

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

1.2.1: *List of new courses introduced of the total number of courses across all programs offered during the academic year 2021 - 2022.*

S. No	Name of the Course	Course Code	Programme Name
1.	Applied Mechanics	CE3501	B. Tech-CE
2.	Linear Algebra and Calculus	MA3501	B. Tech-CE
3.	Integral Transforms and Vector Calculus	MA3505	B. Tech-CE
4.	Engineering Chemistry	CH3501	B. Tech-CE
5.	Engineering Chemistry Lab	CH3502	B. Tech-CE
6.	Fluid Mechanics	CE3505	B. Tech-CE
7.	Engineering Geology & Geo-Spatial Applications	CE3507	B. Tech-CE
8.	Circuit Theory - I	EE3504	B. Tech-EEE
9.	Linear Algebra and Calculus	MA3501	B. Tech-EEE
10.	Integral Transforms and Vector Calculus	MA3505	B. Tech-EEE
11.	Solid State Physics	PH3504	B. Tech-EEE
12.	Solid State Physics Lab	PH3505	B. Tech-EEE
13.	Universal Human Values	UH3501	B. Tech-EEE
14.	Applied Chemistry	CH3503	B. Tech-EEE
15.	Python Programming	CT3508	B. Tech-EEE
16.	Circuit Theory - II	EE3508	B. Tech-EEE
17.	Electronic Devices and Circuits	EC3504	B. Tech-EEE
18.	Electronic Devices and Circuits Lab	EC3506	B. Tech-EEE
19.	Digital Circuits Lab	EC3507	B. Tech-EEE
20.	Logic building and Basic Coding Principles	SD3501	B. Tech-EEE
21.	Digital Circuits	EC3505	B. Tech-EEE
22.	Power Generation Systems	EE3512	B. Tech-EEE
23.	Simulation of Electrical Engineering Systems	EE3517	B. Tech-EEE
24.	Programming for Corporate	SD3503	B. Tech-EEE
25.	Linear Algebra and Calculus	MA3501	B. Tech-ME
26.	Integral Transforms and Vector Calculus	MA3505	B. Tech-ME

S. No	Name of the Course	Course Code	Programme Name
27.	Physics for Engineers	PH3502	B. Tech-ME
28.	Chemistry for Engineers	CH3504	B. Tech-ME
29.	Engineering Mechanics Lab and Fuel & Lubricants Lab	ME3506	B. Tech-ME
30.	Universal Human Values	UH3501	B. Tech-ME
31.	Electrical & Electronics Engineering Lab	EE3506	B. Tech-ME
32.	Engineering Thermodynamics	ME3508	B. Tech-ME
33.	Fluid Mechanics & Hydraulic Machines	ME3516	B. Tech-ME
34.	Logic Building and Basic Coding Principles	SD3501	B. Tech-ME
35.	Manufacturing Processes Lab & Machine Dynamics Lab	ME3520	B. Tech-ME
36.	Manufacturing Science	ME3513	B. Tech-ME
37.	Materials Engineering	ME3511	B. Tech-ME
38.	Mechanics of Solids	ME3510	B. Tech-ME
39.	Mechanics of Solids Lab and Materials Lab	ME3512	B. Tech-ME
40.	Numerical & Statistical Methods	MA3513	B. Tech-ME
41.	Numerical & Statistical Methods Lab	MA3515	B. Tech-ME
42.	Programming for Corporate	SD3503	B. Tech-ME
43.	Python Programming	CT3508	B. Tech-ECE
44.	Problem Solving Using C	CT3501	B. Tech-ECE
45.	Electronic Workshop	EC3503	B. Tech-ECE
46.	Linear Algebra and Calculus	MA3501	B. Tech-ECE
47.	Integral Transforms and Vector Calculus	MA3505	B. Tech-ECE
48.	Solid State Physics	PH3504	B. Tech-ECE
49.	Solid State Physics Lab	PH3506	B. Tech-ECE
50.	Applied Chemistry	CH3503	B. Tech-ECE
51.	Universal Human Values	UH3501	B. Tech-ECE
52.	Logic Building and Algorithmic Programming	SD3502	B. Tech-ECE
53.	Digital Circuit Design	EC3512	B. Tech-ECE
54.	Numerical Methods & Complex Analysis	MA3508	B. Tech-ECE
55.	VLSI Design	EC3519	B. Tech-ECE
56.	Digital Circuit Design lab	EC3536	B. Tech-ECE
57.	Programming for Corporate	SD3503	B. Tech-ECE
58.	Programming for Problem Solving	CT3502	B. Tech-CSE
59.	C Programming Lab	CT3503	B. Tech-CSE
60.	Python Programming	CT3504	B. Tech-CSE
61.	Data Structures	CT3505	B. Tech-CSE

S. No	Name of the Course	Course Code	Programme Name
62.	Python programming lab	CT3506	B. Tech-CSE
63.	Data Structures Lab	CT3507	B. Tech-CSE
64.	Java Programming Lab	CT3514	B. Tech-CSE
65.	Database Management Systems Lab	CT3515	B. Tech-CSE
66.	Logic Building and Algorithmic Programming	SD3502	B. Tech-CSE
67.	Software Engineering*	CS3502	B. Tech-CSE
68.	Operating Systems Lab	CT3523	B. Tech-CSE
69.	Game Programming	CT3524	B. Tech-CSE
70.	Programming for Corporate	SD3503	B. Tech-CSE
71.	Probability and statistics using R Lab	MA3510	B. Tech-CSE
72.	Discrete Mathematical structures	MA3511	B. Tech-CSE
73.	Linear Algebra and Calculus	MA3501	B. Tech-IT
74.	Integral Transforms and Vector Calculus	MA3505	B. Tech-IT
75.	Applied Chemistry	CH3506	B. Tech-IT
76.	Programming for Problem Solving	CT3502	B. Tech-IT
77.	Applied Chemistry Lab	CH3507	B. Tech-IT
78.	C Programming Lab	CT3503	B. Tech-IT
79.	Applied Physics	PH3509	B. Tech-IT
80.	Applied Physics Lab	PH3510	B. Tech-IT
81.	Data Structures Lab	CT3507	B. Tech-IT
82.	Universal Human Values	UH3501	B. Tech-IT
83.	Object Oriented Programming through JAVA	CT3511	B. Tech-IT
84.	JAVA Programming Lab	CT3514	B. Tech-IT
85.	Linux Programming Lab	IT3502	B. Tech-IT
86.	R Programming Lab	IT3501	B. Tech-IT
87.	Python Programming	IT3503	B. Tech-IT
88.	Python Programming Lab	IT3506	B. Tech-IT
89.	Mobile Application Development	CT3525	B. Tech-IT
90.	Logic Building and Algorithmic Programming	SD3502	B. Tech-IT
91.	Programming for Corporate	SD3503	B. Tech-IT
92.	Environment Laws and Policies	CE3514	B. Tech-IT
93.	Fuzzy Mathematics	MA3516	B. Tech-IT
94.	Introduction to Embedded Systems	EC3520	B. Tech-IT
95.	Fundamentals of Communication Systems	EC3521	B. Tech-IT
96.	Information Retrieval Systems	CS3503	B. Tech-IT
97.	Free and open source software	IT3505	B. Tech-IT

S. No	Name of the Course	Course Code	Programme Name
98.	Theory of Structures	CE2522	B. Tech-CE
99.	Geotechnical Engineering	CE2523	B. Tech-CE
100.	Hydrology and Water Resources Engineering	CE2524	B. Tech-CE
101.	Water and Waste Water Engineering	CE2525	B. Tech-CE
102.	Water and Waste Water Engineering Lab	CE2533	B. Tech-CE
103.	Infrastructure Development	CE2534	B. Tech-CE
104.	Foundation Engineering	CE2536	B. Tech-CE
105.	Highway Engineering	CE2537	B. Tech-CE
106.	Highway Engineering Lab	CE2546	B. Tech-CE
107.	Smart Buildings and Automation	CE2548	B. Tech-CE
108.	Building Information Modelling	CE2549	B. Tech-CE
109.	Project Management and Finance	CE2551	B. Tech-CE
110.	Project Scheduling and Contracts	CE2566	B. Tech-CE
111.	Geo informatics	CE2530	B. Tech-CE
112.	Environmental Sanitation	CE2531	B. Tech-CE
113.	Hydrology	CE2543	B. Tech-CE
114.	Planning for Sustainable Development	CE2544	B. Tech-CE
115.	Repair and Retrofitting Techniques	CE2563	B. Tech-CE
116.	Advanced Strength of Materials	CE2526	B. Tech-CE
117.	GIS and GPS	CE2527	B. Tech-CE
118.	Green Buildings	CE2528	B. Tech-CE
119.	Construction Management	CE2529	B. Tech-CE
120.	Ground Improvement Techniques	CE2542	B. Tech-CE
121.	Advanced Foundation Engineering	CE2555	B. Tech-CE
122.	Traffic Engineering	CE2556	B. Tech-CE
123.	Advanced Design of RC Structures	CE2558	B. Tech-CE
124.	Hydraulic Structures	CE2559	B. Tech-CE
125.	Geo synthetics	CE2560	B. Tech-CE
126.	Disaster Preparedness and Planning	CE2561	B. Tech-CE
127.	Logistics Infrastructure Engineering	CE2569	B. Tech-CE
128.	Pre-Engineered Buildings	CE2572	B. Tech-CE
129.	Urban Transportation Planning	CE2573	B. Tech-CE
130.	Soil Dynamics and Machine Foundations	CE2574	B. Tech-CE
131.	Mechatronics	ME2549	B. Tech-CE
132.	Control System Design	EE2528	B. Tech-CE
133.	Probability and Fuzzy Mathematics	MA2511	B. Tech-CE

S. No	Name of the Course	Course Code	Programme Name
134.	Microprocessors, Microcontrollers and Its Applications	EC2510	B. Tech-CE
135.	Microprocessors, Microcontrollers and Its Applications Lab	EC2515	B. Tech-CE
136.	Data Base Management Systems	CT2513	B. Tech-CE
137.	Nano Electronics	EC2516	B. Tech-CE
138.	Solar and Wind Energy Systems	EE2535	B. Tech-CE
139.	Optional Elective- IV MOOCS	EE2529	B. Tech-CE
140.	Optional Elective- VI MOOCS	EE2536	B. Tech-CE
141.	Engineering Optimization	MA2512	B. Tech-CE
142.	Internship/Industrial Training/Practical Training	EE2546	B. Tech-CE
143.	Analog and Digital Communication	EC2519	B. Tech-CE
144.	Introduction to Python Programming	CS2502	B. Tech-CE
145.	Integration of Renewable Energy Sources	Ee2547	B. Tech-CE
146.	Optional Elective-VIII MOOCS	EE2548	B. Tech-CE
147.	Geo informatics	CE2503	B. Tech-CE
148.	Environmental Sanitation	CE2531	B. Tech-CE
149.	Power Systems Engineering	EE2524	B. Tech-CE
150.	Elements of Mechanical Transmission	ME2532	B. Tech-CE
151.	Material Handling Equipment	ME2533	B. Tech-CE
152.	Introduction to MEMS	EC2544	B. Tech-CE
153.	Data Science	CS2508	B. Tech-CE
154.	Virtual and Augmented Reality	CT2524	B. Tech-CE
155.	Quality, Reliability and Operations Research	MA2517	B. Tech-CE
156.	Hydrology	CE2543	B. Tech-CE
157.	Planning for Sustainable Development	CE2544	B. Tech-CE
158.	Electrical and Hybrid Vehicles	EE2531	B. Tech-CE
159.	Material Science	ME2541	B. Tech-CE
160.	Bio-Medical Engineering	EC2507	B. Tech-CE
161.	Node and Angular JS	CS2512	B. Tech-CE
162.	Cyber Security	CS2513	B. Tech-CE
163.	Software Project Management	CT2531	B. Tech-CE
164.	Elements of Stochastic Processes	MA2518	B. Tech-CE
165.	Academic Communication	EG2505	B. Tech-CE
166.	Repair and Retrofitting Techniques	CE2563	B. Tech-CE
167.	Non Destructive Evaluation	ME2554	B. Tech-CE
168.	Cyber Physical Systems	EC2563	B. Tech-CE

S. No	Name of the Course	Course Code	Programme Name
169.	Digital Forensics	CS2521	B. Tech-CE
170.	Business Intelligence & Decision Support Systems	CS2522	B. Tech-CE
171.	Adhoc and Sensor Networks	IT2521	B. Tech-CE
172.	Information Retrieval Systems	CT2537	B. Tech-CE
173.	Fuzzy Logic	MA2514	B. Tech-CE
174.	Switch Gear and Protection	EE2522	B. Tech-EEE
175.	Computer Networks	CT2519	B. Tech-EEE
176.	Pulse and Integrated Circuits	EC2509	B. Tech-EEE
177.	Data Structures	CT2505	B. Tech-EEE
178.	Digital Signal Processing	EC2511	B. Tech-EEE
179.	Embedded System Design	EC2512	B. Tech-EEE
180.	Principles of VLSI Design	EC2513	B. Tech-EEE
181.	DSP Processors and Architecture	EC2514	B. Tech-EEE
182.	Big Data Analytics	CT2534	B. Tech-EEE
183.	CMOS Digital IC Design	EC2517	B. Tech-EEE
184.	Power Semiconductor Drives	EE2538	B. Tech-EEE
185.	Flexible AC Transmission Systems	EE2539	B. Tech-EEE
186.	Cyber Security	CS2513	B. Tech-EEE
187.	Digital Image Processing	EC2518	B. Tech-EEE
188.	Advanced Control Systems	EE2551	B. Tech-EEE
189.	Digital Control Systems	EE2554	B. Tech-EEE
190.	Metal Cutting and Machine Tools	ME2527	B. Tech-ME
191.	Numerical and Statistical Methods	MA2509	B. Tech-ME
192.	Computer Aided Engineering Analysis Lab	ME2548	B. Tech-ME
193.	Computer Aided Machine Drawing Lab	ME2536	B. Tech-ME
194.	Design of Machine Members	ME2539	B. Tech-ME
195.	Engineering Economics and Accountancy	BA2503	B. Tech-ME
196.	Fluid Mechanics and Turbo Machinery Lab	ME2534	B. Tech-ME
197.	Fuzzy Logic Systems	EE2503	B. Tech-ME
198.	Heat Transfer	ME2540	B. Tech-ME
199.	Heat Transfer Lab	ME2546	B. Tech-ME
200.	Mechatronics	ME2549	B. Tech-ME
201.	Micro Processors and Interfacing	EC2520	B. Tech-ME
202.	Object Oriented Programming Through JAVA	CT2507	B. Tech-ME
203.	Turbo machinery	ME2528	B. Tech-ME
204.	Industrial Engineering and Management	ME2551	B. Tech-ME

S. No	Name of the Course	Course Code	Programme Name
205.	Big Data Analytics	CT2534	B. Tech-ME
206.	Computer Organization and Architecture	CT2512	B. Tech-ME
207.	Cryogenics	ME2565	B. Tech-ME
208.	Simulation Lab	ME2562	B. Tech-ME
209.	Academic Communication	EG2505	B. Tech-ME
210.	Assistive Technologies	EC2523	B. Tech-ME
211.	Bio-Medical Engineering	EC2507	B. Tech-ME
212.	Computer Graphics	CT2514	B. Tech-ME
213.	Cyber Security	CS2513	B. Tech-ME
214.	Data Science	CS2508	B. Tech-ME
215.	Electrical and Hybrid Vehicles	EE2531	B. Tech-ME
216.	Elements of Mechanical Transmission	ME2532	B. Tech-ME
217.	Elements of Stochastic Processes	MA2518	B. Tech-ME
218.	Environmental Sanitation	CE2531	B. Tech-ME
219.	Hydrology	CE2543	B. Tech-ME
220.	Introduction to MEMS	EC2544	B. Tech-ME
221.	Material Handling Equipment	ME2533	B. Tech-ME
222.	Node and Angular JS	CS2512	B. Tech-ME
223.	Planning for Sustainable Development	CE2544	B. Tech-ME
224.	Power Plant Instrumentation	EE2532	B. Tech-ME
225.	Power Systems Engineering	EE2524	B. Tech-ME
226.	Quality, Reliability and Operations Research	MA2517	B. Tech-ME
227.	Software Project Management	CT2531	B. Tech-ME
228.	Virtual and Augmented Reality	CT2524	B. Tech-ME
229.	Disaster Management	CE2562	B. Tech-ME
230.	Repair and Retrofitting Techniques	CE2563	B. Tech-ME
231.	Non Destructive Evaluation	ME2554	B. Tech-ME
232.	Cyber Physical Systems	EC2563	B. Tech-ME
233.	Signals and Systems	EC2508	B. Tech-ME
234.	Digital Forensics	CS2521	B. Tech-ME
235.	Business Intelligence and Decision Support Systems	CS2522	B. Tech-ME
236.	Adhoc and Sensor Networks	IT2521	B. Tech-ME
237.	Information Retrieval Systems	CT2537	B. Tech-ME
238.	Fuzzy Logic	MA2514	B. Tech-ME
239.	Data Structures	CT2505	B. Tech-ME
240.	Database Management Systems	CT2513	B. Tech-ME

S. No	Name of the Course	Course Code	Programme Name
241.	Mechanical Vibrations	ME2530	B. Tech-ME
242.	Mechanics of Composite Materials	ME2531	B. Tech-ME
243.	Non-Conventional Sources of Energy	ME2529	B. Tech-ME
244.	Principles of Finite Element Method	ME2543	B. Tech-ME
245.	Robotics	ME2544	B. Tech-ME
246.	Optimization Techniques	MA2515	B. Tech-ME
247.	Refrigeration and Air Conditioning	ME2555	B. Tech-ME
248.	Unconventional Machining Processes	ME2556	B. Tech-ME
249.	Total Quality Management	ME2558	B. Tech-ME
250.	Design of Transmission Elements	ME2561	B. Tech-ME
251.	Design for Manufacturing and Assembly	ME2567	B. Tech-ME
252.	Theory of Elasticity	ME2570	B. Tech-ME
253.	Gas Dynamics and Jet Propulsion	ME2572	B. Tech-ME
254.	Non Destructive Techniques	ME2574	B. Tech-ME
255.	Linear Integrated Circuits Applications	EC2536	B. Tech-ECE
256.	Digital Communications	EC2537	B. Tech-ECE
257.	Antennas and Wave Propagation	EC2538	B. Tech-ECE
258.	Principles of VLSI Design	EC2539	B. Tech-ECE
259.	Linear Integrated Circuits Applications Lab	EC2545	B. Tech-ECE
260.	Analog and Digital Communications Lab	EC2546	B. Tech-ECE
261.	Microprocessors, Microcontrollers and Applications	EC2510	B. Tech-ECE
262.	Microprocessor and Microcontroller Interfacing Lab	EC2515	B. Tech-ECE
263.	VLSI Lab	EC2553	B. Tech-ECE
264.	Data Warehousing and Data Mining	CT2528	B. Tech-ECE
265.	Mechatronics	ME2549	B. Tech-ECE
266.	CMOS Digital IC Design	EC2517	B. Tech-ECE
267.	Embedded System Design	EC2512	B. Tech-ECE
268.	Digital Control Systems	EE2554	B. Tech-ECE
269.	Artificial Intelligence	CT2521	B. Tech-ECE
270.	Transform Techniques	EC2567	B. Tech-ECE
271.	Geo informatics	CE2503	B. Tech-ECE
272.	Environmental Sanitation	CE2531	B. Tech-ECE
273.	Power Systems Engineering	EE2524	B. Tech-ECE
274.	Elements of Mechanical Transmission	ME2532	B. Tech-ECE
275.	Material Handling Equipment	ME2533	B. Tech-ECE
276.	Introduction to MEMS	EC2544	B. Tech-ECE

S. No	Name of the Course	Course Code	Programme Name
277.	Data Science	CS2508	B. Tech-ECE
278.	Virtual and Augmented Reality	CT2524	B. Tech-ECE
279.	Quality, Reliability and Operations Research	MA2517	B. Tech-ECE
280.	Hydrology	CE2543	B. Tech-ECE
281.	Planning for Sustainable Development	CE2544	B. Tech-ECE
282.	Electrical and Hybrid Vehicles	EE2531	B. Tech-ECE
283.	Material Science	ME2541	B. Tech-ECE
284.	Node and Angular JS	CS2512	B. Tech-ECE
285.	Cyber Security	CS2513	B. Tech-ECE
286.	Software Project Management	CT2531	B. Tech-ECE
287.	Elements of Stochastic Processes	MA2518	B. Tech-ECE
288.	Academic Communication	EG2505	B. Tech-ECE
289.	Repair and Retrofitting Techniques	CE2563	B. Tech-ECE
290.	Non Destructive Evaluation	ME2554	B. Tech-ECE
291.	Cyber Physical Systems	EC2563	B. Tech-ECE
292.	Digital Forensics	CS2521	B. Tech-ECE
293.	Business Intelligence & Decision Support Systems	CS2522	B. Tech-ECE
294.	Adhoc and Sensor Networks	IT2521	B. Tech-ECE
295.	Information Retrieval Systems	CT2537	B. Tech-ECE
296.	Fuzzy Logic	MA2514	B. Tech-ECE
297.	Introduction To MEMS	EC2544	B. Tech-ECE
298.	CAD for VLSI	EC2540	B. Tech-ECE
299.	Computer Organization	EC2541	B. Tech-ECE
300.	Computer And Communication Networks	EC2542	B. Tech-ECE
301.	Biomedical Engineering	EC2507	B. Tech-ECE
302.	Analog IC Design	EC2549	B. Tech-ECE
303.	Nano Electronics	EC2516	B. Tech-ECE
304.	Smart Antennas	EC2550	B. Tech-ECE
305.	Coding Theory	EC2551	B. Tech-ECE
306.	Mixed Signal IC Design	EC2557	B. Tech-ECE
307.	System on Chip Design	EC2560	B. Tech-ECE
308.	Low Power VLSI Circuits	EC2569	B. Tech-ECE
309.	Real Time Operating Systems	EC2570	B. Tech-ECE
310.	Adaptive Signal Processing	EC2572	B. Tech-ECE
311.	ASIC Design	EC2573	B. Tech-ECE
312.	Embedded C	EC2574	B. Tech-ECE

S. No	Name of the Course	Course Code	Programme Name
313.	Multi Rate Signal Processing	EC2576	B. Tech-ECE
314.	Computer Networks	CT2519	B. Tech-CSE
315.	Web Technologies	CT2520	B. Tech-CSE
316.	Computer Networks and Compiler Design Lab	CS2509	B. Tech-CSE
317.	Web Technologies Lab	CT2525	B. Tech-CSE
318.	Digital Signal Processing	EC2511	B. Tech-CSE
319.	Control Systems	EE2512	B. Tech-CSE
320.	UML and Design Patterns	CS2511	B. Tech-CSE
321.	Data Mining Lab	CS2514	B. Tech-CSE
322.	Graph Theory	CS2516	B. Tech-CSE
323.	Embedded System Design	EC2512	B. Tech-CSE
324.	Digital Control Systems	EE2554	B. Tech-CSE
325.	Cryptography and Network Security	CT2533	B. Tech-CSE
326.	Big Data Analytics	CT2534	B. Tech-CSE
327.	Big Data Analytics Lab	CT2538	B. Tech-CSE
328.	Cryptography and Network Security Lab	CS2523	B. Tech-CSE
329.	Network Programming	CS2525	B. Tech-CSE
330.	Systems Software	CT2515	B. Tech-CSE
331.	Data Science	CS2508	B. Tech-CSE
332.	Virtual and Augmented Reality	CT2524	B. Tech-CSE
333.	Node and Angular JS	CS2512	B. Tech-CSE
334.	Cyber Security	CS2513	B. Tech-CSE
335.	Business intelligence and decision support systems	CS2522	B. Tech-CSE
336.	Digital Forensics	CS2521	B. Tech-CSE
337.	C#.NET	CS2506	B. Tech-CSE
338.	Advanced Data Structures	CT2522	B. Tech-CSE
339.	Software Testing Methodologies	CT2523	B. Tech-CSE
340.	Principles of Programming Languages	CS2507	B. Tech-CSE
341.	Artificial Intelligence	CT2521	B. Tech-CSE
342.	Scripting Languages	CT2529	B. Tech-CSE
343.	microprocessors and Interfacing	EC2520	B. Tech-CSE
344.	Machine Learning	CS2518	B. Tech-CSE
345.	Internet of Things	CT2535	B. Tech-CSE
346.	NoSQL Databases	CS2519	B. Tech-CSE
347.	Software Requirements Engineering and Estimation	CS2520	B. Tech-CSE
348.	Mobile Computing	CT2536	B. Tech-CSE

S. No	Name of the Course	Course Code	Programme Name
385.	Design Patterns	IT2528	B. Tech-IT
386.	Advanced Structural Analysis	CE3901	M. Tech-SE
387.	Research Methodology and IPR	BA3901	M. Tech-SE
388.	English for Research Paper Writing (Audit Course)	EG3901	M. Tech-SE
389.	Advanced R.C Design	CE3903	M. Tech-SE
390.	Experimental Stress Analysis	CE3904	M. Tech-SE
391.	Repairs and Retrofitting of Structures	CE3916	M. Tech-SE
392.	Sustainable Development	CE3924	M. Tech-SE
393.	Analysis of Power Electronic Converters	EE3902	M. Tech-PEED
394.	Power Electronics Simulation Laboratory	EE3909	M. Tech-PEED
395.	Power Converters Laboratory	EE3910	M. Tech-PEED
396.	Switched Mode Power Conversion	EE3911	M. Tech-PEED
397.	Power Electronic Control of Electrical Drives	EE3912	M. Tech-PEED
398.	Electric Drives Simulation Laboratory	EE3919	M. Tech-PEED
399.	Electric Drives Laboratory	EE3920	M. Tech-PEED
400.	Mini Project with Seminar	EE3921	M. Tech-PEED
401.	English for Research Paper Writing (Audit Course)	EG3901	M. Tech-PEED
402.	Modern Control Theory	EE3903	M. Tech-PEED
403.	Power Quality and custom power devices	EE3904	M. Tech-PEED
404.	Programmable Logic Controllers and Applications	EE3905	M. Tech-PEED
405.	Artificial Intelligence Techniques	EE3906	M. Tech-PEED
406.	Renewable Energy Technologies	EE3907	M. Tech-PEED
407.	Flexible AC Transmission Systems	EE3908	M. Tech-PEED
408.	Control & Integration of Renewable Energy Systems	EE3913	M. Tech-PEED
409.	Hybrid Electric Vehicles	EE3914	M. Tech-PEED
410.	Advanced Digital Control Systems	EE3915	M. Tech-PEED
411.	Advanced Digital Signal Processing	EE3916	M. Tech-PEED
412.	Application of Power Converters	EE3917	M. Tech-PEED
413.	Microcontrollers	EE3918	M. Tech-PEED
414.	Digital Signal Processing Controlled Drives	EE3922	M. Tech-PEED
415.	Smart Grid Technologies	EE3923	M. Tech-PEED
416.	MOOCs-I	EE3924	M. Tech-PEED
417.	Energy audit conservation and management	EE3925	M. Tech-PEED
418.	Mechanical Vibrations and Acoustics**	ME3901	M. Tech-MD
419.	Advanced Mechanics of Solids	ME3902	M. Tech-MD
420.	Machine Dynamics Lab	ME3909	M. Tech-MD

S. No	Name of the Course	Course Code	Programme Name
349.	Image processing	CT2530	B. Tech-CSE
350.	Information Retrieval System	CT2537	B. Tech-CSE
351.	Optimization techniques	MA2515	B. Tech-CSE
352.	Web Mining	CS2527	B. Tech-CSE
353.	Cloud Computing	CT2540	B. Tech-CSE
354.	Agile Software Development Process	CT2532	B. Tech-CSE
355.	Block chain Technologies	CT2541	B. Tech-CSE
356.	Distributed Systems	CS2528	B. Tech-CSE
357.	Social Networks	CT2539	B. Tech-CSE
358.	Deep Learning	CS2530	B. Tech-CSE
359.	Web Technologies	CT2520	B. Tech-IT
360.	Web Technologies Lab	CT2525	B. Tech-IT
361.	Computer Networks and Data Mining Lab	IT2513	B. Tech-IT
362.	Big Data Analytics	CT2534	B. Tech-IT
363.	Big Data Analytics Lab	CT2538	B. Tech-IT
364.	Social Networks	CT2539	B. Tech-IT
365.	Scripting Languages	CT2529	B. Tech-IT
366.	Open Source Software	IT2505	B. Tech-IT
367.	Software Project Management	CT2531	B. Tech-IT
368.	Cyber Laws	IT2506	B. Tech-IT
369.	Machine Learning and Pattern Recognition	IT2517	B. Tech-IT
370.	Distributed Operating Systems	IT2518	B. Tech-IT
371.	Software Testing Methodologies	CT2523	B. Tech-IT
372.	Embedded System Design	EC2512	B. Tech-IT
373.	Advanced Data Structures	CT2522	B. Tech-IT
374.	Soft Computing Techniques	IT2511	B. Tech-IT
375.	Real Time Systems	T2512	B. Tech-IT
376.	Agile Software Development Process	CT2532	B. Tech-IT
377.	Adhoc and Sensor Networks	IT2521	B. Tech-IT
378.	Information Retrieval Systems	CT2537	B. Tech-IT
379.	Stenography and Biometrics	IT2525	B. Tech-IT
380.	Parallel Computing	T2526	B. Tech-IT
381.	Virtual and Augmented Reality	CT2524	B. Tech-IT
382.	Internet of Things	CT2535	B. Tech-IT
383.	Cloud Computing	CT2540	B. Tech-IT
384.	Block chain Technologies	CT2541	B. Tech-IT

S. No	Name of the Course	Course Code	Programme Name
421.	Advanced Material Testing Lab	ME3910	M. Tech-MD
422.	Constitution of India	BA3902	M. Tech-MD
423.	Computational Methods in Engineering	MA3902	M. Tech-MD
424.	Advanced Finite Element Methods	ME3911	M. Tech-MD
425.	Modelling and Simulation Lab	ME3918	M. Tech-MD
426.	Computational Methods Lab	ME3919	M. Tech-MD
427.	Mini Project with Seminar	ME3920	M. Tech-MD
428.	Analysis and Synthesis of Mechanisms	ME3903	M. Tech-MD
429.	Advanced materials	ME3904	M. Tech-MD
430.	Industrial Robotics	ME3905	M. Tech-MD
431.	Gear Engineering	ME3906	M. Tech-MD
432.	Advanced Optimization Techniques	ME3907	M. Tech-MD
433.	Rotor Dynamics	ME3908	M. Tech-MD
434.	Design for Manufacturing and Assembly	ME3912	M. Tech-MD
435.	Mechatronics	ME3913	M. Tech-MD
436.	Vehicle Dynamics	ME3914	M. Tech-MD
437.	Signal Analysis and Condition Monitoring	ME3915	M. Tech-MD
438.	Fracture Mechanics	ME3916	M. Tech-MD
439.	Experimental Stress Analysis	ME3917	M. Tech-MD
440.	Tribology	ME3921	M. Tech-MD
441.	Composite materials	ME3922	M. Tech-MD
442.	Sustainable Development	CE3923	M. Tech-MD
443.	Energy Audit, Conservation & Management	EE3924	M. Tech-MD
444.	Rapid Prototyping	ME3924	M. Tech-MD
445.	Automotive Electronics	EC4924	M. Tech-MD
446.	Soft Computing Techniques	CS3924	M. Tech-MD
447.	English for Research paper writing	EG3901	M. Tech-MD
448.	CMOS VLSI Design	EC4901	M. Tech-VLSI&ED
449.	Advanced Microcontrollers	EC4902	M. Tech-VLSI&ED
450.	CMOS VLSI Design Lab	EC4909	M. Tech-VLSI&ED
451.	Advanced Microcontrollers Lab	EC4910	M. Tech-VLSI&ED
452.	Research Methodology and IPR	BA3901	M. Tech-VLSI&ED
453.	Embedded Systems based IoT	EC4912	M. Tech-VLSI&ED
454.	VLSI System Design Lab	EC4919	M. Tech-VLSI&ED
455.	Embedded Systems and IoT Lab	EC4920	M. Tech-VLSI&ED
456.	Mini Project with Seminar	EC4921	M. Tech-VLSI&ED

S. No	Name of the Course	Course Code	Programme Name
457.	Constitution of India	BA3902	M. Tech-VLSI&ED
458.	English for Research Paper Writing	EG3901	M. Tech-VLSI&ED
459.	Digital Signal and Image Processing	EC4905	M. Tech-VLSI&ED
460.	VLSI Signal Processing	EC4906	M. Tech-VLSI&ED
461.	System Design with Embedded Linux	EC4907	M. Tech-VLSI&ED
462.	Parallel Processing	EC4908	M. Tech-VLSI&ED
463.	Advances in VLSI Design	EC4913	M. Tech-VLSI&ED
464.	Communication Buses and Interfaces	EC4917	M. Tech-VLSI&ED
465.	Low power VLSI Design	EC4922	M. Tech-VLSI&ED
466.	Network Security and Cryptography	EC4923	M. Tech-VLSI&ED
467.	MOOCs	EC4924	M. Tech-VLSI&ED
468.	Sustainable Development	CE3924	M. Tech-VLSI&ED
469.	Energy Audit, Conservation & Management	EE3924	M. Tech-VLSI&ED
470.	Rapid Prototyping	ME4924	M. Tech-VLSI&ED
471.	Automotive Electronics	EC4925	M. Tech-VLSI&ED
472.	Soft Computing Techniques	CS4924	M. Tech-VLSI&ED
473.	Data Science	CS3902	M. Tech-AI&ML
474.	Digital Image Processing	CS3903	M. Tech-AI&ML
475.	Ad hoc and Sensor Networks	CS3904	M. Tech-AI&ML
476.	Intelligent Systems	CS3905	M. Tech-AI&ML
477.	Internet of Things	CS3906	M. Tech-AI&ML
478.	Principles of Computer Security	CS3907	M. Tech-AI&ML
479.	Distributed Systems	CS3908	M. Tech-AI&ML
480.	Data Science Lab	CS3910	M. Tech-AI&ML
481.	Constitution of India	BA4302	M. Tech-AI&ML
482.	MEAN Stack Technologies	CS3911	M. Tech-AI&ML
483.	Machine Learning	CS3912	M. Tech-AI&ML
484.	Block chain Technology	CS3913	M. Tech-AI&ML
485.	Data Preparation and Analysis	CS3914	M. Tech-AI&ML
486.	Natural Language Processing	CS3915	M. Tech-AI&ML
487.	Cloud Computing	CS3916	M. Tech-AI&ML
488.	Quantum Computing	CS3917	M. Tech-AI&ML
489.	Digital Forensics	CS3918	M. Tech-AI&ML
490.	MEAN Stack Technologies Lab	CS3919	M. Tech-AI&ML
491.	Machine Learning using Python Lab	CS3920	M. Tech-AI&ML
492.	Mini Project with Seminar	CS3921	M. Tech-AI&ML

S. No	Name of the Course	Course Code	Programme Name
493.	English for Research Paper Writing	EG3901	M. Tech-AI&ML
494.	Deep Learning	CS3922	M. Tech-AI&ML
495.	Recommender Systems	CS3923	M. Tech-AI&ML
496.	Soft Computing Techniques	CS3924	M. Tech-AI&ML
497.	Retail Management	BA3919	MBA
498.	Human Resources Analytics	BA3925	MBA
499.	Business communication and skill development	BA3905	MBA
500.	Management of Retail Operations	BA3928	MBA


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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	-	-	-

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	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

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	CH3503	Applied Chemistry	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	CH3504	Applied Chemistry Lab	-	-	2	1
7	EG3502	Functional English Lab	-	-	2	1
Total			14	2	6	19
8	BA3501	Constitution of India (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	PH3504	Solid State Physics	3	-	-	3
4	EE3504	Circuit Theory - I	2	1	-	3
5	MA3506	Discrete Mathematics	2	1	-	3
6	ME3501	Engineering Drawing	1	-	4	3
7	EG3504	Professional Communication Lab	-	-	4	2
8	PH3505	Solid State Physics Lab	-	-	2	1
Total			13	3	10	21
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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	CT3508	Python Programming *	2	-	2	3
2	EE3508	Circuit Theory - II	2	1	-	3
3	EE3509	Control Systems	2	1	-	3
4	EE3510	DC Machines and Transformers	2	1	-	3
5	EC3504	Electronic Devices and Circuits	2	1	-	3
6	EC3505	Digital Circuits	3	-	-	3
7	EC3506	Electronic Devices and Circuits Lab	-	-	2	1
8	EC3507	Digital Circuits Lab	-	-	2	1
9	SD3501	Logic Building and Basic Coding Principles	-	-	2	1
Total			13	4	8	21
10	NS3501	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	MA3514	Numerical Methods with Computer Applications*	2	-	2	3
2	EE3511	Induction & Synchronous Machines	2	1	-	3
3	EE3512	Power generation Systems	3	1	-	4
4	EC3510	Signals and Systems	2	1	-	3
5		Open Elective - I	3	-	-	3
6	EE3515	DC Machines and Transofrmers Lab	-	-	2	1
7	EE3516	Electrical Circuits Lab	-	-	2	1
8	EE3517	Simulation of Electrical Engineering Systems	-	-	4	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			12	3	12	21
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

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	PH3502	Physics for Engineers	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	CH3504	Chemistry for Engineers	3	-	-	3
4	ME3504	Engineering Mechanics	3	1	-	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	ME3505	Engineering Workshop	-	-	2	1
8	ME3506	Engineering Mechanics Lab and Fuel & Lubricants Lab	-	-	2	1
Total			13	3	8	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

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	CT3508	Python Programming *	2	-	2	3
2	EE3505	Elements of Electrical and Electronics Engineering	3	-	-	3
3	ME3508	Engineering Thermodynamics	2	1	-	3
4	ME3509	Kinematics of Machines	2	1	-	3
5	ME3510	Mechanics of Solids	2	1	-	3
6	ME3511	Materials Engineering	3	-	-	3
7	EE3506	Electrical & Electronics Engineering Lab	-	-	2	1
8	ME3512	Mechanics of Solids Lab and Materials Lab	-	-	2	1
9	SD3501	Logic Building and Basic Coding Principles	-	-	2	1
Total			14	3	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	ME3513	Manufacturing Science	3	-	-	3
3	ME3514	Applied Thermodynamics	2	1	-	3
4	ME3515	Dynamics of Machines	2	1	-	3
5	ME3516	Fluid Mechanics & Hydraulic Machines	2	1	-	3
6		Open Elective - I	3	-	-	3
7	ME3519	Thermal Engineering Lab	-	-	2	1
8	MA3515	Numerical & Statistical Methods Lab	-	-	2	1
9	ME3520	Manufacturing Processes Lab & Machine Dynamics Lab	-	-	2	1
10	SD3503	Programming for Corporate	-	-	2	1
Total			14	4	8	22
11	NS3501	NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

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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	MA350	Linear Algebra and Calculus	3	1	-	4
3	CH3503	Applied Chemistry	3	-	-	3
4	CT3501	Problem Solving Using C *	3	-	2	4
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EC3503	Electronic Workshop	-	-	4	2
7	EG3502	Functional English Lab	-	-	2	1
8	CH3504	Applied Chemistry Lab	-	-	2	1
Total			14	2	10	21
9	BA3501	Constitution of India (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	EE3502	Linear Electrical Networks	3	-	-	3
4	PH3504	Solid State Physics	3	-	-	3
5	ME3501	Engineering Drawing	1	-	4	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	PH3506	Solid State Physics Lab	-	-	4	2
Total			12	1	12	19
8	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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	EC3508	Probability Theory and Stochastic Processes	3	-	-	3
2	EC3509	Semiconductor Devices and Circuits	3	-	-	3
3	EC3510	Signals and Systems	2	1	-	3
4	EC3511	Electromagnetic Field Theory	3	-	-	3
5	EC3512	Digital Circuit Design	2	1	-	3
6	MA3508	Numerical Methods and Complex Analysis	2	1	-	3
7	EC3513	Semiconductor Devices and Circuits Lab	-	-	2	1
8	EE3507	Linear Electrical Networks Lab	-	-	2	1
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			15	3	6	21
10	NS3501	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	EC3516	Transmission Lines and Waveguides	3	-	-	3
2	EC3517	Analog Circuits	3	-	-	3
3	EC3518	Analog and Digital Communications	3	1	-	4
4	EC3519	VLSI Design	3	-	-	3
5	CT3509	Data Structures*	2	-	2	3
6		Open Elective - I	3	-	-	3
7	EC3522	Analog Circuits Lab	-	-	2	1
8	EC3523	Digital Circuits Design Lab	-	-	2	1
9	SD3503	Programming for Corporate	-	-	2	1
Total			17	1	8	22
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

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	PH3509	Applied Physics	3	-	-	3
4	CT3502	Programming for Problem Solving	3	-	-	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3502	Functional English Lab	-	-	2	1
7	PH3510	Applied Physics Lab	-	-	2	1
8	CT3503	C Programming Lab	-	-	4	2
Total			14	2	8	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

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	EC3502	Basic Electronic Devices	2	-	-	2
4	CT3504	Python Programming	3	-	-	3
5	CT3505	Data Structures	3	-	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	CT3506	Python Programming Lab	-	-	4	2
8	CT3507	Data Structures Lab	-	-	4	2
Total			13	1	12	20
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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	BA3502	Managerial Economics and Financial Analysis	3	-	-	3
2	MA3509	Probability and Statistics	2	1	-	3
3	CT3510	Digital Logic Design	2	1	-	3
4	CT3511	Object Oriented Programming through Java	3	-	-	3
5	CT3512	Database Management Systems	3	-	-	3
6	MA3510	Probability and Statistics Using R Lab	-	-	2	1
7	CT3514	Java Programming Lab	-	-	4	2
8	CT3515	Database Management Systems Lab	-	-	4	2
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			13	2	12	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	MA3511	Discrete Mathematical Structures	2	1	-	3
2	CT3518	Computer Organization	3	-	-	3
3	CS3501	Design and Analysis of Algorithms	3	-	-	3
4	CT3519	Operating Systems	3	-	-	3
5	CS3502	Software Engineering *	3	-	2	4
6		Open Elective - I	3	-	-	3
7	CT3523	Operating Systems Lab	-	-	2	1
8	CT3524	Game Programming	1	-	2	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			18	1	8	23
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

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	CH3506	Applied Chemistry	3	-	-	3
4	EC3501	Elements of Electronics Engineering	3	-	-	3
5	CT3502	Programming for Problem Solving	3	-	-	3
6	EG3502	Functional English Lab	-	-	2	1
7	CH3507	Applied Chemistry Lab	-	-	2	1
8	CT3503	C Programming Lab	-	-	4	2
Total			15	1	8	20
9	EN3501	Environmental Studies (Mandatory Non-Credit Course)	2	-	-	-

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	PH3509	Applied Physics	3	-	-	3
4	CT3505	Data Structures	3	-	-	3
5	UH3501	Universal Human Values 2: Understanding Harmony	2	1	-	3
6	EG3504	Professional Communication Lab	-	-	4	2
7	PH3510	Applied Physics Lab	-	-	2	1
8	CT3507	Data Structures Lab	-	-	4	2
Total			13	2	10	20
9	BA3501	Constitution of India (Mandatory Non-Credit Course)	2	-	-	-

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	MA3511	Discrete Mathematical Structures	2	1	-	3
2	BA3502	Managerial Economics and Financial Analysis	3	-	-	3
3	CT3510	Digital Logic Design	2	1	-	3
4	CT3511	Object Oriented Programming through JAVA	3	-	-	3
5	CT3513	Formal Languages and Automata Theory	2	1	-	3
6	CT3514	JAVA Programming Lab	-	-	4	2
7	IT3501	R Programming Lab	-	-	2	1
8	IT3502	Linux Programming Lab	-	-	2	1
9	SD3502	Logic Building and Algorithmic Programming	-	-	2	1
Total			12	3	10	20
10	NS3501	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	MA3509	Probability and Statistics	2	1	-	3
2	CT3512	Database Management Systems	3	-	-	3
3	CT3518	Computer Organization	3	-	-	3
4	IT3503	Python Programming	3	-	-	3
5		Open Elective - I	3	-	-	3
6	CT3515	Database Management Systems Lab	-	-	4	2
7	IT3506	Python Programming Lab	-	-	4	2
8	CT3525	Mobile Application Development	-	-	4	2
9	SD3503	Programming for Corporate	-	-	2	1
Total			14	1	14	22
10	SG3501	Sports and Games / Cultural (Mandatory Non-Credit Course)	-	-	2	-

: Lecture

T : Tutorial

P : Practical



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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, CSE(AI&ML), & AI&DS)	CSE	3	-	-	3
10	CT3522	Computer Graphics (Other than CSE, IT, CSE(AI&ML) & 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


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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	CE2522	Theory of Structures	3	1	-	3
2	CE2523	Geotechnical Engineering	2	1	-	2
3	CE2524	Hydrology and Water Resources Engineering	4	-	-	3
4	CE2525	Water and Waste Water Engineering	3	1	-	3
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	CE2532	Geotechnical Engineering Lab	-	-	4	2
8	CE2533	Water and Waste Water Engineering Lab	-	-	4	2
Total			20	3	8	21
9		Optional Elective - III	-	-	-	3
	CE2534	i) Infrastructure Development				
	ME2509	ii) Basics of Power Plant Engineering				
	CT2507	iii) Object Oriented Programming through JAVA				
10	CE2535	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	CE2536	Foundation Engineering	3	-	-	2
2	CE2537	Highway Engineering	4	-	-	3
3	CE2538	Design of RC Structures	3	1	-	3
4		Professional Elective - II	4	-	-	3
5		Open Elective-III (see list of Open Electives)	4	-	-	3
6	CE2545	Structural Engineering Lab	-	-	4	2
7	CE2546	Highway Engineering Lab	-	-	4	2
8	CE2547	Mini Project / Survey Camp	-	-	4	2
Total			18	1	12	20
9		Optional Elective - V	-	-	-	3
	CE2548	i) Smart Buildings and Automation				
	CE2549	ii) Building Information Modeling				
	CT2513	iii) Database Management Systems				
10	CE2550	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

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	CE2551	Project Management and Finance	4	-	-	3
2	CE2552	Estimation, Costing and Valuation	3	1	-	3
3	CE2553	Design of Steel Structures	3	1	-	3
4		Professional Elective - III	4	-	-	3
5		Professional Elective - IV	4	-	-	3
6		Open Elective-IV(see list of Open Electives)	4	-	-	3
7	CE2564	Computer Applications in Civil Engineering Lab	-	-	4	2
8	CE2565	Internship / Industrial Training / Practical Training	-	-	-	2
Total			22	2	4	22
9		Optional Elective - VII	-	-	-	3
	CE2566	i) Project Scheduling and Contracts				
	MA2515	ii) Optimization Techniques				
	BA2504	iii) Entrepreneurship				
10	CE2567	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	CE2576	Project	-	-	20	10
Total			8	-	20	16

L : Lecture T : Tutorial P : Practical




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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

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

Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	CE2526	i) Advanced Strength of Materials				
	CE2527	ii) GIS and GPS				
	CE2528	iii) Green Buildings				
	CE2529	iv) Construction Management				
		Professional Elective - II	4	-	-	3
	CE2539	i) Advanced Structural Analysis				
	CE2540	ii) Environmental Pollution and Its Control				
	CE2541	iii) Ground Water Development and Management				
	CE2542	iv) Ground Improvement Techniques				
		Professional Elective - III	4	-	-	3
	CE2554	i) Pre-stressed Concrete				
	CE2555	ii) Advanced Foundation Engineering				
	CE2556	iii) Traffic Engineering				
	CE2557	iv) Industrial Wastewater Management				
		Professional Elective - IV	4	-	-	3
	CE2558	i) Advanced Design of RC Structures				
	CE2559	ii) Hydraulic Structures				
	CE2560	iii) Geosynthetics				
	CE2561	iv) Disaster Preparedness and Planning				
		Professional Elective - V	4	-	-	3
	CE2568	i) Earthquake Resistant Design of Structures				
	CE2569	ii) Logistics Infrastructure Engineering				
	CE2570	iii) Finite Element Methods				
	CE2571	iv) Design and Drawing of Irrigation Structures				
		Professional Elective - VI	4	-	-	3
	CE2572	i) Pre-Engineered Buildings				
	CE2573	ii) Urban Transportation Planning				
	CE2574	iii) Soil Dynamics and Machine Foundations				
	CE2575	iv) Environmental Impact Assessment				

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	MA251	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) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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

L : Lecture

T : Tutorial

P : Practical


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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

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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

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

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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	MA2509	Numerical and Statistical Methods	3	1	-	3
2	ME2527	Metal Cutting and Machine Tools	4	-	-	3
3	ME2528	Turbo Machinery	3	1	-	3
4		Professional Elective - I	4	-	-	3
5		Open Elective-II (see list of Open Electives)	4	-	-	3
6	ME2534	Fluid Mechanics and Turbo Machinery Lab	-	-	4	2
7	ME2535	Machine Tools Lab	-	-	4	2
8	ME2536	Computer Aided Machine Drawing Lab	-	-	4	2
Total			18	2	12	21
9		Optional Elective - III	-	-	-	3
	CT2514	i) Computer Graphics				
	EE2503	ii) Fuzzy Logic Systems				
	EC2520	iii) Micro Processors and Interfacing				
10	ME2537	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	BA2503	Engineering Economics and Accountancy	4	-	-	3
2	ME2538	Metrology and Instrumentation	3	1	-	3
3	ME2539	Design of Machine Members	3	1	-	3
4	ME2540	Heat Transfer	3	1	-	3
5		Professional Elective - II	4	-	-	3
6		Open Elective-III(see list of Open Electives)	4	-	-	3
7	ME2546	Heat Transfer Lab	-	-	4	2
8	ME2547	Metrology and Instrumentation Lab	-	-	4	2
9	ME2548	Computer Aided Engineering Analysis Lab	-	-	2	1
Total			21	3	10	23
10		Optional Elective - V	-	-	-	3
	CT2507	i) Object Oriented Programming through Java				
	ME2549	ii) Mechatronics				
	EC2512iii)	Embedded System Design				
11	ME2550	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

L : Lecture T : Tutorial P : Practical

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	ME2551	Industrial Engineering and Management	3	1	-	3
2	ME2552	CAD / CAM	3	1	-	3
3		Professional Elective - III	4	-	-	3
4		Professional Elective - IV	4	-	-	3
5		Open Elective-IV(see list of Open Electives)	4	-	-	3
6	ME2562	Simulation Lab	-	-	4	2
7	ME2563	Mini Project	-	-	4	2
8	ME2564	Internship / Industrial Training / Practical Training	-	-	-	2
Total			18	2	8	21
9		Optional Elective - VII	-	-	-	3
	CT2534	i) Big Data Analytics				
	CT2512	ii) Computer Organization and Architecture				
	ME2565	iii) Cryogenics				
10	ME2566	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	ME2575	Project	-	-	20	10
Total			8	-	20	16

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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

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

Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	ME2529	i) Non Conventional Sources of Energy				
	ME2530	ii) Mechancial Vibrations				
	ME2531	iii) Mechancis of Composite Materials				
	CT2505	iv) Data Structures				
		Professional Elective - II	4	-	-	3
	ME2543	i) Principles of Finite Element Method				
	ME2544	ii) Robotics				
	ME2545	iii) Automobile Engineering				
	CT2513	iv) Database Management Systems				
		Professional Elective - III	4	-	-	3
	MA2515	i) Optimization Techniques				
	ME2555	ii) Refrigeration and Air Conditioning				
	ME2556	iii) Unconventional Machining Process				
	ME2557	iv) Tribology				
		Professional Elective - IV	4	-	-	3
	ME2558	i) Total Quality Management				
	ME2559	ii) Computational Fluid Dynamics				
	ME2560	iii) Condition Monitoring				
	ME2561	iv) Design of Transmission Elements				
		Professional Elective - V	4	-	-	3
	ME2567	i) Design for Manufacturing and Assembly				
	ME2568	ii) Production Planning and Control				
	ME2569	iii) Power Plant Engineering				
	ME2570	iv) Theory of Elasticity				
		Professional Elective - VI	4	-	-	3
	ME2571	i) Rapid Prototyping				
	ME2572	ii) Gas Dynamics and Jet Propulsion				
	ME2573	iii) Automation in Manufacturing				
	ME2574	iv) Non Destructive Techniques				

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	EC2536	Linear Integrated Circuits Applications	3	1	-	3
2	EC2537	Digital Communications	3	-	-	2
3	EC2538	Antennas and Wave Propagation	4	-	-	3
4	EC2539	Principles of VLSI Design	3	-	-	2
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	EC2545	Linear Integrated Circuits Applications Lab	-	-	4	2
8	EC2546	Analog and Digital Communications Lab	-	-	4	2
Total			21	1	8	20
9		Optional Elective - III	-	-	-	3
	CT2528	i) Data Warehousing and Data Mining				
	ME2549	ii) Mechatronics				
	EC2544	iii) Introduction to MEMS				
10	EC2547	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	EC2511	Digital Signal Processing	4	-	-	3
2	EE2512	Control Systems	3	1	-	3
3	EC2510	Microprocessors, Microcontrollers and Applications**	3	-	1	3
4	EC2548	Microwave and Optical Communications	3	-	-	2
5		Professional Elective - II	4	-	-	3
6		Open Elective-III (see list of Open Electives)	4	-	-	3
7	EC2515	Microprocessor and Microcontroller Interfacing Lab	-	-	4	2
8	EC2552	Digital Signal Processing Lab	-	-	4	2
9	EC2553	VLSI Lab	-	-	4	2
Total			21	1	13	23
10		Optional Elective - V	-	-	-	3
	CT2534	i) Big Data Analytics				
	EC2554	ii) Cognitive Radio Networks				
	CT2533	iii) Cryptography and Network Security				
10	EC2555	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Project Based Theory Course

L : Lecture T : Tutorial P : Practical

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	EC2517	CMOS Digital IC Design	4	-	-	3
2	EC2512	Embedded System Design	3	-	-	2
3	EC2556	Electronic Measurements and Instrumentation	3	-	-	2
4		Professional Elective - III	4	-	-	3
5		Professional Elective - IV	4	-	-	3
6		Open Elective-IV(see list of Open Electives)	4	-	-	3
7	EC2564	Microwave and Optical Communications Lab	-	-	4	2
8	EC2565	Mini Project on Smart Applications	-	-	4	2
9	EC2566	Internship / Industrial Training / Practical Training	-	-	-	2
Total			22	-	8	22
9		Optional Elective - VII	-	-	-	3
	EE2554	i) Digital Control Systems				
	CT2521	ii) Artificial Intelligence				
	EC2567	iii) Transform Techniques				
10	EC2568	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	EC2577	Project	-	-	20	10
Total			8	-	20	16

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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

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 Gudlavalluru - 521 356, Krishna District. A.P.

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




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

Professional Electives

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods			No. of Credits
			per week			
			L	T	P	
		Professional Elective - I	4	-	-	3
	EC2540	i) CAD for VLSI				
	EC2541	ii) Computer Organization				
	EC2542	iii) Computer and Communication Networks				
	EC2507	iv) Biomedical Engineering				
		Professional Elective - II	4	-	-	3
	EC2549	i) Analog IC Design				
	EC2516	ii) Nano Electronics				
	EC2550	iii) Smart Antennas				
	EC2551	iv) Coding Theory				
		Professional Elective - III	4	-	-	3
	EC2557	i) Mixed Signal IC Design				
	EC2558	ii) Cellular and Mobile Communications				
	EC2559	iii) Digital TV Engineering				
	EC2514	iv) DSP Processors and Architectures				
		Professional Elective - IV	4	-	-	3
	EC2560	i) System on Chip Design				
	EC2561	ii) Wireless Sensor Networks				
	EC2562	iii) Satellite Communication				
	EC2518	iv) Digital Image Processing				
		Professional Elective - V	4	-	-	3
	EC2569	i) Low Power VLSI Circuits				
	EC2570	ii) Real Time Operating Systems				
	EC2571	iii) Speech Processing				
	EC2572	iv) Adaptive Signal Processing				
		Professional Elective - VI	4	-	-	3
	EC2573	i) ASIC Design				
	EC2574	ii) Embedded C				
	EC2575	iii) RADAR Engineering				
	EC2576	iv) Multi Rate Signal Processing				

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

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	CT2517	Software Engineering	3	1	-	3
2	CT2518	Compiler Design	3	1	-	3
3	CT2519	Computer Networks	3	1	-	3
4	CT2520	Web Technologies	4	-	-	3
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	CS2509	Computer Networks and Compiler Design Lab	-	-	4	2
8	CT2525	Web Technologies Lab	-	-	4	2
Total			21	3	8	22
9		Optional Elective - III	-	-	-	3
	CT2526	i) Human Computer Interaction				
	EC2511	ii) Digital Signal Processing				
	EE2512	iii) Control Systems				
10	CS2510	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	CT2527	Design and Analysis of Algorithms	3	1	-	3
2	CT2528	Data Warehousing and Data Mining	4	-	-	3
3	CS2511	UML and Design Patterns *	3	-	2	3
5		Professional Elective - II (OR) Any other Elective Depending on Industry Needs	4	-	-	3
6		Open Elective-III (see list of Open Electives)	4	-	-	3
7	CS2514	Data Mining Lab	-	-	4	2
8	CS2515	Mini Project	-	-	4	2
Total			18	1	10	19
9		Optional Elective - V	-	-	-	3
	CS2516	i) Graph Theory				
	EC2512	ii) Embedded System Design				
	EE2554	iii) Digital Control Systems				
10	CS2517	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical



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	CT2533	Cyptography and Network Securty	4	-	-	3
2	CT2534	Big Data Analytics	4	-	-	3
3		Professional Elective - III	4	-	-	3
4		Professional Elective - IV	4	-	-	3
5		Open Elective-IV(see list of Open Electives)	4	-	-	3
6	CT2538	Big Data Analytics Lab	-	-	4	2
7	CS2523	Cryptography and Network Security Lab	-	-	4	2
8	CS2524	Internship / Industrial Training / Practical Training	-	-	-	2
Total			20	-	8	21
9		Optional Elective - VII	-	-	-	3
	CS2525	i) Network Programming				
	CT2515	i) Systems Software				
	ME2544	iii) Robotics				
10	CS2526	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	CS2531	Project	-	-	20	10
Total			8	-	20	16

L : Lecture

T : Tutorial

P : Practical


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

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

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

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
	CS2506	i) C#.NET				
	CT2522	ii) Advanced Data Structures				
	CT2523	iii) Software Testing Methodologies				
	CS2507	iv) Principles of Programming Languages				
		Professional Elective - II	4	-	-	3
	CT2521	i) Artificial Intelligence				
	CT2529	ii) Scripting Languages				
	EC2520	iii) Microprocessors and Interfacing				
	CT2531	iv) Software Project Management				
		Professional Elective - III	4	-	-	3
	CS2518	i) Machine Learning				
	CT2535	ii) Internet of Things				
	CS2519	iii) NoSQL Databases				
	CS2520	iv) Software Requirements Engineering and Estimation				
		Professional Elective - IV	4	-	-	3
	CT2536	i) Mobile Computing				
	CT2530	ii) Image Processing				
	CT2537	iii) Information Retrieval Systems				
	MA2515	iv) Optimization Techniques				
		Professional Elective - V	4	-	-	3
	CS2527	i) Web Mining				
	CT2540	ii) Cloud Computing				
	CT2532	iii) Agile Software Development Process				
	CT2541	iv) Blockchain Technologies				
		Professional Elective - VI	4	-	-	3
	CS2528	i) Distributed Systems				
	CT2539	ii) Social Networks				
	CS2529	iii) Web Services				
	CS2530	iv) Deep Learning				

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	CT2517	Software Engineering	3	1	-	3
2	CT2518	Compiler Design	3	1	-	3
3	CT2510	Operating Systems	3	1	-	3
4	CT2520	Web Technologies	4	-	-	3
5		Professional Elective - I	4	-	-	3
6		Open Elective-II (see list of Open Electives)	4	-	-	3
7	IT2507	Operating Systems and Compiler Design Lab	-	-	4	2
8	CT2525	Web Technologies Lab	-	-	4	2
Total			21	3	8	22
9		Optional Elective - III	-	-	-	3
	IT2508	i) Object Oriented Programming through C++				
	EC2522	ii) Data Communication				
	CE2549	iii) Building Information Modelling				
10	IT2509	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	CT2527	Design and Analysis of Algorithms	3	1	-	3
2	CT2528	Data Warehousing and Data Mining	4	-	-	3
3	IT2510	Object Oriented Analysis and Design *	4	-	2	4
4	CT2519	Computer Networks	3	1	-	3
5		Professional Elective - II	4	-	-	3
6		Open Elective-III(see list of Open Electives)	4	-	-	3
7	IT2513	Computer Networks and Data Mining Lab	-	-	4	2
Total			22	2	6	21
8		Optional Elective - V	-	-	-	3
	IT2514	i) Secure Web Technologies				
	IT2515	ii) Management Information Systems				
	ME2544	iii) Robotics				
9	IT2516	Optional Elective - VI (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

* Integrated Course with Theory and Laboratory

L : Lecture T : Tutorial P : Practical

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	BA2502	Managerial Economics and Financial Analysis	3	-	-	2
2	CT2534	Big Data Analytics	4	-	-	3
3		Professional Elective - III	4	-	-	3
4		Professional Elective - IV	4	-	-	3
5		Open Elective-IV(see list of Open Electives)	4	-	-	3
6	CT2538	Big Data Analytics Lab	-	-	4	2
7	IT2522	Mini Project	-	-	4	2
8	IT2523	Internship / Industrial Training / Practical Training	-	-	-	2
Total			19	-	8	20
9		Optional Elective - VII	-	-	-	3
	CT2539	i) Social Networks				
	EC2523	ii) Assistive Technologies				
	ME2542	iii) Renewable Energy Sources				
10	IT2524	Optional Elective - VIII (MOOCs) Students shall opt from the list of MOOCs given by the Department)	-	-	-	2

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	4	-	-	3
2		Professional Elective - VI	4	-	-	3
3	IT2529	Project	-	-	20	10
Total			8	-	20	16

L : Lecture

T : Tutorial

P : Practical

Open Elective - I

Sl. No.	Course Code	Title of the Subject	Department Offering the Subject	No. of Periods per week			No. of Credits
				L	T	P	
1		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

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

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
	CT2521	i) Artificial Intelligence				
	EC2512	ii) Embedded System Design				
	CT2514	iii) Computer Graphics				
	CT2522	iv) Advanced Data Structures				
		Professional Elective - II	4	-	-	3
	IT2511	i) Soft Computing Techniques				
	IT2512	ii) Real Time Systems				
	CT2530	iii) Image Processing				
	CT2532	iv) Agile Software Development Process				
		Professional Elective - III	4	-	-	3
	IT2517	i) Machine Learning and Pattern Recognition				
	IT2518	ii) Distributed Operating Systems				
	CT2526	iii) Human Computer Interaction				
	CT2523	iv) Software Testing Methodologies				
		Professional Elective - IV	4	-	-	3
	IT2519	i) Business Intelligence				
	CT2536	ii) Mobile Computing				
	IT2520	iii) Multimedia Tools				
	CT2533	iv) Cryptography and Network Security				
		Professional Elective - V	4	-	-	3
	IT2525	i) Steganography and Biometrics				
	IT2526	ii) Parallel Computing				
	CT2524	iii) Virtual and Augmented Reality				
	IT2527	iv) E-Commerce				
		Professional Elective - VI	4	-	-	3
	CT2535	i) Internet of Things				
	CT2540	ii) Cloud Computing				
	CT2541	iii) Blockchain Technologies				
	IT2528	iv) Design Patterns				

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I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	CE3901	Advanced Structural Analysis **	3	-	-	3
2	CE3902	Theory of Elasticity	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5	BA3901	Research Methodology & IPR	3	-	-	3
6	CE3908	Advanced Structural Engineering Lab	-	-	4	2
7	CE3909	Advanced Concrete Technology Lab	-	-	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	CE3910	Finite Element Methods in Structural Engineering **	3	-	-	3
2	CE3911	Structural Dynamics	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	CE3918	Computer Applications in Structural Engineering Lab	-	-	4	2
6	CE3919	Structural Design Lab	-	-	4	2
7	CE3920	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

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

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

- MA3901 Computational Methods in Structural Engineering
- CE3903 Advanced R.C. Design
- CE3904 Experimental Stress Analysis

Professional Elective - II

- CE3905 Theory of Plates and Shells
- CE3906 Advancements in Concrete Technology
- CE3907 Design of Pre-stressed Concrete Structures

Professional Elective - III

- CE3912 Advanced Design of Steel Structures
- CE3913 Stability of Structures
- CE3914 Design of High-rise Structures

Professional Elective - IV

- CE3915 Design of Bridge Structures
- CE3916 Repairs and Retrofitting of Structures
- CE3917 Ground Improvement Methods

Professional Elective - V

- CE3921 Earthquake Resistant Design of Structures
- CE3922 Design of Sub-structures
- CE3923 MOOCs

Open Electives:

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

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	BA3901	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

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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
- EE3924 MOOCs

Open Electives:

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

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	ME3901	Mechanical Vibrations and Acoustics **	3	-	-	3
2	ME3902	Advanced mechanics of Solids	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5	BA3901	Research Methodology & IPR	3	-	-	3
6	ME3909	Machine Dynamics Lab	-	-	4	2
7	ME3910	Advanced Material Testing Lab	-	-	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	MA3902	Computational Methods in Engineering	3	-	-	3
2	ME3911	Advanced Finite Element Methods **	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	ME3918	Modeling and Simulation Lab	-	-	4	2
6	ME3919	Computational Methods Lab	-	-	4	2
7	ME3920	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	ME3926	Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

** Project Based Course

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IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	ME3927	Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:

Professional Elective - I

- ME3903 Analysis and Synthesis of Mechanisms
- ME3904 Advanced Materials
- ME3905 Industrial Robotics

Professional Elective - II

- ME3906 Gear Engineering
- ME3907 Advanced Optimization Techniques
- ME3908 Rotor Dynamics

Professional Elective - III

- ME3912 Design for Manufacturing and Assembly
- ME3913 Mechatronics
- ME3914 Vehicle Dynamics

Professional Elective - IV

- ME3915 Signal Analysis and Condition Monitoring
- ME3916 Fracture Mechanics
- ME3917 Experimental Stress Analysis

Professional Elective - V

- ME3921 Tribology
- ME3922 Composite Materials
- ME3923 MOOCs

Open Electives:

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

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC4901	CMOS VLSI Design	3	-	-	3
2	EC4902	Advanced Microcontrollers *	3	-	-	3
3		Professional Elective - I	3	-	-	3
4		Professional Elective - II	3	-	-	3
5	BA3901	Research Methodology & IPR	3	-	-	3
6	EC4909	CMOS VLSI Design Lab	-	-	4	2
7	EC4910	Advanced Microcontrollers Lab	-	-	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	EC4911	VLSI System Design *	3	-	-	3
2	EC4912	Embedded System Based IoT	3	-	-	3
3		Professional Elective - III	3	-	-	3
4		Professional Elective - IV	3	-	-	3
5	EC4919	VLSI System Design Lab	-	-	4	2
6	EC4920	Embedded System and IoT Lab	-	-	4	2
7	EC4921	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	EC4925	Dissertation Phase - I	-	-	20	10
Total			6	-	20	16

* Project Based Theory Course

L : Lecture

T : Tutorial

P : Practical




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

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	EC4925	Dissertation Phase - II	-	-	32	16
Total			-	-	32	16

Professional Electives:

Professional Elective - I

- EC4903 Testing and Testability of VLSI Circuits
- EC4904 Advanced Digital Design
- EC4905 Digital Signal and Image Processing

Professional Elective - II

- EC4906 VLSI Signal Processing
- EC4907 System Design with Embedded Linux
- EC4908 Parallel Processing

Professional Elective - III

- EC4913 Advances in VLSI Design
- EC4914 Embedded Computer Architecture
- EC4915 System on Chip Design

Professional Elective - IV

- EC4916 VLSI Interconnects
- EC4917 Communication Buses and Interfaces
- EC4918 Advanced Digital Signal Processing

Professional Elective - V

- EC4922 Lower Power VLSI Design
- EC4923 Network Security and Cryptography
- ME49... MOOCs

Open Electives:

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

SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE
SeshadriRao Knowledge Village, Gudlavaluru

Department of Computer Science and Engineering

R20 PG – M.Tech CSE (AI&ML)

Course Structure

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory		No. of hours per week			Total Credits
				L	T	P	
1	BA3901	Research Methodologies and IPR	HSS	3	-	-	3
2	CS3901	Advanced Data Structures and Algorithm Analysis	PC	3	-	-	3
3	CS3902	Data Science	ES	3	-	-	3
4	CS3903	Professional Elective – I 1. Digital Image Processing 2. Ad hoc and Sensor Networks 3. Intelligent Systems	PE	3	-	-	3
	CS3904						
	CS3905						
5	CS3906	Professional Elective – II 1. Internet of Things 2. Principles of Computer Security 3. Distributed Systems	PE	3	-	-	3
	CS3907						
	CS3908						
6	CS3909	Advanced Data Structures and Algorithm Analysis Lab	PC	-	-	4	2
7	CS3910	Data Science Lab	ES	-	-	4	2
8	BA3902	Constitution of India	AC	2	-	-	-
Total :				17	-	8	19

II Semester

Sl. No.	Course code	Name of the Course / Laboratory		No. of hours per week			No. of Credits
				L	T	P	
1	CS3911	MEAN Stack Technologies	PC	3	-	-	3
2	CS3912	Machine Learning	PC	3	-	-	3
3	CS3913	Professional Elective – III 1. Blockchain Technology 2. Data Preparation and Analysis 3. Natural Language Processing	PE	3	-	-	3
	CS3914						
	CS3915						
4	CS3916	Professional Elective – IV 1. Cloud Computing 2. Quantum Computing 3. Digital Forensics	PE	3	-	-	3
	CS3917						
	CS3918						
5	CS3919	MEAN Stack Technologies Lab	PC	-	-	4	2
6	CS3920	Machine Learning using Python Lab	PC	-	-	4	2
7	CS3921	Mini Project with Seminar	PROJ	-	-	6	3
8	EG 3901	English for Research Paper Writing	AC	2	-	-	-
Total:				14	-	14	19

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of hours per week			No. of Credits	
			L	T	P		
1	CS3922 CS3923	Professional Elective – V 1. Deep Learning 2. Recommender Systems 3. MOOCs-1 (NPTEL/SWAYAM) 12 Week Program related to the program which is not listed in the course structure	PE	3	-	-	3
2		Open Elective- I 1. Courses Offered by Other Departments 2. MOOCs-2 (NPTEL/SWAYAM)-Any 12 Week Course on Engineering/ Management/ Mathematics offered by other than parent department	OE	3	-	-	3
3	CS3925	Dissertation (Initiated in third Semester)	PROJ	-	-	20	10
Total :				6	-	20	16

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of hours per week			No. of Credits	
			L	T	P		
1	CS3926	Dissertation (Carried out in third & fourth Semesters)	PROJ	-	-	32	16
Total :				-	-	32	16

Open Elective-I	CS3924	Soft Computing Techniques
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Gudlavalleru - 521 356, Krishna District. A.P.

COURSE STRUCTURE

I Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3902	Perspectives of Management	4	-	-	4
2	BA3903	Managerial Economics	4	-	-	4
3	BA3904	Accounting for Managers	3	-	1	4
4	BA3905	Business Communication & Skill Development	4	-	-	4
5	BA3906	Business Environment and Legislation	4	-	-	4
6	BA3907	Quantitative Analysis for Business Decisions	3	-	1	4
7	BA3908	Business Law	4	-	-	4
8	BA3909	Information Technology Lab for Business Management	-	-	4	2
Total			26	-	6	30

II Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits
			L	T	P	
1	BA3910	Financial Management	3	-	1	4
2	BA3911	Marketing Management	4	-	-	4
3	BA3912	Human Resource Management	4	-	-	4
4	BA3913	Production & Operations Management	4	-	-	4
5	BA3914	Business Research Methods	3	-	1	4
6	BA3915	International Business	4	-	-	4
7	BA3916	Organizational Behaviour	4	-	-	4
Total			26	-	-	28

L : Lecture T : Tutorial P : Practical


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Gudlavalleru - 521 356, Krishna District. A.P.

III Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits	
			L	T	P		
1	BA3917	Business Policy & Strategic Management	4	-	-	4	
2	BA3918	Logistics & Supply Chain Management	4	-	-	3	
3	BA3919	Retail Management	4	-	-	3	
4	BA3920	Business Ethics & Corporate Governance	4	-	-	3	
5		Specialisation - I	Marketing subjects common to all	4	-	-	3
6		Specialisation - II		4	-	-	3
7		Specialisation - III	Finance (or) HR	4	-	-	3
8		Specialisation - IV		4	-	-	3
Total			32	-	-	25	

IV Semester

Sl. No.	Course Code	Name of the Course / Laboratory	No. of Periods per week			No. of Credits	
			L	T	P		
1	BA3927	Entrepreneurship & Project Management	4	-	-	4	
2	BA3928	Management of Retail Operations	4	-	-	3	
3		Specialisation - V	Marketing subjects common to all	4	-	-	3
4		Specialisation - VI		4	-	-	3
5		Specialisation - VII	Finance (or) HR	4	-	-	3
6		Specialisation - VIII		4	-	-	3
7		Project Report	-	-	-	5	
8		Comprehensive Viva-Voce	-	-	-	1	
Total			20	0	0	25	

Specialisations:

III Semester	IV Semester
Marketing BA3921 Advertising & Brand Management BA3922 Consumer Behaviour Finance BA3923 Security Analysis & Portfolio Mgt. BA3924 International Financial Management HR BA3925 Human Resources Analytics BA3926 Industrial Relations and Labour Laws	Marketing BA3929 Marketing of Services BA3930 Sales & Distribution Management Finance BA3931 Financial Derivatives BA3932 Financial Institutions and Services HR BA3933 Compensation Management BA3934 Management of Change and Development