



# **Course File**

**Power System Lab** 

<u>G.SandhyaRani</u> <u>Assistant Professor,EEE Department</u>





#### Course Tittle: Power System Lab

#### Following documents are available in Course File.

S.No.	Points	Yes	No
1	Institute and Department Vision and Mission Statements	J	
2	PEO & PO Mapping	J	
3	Academic Calendar	J	
4	Subject Allocation Sheet	J	
5	Class Time Table, Individual Timetable (Single Sheet)	J	
6	Syllabus Copy	J	
7	Course Handout	J	
8	CO-PO Mapping	J	
9	CO-Cognitive Level Mapping	J	
10	Lecture Notes		
11	Tutorial Sheets With Solution		
12	Soft Copy of Notes/Ppt/Slides		
13	Sessional Question Paper and Scheme of Evaluation	J	
14	Best, Average and Weak Answer Scripts for Each Sessional Exam. (Photocopies)		
15	Assignment Questions and Solutions		
16	Previous University Question Papers		
17	Result Analysis		
18	Feedback From Students	J	
19	Course Exit Survey	J	
20	CO Attainment for All Mids.		
21	Remedial Action.		

#### **Course Instructor / Course Coordinator**

**Course Instructor / Course Coordinator** 

(Name)

(Signatur





#### Vision of the Institute

To be among the best of the institutions for engineers and technologists with attitudes, skills and knowledge and to become an epicenter of creative solutions.

#### **Mission of the Institute**

To achieve and impart quality education with an emphasis on practical skills and social relevance.

#### Vision of the Department

To impart technical knowledge and skills required to succeed in life, career and help society to achieve self sufficiency.

#### **Mission of the Department**

- To become an internationally leading department for higher learning.
- To build upon the culture and values of universal science and contemporary education.
- To be a center of research and education generating knowledge and technologies which lay groundwork in shaping the future in the fields of electrical and electronics engineering.
- To develop partnership with industrial, R&D and government agencies and actively participate in conferences, technical and community activities.



# **GOKARAJU RANGARAJU**

INSTITUTE OF ENGINEERING AND TECHNOLOGY

## Department of Electrical & Electronics Engineering

## **Programme Educational Objectives (B.Tech. – EEE)**

This programme is meant to prepare our students to professionally thrive and to lead. During their progression:

#### Graduates will be able to

- PEO 1: Have a successful technical or professional careers, including supportive and leadership roles on multidisciplinary teams.
- PEO 2: Acquire, use and develop skills as required for effective professional practices.
- PEO 3: Able to attain holistic education that is an essential prerequisite for being a responsible member of society.
- PEO 4: Engage in life-long learning, to remain abreast in their profession and be leaders in our technologically vibrant society.

## **Programme Outcomes (B.Tech. – EEE)**

#### At the end of the Programme, a graduate will have the ability to

- PO 1: Apply knowledge of mathematics, science, and engineering.
- PO 2: Design and conduct experiments, as well as to analyze and interpret data.
- PO 3: Design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability.
- PO 4: Function on multi-disciplinary teams.
- PO 5: Identify, formulates, and solves engineering problems.
- PO 6: Understanding of professional and ethical responsibility.
- PO 7: Communicate effectively.
- PO 8: Broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context.
- PO 9: Recognition of the need for, and an ability to engage in life-long learning.
- PO 10: Knowledge of contemporary issues.
- PO 11: Utilize experimental, statistical and computational methods and tools necessary for engineering practice.
- PO 12: Demonstrate an ability to design electrical and electronic circuits, power electronics, power systems; electrical machines analyze and interpret data and also an ability to design digital and analog systems and programming them.

Programme Educational		Programme Outcomes (POs)										
<b>Objectives (PEOs)</b>	1	2	3	4	5	6	7	8	9	10	11	12
1	Μ	М	-	-	Н	-	-	Н	Н	-	Н	Н
2	-	-	Μ	М	Н	Η	Η	-	-	-	-	Н
3	-	-	-	-	Н	Η	М	Μ	Μ	М	Н	Н
4	-	-	-	Μ	М	Н	Μ	Н	Н	-	М	Н

#### **PEOs & POs Mapping**

\* H: Strongly Correlating (3); M: Moderately Correlating (2)& L: Weakly Correlating (1)

HOD-EEE



Department of Electrical & Electronics Engineering

### GRIET/DAA/1H/G/18-19

## ACADEMIC CALENDAR Academic Year 2018-19

#### III & IV B.TECH - FIRST SEMESTER

S. No.	EVENT	PERIOD	DURATION
1	1st Spell of Instructions	02-07-2018 to 01-09-2018	9 Weeks
2	1 <sup>st</sup> Mid-term Examinations	03-09-2018 to 05-09-2018	3 Days
3	2 <sup>nd</sup> Spell of Instructions	06-09-2018 to 24-10-2018	7 Weeks
4	2 <sup>nd</sup> Mid-term Examinations	25-10-2018 to 27-10-2018	3 Days
5	Preparation	29-10-2018 to 06-11-2018	1 Week 3 Days
6	End Semester Examinations (Theory/	08-11-2018 to 08-12-2018	4 Weeks 3 Days
	Practicals) Regular/Supplementary		
7	Commencement of Second Semester,	10-12-2018	
	A.Y 2018-19		

#### III & IV B.TECH – SECOND SEMESTER

S. No.	EVENT	PERIOD	DURATION
1	1* Spell of Instruction	10-12-2018 to 02-02-2019	8 Weeks
2	1* Mid-term Examinations	04-02-2019 to 06-02-2019	3 Days
3	2 <sup>nd</sup> Spell of Instruction	07-02-2019 to 06-04-2019	8 Weeks 3 Days
4	2 <sup>nd</sup> Mid-term Examinations	08-04-2019 to 10-04-2019	3 Days
5	Preparation	11-04-2019 to 17-04-2019	1 Week
6	End Semester Examinations (Theory/	18-04-2019 to 08-05-2019	3 Weeks
	Practicals) Regular		
7	Supplementary and Summer Vacation	09-05-2019 to 22-06-2019	6 Weeks 3 Days
8	Commencement of First Semester,	24-06-2019	
	A.Y 2019-20		

Dean of Academic Affairs



# Department of Electrical & Electronics Engineering

Department of Electrical and Electronics Engineering

2018-19 II sem Subject Allocation sheet					
GRIET/EEE/05B/G/18-19		30.10.18			
II YEAR(GR17)	Section-A	Section-B			
Managerial Economics and Financial Analysis					
Power Generation and Distrubution	SN	SN			
AC Machines	VVSM	VVSM			
Control Systems	Dr DGP	MS			
Princeples of Digital Electronics	PRK	PRK			
AC Machines Lab	PPK/DSR	PPK/DSR			
Control Systems Lab	MS/PSVD	MS/PSVD			
Analog and Digital Electronics Lab	RAK/DKK	RAK/DKK			
Value Education and Ethics					
Gender Sensitization Lab	MS/PSVD	MS/PSVD			
III YEAR (GR15)					
Computer Methods in Power systems	VVRR/MP	VVRR/MP			
Switch Gear & Protection	PSVD	Dr JSD			
Management Science					
Utilization of Electrical Energy	MRE	MRE			
Non Conventional Sources of Energy					
Neural and Fuzzy Systems					
Sensors&Transducers	UVL	UVL			
Power Systems Lab	GSR/YSV	GSR/YSV			
Advanced English Communications Skills Lab					
Industry Oriented Mini Project Lab	PPK/AVK/Dr JP	MP/Dr JP			

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# Department of Electrical & Electronics Engineering

		1			
IV YEAR (GR15)					
Programmable Logic Controllers	РК				
Flexible AC Transmission Systems	Dr TSK				
EHV AC Transmission					
Power System Automation					
Modern Power Electronics	AVK				
DSP Based Electromechanical Systems					
Advaced Control Systems					
Programmable Logic Controllers-Lab	VVSM	РК			
M ain Projects	RAK/Dr SVJK	PK/VVRR			
M.Tech PE					
Modeling and Analysis of Electrical Machines	Dr BPB				
Digital control of power Electronics and Drive Systems	Dr DGP				
FACTS and Custom power Devices	Dr TSK				
Smart Grids	VVRR				
Audit Course -2	YSV/UVL				
Power Quality Lab	Dr BPB				
Digital Signal Processing Lab	AVK				
MINI Projects	Dr JP/GSR				
M.Tech PS					
Digital Protection of Power System	Dr JSD				
Power System Dynamics -II	Dr SVJK				
FACTS and Custom power Devices	Dr TSK				
Smart Grids	VVRR				
Audit Course -2	YSV/UVL				
Power Quality Lab	Dr BPB				
Power System Protection Lab	VUR				
MINI Projects	Dr JP/GSR				
Other Dept.					
BEE (I YEAR) CSE (6)	MNSR,MI	MNSR,MK,MVK,			
BEE Lab	MNSR,MK,MVK,YSV, GB	VUR,PS,UVL,MRE, R			
EET (II YEAR) Mech (2)	KS	кs			
	KS, DKK, PPK,				

Signature of HOD

Signature of faculty



# Department of Electrical & Electronics Engineering

#### AY: 2018-2019

## TIME TABLE

BTech- EEE - A												III year - II Semester	
DAY/ HOUR	9:00 - 9:45	9:45 - 10:30	10:30 - 11:15		12:00-12:30	12:30 - 1:20	1:20 - 2:10	2:10 -3:	:00			Room No.	
	S	GP	CM	1PS		S&T		UEE	3		Theory	4501	
MONDAY	S	GP	SI	έT		UEE		CMP	s		Lab		
TUESDAY	N	ſS	U	EE	в	SGP		S&T	r			4504/4407/	
THURSDAY	10	MP Lab(A1)	/ AECS Lab(	A2)	R E A K	CMP	5	S&T	r		Class arge:	M Rolins	
		PS Lab(A2)	AECS Lab(A	D		MS		UEF	5				
FRIDAY						CMP		SCR	,				
SATURDAY	_	TOTAT LAD(A	L// FJ Lab (A1	,		C.MIL)	,	501					
Subject Code		Subject Name		Faculty Code		Faculty name			Alma	inac			
CMPS	Computer Me	thods in Power s	y stems	VV/RF/MP	V VI	jaya Rama Rajw'M Pras	hanth	1st Spell of I	instruction	6		10-12-2018 to 06-02-2019	
SGP	Switch Gear &	k Protection		PSVD		P Srividya Devi		1st Mid-term	n Examinat	lions		07-02-2019 to 09-02-2019	
MS	Management	Science		Dr MSRS		Dr M S R Sesha giri		2nd Spell of	Instruction	18		11-02-2019 to 03-04-2019	
VEE	Utilization of I	Electrical Energ	r	MRE		M Reiha		2nd Mid-terr	mExamina	rtions		04-04-2019 to 05-04-2019	
S&T	Sensors& Tran	usduc ers		UVL		U Vijaya Lakshmi		Preparation				08-04-2019 to 17-04-2019	
PS Lab	Power System	ns Lab		GSR/YSV	G	Sandhya Rani/Y Satyaw	ani	End Semest	er Examin	ations	(Theory	18-04-2019 to 08-05-2019	
AEC'S Lab	Advanced En	glish Communic	ations Skills Lab	ES		E Sallaja		Practicalis) F	Practicals) Regular				
IOMP Lab	Industry Ories	nted Mini Projec	tLab	AVK/PPK/D r JP	A Vinay Ku	mar/P Praveen Kumar/ (	0r J Praveen	Supplementary and Summer Vacation			09-05-2019-to 22-05-2019		
								Commence	ment of Se	acond	Semester , AY	6/24/2019	
BTech - EEE - B												III year - II Semester	
DAY/HOUR	9:00 - 9:45	9:45 - 10:30	10:30 - 11:15		12:00-12:30	12:30 - 1:20	1:20 - 2:10	2:10 -3	3:00			Reem No	
				11:15-12:00									
MONDAY		PS Lab(B1) /AECS Lab(B2)			4	UEE		CMPS		Theory		4404	
TUESDAY	F	PS Lab(B2) /	OMF Lab(B)	)		CMPS		5& T			Lab	4504/4407/	
WEDNESDAY	101	MP Lab(B2)	/ AECS Lab(B1)		B	SGF		CMPS					
THURSDAY	80	iP	ហ	ΞĒ	E A K	S&T		MS			Class arge:	M Rekha	
ERIDAY	UE	эE	CM	IPS		S& T		SGP					
SATURDAY	м	1S	SC	)P		UEE		5& T					
Subject Code		Subject Name				Faculty name			Ain	anac			
CMPS	Commence Mark	hadh in Pomor a	- 490-190-1	Faculty Code	Wilson Dama DaluM Drasharth			1st Scall of Instructions				10-12-2018 05-02-2019	
owro	Company Sive	and all rower of	SWILL	VVRR/MP				rot open of	- DEGGEG			10-12-2010 @ 00-02-2017	
MS	Management S	Frenection		DrJSD		Dr J Snow		2nd Snell of	f Instructio	atons		11-07-2019 to 03-04-2019	
VEE	Utilization of E	lectrical Energy		Dr MSRS		M Reitha		2nd Mid-ter	rm Examin	ations	с.	04-04-2019 to 06-04-2019	
S&T	Sensors& Trans	sducers		MRE		U Vijaya Lakshmi		Preparation	1			08-04-2019 to 17-04-2019	
PS Lab	Power System	s Lab		GSR/YSV	G	Sandhya Rani/Y Satyav	ani						
AEC'S Lab	Advanced Eng	lish Communica	tions Skills Lab	ES		E Sailaja		End Semes Practicals)	ter Exami Regular	nation	s (Theory/	18-04-2019 to 08-05-2019	
IOMP Lab	Industry Orien	ted Mini Projec	Lab	MP/DrJP	h	/ Prashanth/ Dr J Praw	ian	Supplement	tary and S	umme	r Vacation	09-05-2019-io 22-06-2019	
								Commence	ement of S	Second	i Semester , AY	6.24/2019	
ur 9:00 9:45	9:4 - 5 - 10: 30	10: 	30 15	11:15- 12:00	12:0 0- 12:3 0	12:30 1:20	- 1:: 2:	20 - :10	2: 3	10 :00	-	Room No	
X		lah/	D1\									Theory	

	30 11:15	0			
MONDAY	PS Lab (B1)			Theory	
TUESDAY	PS Lab (B2)				
WEDNESD AY		BR		Lab	PS LAB
THURSDA Y		EAK		Class	M Rekha
FRIDAY	PS Lab (A2)			ge:	
SATURDA	PS Lab (A1)				

# GOKARAJU RANGARAJU



INSTITUTE OF ENGINEERING AND TECHNOLOGY

### Department of Electrical & Electronics Engineering

## Syllabus

Course Code: GR14A3025 III Year II Semester CONTENTS:

L:0 T:0 P:2 C:2

- 1. Tripping Characteristics of an MCB of 1Ampere rating
- 2. Tripping sequence of protective devices
- 3. Tripping characteristics of protective devices
- 4. Testing of Instantaneous Over Current relay a) Phase Faults b) Earth Faults
- 5. a) Testing of differential relay
- b) Testing of percentage biased differential Relay
- 6. Testing of Negative sequence Relay
- 7. Model of a Transmission Line with Lumped Parameters
- 8. a) Testing of Over Voltage Relay
- b) b) Testing of Under Voltage Relay
- 9. Current time Characteristics of Induction Disc type relay
- 10. Short circuit Analysis
- 11. Protection of Motor, transformer and bus
- 12. Protection of generator in parallel configuration



Department of Electrical & Electronics Engineering

# **COURSE OBJECTIVES**

Academic Year	: 2018-2019					
Semester	: II					
Name of the Program:	EEE B.TechIII Section: A/B					
Course/Subject: POWER S	YSTEMS LAB Code: GR17A3025					
Name of the Faculty: G.Sandhyarani & Y.Satyavani Dept: .EEE Designation: Assistant Professor						

S.N	Course Objectives
0	
1.	To provide knowledge in the area of power systems hardware and software
2.	To analyse the characteristics of various relays
3.	To analyse various types of faults and its protection
4.	To provise knowledge of various power factor correction systems
5.	To provide the knowledge on the concepts of arc flash, load flow, short circuit, transient stability and relay coordination
6.	To provide the knowledge on power management system softwarein Real-time applications

Signature of HOD

Signature of faculty

Date:



## Department of Electrical & Electronics Engineering

The expected outcomes of the Course/Subject are:

S.No	Course Outcomes
1.	Know the power systems hardware
2.	Analyse the characteristics of various relays.
3.	Design and analyse the transmission line.
4.	Analyse various types of faults and its protection
5.	Implement various power factor correction systems
6.	Perform load flows, short circuit analysis for power generation, transmission and distribution networks.
7.	Integrate software for applications that provides intelligent power monitoring, energy management, system optimization, advanced automation, and real-time prediction

Signature of HOD

Signature of faculty

Date:



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INSTITUTE OF ENGINEERING AND TECHNOLOGY

# **GUIDELINESTOSTUDYTHE COURSE/SUBJECT**

Academic Year	: 2018-2019	: 2018-2019					
Semester	: II						
Name of the Program	: EEE B.Tech	III Section: A/B					
Course/Subject: POWER SYSTEM LABCode: GR15A3025							
Name of the Faculty: G.Sandhyarani/Y.Satyavani Dept:EEE							
Designation:Assistant Professor							

#### Course Design and Delivery System (CDD):

- The Course syllabus is written into number of learning objectives and outcomes.
- These learning objectives and outcomes will be achieved through lectures, assessments, assignments, experiments in the laboratory, projects, seminars, presentations, etc.
- Every student will be given an assessment plan, criteria for assessment, scheme of evaluation and grading method.
- The Learning Process will be carried out through assessments of Knowledge, Skills and Attitude by various methods and the students will be given guidance to refer to the text books, reference books, journals, etc.
   The faculty be able to –
- Understand the principles of Learning
- Understand the psychology of students
- Develop instructional objectives for a given topic
- Prepare course, unit and lesson plans
- Understand different methods of teaching and learning
- Use appropriate teaching and learning aids
- Plan and deliver lectures effectively
- Provide feedback to students using various methods of Assessments and tools of Evaluation
- Act as a guide, advisor, counselor, facilitator, motivator and not just as a teacher alone

Signature of HOD

Signature of faculty

Date:





# **COURSE SCHEDULE**

Academic Year	: 2018-2019	
Semester	: II	
Name of the Program	n: EEE B.Tech	nIII Section: A/B
Course/Subject: POWE	R SYSTEMS LAB	Code: GR17A3025
Name of the Faculty:G.S Designation: Assistant Pr	andhyarani & Y.Satyava rofessor	ni Dept: .EEE

The Schedule for the whole Course / Subject is:

		Total No of
S. No.	Description	Periods
1.	Tripping Characteristics of an MCB of 1Ampere rating	4
2.	Tripping sequence of protective devices	4
3.	Tripping characteristics of protective devices	4
	Testing of Instantaneous Over Current relay	
	a) Phase Faults	
4.	b) Earth Faults	4
	a) Testing of differential relay	
5.	<ul> <li>b) Testing of percentage biased differential Relay</li> </ul>	
		4
6.	Testing of Negative sequence Relay	4
7	Model of a Transmission Line with Lumped Parameters	4
8	a) Testing of Over Voltage Relay b) Testing of Under Voltage Relay	4
9	Current time Characteristics of Induction Disc type relay	4
10	Short circuit Analysis	4
11	Protection of Motor, transformer and bus	4
12	Protection og generator in parallel configuration	4





## SCHEDULE OF INSTRUCTIONSCOURSEPLAN

Academic Year

: 2018-2019

Semester: IIName of the Program:EEE.......B.Tech...III.....Section: A/BCourse/Subject:POWER SYSTEMS LABCode:GR17A3025

Name of the Faculty:G.Sandhyarani & Y.Satyavani Dept: .EEE...

Designation: Assistant Professor

<b>.</b>	-	<b>N A</b>		<b>Objectives &amp;</b>
Unit	Lesson	No. of	Topics / Sub-	Outcomes
No.	No.	Periods	Topics	Nos.
			Tripping	
			Characteristics of	2,3,4
			an MCB of	
1	1	4	1Ampere rating	
			Tripping sequence	
			of protective	1,3
2	2	4	devices	
			Tripping	1,3
			characteristics of	1,3
3	3	4	protective devices	
			Testing of	1,3
			Instantaneous Over	1,3
			Current relay	
			a) Phase	
			Faults	
4	4	4	b) Earth Faults	
			a) Testing of	1,3
			differential relay	
			b) Testing of	
			percentage biased	
			differential Relay	
5	5	4		
			Testing of Negative	1,3
6	6	4	sequence Relay	
			Model of a	1,2
			Transmission Line	
			with Lumped	
7	7	4	Parameters	
			a) Testing of Over	1,3
			Voltage Relay b)	
			Testing of Under	
8	8	4	Voltage Relay	





9	9	4	Current time Characteristics of Induction Disc type relay	1,3
10	10	4	Short circuit Analysis	2,3
11	11	4	Protection of Motor, transformer and bus	2,3
12	12	4	Protection of generator in parallel configuration	2,3

Signature of HOD

Signature of faculty

Date:



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#### Assessment methods:

- 1. Operation skill and familiarization of software.
- 2. Experimental procedure, simulation results, internal observation, lab record.
- 3. Internal examinations.
- 4. External examinations.
- 5. Viva-voce.
- **1.** Program Educational Objectives (PEOs) Vision/Mission Matrix (Indicate the relationships by mark "Y")

relationships by mark "X")

	Mission of <b>c</b>	lepartment		
PEOs	Higher Learning	ontemporary Education	Technical knowledge	Research
Graduates will have a successful technical or professional careers, including supportive and leadershiproles or multidisciplinary teams	Х	Х	X	Х
Graduates will be able to acquire, use and develop skills as requiredfor effective professional practices		X	X	
Graduates will be able to attain holistic education that is an essential prerequisite for being aresponsible member of society	X		X	
Graduates will be engaged in life-long learning, to remair abreast in their profession and be leaders in our technologically vibrant society.	X		X	Х

#### 2. Program Educational Objectives(PEOs)-Program Outcomes(POs)

Relationship Matrix (Indicate the relationships by mark"X"

P-Outcomes	a	b	c	d	e	f	g	h	i	j	k	1
PEQs												
N	Х	Х	Х	Х	Х			Х	Х	Х	Х	Х
2	Х	Х	Х	Х	Х			Х	Х	Х	Х	Х
3		Х	Х	Х		Х	Х	Х	Х	Х		
4				Х					Х	Х		Х

8



# 3. Course Objectives-Course Outcomes Relationship Matrix (Indicate

the relationships by mark"X")

Course-Outcomes	1	2	3	4	5	6	7
Course-Objectives	_						
1	Х			Х	Х	Х	Х
2	Х				Х	Х	Х
3		Х	Х				Х
4		Х					Х

# **4.** Course Objectives-Program Outcomes (POs) Relationship Matrix (Indicate the relationships by mark "X")

P-Qutcomes	а	b	с	d	e	f	g	h	i	j	k	1
C-Objectives												
1		Х	Х								Х	Х
2	Х	Х		Х							Х	Х
3		X	Х		Х		Х	Х			Х	Х
4		Х	Х			Х		X			Х	Х

# 5. Course Outcomes-Program Outcomes (POs) Relationship Matrix

(Indicate the relationships by mark"X")

P-Outcomes	а	b	с	d	e	f	g	h	i	j	k	1
C-Outcomes												
1	À		Х						Х			
2	Х				Х							
3		Х									Х	Х
4	Х				Х							Х
5	Х				Х						Х	
6	Х	Х									Х	Х
7	Х	Х									Х	



#### 6. Courses (with title & code)-Program Outcomes (POs) RelationshipMatrix

(Indicate the relationships by mark "X")

P-Qutcomes Courses	a	b	с	d	e	f	g	h	i	j	k	1
Op Amps- GR11A3078		Х	Х		Х						Х	

#### 7. Program Educational Objectives (PEOs)-Course Outcomes RelationshipMatrix

(Indicate the relationships by mark "X")

P-Objectives (PEOs)	1	2	3	4
Course-Outcomes				
1	X	Х		Х
2	X	Х		Х
3	X	X		X
4	X	X		X
5	X	X		X
6	X	X		X
7	X	X		X

#### 8. Assignments & Assessments-Program Outcomes (POs) RelationshipMatrix(Indicate the relationships by mark "X"

R-Outcomes	а	b	с	d	e	f	g	h	i	J	k	1
Assessments												
1	X	Х	Х			Х	X		Х		Х	Х
2	Х	Х	Х		Х	X	X	Х			Х	Х
3	Х	Х			Х						Х	Х
4	Х	X			Х						Х	Х
5	Х	Х			X		X				Х	



9. Assignments & Assessments-Program Educational Objectives (PEOs) Relationship Matrix (Indicate the relationships by mark"X")

P-Objectives (PEOs)	1	2	3	4
Assessments				
1	Х	Х		
2		Х		
3		Х	Х	Х
4		Х		
5		Х		

#### Assessment process and Relevant Surveys conducted:

**10.** Constituencies -Program Outcomes (POs) Relationship Matrix (Indicate the relationships by mark "X"). Constituencies

- 1. Alumni
- 2. Governmentemployers
- 3. Students

P-Qutcomes	a	b	c	d	e	f	G	h	i	j	k	1
Constituencies												
1	Х	Х	Х	Х	Х	Х	Х		Х	Х		Х
2	Х	Х	Х	Х	Х	Х	Х		Х			Х
3	Х	Х			Х	Х	Х	Х		Х	Х	Х



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9	CO-Cognitive Level Mapping
9	CO-Cognitive Level Mapping

СО	Cognitive Learning Level						
	1	2	3	4	5	6	
1					Х		
2	Х						
3		Х					
4					Х		
5			Х				
6			Х				
7			Х				

Cognitive Learning Levels:

CLL1: Remembering

CLL2: Understanding

CLL3: Applying

CLL4: Analyzing

CLL5: Evaluating

CLL6: Creating



13

#### **GOKARAJU RANGARAJU** INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Electrical & Electronics Engineering

Sessional Question Paper and Scheme of Evaluation

# **EVALUATION STRATEGY**

Academic Year	: 2018-2019			
Semester	: II			
Name of the Program:	EEE B.Tec	chIII	Section:	A/B
Course/Subject: POWER S	YSTEMS LAB	Code: GR17	'A3025	
Y.Satyavani Designation: Assistant Profe	ssor	Dept: .I	EEE	
1. TARGET:				
A) Percentage for pass: 100%				
2. COURSE PLAN & CONTE	NT DELIVERY			
PPT presentation of the Lect	ures			
Solving exercise problems				

- Model questions
  - 3. METHOD OF EVALUATION
    - 3.1 
      Daily Attendance
    - $3.2 \square$  Lab records and observation
    - 3.3 Mini Projects
    - 3.4 🗆 Viva Voce
    - 3.5 
      Internal Examination
    - 3.6 
      Semester/End Examination

4. List out any new topic(s) or any innovation you would like to introduce in teaching the subjects in this Semester.

Signature of HODSignature of facultyDate:Date:

50



# Department of Electrical & Electronics Engineering

		Fee	dback Report			
FeedBack No	:	3				1
Branch	:	Electrical and Electron	nics Engineering			20
Academic Year	:	2018-19				
Year & Semester	:	Third Year, Second Se	emester			141
Subject Name	:	Power Systems Lab		Faculty Name	:	G.Sandhya Rani
Subject Code	:	GR15A3025		Section	:	B1
S.No		Question		Ave	rage	
1	How do	es the teacher explain th	he subject?	3.	19	
2	How do skill of t	you find the language the teacher?	and communication	n 3.	35	
3	Rate you class	ur teacher's regularity /	punctuality to the	3.	13	
4	Rate you doubts	ur teacher's explanation	in clearing the	3.	32	
5	Rate you syllabus	ur teacher's commitmer	t in completing the	° 3.	19	
6	Does the	e teacher pays attention	to all the students'	? 3.	19	
7	Rate you	ur teachers use of teach	ing aids	3.	19	
8	Is the se	ssion interactive?		3.	19	
9	Rate you Moodle,	ur teacher's guidence in , NPTEL etc	other activities lik	e 3.	26	
10	What is	the overall opinion abo	ut the teacher?	3.	10	

No of Students given feedback : 31

Overall average : 3.21

			Feedback R	port	
FeedBack !	No	:	3	6	
Branch		:	Electrical and Electronics Engin	eering	5
Academic Y	rear -	:	2018-19		
Year & Sen	nester	:	Third Year, Second Semester		
Subject Na	me	:	Power Systems Lab	Faculty Name : Y. Satyavani	
Subject Co	de	:	GR15A3025	Section : B2	
	S.No		Question	Average	
	1	How do	es the teacher explain the subject	3.20	
	2 How do you find the language and communicati skill of the teacher?			unication 3.27	
	3	Rate yo class	ur teacher's regularity / punctuali	y to the 3.20	
	4	Rate yo doubts	ur teacher's explanation in clearir	g the 3.40	
	5	Rate yo syllabus	ur teacher's commitment in comp s	eting the 3.37	
	6	Does th	e teacher pays attention to all the	students? 3.27	
	7	Rate yo	ur teachers use of teaching aids	3.23	
	8	Is the se	ession interactive?	3.27	
	9 Rate your teacher's guidence in other activities I Moodle, NPTEL etc			vities like 3.23	
	10	What is	the overall opinion about the tea	her? 3.10	

No of Students given feedback : 30

Overall average : 3.25



## Department of Electrical & Electronics Engineering

19

Course Exit Survey

### RUBRIC

## **OBJECTIVE:** Work effectively with others STUDENT OUTCOME: Ability to function in a multi-disciplinary team

S.No.	Student Name	Performance Criteria	Unsatisfactory	Developing	Satisfactory	Exemplar y	Score
			1	2	3	4	
1	D.Tejaswi 16241A0213 Ga Int Fu rol	Research & Gather Information	Does not collect any information that relates to the topic.	Collects very little information some relates to the topic	Collects some basic Informatio n most relates to the topic.	Collects a great deal of Informati on all relates to the topic.	4
		Fulfill team role's	Does not perform any duties of assigned team role.	Performs very little duties.	Performs nearly all duties.	Performs all duties ofassigne d team role.	4
		Share Equally	Always relies on others to do the work.	Rarely does the assigned work often needs reminding.	Usually does the assigned work rarely needs reminding.	Always does the assigned work without having to be reminded	
	Listen to other team mates	Is always talkingnever allows anyone else to speak.	Usually doing most of the talking rarelyallows Othersto speak	Listens, but sometimes talks too much.	Listens and speaks a fair amount. Average	4	
						Average score	4



# Department of Electrical & Electronics Engineering

-		-		-		•	
S.No.	Student Name	Performance Criteria	Unsatisfactory	Developing	Satisfactory	Exemplar y	Score
			1	2	3	4	
2	2 M.Karunya 16241A0242	Research & Gather Information	Does not collect any information that relates to the topic.	Collects very little information some relates to the topic	Collects some basic Informatio n most relates to the topic.	Collects a great deal of Informati on all relates to the topic.	2
		Fulfill team role's	Does not perform any duties of assigned team role.	Performs very little duties.	Performs nearly all duties.	Performs all duties ofassigne d team role.	3
		Share Equally	Always relies on others to do the work.	Rarely does the assigned work often needs reminding.	Usually does the assigned work rarely needs reminding.	Always does the assigned work without having to be reminded	
		Listen to other team mates	Is always talkingnever allows anyone else to speak.	Usually doing most of the talking rarelyallows Othersto speak	Listens, but sometimes talks too much.	Listens and speaks a fair amount.	3
L	1				1	Average score	3

		3	





S.No.	Student Name	Performance Criteria	Unsatisfactory	Developing	Satisfactory	Exemplar y	Score
			1	2	3	4	
3	R.Raashik Arun 16241A0243	Research & Gather Information	Does not collect any information that relates to the topic.	Collects very little information some relates to the topic	Collects some basic Informatio n most relates to the topic.	Collects a great deal of Informati on all relates to the topic.	
		Fulfill team role's	Does not perform any duties of assigned team role.	Performs very little duties.	Performs nearly all duties.	Performs all duties ofassigne d team role.	2
		Share Equally	Always relies on others to do the work.	Rarely does the assigned work often needs reminding.	Usually does the assigned work rarely needs reminding.	Always does the assigned work without having to be reminded	
		Listen to other team mates	Is always talkingnever allows anyone else to speak.	Usually doing most of the talking rarelyallows Othersto speak	Listens, but sometimes talks too much.	Listens and speaks a fair amount.	2
							2

	Average	
	score	2



# Department of Electrical & Electronics Engineering

## **COURSE COMPLETION STATUS**

Academic Year	: 2018	8-2019		
Semester	: II			
Name of the	Program: EEE	B.Tech	III	Section: A/B
Course/Subject: Name of the Fac G.Sandhyarani&	Power System culty: cY.Satyavani	s Lab	C Dept	ode: GR17A3025

Designation:Assistant Professor

Actual Date of Completion & Remarks, if any

		No. of Objectives	No. of
Progra	Remarks	Achieved	Outcomes
m			Achieved
1	1 & 2 programs completed by 18/07/1		
2		2,3,4	2,4
3	3 & 4 programs completed by 22/07/18		
4		1,3	2,4
5	5 program completed by 26/07/18	1,3	2,4
6	6 program completed by 29/07/18	1,3	2,4
7	7 program completed by 02/08/18	1,3	2,4
8	8 program completed by 16/08/18	1,3	2,4
9	9 program completed by 23/08/18	1,3	2,4
10	10 program completed by 30/08/18	1,3	2,4
11	11 & 12 program completed by 06/09/18	1,2	2,3
12		1,3	2,1,5
13	13 program completed by 13/09/18	1,3	2,1,5
14	14 programs completed by 27/09/18	1,3	2,1,5
15	15 programs completed by 11/10/18	2,3	1,2,3,6 ,7

Signature of HOD

Signature of faculty

Date:





## ILLUSTRATIVE VERBS FOR STATING INSTRUCTIONAL OBJECTIVES

These verbs can also be used while framing questions for Continuous Assessment Examinations as well as for End – Semester (final)Examinations

#### **ILLUSTRATIVE VERBS FOR STATING GENERAL OBJECTIVES/OUTCOMES**

	Know	Understand
Design		

ILLUSTRATIVE VERBS FOR STATING SPECIFIC OBJECTIVES/OUTCOMES:

#### A. <u>COGNITIVE DOMAIN (KNOWLEDGE)</u>

1	2	3	4	5	6
Knowledge	Comprehension Understanding	Application of knowledge &	Analysis Of whole w .r.t. its	Synthesis	Evaluation
9	9	comprehension	constituents	•	Judgment

Convert	Demonstrate	Differentiate	Categorize	Compare
Describe (a	Prepare	Discriminate	Combine	-
Procedure)	Relate	Distinguish	Design	
Distinguish	Cl		Generate	
	Snow	Separate	Plan	
Explain why/how	Solve			
	Convert Describe (a Procedure) Distinguish Explain why/how	ConvertDemonstrateDescribe (aPrepareProcedure)RelateDistinguishShowExplain why/howSolve	ConvertDemonstrateDifferentiateDescribe (aPrepareDiscriminateProcedure)RelateDistinguishDistinguishShowSeparateExplain why/howSolveImage: Constrained base of the second secon	ConvertDemonstrateCategorizeDescribe (aPrepareDifferentiateCombineProcedure)RelateDistinguishDesignDistinguishShowSeparatePlan

В.	AFFECTIVE DOMAIN (ATTITUDE)	C. <u>PSYCHOMOTOR DOMAIN (SKILLS)</u>				
Assist	Select	Bend	Dissect	Insert	Perform	Straighten
Change	Develop	Calibrate	Draw	Кеер	Prepare	Strengthen
		Compress	Extend	Elongate	Remove	Time
		Conduct	Feed	Limit	Replace	Transfer
		Connect	File	Manipulate	Report	Туре
		Convert	Grow	Move Precisely	Reset	Weigh
		Decrease	Increase	Paint	Set	