marks of 20

Evaluation Criteria	Score/Marks				Total Marks	Evaluated by
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Technical Knowledge gained through project work	Poor knowledge and no awareness related to project	Lacks sufficient knowledge and Awareness	Fair knowledge and awareness related to the project	Extensive knowledge and awareness related to the project	20	Guide(s)
Regularity and Attendance	Irregular and inconsistent in work	Reports to the guide but lacks Consistency	Reports to the guide very often but not very consistent	Reports to the guide regularly and consistent in work		
Incorporation of Suggestions made in the previous review	All major changes are made as per modifications suggested during previous evaluation	All major changes are made as per modifications suggested during previous evaluation	Changes are made as per modifications suggested during previous evaluation and good justification	Changes are made as per modifications suggested during the previous evaluation and new innovations added		
Organization and structure of Project Report	Project report not prepared according to the specified format, References and citations are not appropriate	Project report is according to the specified format but some mistakes, Insufficient references and citations	Project report is according to the specified format, References and citations are appropriate but not mentioned well	Project report is according to the specified format, References and citations are appropriate and well mentioned		

R8: SEE Evaluation for Project Phase - II (During SEE of VIII semester of BE Program): Total Marks of 50

Evaluation Criteria	Score				Total Marks	Evaluation By
	Needs improvement (Poor) (2)	Acceptable (Average) (3)	Satisfactory (Good) (4)	Proficient (Excellent) (5)		
Presentation	Contents of presentations are not appropriate and not well delivered, Poor eye contact with audience and unclear voice	Contents of presentations are appropriate but not well delivered, Eye contact with only few people and unclear voice	Contents of presentations are appropriate and well delivered, Clear voice with good spoken language but less eye contact with audience	Contents of presentations are appropriate and well delivered, Proper eye contact with audience and clear voice with good spoken language	50	HOD/ nomination + Project coordinator + External Examiner

Each will evaluate for 50 marks and average of all three will be taken |
Designs and implementation	Proper design methodology is not followed resulting into poor design , No modern tools are used to implement, Work contributes very less to the world	Proper design methodology is followed, Design lacks, very less modern tools are used to implement, the work contributes to the world in little way	Proper design methodology is followed, Design is done but not perfect, few modern tools are used to implement, the work contributes to the world in some way	Proper design methodology is followed, Design is perfect, Modern tools are used to implement, the work contributes to the world in greater way		
Results and Demonstration	Some of the defined objectives are achieved Modules are not in proper working form that further leads to failure of integrated system	All defined objectives are achieved Modules are working well in isolation and properly demonstrated Modules of project are not properly integrated	All defined objectives are achieved and working well and demonstrated Integration of all modules not done and system working is not very satisfactory	All defined objectives are achieved and evident from the results Each module working well and properly demonstrated All modules of project are well integrated and system working is accurate		
Project report	Project report not prepared according to the specified format References and citations are not appropriate	Project report is according to the specified format but some mistakes In-sufficient references and citations	Project report is according to the specified format References and citations not mentioned well	Project report is according to the specified format References and citations are appropriate and well mentioned		
Viva - Voce	Answered few questions related to design, implementation and applications of project work	Answered some questions related to design, implementation and applications of project work	Answered 80% of the questions related to design, implementation and applications of project work	Answered all the questions related to design, implementation and applications of project work		

DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING
List of Elective form the Academic Year-2023-24

DEPARTMENT ELECTIVES

Sl.	Department Electives	Prerequisites*
1.	Plant Engineering and Industrial Safety	
2.	Non-Destructive Testing	
3.	Materials Management	
4.	Advanced Foundry Technology	
5.	Industrial Robotics	
6.	Management Information System	
7.	Marketing Management	*UIP533N
8.	Automation In Manufacturing	
9.	Concurrent Engineering	
10.	Facility Planning & Design	UIP601C
11.	Computer Integrated Manufacturing	UIP512C,
12.	Composite Materials &Processing	UIP302
13.	Project Management	UIP601C, UIP416C
14.	Non-Conventional Machining Processes	
15.	Supply Chain Mgmt.	UIP416C,
16.	Strategic Management	UIP416C
17.	Total Quality Management	
18.	Just In Time Manufacturing	UIP416C
19.	Business Process Reengineering and Bench Marking	UIP416C
20.	Design of Experiments	UIP513C
21.	Air craft industry and air craft systems	
22.	Interpret Resource Planning	
23.	Engineering Economy	
24.	Hydraulics and Pneumatics	
25.	Simulation and Modelling & Manufacturing Systems	
26.	Value Engineering	

* For fulfilling prerequisites the candidate must have registered at least once for that subject