Shantilal Shah Engineering College, Bhavnagar

Electrical Engineering Department

Subject Valuation Scheme

Branch : Electrical Engineering
Semester : 4th
Subject : DESIGN ENGINEERING I B
Faculty : Prof. M V GOJIYA (course coordinator)

Division/Batch : Electrical/A||
Subject Code : 3140005
Academic Year : 2022-23

Teaching and Examination Scheme:

Teaching Scheme			Credits	Examination Marks					
				Theory Marks			Practical Marks		Total Marks
L	T	P	C	ESE(E)	PA(M)		ESE Viva (V)	PA (I)	
0	0	2	1	00	00	00	80	20	100

For 4th semester, internal Viva-Voce examination will be conducted at the end of the semester by a team of three examiners - One internal guide, one inter/own departmental faculty, one industry expert (industry expert may be optional but recommended).

- Two department level panel will be formed for Viva-Voce examination with member of two laboratory faculty and one internal guide (if internal guide other than laboratory faculty.)

Sr. no.	Particular	Sub-Head Weightage	Co-related CO
1.	**Phase 1: Reverse Engineering (RE)** ✓ Selection of Branch specific component/product/artefact/program ✓ Disassembly/Analysis of the component/product/artefact/program and learning about the topic	15	CO1
2.	**User Feedback based refinement and redesign of the RE topic based on 3rd semester learning** ✓ Understanding of User's need for Reverse Engineering topic and preparation of canvases/framework for this topic (AEIOU, Mind Mapping, Empathy mapping, ideation, productdevelopment) ✓ Prior art search (Two Papers study and summaryreports) ✓ Summary of the learning from Reverse	15	CO2

	Engineeringactivity		
3.	**Phase 2: Pre-Design** ✓ Learning Need Matrix (LNM) and the skill set learnt in this semester sofar ✓ Basic Pre-design calculation which roughly decide size/shape/material requirement/manufacturing process/design specifications/applicablestandards	15	**C03**
4.	**Phase 3: Proof of Concept** ✓ Dirty Mock-ups/ Fast-prototype/ Schematicplan	15	**C03**
5.	**Log book** (Individual completed log book, duly signed by guide regularly) **Continuous Assessment Card** for Internal Evaluation (Complete and duly signed by guideregularly)	10	**CO4**
6.	**Report:** Compilation of work report (process report), Online Certificategenerated through DE Portal, Future action plan, Question and Answer, Communication Skill, Attitude	10	**C04**

Evaluation Scheme for PA (I): (20 marks-Given by Internal Guide)

Marks->	**Reverse Engineering** (Selection of Branch specific tittle and detail study of project)	Preparation of canvases/frame-work and Prior art search	Preparing Learning Need Matrix (LNM) and Pre design calculation	Dirty Mock-ups/ Fast-prototype/ Schematicplan	Continuous Assessment Card	Report
CO1	3					
CO2		5				
CO3			3	3		
CO4					3	

Assessment Type		Attainment Levels
Internal Assessment	Level 1	50% of students scoring more than 50%marks in inter assessment tools
	Level 2	60% of students scoring more than 50% marks in inter assessmenttools
	Level 3	70% of students scoring more than 50% marks in inter assessmenttools

Signature of the Subject Faculty:

(i) Prof. M V Gojiya

Prof & HOD (Electr ll)

Shantilal Shah Engineering College, Bhavnagar
Electrical Engineering Department
Subject Evaluation Scheme

Name of the subject (code): Economics for Engineers (3140911)
Semester/Branch: B.E. 4th Semester, Electrical Engineering
Name of Concerned Department: Electrical Engineering
Name of faculty member/s: (I) Dr. A.B.Parmar/ Dr. T.B. Maniar

→ **GTU Scheme for the subject:**

Teaching Scheme			Credits	Examination Marks				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE (E)	PA (M)	ESE Viva (V)	PA (I)	
03	--	00	03	70	30	00	00	100

→ **Course Evaluation Plan for PA (M) Component: Total marks 30**

Marks	PAT	Case Study/ Assignment/ Presentation
CO1	20	--
CO2		--
CO3		--
CO4	--	10

Assessment Type	Attainment Levels	
Internal Assessment	Level 1	60% of students scoring more than 50% marks in internal assessment tools
	Level 2	70% of students scoring more than 50% marks in internal assessment tools
	Level 3	80% of students scoring more than 50% marks in internal assessment tools

Signature of the faculty members:

Prof & HOD (Electrical)

Dr. A. B. Parmar

Dr. T. B. Maniar

Shantilal Shah Engineering College, Bhavnagar

Electrical Engineering Department

Subject Evaluation Scheme

Name of the subject (code): Electromagnetic Fields (3140912)
Semester/Branch: B.E. 4thSemester (UG), Electrical Engineering
Name of Concerned Department: Electrical
Name of faculty member/s: (i) Prof A A Rathod (ii) Prof M K Bhatt
(iii) Prof S K Patel (iv) Prof B N Vaidya

→ **GTU Scheme for the subject:**

Teaching Scheme			Credits	Examination Marks				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE (E)	PA (M)	ESE(V)	PA(I)	
3	1	2	5	70	30	30	20	

→ **Course Evaluation Plan for PA (M) Theory Component: Total marks 30**

In the test of PA (M) component, for all the students have to appear for PAT/RPAT Theoretical exam.

Marks	PAT
CO1	10
CO2	10
CO3	05
CO4	05

In the test of PA (M) component, for all the students it is mandatory to appear for PAT/RPAT exam. If the student obtains less than 12 marks out of 30 in PAT then subsequently he/she is supposed to appear for a remedial test RPAT and have to clear the remedial test. He /She are eligible to get 12 marks even though the student has obtained marks more than 12 in RPAT.

Course Evaluation Plan for Practical ESE (V) Component: Total marks 30

Marks	Exp-1	Exp-2	Exp-3	Exp-4	Exp-5	Exp-6	Exp-7	Exp-8	Exp-9	Exp-10
CO1	3	3	3							
CO2				3	3	3				
CO3							3	3		
CO4									3	

Rubrics for Electromagnetic Fields -3140912 (Lab)

LEVEL	Excellent	Good	Satisfactory	Need improvement	Score
CRITERIA	1	0.8	0.6	0.4	
Objectives and Results	Clearly describes the Objectives of the Lab as well as the skill information learned. Discusses possible sources of experimental errors, their likely effects and ways to minimize them.	Adequately describes the Objectives of the Lab and the skill information learned. But does not discuss possible sources of experimental errors, their likely effects.	Describes the Objectives of the Lab and information learned, but some details are lacking. Does not describe any experimental errors or describes their likely effects.	Does not adequately describe the Objectives of the Lab, what was learned, or any possible experimental errors.	
Conclusions	Conclusions illustrate a through and accurate understanding of technical concepts underlying the lab. Describes numerous future applications to real life situations and make it clear how they would be useful.	Conclusions illustrate a through and accurate understanding of most concepts underlying the lab. But does not describes skill and information's learned or make it clear how they would be useful.	Conclusions illustrate a limited understanding of concepts underlying the lab. Does not describes skill and information's learned, any possible applications to real life situations, or explain how they could be useful.	Conclusions illustrate an inaccurate understanding of concepts underlying the lab. No meaningful applications to real life situations are describe.	
Trouble shooting	Clearly describe the problems encountered and how they were solved. Problems cited are highly relevant to the purpose of the lab. Appears to use an efficient and effective strategy to solve the problems.	Adequately describe the problems encountered and how they were solved. But may leave some unanswered questions. Problems cited are relevant to the purpose of the lab. Appears to use an effective strategy to solve the problems.	Describe the problems encountered but does not describe how they were solved. Problems cited are only somewhat relevant to the purpose of the lab. Appears to use an effective strategy to solve the problems, but does not do it consistently.	Does not adequately describe the problems encountered or describe how they were solved. Problems cited are not relevant to the purpose of the lab. Really uses an effective strategy to solve the problems.	
Observation/ Measurements	Adequately detailed results are shown for each procedure step. 90-100 % of the steps have no errors. Used time well in lab and focused attention on the experiment.	Adequately detailed results are shown for each procedure step. Almost (80-89 %) of the steps have no errors. Used time pretty well. Stayed focused experiment most of time.	Results are shown for each procedure step, but some details are lacking. Most (70-79 %) of the steps have no errors. Did the lab but did not appear very interested. Focus was lost on several occasions.	Results and/or details are lacking for some procedure step. More than 30 % of the steps have errors. Participation was minimal or student was hostile about participation.	
Questions	90-100 % of the solution steps and explanations have no errors.	Almost all (80-89 %) of the solution steps and explanations have no errors.	Most (70-79 %) of the solution steps and explanations have no errors.	More than 30 % of the solution steps and explanations have errors.	**Total Points :**

Marks obtained in each experiment based on the rubrics criterion will be normalized as per above distribution and mapping of CO.

Course Evaluation Plan for PA (I) Practical Component: Total marks 20

This PA (I) component evaluated by 7 tutorials =20 marks scheme

Marks	Tut1	Tut 2	Tut 3	Tut 4	Tut 5	Tut 6	Tut 7
CO1	3						
CO2		3	3	3			
CO3					3	3	
CO4							2

Assessment Type	Attainment Levels	
Internal Assessment	Level 1	60% of students scoring more than 50% marks in internal assessment tools
	Level 2	70% of students scoring more than 50% marks in internal assessment tools
	Level 3	80% of students scoring more than 50% marks in internal assessment tools

Name & Signature of the faculty members:

(i) Prof. A A Rathod

Prof & HOD
(Electrical)

Shantilal Shah Engineering College, Bhavnagar
Electrical Engineering Department
Subject Evaluation Scheme

Name of the subject: Electrical Machines – I
Subject Code: 3140913
Semester/Branch: IVth Electrical
Name of Concerned Department: Electrical
Name of faculty members: Prof (Dr.) A B Parmar & Prof. Mayur V Gojiya (course coordinator)
GTU Scheme for the subject: Total marks 30

Teaching Scheme			Credits	Examination Marks				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	ESE (E)	PA (M)	ESE Viva (V)	PA (I)	
03	00	02	04	70	30	30	20	150

Course Evaluation Plan for PA (M) Component:

	PA (M) = 30 Marks
COs	**PAT**
CO1	4
CO2	12
CO3	7
CO4	7

Course Evaluation Plan for ESE Viva (V) and PA (I) Component: Total marks 50

Marks	Pract 1	Pract 2	Pract 3	Pract 4	Pract 5	Pract 6	Pract 7	Pract 8	Pract 9	Pract 10
CO1	5									
CO2		5	5							
CO3						5	5	5		
CO4				5	5				5	5

Assessment Type	**Attainment Levels**	
Internal Assessment	**Level 1**	60% of students scoring more than 50% marks in internal assessment tools
	Level 2	70% of students scoring more than 50% marks in internal assessment tools
	Level 3	80% of students scoring more than 50% marks in internal assessment tools

In the test of PA (M) component, if the student obtains less than 12 marks out of 30, subsequently he/she is supposed to appear for a remedial test and having cleared the remedial test he/she is eligible to get 12 marks.

Signature of the faculty

Signature of the HOD

Shantilal Shah Engineering College, Bhavnagar
Electrical Engineering Department
Subject Evaluation Scheme (Even 2022-23)

Name of the subject (code): Power System I (3140914)
Semester/Branch: 4th Semester Electrical
Name of Concerned Department: Electrical
Name of faculty member/s: Prof Astik K Dhandhia

GTU Scheme for the subject:

Teaching Scheme			Credits	Examination Marks				
				Theory Marks		Practical Marks		Total Marks
L	T	P	C	ESE(E)	PA(M)	ESE (V)	PA(I)	
04	00	02	05	70	30	30	20	150

Course Evaluation Plan for PA (M) Component: Total marks 30

Marks	PAT	Assignment 1	Assignment 2
CO1		5	
CO2	7		
CO3	6		
CO4	7		
CO5			5

Course Evaluation Plan for PA (I) Component: Total marks 20

Marks	Exp 1	Exp 2	Exp3	Exp 4	Exp 5	Exp 6	Exp 7	Exp 8	Exp 9	Exp 10	Exp 11	Exp 12	P-1
CO1		1	1	2								1	
CO2					2					2	1		
CO3						2			2				
CO4							2	2					
CO5													2

*P-1=Presentation 1

→ **Rubrics:**

Marks obtained in each experiment based on the rubrics criterion will be normalized as per above distribution and mapping of CO.

Rubrics Criteria	Excellent – 9 to 10	Good –7 to 8	Average –5 to 6	Poor – 1 to 4
1. Conceptual understanding	Excellent conceptual understanding	Good conceptual understanding	Average conceptual understanding	Poor conceptual understanding
2. Circuit Calculation/Simulation/Programming	Calculations/simulation /programming done perfectly with all the necessary steps/graphs/labelling, units of all quantities	Calculations/simulation done perfectly with some missing of steps, steps/graphs/labelling, units of all quantities	Calculations/simulation done with some minor mistakes, missing of steps, steps/graphs/labelling, units of all quantities	Calculations/simulation done incorrectly with some missing of steps, steps/graphs/labelling, units of all quantities
3. Viva/Oral exam performance	Excellent performance	Good performance	Average performance	Poor performance

Assessment Methods	Attainment Levels	
Internal Assessment	Level 1	60% of students scoring more than 50% marks in internal assessment tools
	Level 2	70% of students scoring more than 50% marks in internal assessmenttools
	Level 3	80% of students scoring more than 50% marks in internal assessmenttools

In the test of PA (M) component, if the student obtains less than 8 marks out of 20, subsequently he/she is supposed to appear for a remedial test and having cleared the remedial test he/she is eligible to get 8 marks. Two assignments each of 5 marks are also to besubmitted and final marks out of 30 will be the sum of (i) marks obtained in the test or remedial test whichever the case is and (ii) those of two assignments.

Signature of the faculty member:

Prof A K Dhandhia

Prof. & H.O.D (Electrical)

Shantilal Shah Engineering College, Bhavnagar
Electrical Engineering Department
Subject Evaluation Scheme

Name of the subject (code): Power Electronics (3140915)
Semester/Branch: B.E. 4thSemester (UG), Electrical Engineering
Name of Concerned Department: Electrical Enginnering
Name of faculty member/s: (i) T. B. Maniar (ii) M. D. Solanki

→ **GTU Scheme for the subject:**

Teaching Scheme			Credits	Examination Marks				Total Marks
				Theory Marks		Practical Marks		
L	T	P	C	ESE (E)	PA (M)	ESE(V)	PA(I)	
3	1	2	5	70	30	30	20	150

→ **Course Evaluation Plan for PA (M) Theory Component: Total marks 30**

In the test of PA (M) component, for all the students have to appe[illegible] PAT/RPAT Theoretical exam.

Marks	PAT	Assignment
CO1	05	
CO2	10	
CO3	05	05
CO4		05

In the test of PA (M) component, for all the students it is mandatory to pass PAT/RPAT exam. If the student obtains less than 08 marks out of 20 in PAT exam, subsequently he/she is supposed to appear for a remedial test RPAT and have to clear the remedial test.

Course Evaluation Plan for Practical PA (I) Component: Total marks 20

Marks	Exp-1	Exp-2	Exp-3	Exp-4	Exp-5	Exp-6	Exp-7	Exp-8	Exp-9	Exp-[illegible]
CO1	2		2			–				
CO2		2		2		2				
CO3					2			2	2	
CO4							2			2

Signature of the faculty members
1. Prof. T. B. Maniar – [signature]
2. Prof. M. D. Solanki – [signature]

Signature of HOD

INTERNAL EVALUATION (20 MARKS)

NAME OF COURSE : POWER ELECTRONICS

NAME OF COURSE COORDINATOR: T. B. Maniar

Analytical Scale for rating the performance of student : POOR = 1 AVERAGE =2 GOOD =3 VERY GOOD= 4 EXCELLENT = 5

			Analytical Scale for rating the performance of student				
S.NO.	CATEGORY	PERFORMANCE CRITERIA/ ASSESSMENT PROCESS	POOR	AVERAGE	GOOD	VERY GOOD	EXCELLENT
1	**Objectives and Results**	**Procedures are written as part of pre-lab preparation and clearly state the plan for the experiment. If adjustments are made during the lab, those changes are noted as they occur.**	**The student is not able to explain even the basic concepts of Practical.**	**The student is able to explain the partial amount of the basic concepts of Practical.**	**The student is able to explain the amount of the basic concepts of Practical.**	**The student is able to explain the amount of basic concept of Practical and identify the elements or trainer kit.**	**The student is able to explain the amount of basic concept of Practical and identify the elements or trainer kit and making connection.**
2	**Conclusions**	**Measurements, when required, are recorded as observations, using proper units. Calculations, when required, are clearly shown on the observation side of the lab sheet.**	**The student is not able to collect the data.**	**The student is able to collect the data but not in proper order.**	**The student is able to collect the data in proper order.**	**The student is able to collect the data in proper order but make wrong calculation.**	**The student is able to collect the data in proper order and make correct calculation.**
3	**Trouble shooting**	**Reasoning for the lab design is summarized, listing any facts or assumptions on which the lab is based. The essential data gathered during the lab is summarized.**	**The student is not able to understand the practical.**	**The student is partially able to understand the practical.**	**The student is able to understand the practical but could not summarized on manual.**	**The student is able to understand the practical and could partially summarized on manual.**	**The student is able to understand the practical and could fully summarized on manual.**
4	**Observation/ Measurements**	**The report is written in such a way that others could accurately duplicate the experiment and compare their data. There is a clear diagram of the essential apparatus used in the experiment drawn in the largest available white space on the front of the lab report sheet.**	**The student is not able to make the correct lab report/ manual.**	**The student is able to make the partially correct lab report/ manual.**	**The student is able to make the fully correct lab report/ manual but not draw proper diagram.**	**The student is able to make the fully correct lab report/ manual and draw proper diagram.**	**The student is able to make the fully correct lab report/ manual without copy and draw neat & clean diagram.**