

SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE

(An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada)

Seshadri Rao Knowledge Village, GUDLAVALLERU-521 356, Krishna District, A.P., India

(Approved by AICTE, New Delhi and Permitted by A.P. State Government)

Accredited by NAAC

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Dr. G. V. S. N. R. V. PRASAD

M.S., M.Tech., Ph.D.,

MISTE, MIETE, MIE, MCSI, MISRS, MIAPR, MCRSI

Principal

1.3.1: List of courses relevant to professional ethics/gender/Environmental Studies

S. No	Regulation	Relevant Issue	Course Code	Name of the Course
1	B.Tech R17	Environment and Sustainability	CE2562	Disaster Management
2			EN2501	Environmental Studies
3			ME2553	Green Engineering
4			EE2531	Electrical and Hybrid Vehicles
5			ME2542	Renewable Energy Sources
6			EE2535	Solar and Wind Energy Systems
7			EC2507	Biomedical Engineering
8			CE2531	Environmental Sanitation
9			EE2547	Integration of Renewable Energy Sources
1	B.Tech R17	Human Values and Professional Ethics	EN2502	Engineer and Society
2			BA2501	Engineering Economics and Project Management
3			EE2552	Energy Audit Conservation and Management
5			CS2513	Cyber Security
6			IT2506	Cyber Laws
7			NS2501	NSS/Fine Arts/ Yoga/ Self Defense
1	B.Tech R20	Environment and Sustainability	EN3501	Environmental Studies
2			EE3529	Community Service Project
3			EE3538	Utilization of Electrical Energy
4			CT3531	Cyber Security
1	B.Tech R20	Human Values and Professional Ethics	UH3501	Universal Human Values 2: Understanding Harmony
2			NS2501	NSS/Fine Arts/ Yoga/ Self Defense
3			SG2501	Sports & Games/Cultural
4			BA3503	Engineering Economics & Project Management
5			BA3501	Constitution of India
1	M. Tech R17	Environment and Sustainability	EE2914	Renewable Energy Storage Systems
1	M.Tech R20	Environment and Sustainability	EE3907	Renewable Energy Technologies
2		Human Values and Professional Ethics	EE3924	Energy Audit Conservation and Management
3		Ethics	BA3902	Constitution of India


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Open Elective - III

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2543 Hydrology (Other than CE)	CE	4	-	-	3
2	CE2544 Planning for Sustainable Development	CE	4	-	-	3
3	EE2531 Electrical and Hybrid Vehicles	EEE	4	-	-	3
4	EE2532 Power Plant Instrumentation	EEE	4	-	-	3
5	ME2541 Material Science (Other than ME)	ME	4	-	-	3
6	ME2542 Renewable Energy Sources (Other than ME)	ME	4	-	-	3
7	EC2523 Assistive Technologies (Other than ECE)	ECE	4	-	-	3
8	EC2507 Bio-Medical Engineering (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2512 Node and Angular JS	CSE	4	-	-	3
10	CS2513 Cyber Security	CSE	4	-	-	3
11	CT2529 Scripting Languages (Other than CSE)	IT	4	-	-	3
12	CT2531 Software Project Management (Other than CSE)	IT	4	-	-	3
13	MA2518 Elements of Stochastic Processes	BS&H	4	-	-	3
14	EG2505 Academic Communication	ENGLISH	4	-	-	3

Open Elective - IV

Sl. No.	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
			L	T	P	
1	CE2562 Disaster Management (Other than CE)	CE	4	-	-	3
2	CE2563 Repair and Retrofitting Techniques	CE	4	-	-	3
3	EE2542 Modern Optimization Techniques	EEE	4	-	-	3
4	EE2543 Electrical Power Utilization (Other than EEE)	EEE	4	-	-	3
5	ME2553 Green Engineering	ME	4	-	-	3
6	ME2554 Non Destructive Evaluation (Other than ME)	ME	4	-	-	3
7	EC2563 Cyber Physical Systems	ECE	4	-	-	3
8	EC2508 Signals and Systems (Other than EEE & ECE)	ECE	4	-	-	3
9	CS2521 Digital Forensics	CSE	4	-	-	3
10	CS2522 Business Intelligence & Decision Support Systems	CSE	4	-	-	3
11	IT2521 Adhoc and Sensor Networks	IT	4	-	-	3
12	CT2537 Information Retrieval Systems (Other than CSE)	IT	4	-	-	3
13	MA2514 Fuzzy Logic (Other than EEE, ME & CSE)	BS&H	4	-	-	3

L : Lecture T : Tutorial P : Practical

Open Elective - I

Sl. No.		Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE2515	Elements of Civil Engineering (Other than CE)	CE	4	-	-	3
2	CE2516	Building Services	CE	4	-	-	3
3	EE2515	Electrical Materials	EEE	4	-	-	3
4	EE2516	Control Systems Engineering (Other than EEE & ECE)	EEE	4	-	-	3
5	ME2520	Elements of Manufacturing Processes (Other than ME)	ME	4	-	-	3
6	ME2521	Automotive Engineering (Other than ME)	ME	4	-	-	3
7	EC2531	Introduction to MPMC (Other than ECE/EEE/CSE/IT)	ECE	4	-	-	3
8	EC2532	Fundamentals of Communications (Other than ECE)	ECE	4	-	-	3
9	CT2514	Computer Graphics (Other than IT)	CSE	4	-	-	3
10	CT2507	Object Oriented Programming through Java (other than CSE & IT)	CSE	4	-	-	3
11	CT2515	Systems Software	IT	4	-	-	3
12	IT2502	Web Programming (Other than CSE & IT)	IT	4	-	-	3
13	MA2516	Mathematical Cryptography (Other than CSE)	BS&H	4	-	-	3
14	PH2508	Semiconductor Physics (Other than ECE)	BS&H	4	-	-	3

Open Elective - II

Sl. No.		Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE2530	Geoinformatics (other than CE)	CE	4	-	-	3
2	CE2531	Environmental Sanitation	CE	4	-	-	3
3	EE2523	Modeling & Simulation of Engineering Systems	EEE	4	-	-	3
4	EE2524	Power Systems Engineering (Other than EEE)	EEE	4	-	-	3
5	ME2532	Elements of Mechanical Transmission (Other than ME)	ME	4	-	-	3
6	ME2533	Material Handling Equipment	ME	4	-	-	3
7	EC2543	Automotive Electronics	ECE	4	-	-	3
8	EC2544	Introduction to MEMS (other than ECE)	ECE	4	-	-	3
9	CS2508	Data Science	CSE	4	-	-	3
10	CT2524	Virtual and Augmented Reality (other than IT)	CSE	4	-	-	3
11	IT2505	Open Source Software	IT	4	-	-	3
12	IT2506	Cyber Laws	IT	4	-	-	3
13	MA2517	Quality, Reliability and Operations Research	BS&H	4	-	-	3

L : Lecture T : Tutorial P : Practical

Civil Engineering

25


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VIII. COURSE STRUCTURE

I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG2501	Functional English	4	-	-	3
2	MA2501	Linear Algebra & Differential Equations	4	1	-	4
3	EN2502	Engineer and Society	3	-	-	2
4	CH2501	Engineering Chemistry	3	-	-	2
5	CT2501	Problem Solving Using C *	4	-	2	4
6	ME2501	Engineering Drawing	1	-	4	3
7	EG2502	Functional English Lab	-	-	2	1
8	CH2502	Engineering Chemistry Lab	-	-	2	1
Total			19	1	10	20

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG2503	Professional Communication	3	-	-	2
2	MA2503	Integral Transforms and Multiple Integrals	3	1	-	3
3	EN2501	Environmental Studies	3	-	-	2
4	PH2501	Engineering Physics	3	1	-	3
5	CE2501	Engineering Mechanics	4	1	-	4
6	EG2504	Professional Communication Lab	-	-	4	2
7	CE2502	Computer Aided Drafting Lab	-	-	4	2
8	PH2503	Engineering Physics Lab	-	-	2	1
9	CE2503	Applied Mechanics Lab and Building Trade Practice	-	-	2	1
Total			16	3	12	20

L : Lecture

T : Tutorial

P : Practical

II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE2508	DC Machines and Transformers	3	1	-	3
2	EE2509	Electric Circuit Analysis	3	1	-	3
3	EC2503	Analog Electronics	3	1	-	3
4	EE2510	Power Systems - I	3	1	-	3
5	MA2507	Numerical Methods with Computer Applications *	3	-	2	3
6	ME2504	Mechanical Engineering Lab	-	-	4	2
7	EE2511	Electric Circuits Lab	-	-	4	2
8	EC2504	Analog Electronics Lab	-	-	4	2
Total			15	4	14	21
9	NS2501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC2505	Digital Circuit Design	3	1	-	3
2	EE2512	Control Systems	3	1	-	3
3	BA2501	Engineering Economics and Project Management	3	-	-	2
4	EE2513	Induction and Synchronous Machines	3	1	-	3
5	EE2514	Electromagnetic Fields	3	1	-	3
6		Open Elective-I (see list of Open Electives)	4	-	-	3
7	EC2506	Digital Circuit Design Lab	-	-	4	2
8	EE2517	Electrical Machines - I Lab	-	-	4	2
Total			19	4	8	21
9	SG2501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-
10		Optional Elective - I	-	-	-	3
	EC2507	i) Biomedical Engineering				
	CT2512	ii) Computer Organisation and Architecture				
	EE2518	iii) Introduction to Quantum Mechanics for Engineers				
11	EE2519	Optional Elective - II (MOOCs) Student shall opt from the list of MOOCs given by the Department)	-	-	-	2

L : Lecture T : Tutorial P : Practical

III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE2520	Electrical Measurements & Instrumentation	4	-	-	3
2	EC2508	Signals and Systems	3	1	-	3
3	EE2521	Power Systems - II	3	1	-	3
4		Professional Elective - I	4	-	-	3
5		Open Elective-II (see list of Open Electives)	4	-	-	3
6	EE2525	Control Systems Lab	-	-	4	2
7	EE2526	Electrical Machines- II Lab	-	-	4	2
8	EE2527	Mini Project	-	-	4	2
Total			18	2	12	21
9		Optional Elective - III	-	-	-	3
	ME2549	i) Mechatronics				
	CT2507	ii) Object Oriented Programming Through Java				
	EE2528	iii) Control System Design				
10	EE2529	Optional Elective - IV (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE2530	Power Electronics	3	1	-	3
2	MA2511	Probability and Fuzzy Mathematics	3	1	-	3
3	EC2510	Microprocessors, Microcontrollers and Its Applications **	3	1	-	3
4		Professional Elective - II	4	-	-	3
5		Open Elective-III (see list of Open Electives)	4	-	-	3
6	EE2533	Electrical Systems Simulation Lab	-	-	4	2
7	EE2534	Electrical Measurements & Instrumentation Lab	-	-	4	2
8	EC2515	Microprocessors, Microcontrollers and Its Applications Lab	-	-	4	2
Total			17	3	12	21
9		Optional Elective - V	-	-	-	3
	CT2513	i) Data Base Management Systems				
	EC2516	ii) Nano Electronics				
	EE2535	iii) Solar and Wind Energy Systems				
10	EE2536	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

** Project Based Theory Course

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IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE2537	Power System Analysis	3	1	-	3
2		Professional Elective - III	3	1	-	3
3		Professional Elective - IV	3	1	-	3
4		Open Elective-IV (see list of Open Electives)	4	-	-	3
5	MA2512	Engineering Optimization	2	1	-	2
6	EE2544	Power Electronics Lab	-	-	4	2
7	EE2545	Power Systems Lab	-	-	4	2
8	EE2546	Internship / Industrial Training / Practical Training	-	-	4	2
Total			15	4	12	20
9		Optional Elective - VII	-	-	-	3
	EC2519	i) Analog and Digital Communication				
	CS2502	ii) Introduction to Python Programming				
	EE2547	iii) Integration of Renewable Energy Sources				
10	EE2548	Optional Elective - VIII (MOOCs)	-	-	-	2
Students shall opt from the list of MOOCs given by the Department)						

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	3	1	-	3
2		Professional Elective - VI	3	1	-	3
3	EE2557	Project	-	-	20	10
Total			6	2	20	16

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Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
		Professional Elective - I	4	-	-	3
	EE2522	i) Switch Gear and Protection				
	CT2519	ii) Computer Networks				
	EC2509	iii) Pulse and Integrated Circuits				
	CT2505	iv) Data Structures				
		Professional Elective - II	4	-	-	3
	EC2511	i) Digital Signal Processing				
	EC2512	ii) Embedded System Design				
	EC2513	iii) Principles of VLSI Design				
	EC2514	iv) DSP Processors and Architecture				
		Professional Elective - III	3	1	-	3
	CT2534	i) Big Data Analytics				
	EC2517	ii) CMOS Digital IC Design				
	EE2538	iii) Power Semiconductor Drives				
	EE2539	iv) Flexible AC Transmission Systems				
		Professional Elective - IV	3	1	-	3
	CS2513	i) Cyber Security				
	EC2518	ii) Digital Image Processing				
	EE2540	iii) Power System Operation & Control				
	EE2541	iv) High Voltage Engineering				
		Professional Elective - V	-	-	-	3
	EE2549	i) Electrical Distribution System	3	1	-	
	EE2550	ii) Artificial Intelligence Techniques	4	-	-	
	EE2551	iii) Advanced Control Systems	3	1	-	
	EE2552	iv) Energy Audit, Conservation and Management	3	1	-	
		Professional Elective - VI	3	1	-	3
	EE2553	i) Special Electrical Machines				
	EE2554	ii) Digital Control Systems				
	EE2555	iii) Utilization of Electrical Energy				
	EE2556	iv) HVDC Transmission Systems				

L : Lecture T : Tutorial P : Practical

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Term Paper	-	-	4	2
2		Dissertation (Initiated in third semester)	-	-	-	-
Total			-	-	4	2

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Dissertation (Carried out in third & Fourth Semester)	-	-	52	34
Total			-	-	52	34

Professional Electives:

Professional Elective - I

- EE2905 Power Semiconductor Devices & Protection
- EE2906 Special Machines and Control
- EE2907 HVDC Transmission Systems

Professional Elective - II

- EE2914 Renewable Energy Storage Systems
- EE2915 Application of power Electronics to Power Systems
- EE2916 Custom Power Devices

Professional Elective - III

- EC2902 Digital Signal Processing and Applications
- EE2917 AI Techniques
- EE2918 Smart Grids


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COURSE STRUCTURE

I Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3501	Functional English	3	-	-	3
2	MA3501	Linear Algebra and Calculus	3	1	-	4
3	PH3501	Engineering Physics	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	ME3503	Engineering Graphics *	2	-	4	4
6	EG3502	Functional English Lab	-	-	2	1
7	PH3503	Engineering Physics Lab	-	-	2	1
Total			14	1	10	20
8	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

* Integrated Course with Theory and Laboratory

I Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EG3503	Professional Communication	2	-	-	2
2	MA3505	Integral Transforms and Vector Calculus	3	1	-	4
3	CH3501	Engineering Chemistry	3	-	-	3
4	CE3501	Applied Mechanics	3	1	-	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	CH3502	Engineering Chemistry Lab	-	-	2	1
8	CE3502	Applied Mechanics Lab & Building Trade Practice	-	-	2	1
Total			13	3	8	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

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II Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE3503	Building Materials and Building Construction	2	-	-	2
2	ME3507	Elements of Mechanical and Electrical Engineering	2	1	-	3
3	CE3504	Mechanics of Solids	3	1	-	4
4	CE3505	Fluid Mechanics	2	1	-	3
5	CE3506	Surveying	2	1	-	3
6	CE3507	Engineering Geology & Geo-Spatial Applications *	2	-	2	3
7	CE3508	Mechanics of Solids Lab	-	-	2	1
8	CE3509	Survey Field Work	-	-	2	1
9	SD3501	Logic Building and Basic Coding Principles	-	-	2	1
Total			13	4	8	21
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

II Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	MA3513	Numerical & Statistical Methods	2	1	-	3
2	CE3510	Structural Analysis	3	1	-	4
3	CE3511	Hydraulics & Hydraulic Machines	2	1	-	3
4	CE3512	Concrete Technology	3	-	-	3
5	CT3508	Python Programming *	2	-	2	3
6		Open Elective - I	3	-	-	3
7	CE3515	Fluid Mechanics & Hydraulic Machines Lab	-	-	2	1
8	CE3516	Concrete Technology Lab	-	-	2	1
9	SD3503	Programming for Corporate	-	-	2	1
Total			15	3	8	22
10	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

Open Elective - II

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3525	Remote Sensing & GIS (other than CE)	CE	3	-	-	3
2	CE3526	Green Building Technology (other than CE)	CE	3	-	-	3
3	EE3526	Modeling & Simulation of Engineering Systems (other than EEE)	EEE	3	-	-	3
4	EE3527	Power Systems Engineering (other than EEE)	EEE	3	-	-	3
5	ME3530	Renewable Energy Sources (other than ME)	ME	3	-	-	3
6	ME3531	Vennture Development (other than ME)	ME	3	-	-	3
7	EC3538	Automotive Electronics (other than ECE & IoT)	ECE	3	-	-	3
8	EC3539	Introduction to Signal Processing (other than ECE&IoT)	ECE	3	-	-	3
9	CS3505	Network Programming (Other than CSE)	CSE	3	-	-	3
10	CS3530	Social Network Analysis(Other than CSE/CSE(AI&ML))	CSE	3	-	-	3
11	CT3531	Cyber Security (Other than IT)	IT	3	-	-	3
12	IT3508	E-Commerce (Other than IT)	IT	3	-	-	3
13	AD3502	Intelligent Systems (Other than AI&DS)	AI&DS	3	-	-	3
14	CT3532	Recommender Systems(Other than CSE, IT, CSE(AI&ML) & AI&DS)	AI&DS	3	-	-	3
15	IN3514	Introduction to IoT Architecture (Other than IoT)	IoT	3	-	-	3
16	IN3515	Introduction to Smart Sensors (Other than IoT)	IoT	3	-	-	3

Open Elective - III

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3541	Basics of Environmental Engineering (other than CE)	CE	3	-	-	3
2	CE3542	Disaster Preparedness, Planning & Management (other than CE)	CE	3	-	-	3
3	EE3540	Principles of Special Electric Machines (other than EEE)	EEE	3	-	-	3
4	EE3541	Electrical Instrumentation (other than EEE)	EEE	3	-	-	3
5	ME3545	Green Engineering (other than ME)	ME	3	-	-	3
6	ME3546	3D Printing Technologies (other than ME)	ME	3	-	-	3
7	EC3555	Assistive Technologies(other than ECE)	ECE	3	-	-	3
8	EC3556	Introduction to Bio-Medical Engineering (other than ECE&IoT)	ECE	3	-	-	3
9	CT3548	DevOps (Other than CSE and IT)	CSE	3	-	-	3
10	CS3511	Object Oriented Analysis & Design (Other than CSE)	CSE	3	-	-	3
11	IT3516	Scripting Languages (Other than IT)	IT	3	-	-	3
12	CT3535	Software Project Management(Other than CSE & IT)	IT	3	-	-	3
13	AD3504	Web Mining (Other than AI&DS)	AI&DS	3	-	-	3
14	CT3549	AI Chatbots (Other than AI&DS and CSE (AI&ML))	AI&DS	3	-	-	3
15	IN3523	Trends in IoT (Other than IoT)	IoT	3	-	-	3
16		Academic Communication	ENG	3	-	-	3

IV Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3538	Utilization of Electrical Energy	3	1	-	4
2		Professional Elective - III	3	-	-	3
3		Professional Elective - IV	3	-	-	3
4		Professional Elective - V	3	-	-	3
5	BA3503	Engineering Economics & Project Management	2	-	-	2
6	EE3545	Power Systems Lab	-	-	2	1
7	EE3546	Power Electronics Lab	-	-	2	1
8	EE3547	Computer Aided Electrical Drawing	-	-	4	2
9	EE3548	Internship/Industrial Training / Practical Training	-	-	6	3
10	EE3549	MOOCs	-	-	-	2
Total			14	1	14	24

IV Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3550	Major Project Work	-	-	16	8
Total			-	-	16	8

Open Elective - I

Sl. No.	Course Code	Name of the Course / Laboratory	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1	CE3513	Elements of Civil Engineering (other than CE)	CE	3	-	-	3
2	CE3514	Environment Laws and Policies (other than CE)	CE	3	-	-	3
3	EE3513	Electrical Materials (other than EEE)	EEE	3	-	-	3
4	EE3514	Control Systems Engineering (other than EEE&ECE)	EEE	3	-	-	3
5	ME3517	Automotive Engineering (other than ME)	ME	3	-	-	3
6	ME3518	Elements of Mechanical Transmission (other than ME)	ME	3	-	-	3
7	EC3520	Introduction to Embedded Systems (other than ECE/IoT)	ECE	3	-	-	3
8	EC3521	Fundamentals of Communication Systems (other than ECE/IoT)	ECE	3	-	-	3
9	CS3503	Information Retrieval Systems (Other than CSE & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT & AI&DS)	CSE	3	-	-	3
11	IT3504	System Software (Other than IT)	IT	3	-	-	3
12	IT3505	Free & Open Source Software (Other than IT)	IT	3	-	-	3
13	MA3516	Fuzzy Mathematics	BS&H	3	-	-	3

III Year - I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3519	Electrical Measurements and Instrumentation	3	1	-	4
2	EE3520	Power Transmission Systems	2	1	-	3
3	EC3524	Analog and Digital IC Applications	2	1	-	3
4		Professional Elective - I	3	-	-	3
5		Open Elective - II	3	-	-	3
6	EE3526	Control Systems Lab	-	-	2	1
7	EE3527	AC Machines Lab	-	-	2	1
8	EE3528	Electrical Measurements & Instrumentation Lab	-	-	4	2
9	SD3504	Problems Solving Enhancement	-	-	2	1
10	EE3529	Community Service Project	-	-	8	4
Total			13	3	18	25

III Year - II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC3539	Microprocessors, Microcontrollers & its Applications**	3	1	-	4
2	EE3530	Power Electronics	3	1	-	4
3	EE3531	Power System Analysis	2	1	-	3
4		Professional Elective - II	3	-	-	3
5		Open Elective - III	3	-	-	3
6	EC3540	Microprocessors, Microcontrollers & its Applications Lab	-	-	2	1
7	EE3537	Automation of Electrical Systems Using IoT	-	-	4	2
8	SD3506	Linguistic Competency Building	-	-	2	1
Total			14	3	8	21

** Project base Theory Course

L : Lecture T : Tutorial P : Practical


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Seshadri Rao Knowledge Village
Gudlavalleru - 521 356, Krishna District. A.P.

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3901	Electrical Machine Modeling and Analysis	3	-	-	3
2	EE3902	Analysis of Power Electronic Converters**	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5		Research Methodology & IPR	3	-	-	3
6	EE3909	Power Electronics Simulation Laboratory	-	-	4	2
7	EE3910	Power Converters Laboratory	-	-	4	2
Total			15	-	8	19
8	BA3902	Constitution of India (Audit Course)	2	-	-	

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EE3911	Switched Mode Power Conversion	3	-	-	3
2	EE3912	Power Electronic Control of Electrical Drives **	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	EE3919	Electric Drives Simulation Laboratory	-	-	4	2
6	EE3920	Electric Drives Laboratory	-	-	4	2
7	EE3921	Mini Project with Seminar	-	-	6	3
Total			12	-	14	19
8	EG3901	English for Research Paper Writing (Audit Course)	2	-	-	-

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Professional Elective - V	3	-	-	3
2		Open Elective	3	-	-	3
3		Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

** Project Based Course

L : Lecture T : Tutorial P : Practical

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1		Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:

Professional Elective - I

- EE3903 Modern Control Theory
- EE3904 Power Quality and Custom Power Devices
- EE3905 Programmable Logic Controllers and Applications

Professional Elective - II

- EE3906 Artificial Intelligence Techniques
- EE3907 **Renewable Energy Technologies**
- EE3908 Flexible AC Transmission Systems

Professional Elective - III

- EE3913 Control and Integration of Renewable Energy Systems
- EE3914 Hybrid Electric Vehicles
- EE3915 Advanced Digital Control Systems

Professional Elective - IV

- EE3916 Advanced Digital Signal Processing
- EE3917 Applications of Power Converters
- EE3918 Microcontrollers

Professional Elective - V

- EE3922 Digital Signal Processing Controlled Drives
- EE3923 Smart Grid Technologies
- EE39.... MOOCs

Open Electives:

- CE3924 Sustainable Development
- EE3924 **Energy Audit, Conservation & Management**
- ME3924 Rapid Prototyping
- EC4924 Automotive Electronics (Other than VLSID&ES)
- CS3924 Soft Computing Techniques