

VAAGESWARI COLLEGE OF ENGINEERING

UGC AUTONOMOUS

Accredited by NAAC with A+ Grade and ISO 9001:2015 Certified

Approved by AICTE New Delhi, Affiliated to JNTUH Hyderabad and Recognized by Govt. of Telangana

B.Tech.in ELECTRICAL & ELECTRONICS ENGINEERING

COURSE STRUCTURE (VR24 Regulations)

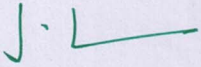
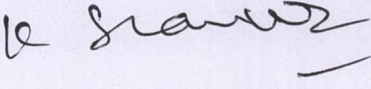
Applicable from AY 2024-25 Batch

I Year I Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	24MA101BS	Matrices and Calculus	3	1	0	4
2	24CH102BS	Engineering Chemistry	3	1	0	4
3	24EE103ES	C Programming and Data Structures	3	0	0	3
4	24EE105ES	Electrical Circuit Analysis-I	3	0	0	3
5	24ME105ES	Computer Aided Engineering Graphics	1	0	4	3
6	24EE106ES	Elements of Electrical and Electronics Engineering	0	0	2	1
7	24CH107BS	Engineering Chemistry Laboratory	0	0	2	1
8	24EE108ES	C Programming and Data Structures Laboratory	0	0	2	1
		Induction Program				
		Total Credits	13	2	10	20

I Year II Semester

S. No.	Course Code	Course Title	L	T	P	Credits
1	24MA201BS	Ordinary Differential Equations and Vector Calculus	3	1	0	4
2	24PH202BS	Applied Physics	3	1	0	4
3	24ME203ES	Engineering Workshop	0	1	3	2.5
4	24EN204HS	English for Skill Enhancement	2	0	0	2
5	24EE205ES	Electrical Circuit Analysis-II	2	0	0	2
6	24EE206ES	Applied Python Programming Laboratory	0	1	2	2
7	24PH207BS	Applied Physics Laboratory	0	0	3	1.5
8	24EN208HS	English Language and Communication Skills Laboratory	0	0	2	1
9	24EE209ES	Electrical Circuit Analysis Laboratory	0	0	2	1
10	24MC210NC	Environmental Science	3	0	0	0
		Total Credits	13	2	14	20

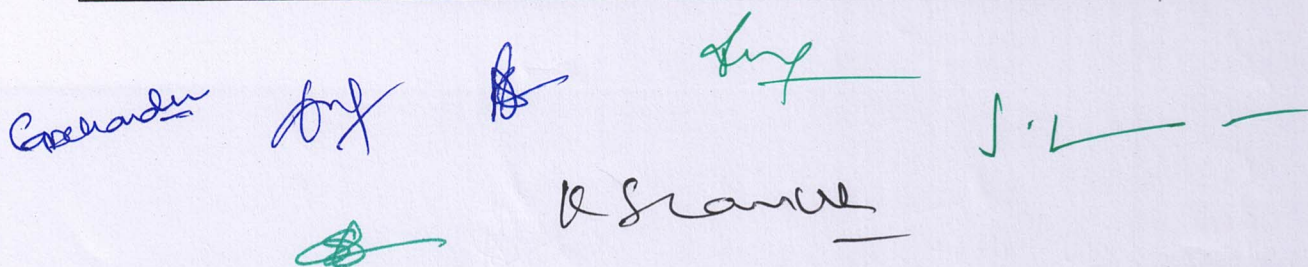
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II YEAR I SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	24MA301BS	Numerical Methods and Complex variables	3	1	0	4
2	24EE302PC	Electrical Machines-I	3	1	0	4
3	24EE303PC	Power System-I	3	0	0	3
4	24EE304PC	Analog Electronic Circuits	3	0	0	3
5	24EE305PC	Electro Magnetic Fields	3	0	0	3
6	24EE306PC	Electrical Machines Laboratory-I	0	0	2	1
7	24EE307PC	Analog Electronic Circuits Laboratory	0	0	2	1
8	24EE308PC	Electrical Simulation tools Laboratory	0	0	2	1
9	24MC309NC	Gender Sensitization Laboratory	0	0	2	0
		Total Credits	15	2	08	20

II YEAR II SEMESTER

S. No.	Course Code	Course Title	L	T	P	Credits
1	24EE401PC	Solid Mechanics & Hydraulic Machines	3	1	0	4
2	24EE402PC	Measurements and Instrumentation	3	0	0	3
3	24EE403PC	Electrical Machines-II	3	0	0	3
4	24EE404PC	Digital Electronics	2	0	0	2
5	24EE405PC	Power System-II	3	0	0	3
6	24EE406PC	Digital Electronics Laboratory	0	0	2	1
7	24EE407PC	Measurements and Instrumentation Laboratory	0	0	2	1
8	24EE408PC	Electrical Machines Laboratory-II	0	0	2	1
9	24EE409PC	Real-time Research Project/Field Based Project	0	0	4	2
10	24MC410NC	Constitution of India	3	0	0	0
		Total Credits	17	1	10	20



VAAGESWARI COLLEGE OF ENGINEERING
AUTONOMOUS
M. TECH- POWER ELECTRONICS
(Applicable for the Batch admitted from the Academic Year 2024-25 Batch)

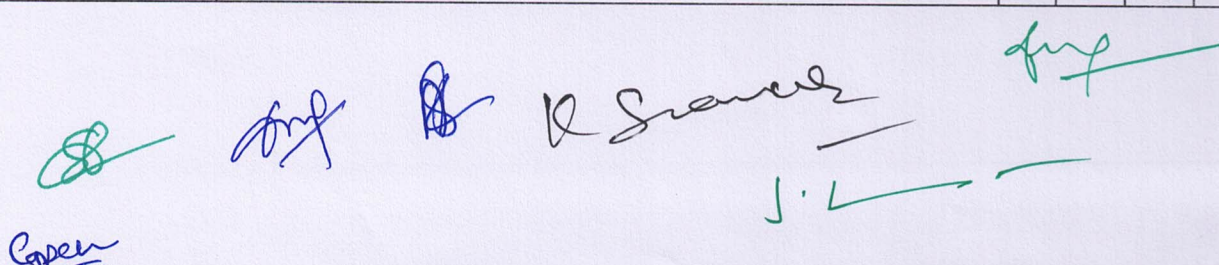
(R24) COURSE STRUCTURE AND SYLLABUS

I YEAR I SEMESTER

Sr.No	Core/Elective	Course Name	L	T	P	Credits
1.	Program Core-I	24D43C101 Advanced Power Electronic Converters-I	3	0	0	3
2.	Program Core-II	24D43C102 Electrical Drives	3	0	0	3
3.	Program Elective-I	24D43E103 Machine Modelling and Analysis 24D43E104 Microcontroller Applications to Power Electronics 24D43E105 Smart Grid Technologies 24D43E106 Modern Control Theory	3	0	0	3
4.	Program Elective-II	24D43E107 Power Semiconductor Devices and Modelling 24D43E108 Reactive Power Compensation and Management 24D43E109 High Frequency Magnetic Components 24D43E110 Electric Vehicles and Design	3	0	0	3
5.		24D43M111 Research Methodology & IPR	2	0	0	2
6.	Lab-I	24D43L112 Advanced Power Electronic Converters Lab-I	0	0	4	2
7.	Lab-II	24D43L113 Electrical Drives Lab	0	0	4	2
8.	Audit Course-I	24D43N114 English for Research Paper Writing 24D43N115 Disaster Management 24D43N116 Sanskrit for Technical Knowledge 24D43N117 Value Education	2	0	0	0
		Total Credits	16	0	8	18

I YEAR II SEMESTER

Sr.No	Core/Elective	Course Name	L	T	P	Credits
1.	Program Core-III	24D43C201 Advanced Power Electronic Converters-II	3	0	0	3
2.	Program Core-IV	24D43C202 Power Electronics Application to Power Systems	3	0	0	3
3.	Program Elective-III	24D43E203 Industrial Load Modelling and Control 24D43E204 Advanced Digital Signal Processing 24D43E205 Power Quality Improvement Techniques 24D43E206 Power Electronics for Renewable Energy Systems	3	0	0	3
4.	Program Elective-IV	24D43E207 DSP based Drive Control 24D43E208 Distributed Generation 24D43E209 Electric Vehicle Charging Techniques 24D43E210 Electromagnetic interference and compatibility	3	0	0	3
5.	MPWS	24D43M211 Mini Project with Seminar	0	0	4	2
6.	Lab-III	24D43L212 Advanced Power Electronic Converters Lab-II	0	0	4	2
7.	Lab-IV	24D43L213 Power Electronics Application to Power Systems Lab	0	0	4	2
8.	Audit Course-II	24D43N214 Constitution of India 24D43N215 Pedagogy Studies 24D43N216 Stress Management by Yoga 24D43N217 Personality Development through Life Enlightenment Skills	2	0	0	0
		Total Credits	14	0	12	18



II YEAR I SEMESTER

Sr.No	Core/Elective	Course Name	L	T	P	Credits
1.	Program Elective-V	24D43E301 Reliability Engineering 24D43E302 Dynamics of Electrical Machines 24D43E303 Energy Storage Technologies 24D43E304 SCADA Systems and Applications	3	0	0	3
2.	Open Elective	24D43O305 Business Analytics 24D43O306 Industrial Safety 24D43O307 Operations Research 24D43O308 Cost Management of Engineering Projects 24D43O309 Composite Materials 24D43O310 Photovoltaic Systems	3	0	0	3
3.	Dissertation	24D43P311 Dissertation Stage-I	0	0	12	6
		Total Credits	6	0	12	12

II YEAR II SEMESTER

Sr.No	Core/Elective	Course Name	L	T	P	Credits
1.	Dissertation	24D43P401 Dissertation Stage-II	0	0	12	6
2.	Dissertation	24D43P402 Dissertation Viva-Voce	0	0	28	14
		Total Credits	0	0	40	20

*For Dissertation Work Review - I, please refer 7.10 in R24 Academic Regulations.

Open Elective

1. Business Analytics (Offered by CSE Department)
2. Industrial Safety (Offered by **Chemical Engineering** Department)
3. Operations Research (Offered by **Mechanical Engineering** Department)
4. Cost Management of Engineering Projects (Offered by **Civil Engineering** Department)
5. Composite Materials (Offered by **Metallurgical Engineering** Department)
6. Photovoltaic Systems (Offered by EEE Department)

Audit Course I & II

1. English for Research Paper Writing.
2. Disaster Management.
3. Sanskrit for Technical Knowledge.
4. Value Education.
5. Constitution of India.
6. Pedagogy Studies.
7. Stress Management by Yoga.
8. Personality Development through Life Enlightenment Skills.

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