# 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

1.1.3: List of courses having focus on employability/entrepreneurship/ skill development offered by the institution during the academic year 2020-2021.

| S. No | Name of the Course | $\begin{array}{c}\text { Course } \\ \text { Code }\end{array}$ | $\begin{array}{c}\text { Programme } \\ \text { Name }\end{array}$ | $\begin{array}{c}\text { Focus on } \\ \text { Employability/ } \\ \text { Entrepreneurship/ } \\ \text { Skill }\end{array}$ |
| :---: | :--- | :--- | :--- | :--- |
| Development |  |  |  |  |$]$| Employability |
| :---: | :--- | :--- |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 22. | Solid State Physics Lab | PH3506 | B. Tech-ECE | Skill Development |
| 23. | Applied Chemistry | CH3503 | B. Tech-ECE | Employability |
| 24. | Programming for Problem Solving | CT3502 | B. Tech-CSE | Employability |
| 25. | C Programming Lab | CT3503 | B. Tech-CSE | Skill Development |
| 26. | Python Programming | CT3504 | B. Tech-CSE | Employability |
| 27. | Data Structures | CT3505 | B. Tech-CSE | Employability |
| 28. | Python Programming Lab | CT3506 | B. Tech-CSE | Skill Development |
| 29. | Data Structures Lab | CT3507 | B. Tech-CSE | Skill Development |
| 30. | Linear Algebra and Calculus | MA3501 | B. Tech-IT | Employability |
| 31. | Integral Transforms and Vector Calculus | MA3505 | B. Tech-IT | Employability |
| 32. | Applied Physics | PH3509 | B. Tech-IT | Employability |
| 33. | Applied Physics Lab | PH3510 | B. Tech-IT | Skill Development |
| 34. | Applied Chemistry | CH3506 | B. Tech-IT | Employability |
| 35. | Programming for Problem Solving | CT3502 | B. Tech-IT | Employability |
| 36. | Applied Chemistry Lab | CH3507 | B. Tech-IT | Skill Development |
| 37. | C Programming Lab | CT3503 | B. Tech-IT | Skill Development |
| 38. | Data Structures Lab | CT3507 | B. Tech-IT | Skill Development |
| 39. | Mechanics of Solids | CE2504 | B. Tech-CE | Employability |
| 40. | Mechanics of Fluids | CE2505 | B. Tech-CE | Employability |
| 41. | Mechanics of Solids Lab | CE2509 | B. Tech-CE | Skill Development |
| 42. | Structural Analysis | CE2511 | B. Tech-CE | Employability |
| 43. | Engineering Geology and Geomatics | CE2514 | B. Tech-CE | Employability |
| 44. | Building Materials and Construction | CE2506 | B. Tech-CE | Employability |
| 45. | Surveying | CE2507 | B. Tech-CE | Employability |
| 46. | Building Planning and Drawing | CE2508 | B. Tech-CE | Skill Development |
| 47. | Survey Field Work | CE2510 | B. Tech-CE | Skill Development |
| 48. | Hydraulics and Hydraulic Machines | CE2512 | B. Tech-CE | Employability |
| 49. | Concrete Technology | CE2513 | B. Tech-CE | Employability |
| 50. | Fluid Mechanics and Hydraulic Machines Lab | CE2517 | B. Tech-CE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 51. | Concrete Technology Lab | CE2518 | B. Tech-CE | Employability |
| 52. | Interior Design | CE2519 | B. Tech-CE | Employability |
| 53. | Building Bye Laws and Scientific Planning | CE2520 | B. Tech-CE | Employability |
| 54. | Data Structures | CT2505 | B. Tech-CE | Employability |
| 55. | Theory of Structures | CE2522 | B. Tech-CE | Employability |
| 56. | Geotechnical Engineering | CE2523 | B. Tech-CE | Employability |
| 57. | Hydrology and Water Resources Engineering | CE2524 | B. Tech-CE | Employability |
| 58. | Water and Waste Water Engineering | CE2525 | B. Tech-CE | Employability |
| 59. | Water and Waste Water Engineering Lab | CE2533 | B. Tech-CE | Skill Development |
| 60. | Infrastructure Development | CE2534 | B. Tech-CE | Employability |
| 61. | Foundation Engineering | CE2536 | B. Tech-CE | Employability |
| 62. | Highway Engineering | CE2537 | B. Tech-CE | Employability |
| 63. | Highway Engineering Lab | CE2546 | B. Tech-CE | Skill Development |
| 64. | Smart Buildings and Automation | CE2548 | B. Tech-CE | Employability |
| 65. | Building Information Modelling | CE2549 | B. Tech-CE | Employability |
| 66. | Project Management and Finance | CE2551 | B. Tech-CE | Entrepreneurship |
| 67. | Project Scheduling and Contracts | CE2566 | B. Tech-CE | Employability |
| 68. | Estimation, Costing and Valuation | CE2552 | B. Tech-CE | Employability |
| 69. | Design of Steel Structures | CE2553 | B. Tech-CE | Employability |
| 70. | Computer Applications in Civil Engineering Lab | CE2564 | B. Tech-CE | Skill Development |
| 71. | Internship / Industrial Training / Practical Training | CE2565 | B. Tech-CE | Skill Development |
| 72. | Geo informatics | CE2530 | B. Tech-CE | Employability |
| 73. | Environmental Sanitation | CE2531 | B. Tech-CE | Employability |
| 74. | Power Systems Engineering | EE2524 | B. Tech-CE | Employability |
| 75. | Elements of Mechanical Transmission | ME2532 | B. Tech-CE | Employability |
| 76. | Material Handling Equipment | ME2533 | B. Tech-CE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 77. | Introduction to MEMS | EC2544 | B. Tech-CE | Employability |
| 78. | Data Science | CS2508 | B. Tech-CE | Employability |
| 79. | Virtual and Augmented Reality | CT2524 | B. Tech-CE | Employability |
| 80. | Quality, Reliability and Operations Research | MA2517 | B. Tech-CE | Employability |
| 81. | Hydrology | CE2543 | B. Tech-CE | Employability |
| 82. | Planning for Sustainable Development | CE2544 | B. Tech-CE | Employability |
| 83. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-CE | Employability |
| 84. | Material Science | ME2541 | B. Tech-CE | Employability |
| 85. | Bio-Medical Engineering | EC2507 | B. Tech-CE | Employability |
| 86. | Node and Angular JS | CS2512 | B. Tech-CE | Employability |
| 87. | Cyber Security | CS2513 | B. Tech-CE | Employability |
| 88. | Software Project Management | CT2531 | B. Tech-CE | Employability |
| 89. | Elements of Stochastic Processes | MA2518 | B. Tech-CE | Employability |
| 90. | Academic Communication | EG2505 | B. Tech-CE | Employability |
| 91. | Repair and Retrofitting Techniques | CE2563 | B. Tech-CE | Employability |
| 92. | Non Destructive Evaluation | ME2554 | B. Tech-CE | Employability |
| 93. | Cyber Physical Systems | EC2563 | B. Tech-CE | Employability |
| 94. | Digital Forensics | CS2521 | B. Tech-CE | Employability |
| 95. | Business Intelligence \& Decision Support Systems | CS2522 | B. Tech-CE | Employability |
| 96. | Adhoc and Sensor Networks | IT2521 | B. Tech-CE | Employability |
| 97. | Information Retrieval Systems | CT2537 | B. Tech-CE | Employability |
| 98. | Fuzzy Logic | MA2514 | B. Tech-CE | Employability |
| 99. | Advanced Strength of Materials | CE2526 | B. Tech-CE | Employability |
| 100. | GIS and GPS | CE2527 | B. Tech-CE | Employability |
| 101. | Green Buildings | CE2528 | B. Tech-CE | Employability |
| 102. | Construction Management | CE2529 | B. Tech-CE | Employability |
| 103. | Ground Improvement Techniques | CE2542 | B. Tech-CE | Employability |
| 104. | Advanced Foundation Engineering | CE2555 | B. Tech-CE | Employability |
| 105. | Traffic Engineering | CE2556 | B. Tech-CE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 106. | Advanced Design of RC Structures | CE2558 | B. Tech-CE | Employability |
| 107. | Hydraulic Structures | CE2559 | B. Tech-CE | Employability |
| 108. | Geo synthetics | CE2560 | B. Tech-CE | Employability |
| 109. | Disaster Preparedness and Planning | CE2561 | B. Tech-CE | Employability |
| 110. | Logistics Infrastructure Engineering | CE2569 | B. Tech-CE | Employability |
| 111. | Pre-Engineered Buildings | CE2572 | B. Tech-CE | Employability |
| 112. | Urban Transportation Planning | CE2573 | B. Tech-CE | Employability |
| 113. | Soil Dynamics and Machine Foundations | CE2574 | B. Tech-CE | Employability |
| 114. | Numerical Methods with Computer Applications | MA2507 | B. Tech-EEE | Employability |
| 115. | Probability and Fuzzy Mathematics | MA2511 | B. Tech-EEE | Employability |
| 116. | Engineering Optimization | MA2512 | B. Tech-EEE | Employability |
| 117. | DC Machines and Transformers | EE2508 | B. Tech-EEE | Employability |
| 118. | Electric Circuit Analysis | EE2509 | B. Tech-EEE | Employability |
| 119. | Analog Electronics | EC2503 | B. Tech-EEE | Employability |
| 120. | Mechanical Engineering Lab | ME2504 | B. Tech-EEE | Skill Development |
| 121. | Electric Circuits Lab | EE2511 | B. Tech-EEE | Skill Development |
| 122. | Analog Electronics Lab | EC2504 | B. Tech-EEE | Skill Development |
| 123. | Digital Circuit Design | EC2505 | B. Tech-EEE | Employability |
| 124. | Engineering Economics and Project Management | BA2501 | B. Tech-EEE | Entrepreneurship |
| 125. | Induction and Synchronous Machines | EE2513 | B. Tech-EEE | Employability |
| 126. | Digital Circuit Design Lab | EC2506 | B. Tech-EEE | Skill Development |
| 127. | Biomedical Engineering | EC2507 | B. Tech-EEE | Employability |
| 128. | Computer Organisation and Architecture | CT2512 | B. Tech-EEE | Employability |
| 129. | Introduction to Quantum Mechanics for Engineers | EE2518 | B. Tech-EEE | Employability |
| 130. | Optional Elective-II MOOCS | EE2519 | B. Tech-EEE | Employability |
| 131. | Control System Design | EE2528 | B. Tech-EEE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 132. | Probability and Fuzzy Mathematics | MA2511 | B. Tech-EEE | Employability |
| 133. | Microprocessors, Microcontrollers and Its Applications | EC2510 | B. Tech-EEE | Employability |
| 134. | Microprocessors, Microcontrollers and Its Applications Lab | EC2515 | B. Tech-EEE | Skill Development |
| 135. | Electrical Measurements \& Instrumentation | EE2520 | B. Tech-EEE | Employability |
| 136. | Signals and Systems | EC2508 | B. Tech-EEE | Employability |
| 137. | Power Systems - II | EE2521 | B. Tech-EEE | Employability |
| 138. | Control Systems Lab | EE2525 | B. Tech-EEE | Skill Development |
| 139. | Electrical Machines- II Lab | EE2526 | B. Tech-EEE | Skill Development |
| 140. | Mini Project | EE2527 | B. Tech-EEE | Skill Development |
| 141. | Power Electronics | EE2530 | B. Tech-EEE | Employability |
| 142. | Electrical Systems Simulation Lab | EE2533 | B. Tech-EEE | Skill Development |
| 143. | Electrical Measurements \& Instrumentation Lab | EE2534 | B. Tech-EEE | Skill Development |
| 144. | Power System Analysis | EE2537 | B. Tech-EEE | Employability |
| 145. | Power Electronics Lab | EE2544 | B. Tech-EEE | Skill Development |
| 146. | Power Systems Lab | EE2545 | B. Tech-EEE | Skill Development |
| 147. | Data Base Management Systems | CT2513 | B. Tech-EEE | Employability |
| 148. | Nano Electronics | EC2516 | B. Tech-EEE | Employability |
| 149. | Solar and Wind Energy Systems | EE2535 | B. Tech-EEE | Employability |
| 150. | Optional Elective- IV MOOCS | EE2529 | B. Tech-EEE | Employability |
| 151. | Optional Elective- VI MOOCS | EE2536 | B. Tech-EEE | Employability |
| 152. | Engineering Optimization | MA2512 | B. Tech-EEE | Employability |
| 153. | Internship/Industrial Training/Practical Training | EE2546 | B. Tech-EEE | Skill Development |
| 154. | Analog and Digital Communication | EC2519 | B. Tech-EEE | Employability |
| 155. | Introduction to Python Programming | CS2502 | B. Tech-EEE | Employability |
| 156. | Integration of Renewable Energy Sources | Ee2547 | B. Tech-EEE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 157. | Optional Elective-VIII MOOCS | EE2548 | B. Tech-EEE | Employability |
| 158. | Elements of civil engineering | CE2515 | B. Tech-EEE | Employability |
| 159. | Building Services | CE2516 | B. Tech-EEE | Employability |
| 160. | Electrical Materials | EE2515 | B. Tech-EEE | Employability |
| 161. | Control Systems Engineering | EE2516 | B. Tech-EEE | Employability |
| 162. | Elements of Manufacturing Processes | ME2520 | B. Tech-EEE | Employability |
| 163. | Automotive Engineering | ME2521 | B. Tech-EEE | Employability |
| 164. | Fundamentals of Communications | EC2532 | B. Tech-EEE | Employability |
| 165. | Computer Graphics | CT2514 | B. Tech-EEE | Employability |
| 166. | Systems Software | CT2515 | B. Tech-EEE | Employability |
| 167. | Web Programming | IT2502 | B. Tech-EEE | Employability |
| 168. | Mathematical Cryptography | MA2516 | B. Tech-EEE | Employability |
| 169. | Semiconductor Physics | PH2508 | B. Tech-EEE | Employability |
| 170. | Mechatronics | ME2549 | B. Tech-EEE | Employability |
| 171. | Geoinformatics | CE2503 | B. Tech-EEE | Employability |
| 172. | Power Systems Engineering | EE2524 | B. Tech-EEE | Employability |
| 173. | Elements of Mechanical Transmission | ME2532 | B. Tech-EEE | Employability |
| 174. | Material Handling Equipment | ME2533 | B. Tech-EEE | Employability |
| 175. | Introduction to MEMS | EC2544 | B. Tech-EEE | Employability |
| 176. | Data Science | CS2508 | B. Tech-EEE | Employability |
| 177. | Virtual and Augmented Reality | CT2524 | B. Tech-EEE | Employability |
| 178. | Quality, Reliability and Operations Research | MA2517 | B. Tech-EEE | Employability |
| 179. | Hydrology | CE2543 | B. Tech-EEE | Employability |
| 180. | Planning for Sustainable Development | CE2544 | B. Tech-EEE | Employability |
| 181. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-EEE | Employability |
| 182. | Material Science | ME2541 | B. Tech-EEE | Employability |
| 183. | Bio-Medical Engineering | EC2507 | B. Tech-EEE | Employability |
| 184. | Node and Angular JS | CS2512 | B. Tech-EEE | Employability |
| 185. | Cyber Security | CS2513 | B. Tech-EEE | Employability |
| 186. | Software Project Management | CT2531 | B. Tech-EEE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 187. | Elements of Stochastic Processes | MA2518 | B. Tech-EEE | Employability |
| 188. | Academic Communication | EG2505 | B. Tech-EEE | Employability |
| 189. | Big Data Analytics | CT2534 | B. Tech-EEE | Employability |
| 190. | CMOS Digital IC Design | EC2517 | B. Tech-EEE | Employability |
| 191. | Power Semiconductor Drives | EE2538 | B. Tech-EEE | Employability |
| 192. | Flexible AC Transmission Systems | EE2539 | B. Tech-EEE | Employability |
| 193. | Cyber Security | CS2513 | B. Tech-EEE | Employability |
| 194. | Digital Image Processing | EC2518 | B. Tech-EEE | Employability |
| 195. | Advanced Control Systems | EE2551 | B. Tech-EEE | Employability |
| 196. | Digital Control Systems | EE2554 | B. Tech-EEE | Employability |
| 197. | Disaster Management | CE2562 | B. Tech-EEE | Employability |
| 198. | Repair and Retrofitting Techniques | CE2563 | B. Tech-EEE | Employability |
| 199. | Non Destructive Evaluation | ME2554 | B. Tech-EEE | Employability |
| 200. | Cyber Physical Systems | EC2563 | B. Tech-EEE | Employability |
| 201. | Digital Forensics | CS2521 | B. Tech-EEE | Employability |
| 202. | Business Intelligence \& Decision Support Systems | CS2522 | B. Tech-EEE | Employability |
| 203. | Adhoc and Sensor Networks | IT2521 | B. Tech-EEE | Employability |
| 204. | Information Retrieval Systems | CT2537 | B. Tech-EEE | Employability |
| 205. | Fuzzy Logic | MA2514 | B. Tech-EEE | Employability |
| 206. | Switch Gear and Protection | EE2522 | B. Tech-EEE | Employability |
| 207. | Computer Networks | CT2519 | B. Tech-EEE | Employability |
| 208. | Pulse and Integrated Circuits | EC2509 | B. Tech-EEE | Employability |
| 209. | Data Structures | CT2505 | B. Tech-EEE | Employability |
| 210. | Digital Signal Processing | EC2511 | B. Tech-EEE | Employability |
| 211. | Embedded System Design | EC2512 | B. Tech-EEE | Employability |
| 212. | Principles of VLSI Design | EC2513 | B. Tech-EEE | Employability |
| 213. | DSP Processors and Architecture | EC2514 | B. Tech-EEE | Employability |
| 214. | Elements of Electrical and Electronics Engineering | EE2501 | B. Tech-ME | Employability |
| 215. | Solid Mechanics | ME2512 | B. Tech-ME | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 216. | Engineering Metallurgy | ME2513 | B. Tech-ME | Employability |
| 217. | Electrical and Electronics Engineering Lab | EE2502 | B. Tech-ME | Skill Development |
| 218. | Solid Mechanics and Metallurgy Lab | ME2514 | B. Tech-ME | Skill Development |
| 219. | Computer Aided Modelling Lab | ME2515 | B. Tech-ME | Skill Development |
| 220. | Applied Thermodynamics | ME2517 | B. Tech-ME | Employability |
| 221. | Fuzzy Logic Systems | EE2503 | B. Tech-ME | Employability |
| 222. | Thermal Engineering Lab | ME2522 | B. Tech-ME | Skill Development |
| 223. | Machine Dynamics Lab | ME2524 | B. Tech-ME | Skill Development |
| 224. | Control Systems | EE2512 | B. Tech-ME | Employability |
| 225. | Nano Technology | ME2525 | B. Tech-ME | Employability |
| 226. | Digital Logic Design | CT2506 | B. Tech-ME | Employability |
| 227. | Metal Cutting and Machine Tools | ME2527 | B. Tech-ME | Employability |
| 228. | Turbo Machinery | ME2528 | B. Tech-ME | Employability |
| 229. | Numerical and Statistical Methods | MA2509 | B. Tech-ME | Employability |
| 230. | Computer Aided Engineering Analysis Lab | ME2548 | B. Tech-ME | Skill Development |
| 231. | Computer Aided Machine Drawing Lab | ME2536 | B. Tech-ME | Skill Development |
| 232. | Computer Graphics | CT2514 | B. Tech-ME | Employability |
| 233. | Design of Machine Members | ME2539 | B. Tech-ME | Employability |
| 234. | Embedded System Design | EC2512 | B. Tech-ME | Employability |
| 235. | Engineering Economics and Accountancy | BA2503 | B. Tech-ME | Entrepreneurship |
| 236. | Fluid Mechanics and Turbo Machinery Lab | ME2534 | B. Tech-ME | Employability |
| 237. | Heat Transfer | ME2540 | B. Tech-ME | Employability |
| 238. | Heat Transfer Lab | ME2546 | B. Tech-ME | Skill Development |
| 239. | Mechatronics | ME2549 | B. Tech-ME | Employability |
| 240. | Micro Processors and Interfacing | EC2520 | B. Tech-ME | Employability |
| 241. | Industrial Engineering and Management | ME2551 | B. Tech-ME | Entrepreneurship |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 242. | Big Data Analytics | CT2534 | B. Tech-ME | Employability |
| 243. | Computer Organization and Architecture | CT2512 | B. Tech-ME | Employability |
| 244. | Cryogenics | ME2565 | B. Tech-ME | Employability |
| 245. | Simulation Lab | ME2562 | B. Tech-ME | Skill Development |
| 246. | Elements of Civil Engineering | CE2515 | B. Tech-ME | Employability |
| 247. | Building Services | CE2516 | B. Tech-ME | Employability |
| 248. | Electrical Materials | EE2515 | B. Tech-ME | Employability |
| 249. | Control Systems Engineering | EE2516 | B. Tech-ME | Employability |
| 250. | Elements of Manufacturing Processes | ME2520 | B. Tech-ME | Employability |
| 251. | Automotive Engineering | ME2521 | B. Tech-ME | Employability |
| 252. | Introduction to Microprocessors and Microcontrollers | EC2531 | B. Tech-ME | Employability |
| 253. | Fundamentals of Communications | EC2532 | B. Tech-ME | Employability |
| 254. | Computer Graphics | CT2514 | B. Tech-ME | Employability |
| 255. | Object Oriented Programming through JAVA | CT2507 | B. Tech-ME | Employability |
| 256. | Systems Software | CT2515 | B. Tech-ME | Employability |
| 257. | Web Programming | IT2502 | B. Tech-ME | Employability |
| 258. | Mathematical Cryptography | MA2516 | B. Tech-ME | Employability |
| 259. | Semiconductor Physics | PH2508 | B. Tech-ME | Employability |
| 260. | Academic Communication | EG2505 | B. Tech-ME | Employability |
| 261. | Assistive Technologies | EC2523 | B. Tech-ME | Employability |
| 262. | Bio-Medical Engineering | EC2507 | B. Tech-ME | Employability |
| 263. | Cyber Security | CS2513 | B. Tech-ME | Employability |
| 264. | Data Science | CS2508 | B. Tech-ME | Employability |
| 265. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-ME | Employability |
| 266. | Elements of Mechanical Transmission | ME2532 | B. Tech-ME | Employability |
| 267. | Elements of Stochastic Processes | MA2518 | B. Tech-ME | Employability |
| 268. | Environmental Sanitation | CE2531 | B. Tech-ME | Employability |
| 269. | Hydrology | CE2543 | B. Tech-ME | Employability |
| 270. | Introduction to MEMS | EC2544 | B. Tech-ME | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 271. | Material Handling Equipment | ME2533 | B. Tech-ME | Employability |
| 272. | Node and Angular JS | CS2512 | B. Tech-ME | Employability |
| 273. | Object Oriented Programming Through JAVA | CT2507 | B. Tech-ME | Employability |
| 274. | Planning for Sustainable Development | CE2544 | B. Tech-ME | Employability |
| 275. | Power Plant Instrumentation | EE2532 | B. Tech-ME | Employability |
| 276. | Power Systems Engineering | EE2524 | B. Tech-ME | Employability |
| 277. | Quality, Reliability and Operations Research | MA2517 | B. Tech-ME | Employability |
| 278. | Software Project Management | CT2531 | B. Tech-ME | Employability |
| 279. | Virtual and Augmented Reality | CT2524 | B. Tech-ME | Employability |
| 280. | Disaster Management | CE2562 | B. Tech-ME | Employability |
| 281. | Repair and Retrofitting Techniques | CE2563 | B. Tech-ME | Employability |
| 282. | Non Destructive Evaluation | ME2554 | B. Tech-ME | Employability |
| 283. | Cyber Physical Systems | EC2563 | B. Tech-ME | Employability |
| 284. | Signals and Systems | EC2508 | B. Tech-ME | Employability |
| 285. | Digital Forensics | CS2521 | B. Tech-ME | Employability |
| 286. | Business Intelligence and Decision Support Systems | CS2522 | B. Tech-ME | Employability |
| 287. | Adhoc and Sensor Networks | IT2521 | B. Tech-ME | Employability |
| 288. | Information Retrieval Systems | CT2537 | B. Tech-ME | Employability |
| 289. | Fuzzy Logic | MA2514 | B. Tech-ME | Employability |
| 290. | Data Structures | CT2505 | B. Tech-ME | Employability |
| 291. | Database Management Systems | CT2513 | B. Tech-ME | Employability |
| 292. | Mechanical Vibrations | ME2530 | B. Tech-ME | Employability |
| 293. | Mechanics of Composite Materials | ME2531 | B. Tech-ME | Employability |
| 294. | Non-Conventional Sources of Energy | ME2529 | B. Tech-ME | Employability |
| 295. | Principles of Finite Element Method | ME2543 | B. Tech-ME | Employability |
| 296. | Robotics | ME2544 | B. Tech-ME | Employability |
| 297. | Optimization Techniques | MA2515 | B. Tech-ME | Employability |
| 298. | Refrigeration and Air | ME2555 | B. Tech-ME | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
|  | Conditioning |  |  |  |
| 299. | Unconventional Machining Processes | ME2556 | B. Tech-ME | Employability |
| 300. | Total Quality Management | ME2558 | B. Tech-ME | Entrepreneurship |
| 301. | Design of Transmission Elements | ME2561 | B. Tech-ME | Employability |
| 302. | Design for Manufacturing and Assembly | ME2567 | B. Tech-ME | Employability |
| 303. | Theory of Elasticity | ME2570 | B. Tech-ME | Employability |
| 304. | Gas Dynamics and Jet Propulsion | ME2572 | B. Tech-ME | Employability |
| 305. | Non Destructive Techniques | ME2574 | B. Tech-ME | Employability |
| 306. | Probability Theory and Stochastic Process | EC2524 | B. Tech-ECE | Employability |
| 307. | Electronic Devices | EC2525 | B. Tech-ECE | Employability |
| 308. | Engineering Economics And Project Management | BA2501 | B. Tech-ECE | Entrepreneurship |
| 309. | Elements of Electrical Engineering | EE2505 | B. Tech-ECE | Employability |
| 310. | Electronic Devices Lab | EC2527 | B. Tech-ECE | Skill Development |
| 311. | Analog Circuits | EC2529 | B. Tech-ECE | Employability |
| 312. | Analog Communications | EC2530 | B. Tech-ECE | Employability |
| 313. | Digital Circuit Design | EC2505 | B. Tech-ECE | Employability |
| 314. | Fundamentals of Data Structures | CS2501 | B. Tech-ECE | Employability |
| 315. | Analog Circuits Lab | EC2533 | B. Tech-ECE | Skill Development |
| 316. | Digital Circuit Design Lab | EC2506 | B. Tech-ECE | Skill Development |
| 317. | Electronic Switching Systems | EC2534 | B. Tech-ECE | Employability |
| 318. | Introduction to Python Programming | CS2502 | B. Tech-ECE | Employability |
| 319. | Database Management Systems | CT2513 | B. Tech-ECE | Employability |
| 320. | Linear Integrated Circuits Applications | EC2536 | B. Tech-ECE | Employability |
| 321. | Digital Communications | EC2537 | B. Tech-ECE | Employability |
| 322. | Antennas and Wave Propagation | EC2538 | B. Tech-ECE | Employability |
| 323. | Principles of VLSI Design | EC2539 | B. Tech-ECE | Employability |
| 324. | Introduction To MEMS | EC2544 | B. Tech-ECE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 325. | Linear Integrated Circuits Applications Lab | EC2545 | B. Tech-ECE | Skill Development |
| 326. | Analog and Digital Communications Lab | EC2546 | B. Tech-ECE | Skill Development |
| 327. | Microprocessors, Microcontrollers and Applications | EC2510 | B. Tech-ECE | Employability |
| 328. | Microprocessor and Microcontroller Interfacing Lab | EC2515 | B. Tech-ECE | Skill Development |
| 329. | VLSI Lab | EC2553 | B. Tech-ECE | Skill Development |
| 330. | Data Warehousing and Data Mining | CT2528 | B. Tech-ECE | Employability |
| 331. | Mechatronics | ME2549 | B. Tech-ECE | Employability |
| 332. | CMOS Digital IC Design | EC2517 | B. Tech-ECE | Employability |
| 333. | Embedded System Design | EC2512 | B. Tech-ECE | Employability |
| 334. | Digital Control Systems | EE2554 | B. Tech-ECE | Employability |
| 335. | Artificial Intelligence | CT2521 | B. Tech-ECE | Employability |
| 336. | Transform Techniques | EC2567 | B. Tech-ECE | Employability |
| 337. | Microwave and Optical Communications Lab | EC2564 | B. Tech-ECE | Skill Development |
| 338. | Mini Project on Smart Applications | EC2565 | B. Tech-ECE | Skill Development |
| 339. | Internship / Industrial Training / Practical Training | EC2566 | B. Tech-ECE | Skill Development |
| 340. | Elements of Civil Engineering | CE2515 | B. Tech-ECE | Employability |
| 341. | Building Services | CE2516 | B. Tech-ECE | Employability |
| 342. | Electrical Materials | EE2515 | B. Tech-ECE | Employability |
| 343. | Control Systems Engineering | EE2516 | B. Tech-ECE | Employability |
| 344. | Elements of Manufacturing Processes | ME2520 | B. Tech-ECE | Employability |
| 345. | Automotive Engineering | ME2521 | B. Tech-ECE | Employability |
| 346. | Fundamentals of Communications | EC2532 | B. Tech-ECE | Employability |
| 347. | Computer Graphics | CT2514 | B. Tech-ECE | Employability |
| 348. | Object Oriented Programming through JAVA | CT2507 | B. Tech-ECE | Employability |
| 349. | Systems Software | CT2515 | B. Tech-ECE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 350. | Web Programming | IT2502 | B. Tech-ECE | Employability |
| 351. | Mathematical Cryptography | MA2516 | B. Tech-ECE | Employability |
| 352. | Academic Communication | EG2505 | B. Tech-ECE | Employability |
| 353. | Cyber Security | CS2513 | B. Tech-ECE | Employability |
| 354. | Data Science | CS2508 | B. Tech-ECE | Employability |
| 355. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-ECE | Employability |
| 356. | Elements of Mechanical Transmission | ME2532 | B. Tech-ECE | Employability |
| 357. | Elements of Stochastic Processes | MA2518 | B. Tech-ECE | Employability |
| 358. | Material Handling Equipment | ME2533 | B. Tech-ECE | Employability |
| 359. | Node and Angular JS | CS2512 | B. Tech-ECE | Employability |
| 360. | Planning for Sustainable Development | CE2544 | B. Tech-ECE | Employability |
| 361. | Power Plant Instrumentation | EE2532 | B. Tech-ECE | Employability |
| 362. | Power Systems Engineering | EE2524 | B. Tech-ECE | Employability |
| 363. | Quality, Reliability and Operations Research | MA2517 | B. Tech-ECE | Employability |
| 364. | Software Project Management | CT2531 | B. Tech-ECE | Employability |
| 365. | Virtual and Augmented Reality | CT2524 | B. Tech-ECE | Employability |
| 366. | Cyber Physical Systems | EC2563 | B. Tech-ECE | Employability |
| 367. | Digital Forensics | CS2521 | B. Tech-ECE | Employability |
| 368. | Business Intelligence and Decision Support Systems | CS2522 | B. Tech-ECE | Employability |
| 369. | Adhoc and Sensor Networks | IT2521 | B. Tech-ECE | Employability |
| 370. | Information Retrieval Systems | CT2537 | B. Tech-ECE | Employability |
| 371. | Fuzzy Logic | MA2514 | B. Tech-ECE | Employability |
| 372. | CAD for VLSI | EC2540 | B. Tech-ECE | Employability |
| 373. | Computer Organization | EC2541 | B. Tech-ECE | Employability |
| 374. | Computer And Communication Networks | EC2542 | B. Tech-ECE | Employability |
| 375. | Biomedical Engineering | EC2507 | B. Tech-ECE | Employability |
| 376. | Analog IC Design | EC2549 | B. Tech-ECE | Employability |
| 377. | Nano Electronics | EC2516 | B. Tech-ECE | Employability |
| 378. | Smart Antennas | EC2550 | B. Tech-ECE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 379. | Coding Theory | EC2551 | B. Tech-ECE | Employability |
| 380. | Mixed Signal IC Design | EC2557 | B. Tech-ECE | Employability |
| 381. | System on Chip Design | EC2560 | B. Tech-ECE | Employability |
| 382. | Low Power VLSI Circuits | EC2569 | B. Tech-ECE | Employability |
| 383. | Real Time Operating Systems | EC2570 | B. Tech-ECE | Employability |
| 384. | Adaptive Signal Processing | EC2572 | B. Tech-ECE | Employability |
| 385. | ASIC Design | EC2573 | B. Tech-ECE | Employability |
| 386. | Embedded C | EC2574 | B. Tech-ECE | Employability |
| 387. | Multi Rate Signal Processing | EC2576 | B. Tech-ECE | Employability |
| 388. | Object Oriented Programming through Java | CT2507 | B. Tech-CSE | Employability |
| 389. | Data Structures | CT2505 | B. Tech-CSE | Employability |
| 390. | Object Oriented Programming Lab | CT2509 | B. Tech-CSE | Skill Development |
| 391. | UNIX Programming Lab | CS2503 | B. Tech-CSE | Skill Development |
| 392. | Data Structures Lab | CT2508 | B. Tech-CSE | Skill Development |
| 393. | Database Management Systems | CT2513 | B. Tech-CSE | Employability |
| 394. | Operating Systems Lab | CS2504 | B. Tech-CSE | Skill Development |
| 395. | Computer Networks | CT2519 | B. Tech-CSE | Employability |
| 396. | Web Technologies | CT2520 | B. Tech-CSE | Employability |
| 397. | Computer Networks and Compiler Design Lab | CS2509 | B. Tech-CSE | Skill Development |
| 398. | Web Technologies Lab | CT2525 | B. Tech-CSE | Skill Development |
| 399. | Digital Signal Processing | EC2511 | B. Tech-CSE | Employability |
| 400. | Control Systems | EE2512 | B. Tech-CSE | Employability |
| 401. | UML and Design Patterns | CS2511 | B. Tech-CSE | Employability |
| 402. | Node and Angular JS | CS2512 | B. Tech-CSE | Employability |
| 403. | Data Mining Lab | CS2514 | B. Tech-CSE | Skill Development |
| 404. | Graph Theory | CS2516 | B. Tech-CSE | Employability |
| 405. | Embedded systems Design | EC2512 | B. Tech-CSE | Employability |
| 406. | Digital Control Systems | EE2554 | B. Tech-CSE | Employability |
| 407. | Cryptography and Network Security | CT2533 | B. Tech-CSE | Employability |
| 408. | Big Data Analytics | CT2534 | B. Tech-CSE | Employability |
| 409. | Big Data Analytics Lab | CT2538 | B. Tech-CSE | Skill Development |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill Development |
| :---: | :---: | :---: | :---: | :---: |
| 410. | Cryptography and Network Security Lab | CS2523 | B. Tech-CSE | Skill Development |
| 411. | Network Programming | CS2525 | B. Tech-CSE | Employability |
| 412. | Systems Software | CT2515 | B. Tech-CSE | Employability |
| 413. | Electrical Materials | EE2515 | B. Tech-CSE | Employability |
| 414. | Control Systems Engineering | EE2516 | B. Tech-CSE | Employability |
| 415. | Fundamentals of Communications | EC2532 | B. Tech-CSE | Employability |
| 416. | Computer Graphics | CT2514 | B. Tech-CSE | Employability |
| 417. | Systems Software | CT2515 | B. Tech-CSE | Employability |
| 418. | Academic Communication | EG2505 | B. Tech-CSE | Employability |
| 419. | Assistive Technologies | EC2523 | B. Tech-CSE | Employability |
| 420. | Bio-Medical Engineering | EC2507 | B. Tech-CSE | Employability |
| 421. | Cyber Security | CS2513 | B. Tech-CSE | Employability |
| 422. | Data Science | CS2508 | B. Tech-CSE | Employability |
| 423. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-CSE | Employability |
| 424. | Elements of Stochastic Processes | MA2518 | B. Tech-CSE | Employability |
| 425. | Introduction to MEMS | EC2544 | B. Tech-CSE | Employability |
| 426. | Material Handling Equipment | ME2533 | B. Tech-CSE | Employability |
| 427. | Planning for Sustainable Development | CE2544 | B. Tech-CSE | Employability |
| 428. | Power Plant Instrumentation | EE2532 | B. Tech-CSE | Employability |
| 429. | Power Systems Engineering | EE2524 | B. Tech-CSE | Employability |
| 430. | Quality, Reliability and Operations Research | MA2517 | B. Tech-CSE | Employability |
| 431. | Software Project Management | CT2531 | B. Tech-CSE | Employability |
| 432. | Virtual and Augmented Reality | CT2524 | B. Tech-CSE | Employability |
| 433. | Cyber Physical Systems | EC2563 | B. Tech-CSE | Employability |
| 434. | Signals and Systems | EC2508 | B. Tech-CSE | Employability |
| 435. | Digital Forensics | CS2521 | B. Tech-CSE | Employability |
| 436. | Business Intelligence and Decision Support Systems | CS2522 | B. Tech-CSE | Employability |
| 437. | Adhoc and Sensor Networks | IT2521 | B. Tech-CSE | Employability |
| 438. | Information Retrieval Systems | CT2537 | B. Tech-CSE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 439. | Fuzzy Logic | MA2514 | B. Tech-CSE | Employability |
| 440. | C\#.NET | CS2506 | B. Tech-CSE | Employability |
| 441. | Advanced Data Structures | CT2522 | B. Tech-CSE | Employability |
| 442. | Software Testing Methodologies | CT2523 | B. Tech-CSE | Employability |
| 443. | Principles of Programming Languages | CS2507 | B. Tech-CSE | Employability |
| 444. | Artificial Intelligence | CT2521 | B. Tech-CSE | Employability |
| 445. | Scripting Languages | CT2529 | B. Tech-CSE | Employability |
| 446. | microprocessors and Interfacing | EC2520 | B. Tech-CSE | Employability |
| 447. | Machine Learning | CS2518 | B. Tech-CSE | Employability |
| 448. | Internet of Things | CT2535 | B. Tech-CSE | Employability |
| 449. | NoSQL Databases | CS2519 | B. Tech-CSE | Employability |
| 450. | Software Requirements Engineering and Estimation | CS2520 | B. Tech-CSE | Employability |
| 451. | Mobile Computing | CT2536 | B. Tech-CSE | Employability |
| 452. | Image processing | CT2530 | B. Tech-CSE | Employability |
| 453. | Information Retrieval System | CT2537 | B. Tech-CSE | Employability |
| 454. | Optimization techniques | MA2515 | B. Tech-CSE | Employability |
| 455. | Web Mining | CS2527 | B. Tech-CSE | Employability |
| 456. | Cloud Computing | CT2540 | B. Tech-CSE | Employability |
| 457. | Agile Software Development Process | CT2532 | B. Tech-CSE | Employability |
| 458. | Block chain Technologies | CT2541 | B. Tech-CSE | Employability |
| 459. | Distributed Systems | CS2528 | B. Tech-CSE | Employability |
| 460. | Social Networks | CT2539 | B. Tech-CSE | Employability |
| 461. | Deep Learning | CS2530 | B. Tech-CSE | Employability |
| 462. | Data Structures | CT2505 | B. Tech-IT | Employability |
| 463. | UNIX and Shell Programming | IT2501 | B. Tech-IT | Employability |
| 464. | Object Oriented Programming <br> Lab | CT2509 | B. Tech-IT | Skill Development |
| 465. | Computer Organization and Architecture | CT2512 | B. Tech-IT | Employability |
| 466. | Database Management Systems Lab | CT2516 | B. Tech-IT | Skill Development |
| 467. | Information and Communication Technology | IT2503 | B. Tech-IT | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 468. | Web Technologies | CT2520 | B. Tech-IT | Employability |
| 469. | Web Technologies Lab | CT2525 | B. Tech-IT | Skill Development |
| 470. | Computer Networks and Data Mining Lab | IT2513 | B. Tech-IT | Skill Development |
| 471. | Big Data Analytics | CT2534 | B. Tech-IT | Employability |
| 472. | Big Data Analytics Lab | CT2538 | B. Tech-IT | Skill Development |
| 473. | Social Networks | CT2539 | B. Tech-IT | Employability |
| 474. | Software Engineering | CT2517 | B. Tech-IT | Employability |
| 475. | Compiler Design | CT2518 | B. Tech-IT | Employability |
| 476. | Operating Systems | CT2510 | B. Tech-IT | Employability |
| 477. | Operating Systems and Compiler Design Lab | IT2507 | B. Tech-IT | Skill Development |
| 478. | Design and Analysis of Algorithms | CT2527 | B. Tech-IT | Employability |
| 479. | Data Warehousing and Data Mining | CT2528 | B. Tech-IT | Employability |
| 480. | Object Oriented Analysis and Design | IT2510 | B. Tech-IT | Employability |
| 481. | Computer Networks | CT2519 | B. Tech-IT | Employability |
| 482. | Mini Project | IT2522 | B. Tech-IT | Skill Development |
| 483. | Internship / Industrial Training Practical Training | IT2523 | B. Tech-IT | Skill Development |
| 484. | Control Systems Engineering | EE2516 | B. Tech-IT | Employability |
| 485. | Fundamentals of Communications | EC2532 | B. Tech-IT | Employability |
| 486. | Systems Software | CT2515 | B. Tech-IT | Employability |
| 487. | Semiconductor Physics | PH2508 | B. Tech-IT | Employability |
| 488. | Mathematical Cryptography | MA2516 | B. Tech-IT | Employability |
| 489. | Academic Communication | EG2505 | B. Tech-IT | Employability |
| 490. | Assistive Technologies | EC2523 | B. Tech-IT | Employability |
| 491. | Bio-Medical Engineering | EC2507 | B. Tech-IT | Employability |
| 492. | Cyber Security | CS2513 | B. Tech-IT | Employability |
| 493. | Data Science | CS2508 | B. Tech-IT | Employability |
| 494. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-IT | Employability |
| 495. | Elements of Stochastic Processes | MA2518 | B. Tech-IT | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 496. | Introduction to MEMS | EC2544 | B. Tech-IT | Employability |
| 497. | Material Handling Equipment | ME2533 | B. Tech-IT | Employability |
| 498. | Node and Angular JS | CS2512 | B. Tech-IT | Employability |
| 499. | Planning for Sustainable Development | CE2544 | B. Tech-IT | Employability |
| 500. | Power Plant Instrumentation | EE2532 | B. Tech-IT | Employability |
| 501. | Power Systems Engineering | EE2524 | B. Tech-IT | Employability |
| 502. | Quality, Reliability and Operations Research | MA2517 | B. Tech-IT | Employability |
| 503. | Software Project Management | CT2531 | B. Tech-IT | Employability |
| 504. | Virtual and Augmented Reality | CT2524 | B. Tech-IT | Employability |
| 505. | Cyber Physical Systems | EC2563 | B. Tech-IT | Employability |
| 506. | Signals and Systems | EC2508 | B. Tech-IT | Employability |
| 507. | Digital Forensics | CS2521 | B. Tech-IT | Employability |
| 508. | Business Intelligence and Decision Support Systems | CS2522 | B. Tech-IT | Employability |
| 509. | Adhoc and Sensor Networks | IT2521 | B. Tech-IT | Employability |
| 510. | Information Retrieval Systems | CT2537 | B. Tech-IT | Employability |
| 511. | Fuzzy Logic | MA2514 | B. Tech-IT | Employability |
| 512. | Cyber Laws | IT2506 | B. Tech-IT | Employability |
| 513. | Systems Software | CT2515 | B. Tech-IT | Employability |
| 514. | Scripting Languages | CT2529 | B. Tech-IT | Employability |
| 515. | Open Source Software | IT2505 | B. Tech-IT | Employability |
| 516. | Embedded System Design | EC2512 | B. Tech-IT | Employability |
| 517. | Advanced Data Structures | CT2522 | B. Tech-IT | Employability |
| 518. | Soft Computing Techniques | IT2511 | B. Tech-IT | Employability |
| 519. | Real Time Systems | T2512 | B. Tech-IT | Employability |
| 520. | Agile Software Development Process | CT2532 | B. Tech-IT | Employability |
| 521. | Machine Learning and Pattern Recognition | IT2517 | B. Tech-IT | Employability |
| 522. | Distributed Operating Systems | IT2518 | B. Tech-IT | Employability |
| 523. | Software Testing Methodologies | CT2523 | B. Tech-IT | Employability |
| 524. | Stenography and Biometrics | IT2525 | B. Tech-IT | Employability |
| 525. | Parallel Computing | T2526 | B. Tech-IT | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 526. | Virtual and Augmented Reality | CT2524 | B. Tech-IT | Employability |
| 527. | Internet of Things | CT2535 | B. Tech-IT | Employability |
| 528. | Cloud Computing | CT2540 | B. Tech-IT | Employability |
| 529. | Block chain Technologies | CT2541 | B. Tech-IT | Employability |
| 530. | Design Patterns | IT2528 | B. Tech-IT | Employability |
| 531. | Advanced Structural Analysis | CE3901 | M. Tech-SE | Employability |
| 532. | Advanced R.C Design | CE3903 | M. Tech-SE | Employability |
| 533. | Experimental Stress Analysis | CE3904 | M. Tech-SE | Employability |
| 534. | Repairs and Retrofitting of Structures | CE3916 | M. Tech-SE | Employability |
| 535. | Research Methodology and IPR | BA3901 | M. Tech-SE | Employability |
| 536. | English for Research Paper Writing | EG3901 | M. Tech-SE | Employability |
| 537. | Sustainable Development | CE3924 | M. Tech-SE | Employability |
| 538. | Theory of Elasticity | CE3902 | M. Tech-SE | Employability |
| 539. | Advanced Structural Engineering Lab | CE3908 | M. Tech-SE | Skill Development |
| 540. | Advanced Concrete Technology Lab | CE3909 | M. Tech-SE | Skill Development |
| 541. | Finite Element Methods in Structural Engineering | CE3910 | M. Tech-SE | Employability |
| 542. | Structural Dynamics | CE3911 | M. Tech-SE | Employability |
| 543. | Computer Applications in Structural Engineering Lab | CE3918 | M. Tech-SE | Skill Development |
| 544. | Structural Design Lab | CE3919 | M. Tech-SE | Skill Development |
| 545. | Mini Project with Seminar | CE3920 | M. Tech-SE | Skill Development |
| 546. | Analysis of Power Electronic Converters | EE3902 | M. Tech-PEED | Employability |
| 547. | Power Electronics Simulation Laboratory | EE3909 | M. Tech-PEED | Skill Development |
| 548. | Power Converters Laboratory | EE3910 | M. Tech-PEED | Skill Development |
| 549. | Research Methodology and IPR | BA3901 | M. Tech-PEED | Employability |
| 550. | Switched Mode Power Conversion | EE3911 | M. Tech-PEED | Employability |
| 551. | Power Electronic Control of Electrical Drives | EE3912 | M. Tech-PEED | Employability |


| S. No | Name of the Course | Course <br> Code | Programme <br> Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill |
| ---: | :--- | :--- | :--- | :--- |
| 552. | Electric Drives Simulation <br> Laboratory | EE3919 | M. Tech-PEED | Skill Development |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 577. | Computational Methods in Engineering | MA3902 | M. Tech-MD | Employability |
| 578. | Advanced Finite Element Methods | ME3911 | M. Tech-MD | Employability |
| 579. | Modelling and Simulation Lab | ME3918 | M. Tech-MD | Skill Development |
| 580. | Computational Methods Lab | ME3919 | M. Tech-MD | Skill Development |
| 581. | Mini Project with Seminar | ME3920 | M. Tech-MD | Skill Development |
| 582. | English for Research Paper Writing | EG3901 | M. Tech-MD | Employability |
| 583. | Tribology | ME3921 | M. Tech-MD | Employability |
| 584. | Composite Materials | ME3922 | M. Tech-MD | Employability |
| 585. | Analysis and Synthesis of Mechanisms | ME3903 | M. Tech-MD | Employability |
| 586. | Advanced materials | ME3904 | M. Tech-MD | Employability |
| 587. | Industrial Robotics | ME3905 | M. Tech-MD | Employability |
| 588. | Gear Engineering | ME3906 | M. Tech-MD | Employability |
| 589. | Advanced Optimization Techniques | ME3907 | M. Tech-MD | Employability |
| 590. | Rotor Dynamics | ME3908 | M. Tech-MD | Employability |
| 591. | Design for Manufacturing and Assembly | ME3912 | M. Tech-MD | Employability |
| 592. | Mechatronics | ME3913 | M. Tech-MD | Employability |
| 593. | Vehicle Dynamics | ME3914 | M. Tech-MD | Employability |
| 594. | Signal Analysis and Condition Monitoring | ME3915 | M. Tech-MD | Employability |
| 595. | Fracture Mechanics | ME3916 | M. Tech-MD | Employability |
| 596. | Experimental Stress Analysis | ME3917 | M. Tech-MD | Employability |
| 597. | Sustainable Development | CE3923 | M. Tech-MD | Employability |
| 598. | Energy Audit, Conservation \& Management | EE3924 | M. Tech-MD | Employability |
| 599. | Rapid Prototyping | ME3924 | M. Tech-MD | Employability |
| 600. | Automotive Electronics | EC4924 | M. Tech-MD | Employability |
| 601. | Soft Computing Techniques | CS3924 | M. Tech-MD | Employability |
| 602. | CMOS VLSI Design | EC4901 | M. TechVLSI\&ES | Employability |
| 603. | Advanced Microcontrollers | EC4902 | M. Tech- | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | VLSI\&ES |  |
| 604. | CMOS VLSI Design Lab | EC4909 | M. TechVLSI\&ES | Employability |
| 605. | Advanced Microcontrollers Lab | EC4910 | M. TechVLSI\&ES | Skill Development |
| 606. | Research Methodology and IPR | BA3901 | M. TechVLSI\&ES | Employability |
| 607. | Embedded Systems based IoT | EC4912 | M. TechVLSI\&ES | Employability |
| 608. | VLSI System Design Lab | EC4919 | M. TechVLSI\&ES | Skill Development |
| 609. | Embedded Systems and IoT Lab | EC4920 | M. TechVLSI\&ES | Skill Development |
| 610. | Mini Project with Seminar | EC4921 | M. TechVLSI\&ES | Skill Development |
| 611. | Communication Buses and Interfaces | EC4917 | M. TechVLSI\&ES | Employability |
| 612. | Digital Signal and Image Processing | EC4905 | M. TechVLSI\&ES | Employability |
| 613. | VLSI Signal Processing | EC4906 | M. TechVLSI\&ES | Employability |
| 614. | System Design with Embedded Linux | EC4907 | M. TechVLSI\&ES | Employability |
| 615. | Parallel Processing | EC4908 | M. TechVLSI\&ES | Employability |
| 616. | Advances in VLSI Design | EC4913 | M. TechVLSI\&ES | Employability |
| 617. | Low power VLSI Design | EC4922 | M. TechVLSI\&ES | Employability |
| 618. | Network Security and Cryptography | EC4923 | M. TechVLSI\&ES | Employability |
| 619. | MOOCs | EC4924 | M. TechVLSI\&ES | Employability |
| 620. | Sustainable Development | CE3924 | M. TechVLSI\&ES | Employability |
| 621. | Energy Audit, Conservation \& Management | EE3924 | M. TechVLSI\&ES | Employability |
| 622. | Rapid Prototyping | ME4924 | M. TechVLSI\&ES | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 623. | Automotive Electronics | EC4925 | M. TechVLSI\&ES | Employability |
| 624. | Soft Computing Techniques | CS4924 | M. TechVLSI\&ES | Employability |
| 625. | English for Research Paper Writing | EG5901 | M. TechVLSI\&ES | Employability |
| 626. | Data Science | CS3902 | M. Tech-AI\&ML | Employability |
| 627. | Digital Image Processing | CS3903 | M. Tech-AI\&ML | Employability |
| 628. | Ad hoc and Sensor Networks | CS3904 | M. Tech-AI\&ML | Employability |
| 629. | Intelligent Systems | CS3905 | M. Tech-AI\&ML | Employability |
| 630. | Principles of Computer Security | CS3907 | M. Tech-AI\&ML | Employability |
| 631. | Distributed Systems | CS3908 | M. Tech-AI\&ML | Employability |
| 632. | Data Science Lab | CS3910 | M. Tech-AI\&ML | Skill Development |
| 633. | MEAN Stack Technologies | CS3911 | M. Tech-AI\&ML | Employability |
| 634. | Block chain Technology | CS3913 | M. Tech-AI\&ML | Employability |
| 635. | Data Preparation and Analysis | CS3914 | M. Tech-AI\&ML | Employability |
| 636. | Natural Language Processing | CS3915 | M. Tech-AI\&ML | Employability |
| 637. | Quantum Computing | CS3917 | M. Tech-AI\&ML | Employability |
| 638. | Cloud Computing | CS3916 | M. Tech-AI\&ML | Employability |
| 639. | Research Methodology and IPR | BA3901 | M. Tech-AI\&ML | Employability |
| 640. | Digital Forensics | CS3918 | M. Tech-AI\&ML | Employability |
| 641. | MEAN Stack Technologies Lab | CS3919 | M. Tech-AI\&ML | Skill Development |
| 642. | Machine Learning using Python Lab | CS3920 | M. Tech-AI\&ML | Skill Development |
| 643. | Mini Project with Seminar | CS3921 | M. Tech-AI\&ML | Skill Development |
| 644. | English for Research Paper Writing | EG3901 | M. Tech-AI\&ML | Employability |
| 645. | Deep Learning | CS3922 | M. Tech-AI\&ML | Employability |
| 646. | Recommender Systems | CS3923 | M. Tech-AI\&ML | Employability |
| 647. | Soft Computing Techniques | CS3924 | M. Tech-AI\&ML | Employability |
| 648. | Retail Management | BA3919 | MBA | Entrepreneurship |
| 649. | Human Resources Analytics | BA3925 | MBA | Entrepreneurship |
| 650. | Business communication and skill development | BA3905 | MBA | Entrepreneurship |
| 651. | Management of Retail Operations | BA3928 | MBA | Entrepreneurship |


| S. No | Name of the Course | Course <br> Code | Programme <br> Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill |
| ---: | :--- | :--- | :--- | :--- |
| 652. | Perspectives of Management | BA3902 | MBA | Employability |
| 653. | Managerial Economics | BA3903 | MBA | Employability |
| 654. | Accounting for Managers | BA3904 | MBA | Employability |
| 655. |  <br> Skill Development | BA3905 | MBA | Skill Development |
| 656. | Business Environment and <br> Legislation | BA3906 | MBA | Employability |
| 657. | Quantitative Analysis for <br> Business Decisions | BA3907 | MBA | Employability |
| 658. | Business Law | BA3908 | MBA | Employability |
| 659. | Information Technology Lab for <br> Business Management | BA3909 | MBA | Skill Development |
| 660. | Financial Management | BA3910 | MBA | Employability |
| 661. | Marketing Management | BA3911 | MBA | Employability |
| 662. | Human Resource Management | BA3912 | MBA | Employability |
| 663. | Production \& Operations <br> Management | BA3913 | MBA | Employability |
| 664. | Business Research Methods | BA3914 | MBA | Employability |
| 665. | International Business | BA3915 | MBA | Employability |
| 666. | Organizational Behaviour | BA3916 | MBA | Employability |
|  | MB |  |  |  |



IQAC Convener
IQAC


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

## COURSE STRUCTURE

## I Year-I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $T$ | P |  |
| 1 | EG3501 | Functional English |  |  |  | 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 <br> (Mandatory Non-Credit Course) | 2 | - | - | - |

* Integrated Course with Theory and Laboratory

I Year - II Semester

| SI. <br> No. | CourseCode | 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


I Year-I Semester

| $\begin{aligned} & \text { Sl. } \\ & \text { No. } \end{aligned}$ | CourseCode | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 3 | T | $\bar{P}$ |  |
| 1 | EG3501 | Functional English |  |  |  | 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

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | Course Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \\ \hline \end{gathered}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 2 \end{aligned}$ | T | $\mathrm{P}$ |  |
| 1 | EG3503 | Professional Communication |  |  |  | 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

Electrical and Electronics Engineering


I Year - I Semester

| SI. <br> No. | Course <br> 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 <br> (Mandatory Non-Credit Course) | 2 | - | - | - |

* Integrated Course with Theory and Laboratory

I Year - II Semester

| $\begin{array}{\|l\|} \hline \text { SI. } \\ \text { No. } \end{array}$ | 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: <br> 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 $\quad$ T: Tutorial $\quad \mathbf{P}$ : Practical


1 Year - I Semester

| $\begin{array}{\|l} \text { SI. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \end{gathered}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EG3501F | 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

| $\begin{array}{\|l\|l} \hline \text { Sl. } \\ \text { No. } \end{array}$ | Course <br> 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 |  |  |  |  |



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Gudlavallaru - 521356 , Krishna District. A.P.

I Year - I Semester

| $\begin{array}{\|l\|} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 3 \end{aligned}$ | $\mathrm{T}$ | $P$ |  |
| 1 | EG3501 | Functional English |  |  |  | 3 |
| 2 | MA350 | 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: <br> 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 Cours) | 2 | - | - | - |

I Year - II Semester

| SI. <br> 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 $\quad$ T:Tutorial $\quad$ : Practical

Computer Science and Engineering



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I Year-I Semester

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Course } \\ & \text { Code } \end{aligned}$ | 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

| SI. <br> No. | $\begin{array}{\|l} \text { Course } \\ \text { Code } \end{array}$ | 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 | I | - | 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

Information Technology


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

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \end{gathered}$ |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | CE2504 | Mechanics of Solids | 3 | 1 | - | 3 |
| 2 | CE2505 | Mechanics of Fluids | 3 | 1 | - | 3 |
| 3 | CE2506 | Building Materials and Construction | 2 | 1 | - | 2 |
| 4 | CE2507 | Surveying | 3 | 1 | - | 3 |
| 5 | ME2502 | Elements of Mechancial and Electrical Engineering | 4 | - | - | 3 |
| 6 | CE2508 | Building Planning and Drawing | 2 | - | 3 | 3 |
| 7 | CE2509 | Mechanics of Solids Lab | - | - | 4 | 2 |
| 8 | CE2510 | Survey Field Work | - | - | 4 | 2 |
|  |  | Total | 17 | 4 | 11 | 21 |
| 9 | SG2501 | Sports and Games / Cultural (Mandatory Non-Credit Course) | - | - | 2 | - |

II Year - II Semester

| $\begin{array}{r} \mathrm{Sl} . \\ \mathrm{No} . \end{array}$ | Course | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | MA2509 | Numerical and Statistical Methods | 3 | 1 | - | 3 |
| 2 | CE2511 | Structural Analysis | 2 | 1 | - | 2 |
| 3 | CE2512 | Hydraulics and Hydraulic Machines | 2 | 1 | - | 2 |
| 4 | CE2513 | Concrete Technology | 4 | - | - | 3 |
| 5 | CE2514 | Engineering Geology and Geomatics * | 3 | - | 2 | 3 |
| 6 |  | Open Elective-I (see list of Open Electives) | 4 | - | - | 3 |
| 7 | CE2517 | Fluid Mechanics and Hydraulic Machines Lab | - | - | 4 | 2 |
| 8 | CE2518 | Concrete Technology Lab | - | - | 4 | 2 |
|  |  | Total | 18 | 3 | 10 | 20 |
| 9 | NS2501 | NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course) | - | - | 2 | - |
| 10 | $\begin{aligned} & \text { CE2519 } \\ & \text { CE2520 } \\ & \text { CT2505 } \end{aligned}$ | Optional Elective - I <br> i) Interior Design <br> ii) Building Bye Laws and Scientific Planning <br> iii) Data Structures | - | - | - | 3 |
| 11 | CE2521 | Optional Elective - II (MOOCs) <br> Student shall opt from the list of MOOCs given by | - | - | - | 2 |

* Integrated Course with Theory and Laboratory

Civil Engineering


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| $\begin{gathered} \text { Sl. } \\ \text { No. } \end{gathered}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | 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 | $\begin{aligned} & \mathrm{CE} 2534 \\ & \text { ME2509 } \\ & \text { CT2507 } \end{aligned}$ | Optional Elective - III <br> i) Infrastructure Development <br> ii) Basics of Power Plant Engineering <br> iii) Object Oriented Programming through JAVA | - | - | - | 3 |
| 10 | CE2535 | Optional Elective - IV (MOOCs) | - | - | - | 2 |

III Year - II Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.ofCredits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L3 | $T$ | $\mathbf{P}$ |  |
| 1 | CE2536 | Foundation Engineering |  |  |  | 2 |
| 2 | CE2537 | Highway Engineering | 4 | - | - | 3 |
| 3 | CE2538 | Design of RC Structures | 3 | 1 | - | 3 |
| 4 |  | Professional Elective - II | 4 | - | - | 3 |
| 5 |  | Open Eletive-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 | $\begin{aligned} & \text { CE2548 } \\ & \text { CE2549 } \\ & \text { CT2513 } \end{aligned}$ | Optional Elective - V <br> i) Smart Buildings and Automation <br> ii) Building Information Modeling <br> iii) Database Management Systems | - | - | - | 3 |
| 10 | CE2550 | Optional Elective - VI (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by | die | Dep | ment |  |

* Integrated Course with Theory and Laboratory

$$
\text { L: Lecture } \quad T \text { : Tutorial } \quad P: \text { Practical }
$$

Civil Engineering


IV Year - I Semester

| $\begin{array}{\|l} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| 1 | CE2551 | Project Management and Finance | 4 | - | P | 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 <br> i) Project Scheduling and Contracts <br> ii) Optimization Techniques <br> iii) Entrepreneurship | - | - | - | 3 |
| 10 | CE2567 | Optional Elective - VIII (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

IV Year - II Semester

| SI. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 |  | Professional Elective - V | $\begin{gathered} \mathbf{L} \\ 4 \end{gathered}$ |  | P | 3 |
| 2 |  | Professional Elective - VI | 4 | - | - | 3 |
| 3 | CE2576 | Project | - | - | 20 | 10 |
|  |  | Total | 8 | - | 20 | 16 |

L: Lecture
T: Tutorial
P: Practical

Civil Engineering


Open Elective - I

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \\ 3 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2515 | Elements of Civil Engineering (Other than CE) | CE | 4 | - | - |  |
| 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 <br> (Other than ME) | ME | 4 | - | - | 3 |
| 7 | EC2531 | Introduction to MPMC (Other than ECE/EEE/CSE/T) | 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 | - | - |  |
| 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

| $\left\lvert\, \begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}\right.$ |  | Title of the Subject | Department <br> Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 |
| 1 | IT2505 | Open Source Software | IT | 4 | - | - | 3 |
|  | IT2506 | Cyber Laws | IT | 4 | - | - | 3 |
|  | MA2517 | Quality, Reliability and Operations Research | BS\&H | 4 | - | - | 3 |

L: Lecture T:Tutorial P: Practical
Civil Engineering


Open Elective - III

|  |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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
Civil Engineering


Professional Electives

| $\begin{array}{\|c\|} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | CE2526 CE2527 CE2528 CE2529 | Professional Elective - I <br> i) Advanced Strength of Materials <br> ii) GIS and GPS <br> iii) Green Buildings <br> iv) Construction Management | 4 | - |  | 3 |
|  | $\begin{aligned} & \text { CE2539 } \\ & \text { CE2540 } \\ & \text { CE2541 } \\ & \text { CE2542 } \end{aligned}$ | Professional Elective - II <br> i) Advanced Structural Analysis <br> ii) Environmental Pollution and Its Control <br> iii) Ground Water Development and Management <br> iv) Ground Improvement Techniques | 4 | - | - | 3 |
|  | CE2554 CE2555 CE2556 CE2557 | Professional Elective - III <br> i) Pre-stressed Concrete <br> ii) Advanced Foundation Engineering <br> iii) Traffic Engineering <br> iv) Industrial Wastewater Management | 4 | - | - | 3 |
|  | $\begin{aligned} & \mathrm{CE} 2558 \\ & \mathrm{CE} 2559 \\ & \mathrm{CE} 2560 \\ & \mathrm{CE} 2561 \end{aligned}$ | Professional Elective - IV <br> i) Advanced Design of RC Structures <br> ii) Hydraulic Structures <br> iii) Geosynthetics <br> iv) Disaster Preparedness and Planning | 4 | - | - | 3 |
|  | CE2568 CE2569 CE2570 CE2571 | Professional Elective - V <br> i) Earthquake Resistant Design of Structures <br> ii) Logistics Infrastructure Engineering <br> iii) Finite Element Methods <br> iv) Design and Drawing of Irrigation Structures | 4 | - | - | 3 |
|  | $\begin{aligned} & \mathrm{CE} 2572 \\ & \mathrm{CE} 2573 \\ & \mathrm{CE} 2574 \\ & \mathrm{CE} 2575 \end{aligned}$ | Professional Elective - VI <br> i) Pre-Engineered Buildings <br> ii) Urban Transportation Planning <br> iii) Soil Dynamics and Machine Foundations <br> iv) Environmental Impact Assessment | 4 | - | - | 3 |

L: Lecture $\quad$ T:Tutorial $\quad$ P: Practical


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

* Integrated Course with Theory and Laboratory

II Year - II Semester

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

L: Lecture $\quad \mathbf{T}:$ Tutorial $\mathbf{P}$ : Practical
Electrical and Electronics Engineering


III Year - I Semester

| Sl. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> 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 | $\begin{aligned} & \text { ME2549 } \\ & \text { CT2507 } \\ & \text { EE2528 } \end{aligned}$ | Optional Elective - III <br> i) Mechatronics <br> ii) Object Oriented Programming Through Java <br> iii) Control System Design | - | - | - | 3 |
| 10 | EE2529 | Optional Elective - IV (MOOCs) | - | - | - | 2 |

III Year - II Semester

| SI. <br> No. | $\begin{gathered} \text { Course } \\ \text { Code } \end{gathered}$ | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L3 | T | $\mathbf{P}$ |  |
| 1 | EE2530 | Power Electronics |  |  |  | 3 |
| 2 | MA251 | Probability and Fuzzy Mathematics | 3 | 1 | - | 3 |
| 3 | EC2510 M | icroprocessors, Microcontrollers and Its Applications ** | 3 | 1 | - | 3 |
| 4 |  | Professional Elective - II | - | - | - | 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 M | icroprocessors, Microcontrollers and Its Applications Lab | - | - | 4 | 2 |
| Total |  |  | 17 | 3 | 12 | 21 |
| 9 | $\begin{aligned} & \text { CT2513 } \\ & \text { EC2516 } \\ & \text { EE2535 } \end{aligned}$ | Optional Elective - V <br> i) Data Base Management Systems <br> ii) Nano Electronics <br> iii)Solar and Wind Energy Systems | - | - | - | 3 |
| 10 | EE2536 | Optional Elective - VI (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given | , | epa | ( |  |

* Project Based Theory Course
L: Lecture
T: Tutorial
P: Practical

Electrical and Electronics Engineering


IV Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 | 2 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 | $\begin{aligned} & \mathrm{EC} 2519 \\ & \mathrm{CS} 2502 \\ & \mathrm{EE} 2547 \end{aligned}$ | Optional Elective - VII <br> i) Analog and Digital Communication <br> ii) Introduction to Python Programming <br> iii) Integration of Renewable Energy Sources | - | - | - | 3 |
| 10 | EE2548 | Optional Elective - VIII (MOOCs) | $-$ | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by | the |  | ment |  |

IV Year - II Semester

| SI. <br> No. | Course <br> 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

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 <br> (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

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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

Electrical and Electronics Engineering


Open Elective - III

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2543 | Hydrology (Other than CE) | CE | 4 | - | - |  |
| 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 |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

| SI. <br> 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 |
|  | 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 $\quad$ T: Tutorial $\quad \mathbf{P}$ : Practical

Electrical and Electronics Engineering


Professional Electives

| $\begin{array}{\|c\|} \mathrm{Sl} . \\ \mathrm{No} . \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | EE2522 CT2519 EC2509 CT2505 | Professional Elective - I <br> i) Switch Gear and Protection <br> ii) Computer Networks <br> iii) Pulse and Integrated Circuits <br> iv) Data Structures | 4 | - |  | 3 |
|  | $\begin{aligned} & \mathrm{EC} 2511 \\ & \mathrm{EC} 2512 \\ & \mathrm{EC} 2513 \\ & \mathrm{EC} 2514 \end{aligned}$ | Professional Elective - II <br> i) Digital Signal Processing <br> ii) Embedded System Design <br> iii) Principles of VLSI Design <br> iv) DSP Processors and Architecture | 4 | - | - | 3 |
|  | CT2534 EC2517 EE2538 EE2539 | Professional Elective - III <br> i) Big Data Analytics <br> ii) CMOS Digital IC Design <br> iii) Power Semiconductor Drives <br> iv) Flexible AC Transmission Systems | 3 | 1 | - | 3 |
|  | $\begin{aligned} & \mathrm{CS} 2513 \\ & \mathrm{EC} 2518 \\ & \mathrm{EE} 2540 \\ & \mathrm{EE} 2541 \end{aligned}$ | Professional Elective - IV <br> i) Cyber Security <br> ii) Digital Image Processing <br> iii) Power System Operation \& Control <br> iv) High Voltage Engineering | 3 | 1 | - | 3 |
|  | $\begin{aligned} & \mathrm{EE} 2549 \\ & \mathrm{EE} 2550 \\ & \mathrm{EE} 2551 \\ & \mathrm{EE} 2552 \end{aligned}$ | Professional Elective - V <br> i) Electrical Distribution System <br> ii) Artificial Intelligence Techniques <br> iii) Advanced Control Systems <br> iv) Energy Audit, Conservation and Management | $\begin{aligned} & 3 \\ & 4 \\ & 3 \\ & 3 \end{aligned}$ | 1 <br>  <br> 1 <br> 1 | - - - - -- | 3 |
|  | $\begin{aligned} & \mathrm{EE} 2553 \\ & \mathrm{EE} 2554 \\ & \mathrm{EE} 2555 \\ & \mathrm{EE} 2556 \end{aligned}$ | Professional Elective - VI <br> i) Special Electrical Machines <br> ii) Digital Control Systems <br> iii) Utilization of Electrical Energy <br> iv) HVDC Transmission Systems | 3 | 1 | - | 3 |
|  | Lecture | T: Tutorial $\quad \mathbf{P}$ : Practical |  |  |  |  |

Electrical and Electronics Engineering


II Year - I Semester

|  | Course Code | Name of the Course / Laboratory | $\begin{array}{\|c} \hline \text { No.of Periods } \\ \text { per week } \end{array}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EE2501 | Elements of Electrical and Electronics Engineering | 3 | 1 | - | 3 |
| 2 | ME2510 | Engineering Thermodynamics | 3 | 1 | - | 3 |
| 3 | ME2511 | Kinematics of Machines | 3 | 1 | - | 3 |
| 4 | ME2512 | Solid Mechanics | 3 | 1 | - | 3 |
| 5 | ME2513 | Engineering Metallurgy | 4 | - | - | 3 |
| 6 | EE2502 | Electrical and Electronics Engineering Lab | - | - | 2 | 1 |
| 7 | ME2514 | Solid Mechanics and Metallurgy Lab | - | - | 4 | 2 |
| 8 | ME2515 | Computer Aided Modeling Lab | - | - | 2 | 1 |
|  |  | Total | 16 | 4 | 8 | 19 |
| 9 | SG2501 | Sports and Games / Cultural (Mandatory Non-Credit Course) | - | - | 2 | - |

II Year - II Semester

| $\begin{array}{\|c\|} \hline \text { St. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \end{gathered}$ |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L |  | P |  |
| 1 | ME2516 | Manufacturing Processes | 4 | - | - | 3 |
| 2 | ME2517 | Applied Thermodynamics | 3 | 1 | - | 3 |
| 3 | ME2518 | Dynamics of Machines | 3 | 1 | - | 3 |
| 4 | ME2519 | Fluid Mechanics | 3 | 1 | - | 3 |
| 5 |  | Open Elective-I (see list of Open Electives) | 4 | - | - | 3 |
| 6 | ME2522 | Thermal Engineering Lab | - | - | 4 | 2 |
| 7 | ME2523 | Manufacturing Processes Lab | - | - | 4 | 2 |
| 8 | ME2524 | Machine Dynamics Lab | - | - | 2 | 1 |
|  |  | Total | 17 | 3 | 10 | 20 |
| 9 | NS2501 | NSS /Fine Arts / Yoga / Self Defense Mandatory Non-Credit Course) | - | - |  | - |
| 10 | $\begin{aligned} & \mathrm{EE} 2512 \\ & \text { ME2525 } \\ & \text { CT2506 } \\ & \hline \end{aligned}$ | Optional Elective - I <br> i) Control Systems <br> ii) Nano Technology <br> jii) Digital Logic Design | - | - | - | 3 |
| 11 | ME2526 | Optional Elective - II (MOOCs) Student shall opt from teh list of MOOC's given by the | . | - | Depar | $\frac{2}{n t)}$ |



III Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 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 | $\begin{aligned} & \mathrm{CT} 2514 \\ & \mathrm{EE} 2503 \\ & \mathrm{EC} 2520 \\ & \hline \end{aligned}$ | Optional Elective - III <br> i) Computer Graphics <br> ii) Fuzzy Logic Systems <br> iii) Micro Processors and Interfacing | - | - | - | 3 |
| 10 | ME2537 | Optional Elective - IV (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

III Year - II Semester

| $\begin{gathered} \text { Sl. } \\ \text { No. } \end{gathered}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \mathbf{L} \\ & 4 \end{aligned}$ | $\mathrm{T}$ | P |  |
| 1 | BA2503 | Engineering Economics and Accountancy |  |  |  | 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 | $\begin{aligned} & \text { CT2507 } \\ & \text { ME2549 } \\ & \text { EC2512iii) } \end{aligned}$ | Optional Elective - V <br> i) Object Oriented Programming through Java <br> ii) Mechatronics <br> Embedded System Design | - | - | - | 3 |
| 11 | ME2550 | Optional Elective - VI (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given | the | ep | en |  |

L: Lecture $\quad$ T:Tutorial $\quad \mathbf{P}:$ Practical


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Gudlavallert Errinsering College
Seshadri Rao Knowiedge Village
Gudlavalleru-521355, Rnishr. $\quad$ : ~.A.P.

IV Year - I Semester

| $\begin{array}{\|c} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 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 | $\begin{aligned} & \text { CT2534 } \\ & \text { CT2512 } \\ & \text { ME2565 } \end{aligned}$ | Optional Elective - VII <br> i) Big Data Analytics <br> ii) Computer Organization and Architecutre <br> iii) Cryogenics | - | - | - | 3 |
| 10 | ME2566 | Optional Elective - VIII (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

IV Year - II Semester

| $\begin{gathered} \mathrm{SI} . \\ \mathrm{No} . \end{gathered}$ | 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 |

L:Lecture $T$ : Tutorial $P$ : Practical


Open Elective - I

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2515 | Elements of Civil Engineering (Other than CE) | CE | 4 | - | - |  |
| 2 | CE2516 | (Other than CE) 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 <br> (Other than ME) | ME | 4 | - | - | 3 |
| 7 | EC2531 | Introduction to MPMC (Other than ECE/EEE/CSE/TT) | 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

| $\begin{array}{\|c\|} \hline \text { SI. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the Subject | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | 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 $\quad$ : Tutorial P: Practical
Mechanical Engineering
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## Open Elective - III

| SI. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 |
|  | MA2518 | Elements of Stochastic Processes | BS\&H | 4 | - | - | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

| $\begin{array}{\|c\|} \hline \text { SI. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 |
|  | 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
Mechanical Engineering


Professional Electives

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


| L: Lecture | T: Tutorial | P:Practical |  |
| :--- | :--- | :--- | :--- |
| Mechanical Engineering |  | 27 |  |



| $\begin{gathered} \mathrm{Sl} . \\ \text { No. } \end{gathered}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EC2524 | Probability Theory and Stochastic Process | 3 | 1 | - | 3 |
| 2 | EC2525 | Electronic Devices | 4 | - | - | 3 |
| 3 | EC2508 | Signals and Systems | 3 | 1 | - | 3 |
| 4 | BA2501 | Engineering Economics and Project Management | 3 | - | - | 2 |
| 5 | EC2526 | Electromagnetic Field Theory | 4 | - | - | 3 |
| 6 | EE2505 | Elements of Electrical Engineering | 3 | - | - | 2 |
| 7 | EC2527 | Electronic Devices Lab | - | - | 4 | 2 |
| 8 | EE2507 | Networks and Electrical Technology Lab | - | - | 2 | 1 |
|  |  | Total | 20 | 2 | 6 | 19 |
| 9 | NS2501 | NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course) | - | - | 2 | - |

II Year - II Semester

|  | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L |  | P |  |
| 1 | EC2528 | Transmission Lines and Waveguides | 4 | - | - | 3 |
| 2 | EC2529 | Analog Circuits | 4 | - | - | 3 |
| 3 | EC2530 | Analog Communications | 3 | - | - | 2 |
| 4 | EC2505 | Digital Circuit Design | 3 | 1 | - | 3 |
| 5 | CS2501 | Fundamentals of Data Structures | , | - | - | 2 |
| 6 |  | Open Elective-I (see list of Open Electives) | 4 | - | - | 3 |
| 7 | EC2533 | Analog Circuits Lab | - | - | 4 | 2 |
| 8 | EC2506 | Digital Circuit Design Lab | - | - | 4 | 2 |
|  |  | Total | 21 | 1 | 8 | 20 |
| 9 | SG2501 | Sports and Games / Cultural (Mandatory Non-Credit Course) | - | - | 2 | - |
| 10 | $\begin{aligned} & \text { CS2502 } \\ & \text { CT2513 } \\ & \text { EC2534 } \end{aligned}$ | Optional Elective - I <br> h) Introduction to Python Programming <br> ii) Database Managemnent Systems <br> iii) Electronic Switching Systems | - | - | - | 3 |
| 11 | EC2535 | Optional Elective - II (MOOCs) | - | - | - | 2 |
|  |  | Student shall opt from teh list of MOOCs given by | the |  | ent) |  |

L: Lecture T:Tutorial P:Practical



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III Year - I Semester

| $\begin{array}{\|c\|} \hline \text { St. } \\ \text { No. } \\ \hline \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EC2536 | Linear Integrated Circuits Applications | 3 | , | - | 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 | $\begin{aligned} & \text { CT2528 } \\ & \text { ME2549 } \\ & \text { EC2544 } \end{aligned}$ | Optional Elective - III <br> i) Data Warehousing and Data Mining <br> ii) Mechatronics <br> iii) Introduction to MEMS | - | - | - | 3 |
| 10 | EC2547 | Optional Elective - IV (MOOCs) | - | - | - | 2 |

III Year - II Semester

| $\begin{array}{\|l\|} \hline \text { SI. } \\ \text { No. } \end{array}$ | $\begin{gathered} \text { Course } \\ \text { Code } \end{gathered}$ | Name of the Course / Laboratory | No.of Periods per week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\mathbf{P}$ |  |
| 1 | EC2511 | Digital Signal Processing |  |  |  | 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 Eletive-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 | $\begin{aligned} & \text { CT2534 } \\ & \text { EC2554 } \\ & \text { CT2533 } \end{aligned}$ | Optional Elective - V <br> i) Big Data Analytics <br> ii) Cognitive Radio Networks <br> iiii) Cryptography and Network Security | - | - | - | 3 |
| 10 | EC2555 | Optional Elective - VI (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

* Project Based Theory Course
L: Lecture T:Tutorial P: Practical


IV Year - I Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | - | 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) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

IV Year - II Semester

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> 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 |

L: Lecture T:Tutorial P: Practical

Electronics and Communication Engineering



Open Elective - I

|  |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \\ 3 \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2515 | Elements of Civil Engineering | CE | 4 | - | - |  |
| 2 | CE2516 | (Other than CE) 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 | ME | 4 | - | - | 3 |
| 7 | EC2531 | (Other than ME) Introduction to MPMC | ECE | 4 | - | - | 3 |
|  |  | (Other than ECE/EEE/CSE/IT) |  |  |  |  |  |
| 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

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2530 | Geoinformatics (other than CE) | CE | 4 | - | - |  |
| 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

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ |  | Title of the Subject | Department Offering the | No.of Periods per week $\qquad$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| , | 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 |
|  | MA2518 | Elements of Stochastic Processes | $\begin{gathered} \text { BS\&H } \\ \text { ENGLISH } \end{gathered}$ | 4 | - | - | $\begin{aligned} & 3 \\ & 3 \end{aligned}$ |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

| $\begin{array}{\|c\|} \hline \text { SI. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 $\quad$ T:Tutorial P: Practical
Electronics and Communication Engineering


Professional Electives

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
|  | $\left\lvert\, \begin{aligned} & \text { EC2540 } \\ & \text { EC2541 } \\ & \text { EC2542 } \\ & \text { EC2507 } \end{aligned}\right.$ | Professional Elective - I <br> i) CAD for VLSI <br> ii) Computer Organization <br> iii) Computer and Communication Networks <br> iv) Biomedical Engineering | 4 | - | - | 3 |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2549 \\ \mathrm{EC2516} \\ \mathrm{EC2550} \\ \mathrm{EC2551} \end{array}\right\|$ | Professional Elective - II <br> i) Analog IC Design <br> ii) Nano Electronics <br> iii) Smart Antennas <br> iv) Coding Theory | 4 | - | - | 3 |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2557 \\ \mathrm{EC} 2558 \\ \mathrm{EC} 2559 \\ \mathrm{EC} 2514 \end{array}\right\|$ | Professional Elective - III <br> i) Mixed Signal IC Design <br> ii) Cellular and Mobile Communications <br> iii) Digital TV Engineering <br> iv) DSP Processors and Architectures | 4 | - | - | 3 |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2560 \\ \mathrm{EC2561} \\ \mathrm{EC} 2562 \\ \mathrm{EC} 2518 \end{array}\right\|$ | Professional Elective - IV <br> i) System on Chip Design <br> ii) Wireless Sensor Networks <br> iii) Satellite Communication <br> iv) Digital Image Processing | 4 | - | - | 3 |
|  | $\begin{aligned} & \mathrm{EC} 2569 \\ & \mathrm{EC} 2570 \\ & \mathrm{EC} 2571 \\ & \mathrm{EC} 2572 \end{aligned}$ | Professional Elective - V <br> i) Low Power VLSI Circuits <br> ii) Real Time Operating Systems <br> iii) Speech Processing <br> iv) Adaptive Signal Processing | 4 | - | - | 3 |
|  | $\begin{array}{\|l\|l} \mathrm{EC} 2573 \\ \mathrm{EC} 2574 \\ \mathrm{EC} 2575 \\ \mathrm{EC} 2576 \end{array}$ | Professional Elective - VI <br> i) ASIC Design <br> ii) Embedded C <br> iii) RADAR Engineering <br> iv) Multi Rate Signal Processing | 4 | - | - | 3 |

L: Lecture T: Tutorial P: Practical
Electronics and Communication Engineering


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Gudlavalleru- 521355 , Knsinna District. A.P.

| SI. <br> No. | Course <br> 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 | MA2508 | Discrete Mathematical Structures | 3 | 1 | - | 3 |
| 3 | CT2505 | Data Structures | 3 | 1 | - | 3 |
| 4 | CT2506 | Digital Logic Design | 3 | 1 | - | 3 |
| 5 | CT2507 | Object Oriented Programming through Java | 4 | - | - | 3 |
| 6 | CT2508 | Data Structures Lab | - | - | 4 | 2 |
| 7 | CT2509 | Object Oriented Programming Lab | - | - | 4 | 2 |
| 8 | CS2503 | UNIX Programming Lab | - | - | 4 | 2 |
|  |  | Total | 16 | 3 | 12 | 20 |
| 9 | SG2501 | Sports and Games / Cultural (Mandatory Non-Credit Course) | - | - | 2 | - |

II Year - II Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | P |  |
| 1 | MA25I0 | Probability and Statistics | 3 | 1 | - | 3 |
| 2 | CT2510 | Operating Systems | 3 | 1 | - | 3 |
| 3 | CT2511 | Formal Languages and Automata Theory | 3 | 1 | - | 3 |
| 4 | CT2512 | Computer Organization and Architecture | 3 | 1 | - | 3 |
| 5 | CT2513 | Database Management Systems | 3 | 1 | - | 3 |
| 6 |  | Open Elective-I (see list of Open Electives) | 4 | - | - | 3 |
| 7 | CS2504 | Operating Systems Lab | - | - | 4 | 2 |
| 8 | CT2516 | Database Management Systems Lab | - | - | 4 | 2 |
|  |  | Total | 19 | 5 | 8 | 22 |
| 9 | NS2501 | NSS / Fine Arts / Yoga / Self Defense Mandatory Non-Credit Course) | - | - | 2 | - |
| 10 | $\begin{aligned} & \text { CE2575 } \\ & \text { EC2508 } \\ & \text { MA2514 } \end{aligned}$ | Optional Elective - I <br> i) Environmental Impact Assessment <br> ii) Signals and Systems <br> iii) Fuzzy Logic | - | - | - | 3 |
| 11 | CS2505 | Optional Elective - II (MOOCs) <br> Students shall opt from the list of MOOCs giv |  |  |  | 2 |

L: Lecture T:Tutorial P: Practical

Computer Science and Engineering


III Year - I Semester

| $\begin{aligned} & \text { St. } \\ & \text { No. } \end{aligned}$ | $\begin{aligned} & \text { Course } \\ & \text { Code } \end{aligned}$ | 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 | $\begin{aligned} & \text { CT2526 } \\ & \text { EC2511 } \\ & \text { EE2512 } \\ & \hline \end{aligned}$ | Optional Elective - III <br> i) Human Computer Interaction <br> ii) Digital Signal Processing <br> iii) Control Systems | - | - | - | 3 |
| 10 | CS2510 | Optional Elective - IV (MOOCs) | - | - | - | 2 |

III Year - II Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 3 \end{aligned}$ | T1 | P |  |
| 1 | CT2527 | Design and Analysis of Algorithms |  |  |  | 3 |
| 2 | CT2528 | Data Warehousing and Data Maining | 4 | - | - | 3 |
| 3 | CS2511 | UML and Design Patterns * | 3 | - | 2 | 3 |
| 5 |  | Professional Elective - II (OR) Any other Elective Depending on Industry Needs | , | - | - | 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 | $\begin{aligned} & \mathrm{CS} 2516 \\ & \mathrm{EC} 2512 \\ & \mathrm{EE} 2554 \end{aligned}$ | Optional Elective - V <br> i) Graph Theory <br> ii) Embedded System Design <br> iii) Digital Control Systems | - | - | - | 3 |
| 10 | CS2517 | Optional Elective - VI (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

* Integrated Course with Theory and Laboratory

L: Lecture $\quad$ T:Tutorial $\quad$ P: Practical
Computer Science and Engineering


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

IV Year - I Semester

| $\begin{array}{\|l} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $L^{\prime}$ | $T$ | P |  |
| 1 | CT2533 | Cyptography and Network Secuirty | 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 | $\begin{array}{\|l\|} \mathrm{CS} 2525 \\ \text { CT2515 } \\ \mathrm{ME} 2544 \\ \hline \end{array}$ | Optional Elective - VII <br> i) Network Programming <br> i) Systems Software <br> iii) Robotics | - | - | - | 3 |
| 10 | CS2526 | Optional Elective - VIII (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by | by the | Depa |  |  |

IV Year - II Semester

| Sl. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | P |  |
| 1 |  | Professional Elective - V | 4 | - | - | 3 |
| 2 |  | Professional Elective - VI | 4 | - | - | 3 |
| 3 | CS2531 | Project | - | - | 20 | 10 |
|  |  | Total | 8 | - | 20 | 16 |

$$
\text { L: Lecture } \quad \mathrm{T}: \text { Tutorial } \quad \text { P: Practical }
$$



Open Elective - I

| $\begin{array}{\|c\|} \text { SI. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2515 | Elements of Civil Engineering (Other than CE) | CE | 4 | - | - |  |
| 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 <br> (Other than ME) | ME | 4 | - | - | 3 |
| 7 | EC253I | Introduction to MPMC <br> (Other than ECE/EEE/CSE/T T) | 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 (Oher than CSE) | BS\&H | 4 | - | - | 3 |
| 14 | PH2508 | Semiconductor Physics (Other than ECE) | BS\&H | 4 | - | - | 3 |

Open Elective - II

| $\begin{array}{\|c} \text { SI. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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
Computer Science and Engineering
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Gudlavalleru-521 356, Krishna District. A.P.

Open Elective - III

| $\begin{array}{\|c\|} \hline \mathrm{SI} . \\ \mathrm{No} . \\ \hline \end{array}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 |
|  | MA2518 | Elements of Stochastic Processes | BS\&H | 4 | - | - | 3 |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

| $\left\|\begin{array}{c} \text { SI. } \\ \text { No. } \end{array}\right\|$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of <br> Credits 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 |
|  | IT2521 | Adhoc and Sensor Networks | IT | 4 | - | - | 3 |
| 12 | CT2537 | Information Retrieval Systems (Other than CSE) | IT | 4 | - | - | 3 |
|  | MA2514 | Fuzzy Logic (Other than EEE, ME \& CSE) | BS\&H | 4 | - | - | 3 |

L: Lecture T:Tutorial P:Practical
Computer Science and Engineering


Professional Electives

| $\begin{array}{\|c\|} \hline \text { SI. } \\ \text { No. } \\ \hline \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
|  | CS2506 CT2522 CT2523 CS2507 | Professional Elective - I <br> i) C\#.NET <br> ii) Advanced Data Structures <br> iii) Software Testing Methodologies <br> iv) Principles of Programming Languages | 4 | - | - | 3 |
|  | CT2521 CT2529 EC2520 CT2531 | Professional Elective - II <br> i) Artificial Intelligence <br> ii) Scripting Languages <br> iii) Microprocessors and Interfacing <br> iv) Software Project Management | 4 | - | - | 3 |
|  | CS2518 CT2535 CS2519 CS2520 | Professional Elective - III <br> i) Machine Learning <br> ii) Internet of Things <br> iii) NoSQL Databases <br> iv) Software Requirements Engineering and Estimation | 4 | - | - | 3 |
|  | CT2536 CT2530 CT2537 MA2515 | Professional Elective - IV <br> i) Mobile Computing <br> ii) Image Processing <br> iii) Information Retrieval Systems <br> iv) Optimization Techniques | 4 | - | - | 3 |
|  | $\begin{aligned} & \mathrm{CS} 2527 \\ & \text { CT2540 } \\ & \text { CT2532 } \\ & \text { CT2541 } \end{aligned}$ | Professional Elective - V <br> i) Web Mining <br> ii) Cloud Computing <br> iii) Agile Software Development Process <br> iv) Blockchain Technologies | 4 | - | - | 3 |
|  | $\begin{aligned} & \text { CS2528 } \\ & \text { CT2539 } \\ & \text { CS2529 } \\ & \text { CS2530 } \end{aligned}$ | Professional Elective - VI <br> i) Distributed Systems <br> ii) Social Networks <br> iii) Web Services <br> iv) Deep Learning | 4 | - | - | 3 |


| L: Lecture $\quad$ T : Tutorial | P : Practical |  |
| :--- | :---: | :--- |
| Computer Science and Engineering | 27 |  |



| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathbf{L}$ | $\mathrm{T}$ | P |  |
| 1 | MA2508 | Discrete Mathematical Structures | 3 | 1 | - | 3 |
| 2 | CT2505 | Data Structures | 3 | 1 | - | 3 |
| 3 | CT2506 | Digital Logic Design | 3 | 1 | - | 3 |
| 4 | CT2507 | Object Oriented Programming through Java | 4 | - | - | 3 |
| 5 | IT2501 | UNIX and Shell Programming * | 4 | - | 2 | 4 |
| 6 | CT2508 | Data Structures Lab | - | - | 4 | 2 |
| 7 | CT2509 | Object Oriented Programming Lab | - | - | 4 | 2 |
|  |  | Total | 17 | 3 | 10 | 20 |
| 8 | NS2501 | NSS / Fine Arts / Yoga / Self Defense (Mandatory Non-Credit Course) | - | - | 2 | - |

II Year - II Semester

| $\begin{array}{\|l\|} \text { Sl. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | MA2510 | Probability and Statistics | 3 | 1 | - | 3 |
| 2 | EC2521 | Microprocessors and Microcontrollers* | 4 | - | 2 | 4 |
| 3 | CT2511 | Formal Languages and Automata Theory | 3 | 1 | - | 3 |
| 4 | CT2512 | Computer Organization and Architecture | 3 | 1 | - | 3 |
| 5 | CT2513 | Database Management Systems | 3 | 1 | - | 3 |
| 6 |  | Open Elective-I (see list of Open Electives) | 4 | - | - | 3 |
| 7 | CT2516 | Database Management Systems Lab | - | - | 4 | 2 |
|  |  | Total | 20 | 4 | 6 | 21 |
| 8 | SG2501 | Sports and Games / Cultural (Mandatory Non-Credit Course) | - | - | 2 | - |
| 9 | $\begin{aligned} & \text { IT2503 } \\ & \text { EC2508 } \\ & \text { EE2506 } \end{aligned}$ | Optional Elective - I <br> i) Information and Communication Technology <br> ii) Signals and Systems <br> iii) Basic Electrical Engineering | - | - | - | 3 |
| 10 | IT2504 | Optional Elective - II (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given | the | ep |  |  |

* Integrated Course with Theory and Laboratory

L: Lecture T:Tutorial P: Practical
Information Technology

III Year - I Semester

| $\begin{gathered} \text { Sl. } \\ \text { No. } \end{gathered}$ | Course <br> 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 | 172507 | Operating Systems and Compiler Design Lab | - | - | 4 | 2 |
| 8 | CT2525 | Web Technologies Lab | - | - | 4 | 2 |
|  |  | Total | 21 | 3 | 8 | 22 |
| 9 | $\begin{array}{\|l} \hline \text { IT2508 } \\ \text { EC2522 } \\ \text { CE2549 } \\ \hline \end{array}$ | Optional Elective - III <br> i) Object Oriented Programming through C+1 <br> ii) Data Communication <br> iii) Building Information Modelling | - | - | - | 3 |
| 10 | IT2509 | Optional Elective - IV (MOOCs) | - | - | - | 2 |

III Year - II Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T1 | $\mathbf{P}$ |  |
| 1 | CT2527 | Design and Analysis of Algorithms | 3 |  |  | 3 |
| 2 | CT2528 | Data Warehousing and Data Maining | 4 | - | - | 3 |
| 3 | 172510 | Object Oriented Analysis and Design * | 4 | - | 2 | 4 |
| 4 | CT2519 | Computer Nerworks | 3 | 1 | - | 3 |
| 5 |  | Professional Elective - II | 4 | - | - | 3 |
| 6 |  | Open Elective-III(see list of Open Electives) | 4 | - | - | 3 |
| 7 | LT2513 | Computer Networks and Data Mining Lab | - | - | 4 | 2 |
|  |  | Total | 22 | 2 | 6 | 21 |
| 8 | $\begin{aligned} & \text { IT2514 } \\ & \text { IT2515 } \\ & \text { ME2544 } \end{aligned}$ | Optional Elective - V <br> i) Secure Web Technologies <br> ii) Management Information Systems <br> iii) Robotics | - | - | - | 3 |
| 9 | IT2516 | Optional Elective - VI (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by | 兂 | 号a | ment) |  |

* Integrated Course with Theory and Laboratory

$$
\text { L: Lecture } \quad \text { T: Tutorial } \quad \text { P: Practical }
$$

Information Technology


IV Year - I Semester

| $\begin{gathered} \mathrm{SI} . \\ \mathrm{No} . \end{gathered}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | BA2502 | Managerial Economics and Financial Analysis | $3$ | T | P | 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 | 172522 | Mini Project | - | - | 4 | 2 |
| 8 | 1 I2523 | Internship / Industrial Training / Practical Training | - | - | - | 2 |
| Total |  |  | 19 | - | 8 | 20 |
| 9 | $\begin{array}{\|l} \text { CT2539 } \\ \text { EC2523 } \\ \text { ME2542 } \\ \hline \end{array}$ | Optional Elective - VII <br> i) Social Networks <br> ii) Assistive Technologies <br> iii) Renewable Energy Sources | - | - | - | 3 |
| 10 | IT2524 | Optional Elective - VIII (MOOCs) | - | - | - | 2 |
|  |  |  |  |  |  |  |

IV Year - II Semester

| $\begin{gathered} \text { Sl. } \\ \text { No. } \end{gathered}$ | Course <br> 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 $\quad$ T: Tutorial $\quad$ P: Practical

Open Elective - I

| SI. |  | Title of the Subject | Department Offering the |  |  |  | No.of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | Subject | L | T | P | Credits |
| 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 | ME | 4 | - | - | 3 |
| 7 | EC2531 | (Other (ianME) MPMC | ECE | 4 | - | - | 3 |
| 8 | EC2532 | (Other than ECE/E <br> Fundamentals of Communications (Other than ECE) | ECE | 4 | - | - | 3 |
|  | 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 Cryplography(Other than CSE) | BS\&H | 4 | - | - | 3 |
| 14 | PH2508 | Semiconductor Physics (Other than ECE) | BS\&H | 4 | - | - | 3 |

Open Elective - II

| SI. |  | Title of the Subject | Department Offering the |  |  |  | No.of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | Subject | L | T | P | Credits |
| 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 $\quad \mathbf{T}:$ Tutorial $\mathrm{P}:$ Practical


Open Elective - III

| SI. <br> No. |  | Title of the Subject | Department Offering the Subject | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |
| 1 | CE2543 | Hydrology (Other than CE) | CE | 4 | - | - |  |
| 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 |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

| $\left\|\begin{array}{c} \text { SI. } \\ \text { No. } \end{array}\right\|$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of <br> Credits 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | 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 |

$\mathbf{L}:$ Lecture $\quad$ T:Tutorial $\quad \mathbf{P}$ : Practical
Information Technology


Seshadı Rao Gudlavalleru Engineering College

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

Professional Electives

| SI. | Course | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  <br> CT2521 <br> EC2512 <br> CT2514 <br> CT2522 | Professional Elective - I <br> i) Artificial Intelligence <br> ii) Embedded System Design <br> iii) Computer Graphics <br> iv) Advanced Data Structures | L 4 | T | P | Credits |
|  | $\left\lvert\, \begin{aligned} & \text { IT2511 } \\ & \text { IT2512 } \\ & \text { CT2530 } \\ & \text { CT2532 } \end{aligned}\right.$ | Professional Elective - II <br> i) Soft Computing Techniques <br> ii) Real Time Systems <br> iii) Image Processing <br> iv) Agile Software Development Process | 4 | - | - | 3 |
|  | $\left\lvert\, \begin{aligned} & \text { IT2517 } \\ & \text { IT2518 } \\ & \text { CT2526 } \\ & \text { CT2523 } \end{aligned}\right.$ | Professional Elective - III <br> i) Machine Learning and Pattern Recognition <br> ii) Distributed Operating Systems <br> iii) Human Computer Interaction <br> iv) Software Testing Methodologies | 4 | - | - | 3 |
|  | $\begin{aligned} & \text { IT2519 } \\ & \text { CT2536 } \\ & \text { IT2520 } \\ & \text { CT2533 } \end{aligned}$ | Professional Elective - IV <br> i) Business Intelligence <br> ii) Mobile Computing <br> iii) Multimedia Tools <br> iv) Cryptography and Network Security | 4 | - | - | 3 |
|  | $\left\lvert\, \begin{aligned} & \text { IT2525 } \\ & \text { IT2526 } \\ & \text { CT2524 } \\ & \text { IT2527 } \end{aligned}\right.$ | Professional Elective - V <br> i) Steganography and Biometrics <br> ii) Parallel Computing <br> iii) Virtual and Augmented Reality <br> iv) E-Commerce | 4 | - | - | 3 |
|  | $\begin{aligned} & \text { CT2535 } \\ & \text { CT2540 } \\ & \text { CT2541 } \\ & \text { IT2528 } \end{aligned}$ | Professional Elective - VI <br> i) Internet of Things <br> ii) Cloud Computing <br> iii) Blockchain Technologies <br> iv) Design Patterns | 4 | - | - | 3 |
| L: Lec | cture | T: Tutorial P Practical |  |  |  |  |



## I Semester

| $\begin{gathered} \text { Sl. } \\ \text { No. } \end{gathered}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | $\begin{array}{r}\text { P } \\ - \\ \hline\end{array}$ |  |
| 1 | CE3901 | Advanced Structural Analysis ** |  |  |  | 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 |  |  |  |  |  |  |
| SI. | Course | Name of the Course / Laboratory | No.of Periodsper week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| No. | Code |  | 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 | - | - | - |


|  | Course Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per wedek } \end{gathered}$ |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{array}{r} \hline \mathbf{L} \\ 3 \end{array}$ | $T$ | P |  |
| 1 |  | Professional Elective - V |  |  |  | 3 |
| 2 |  | Open Elective | 3 | - | - | 3 |
| 3 |  | Dissertation Phase - I | - | - | 20 | 10 |
|  |  | Total | 6 | - | 20 | 16 |

** Project Based Course
L: Lecture T:Tutorial P: Practical
M.Tech - Structural Engineering (CE) - R20


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## IV Semester

| SI. | Course <br> Code | Name of the Course / Laboratory | No.of Periods pler wedk |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | $\mathbf{L}$ | T | $\begin{gathered} \mathbf{P} \\ 32 \end{gathered}$ |  |
| 1 |  | Dissertation Phase - II |  |  |  | 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 (Otther than VLSID\&ES)
CS3924 Soft Computing Techniques


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

## I Semester

| $\begin{gathered} \text { Sl. } \\ \text { No. } \end{gathered}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | $\mathbf{P}$ |  |
| 1 | EE3901 | Electrical Machine Modeling and Analysis | 3 |  |  | 3 |
| 2 | EE3902 | Analysis of Power Electronic Converters** | 3 | - | - | 3 |
| 3 |  | Professional Elective - I | 3 | - | - | 3 |
| 4 |  | Professional Elective - II | 3 | - | - | 3 |
| 5 |  | Research Methodology \& IPR | 3 | - | - | 3 |
| 6 | EE3909 | Power Electronics Simulation Laboratory | - | - | 4 | 2 |
| 7 | EE3910 | Power Converters Laboratory | - | - | 4 | 2 |
|  |  | Total | 15 | - | 8 | 19 |
| 8 | BA3902 | Constitution of India (Audit Course) | 2 | - | - |  |

II Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \\ \hline \end{gathered}$ |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\mathbf{P}$ |  |
| 1 | EE3911 | Switched Mode Power Conversion |  |  |  | 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

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L3 | T | P |  |
| 1 |  | Professional Elective - V |  |  |  | 3 |
| 2 |  | Open Elective | 3 | - | - | 3 |
| 3 |  | Dissertation Phase - I | - | - | 20 | 10 |
|  |  | Total | 6 | - | 20 | 16 |

** Project Based Course
$\mathbf{L}:$ Lecture $\quad \mathrm{T}:$ Tutorial $\quad \mathbf{P}$ Practical
M.Tech - Power Electronics and Electric Drives (EEE) - R20


PRINCIPAL
Seshadri Rao

IV Semester

| SI. | Course <br> Code | Name of the Course / Laboratory | No.of Periods pler week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\begin{gathered} \hline \mathbf{P} \\ 32 \end{gathered}$ |  |
| 1 |  | Dissertation Phase - II |  |  |  | 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 Smat Grid Technologies
EE39.... MOOCs

## Open Electives:

CE3924 Sustainable Development
EE3924 Energy Audit, Conservation \& Management
ME3924 Rapid Prototyping
EC4924 Automotive Electronics (Otther than VLSID\&ES)
CS3924 Soft Computing Techniques
M.Tech - Power Electronics and Electric Drives (EEE) - R20


Seshadri Rao
Gudlavalleru Engineering College
Seshadri Rao Knowledge Village
Gudlavalleru - 521356 , Krishna District. A.P.

I Semester

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{gathered} \hline \mathrm{L} \\ 3 \end{gathered}$ | T | P. |  |
| 1 | ME3901 | Mechanical Vibrations and Acoustics ** |  |  |  | 3 |
| 2 | ME3902 | Advanced mechancis 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

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | Course Code | Name of the Course / Laboratory | $\begin{array}{\|c} \hline \begin{array}{c} \text { No.of Periods } \\ \text { per week } \end{array} \\ \hline \end{array}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | MA3902 | Computational Methods in Engineering |  |  |  | 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

| $\begin{array}{\|c} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \end{gathered}$ |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 3 \end{aligned}$ | T | $\mathbf{P}$ |  |
| 1 |  | Professional Elective - V |  |  |  | 3 |
| 2 |  | Open Elective | 3 | - | - | 3 |
| 3 | ME3926 | Dissertation Phase - I | - | - | 20 | 10 |
|  |  | Total | 6 | - | 20 | 16 |

** Project Based Course
L: Lecture T:Tutorial P: Practical
M.Tech - Machine Design (ME) - R20


IV Semester

| SI. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | 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 (Otther than VLSID\&ES)
CS3924 Soft Computing Techniques
M.Tech - Machine Design (ME) - R20


I Semester

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ | Course Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \end{gathered}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L3 | T | P |  |
| 1 | EC4901 | CMOS VLSI Design |  |  |  | 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 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 3 \end{aligned}$ | T | $\mathrm{P}$ |  |
| 1 | EC4911 | VLSI System Design * |  |  |  | 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

| $\begin{array}{\|l} \hline \text { SI. } \\ \text { No. } \end{array}$ | 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
M.Tech - VLSI Design and Embedded System (ECE) - R20


IV Semester

| SI. | Course <br> Code | Name of the Course / Laboratory | No.of Periods pler week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | L <br> - | T | $\begin{gathered} \hline \mathbf{P} \\ 32 \\ \hline \end{gathered}$ |  |
| 1 | EC4925 | Dissertation Phase - II |  |  |  | 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 Proessing
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 Crypthography
ME49... MOOCs
Open Electives:
CE3924 Sustainable Development
EE3924 Energy Audit, Conservation \& Management
ME3924 Rapid Prototyping
EC4924 Automotive Electronics (Otther than VLSID\&ES)
CS3924 Soft Computing Techniques
M.Tech - VLSI Design and Embedded System (ECE) - R20



Gudlavalleru Engineering College
Seshadri Rao Knowledge Village
Gudlavalleru - 521356 , Krishna District. A.P

# SESHADRI RAO GUDLAVALLERU ENGINEERING COLLEGE <br> SeshadriRao Knowledge Village, Gudlavalleru 

## Department of Computer Science and Engineering

R20 PG - M.Tech CSE (AI\&ML)
Course Structure
I Semester

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | Course Code | Name of the Course / Laboratory |  | No. of hours per week |  |  | Total Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |
| 1 |  | 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 | $\begin{aligned} & \text { CS3903 } \\ & \text { CS3904 } \\ & \text { CS3905 } \end{aligned}$ | Professional Elective - I <br> 1. Digital Image Processing <br> 2. Ad hoc and Sensor Networks <br> 3. Intelligent Systems | PE | 3 | - | - | 3 |
| 5 | $\begin{aligned} & \text { CS3906 } \\ & \text { CS3907 } \\ & \text { CS3908 } \\ & \hline \end{aligned}$ | Professional Elective - II <br> 1. Internet of Things <br> 2. Principles of Computer Security <br> 3. Distributed Systems | PE | 3 | - | - | 3 |
| 6 | CS3909 | Advanced Data Structures and Algorithm Analysis Lab | PC | - | - | 4 | 2 |
| 7 | CS3910 | Data Science Lab | ES | - | - | 4 | 2 |
| 8 |  | Constitution of India | AC | 2 | - | - | - |
|  |  |  | Total : | 17 | - | 8 | 19 |


| II Semester |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SI. <br> 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 | $\begin{aligned} & \text { CS3913 } \\ & \text { CS3914 } \\ & \text { CS3915 } \\ & \hline \end{aligned}$ | Professional Elective - III <br> 1. Blockchain Technology <br> 2. Data Preparation and Analysis <br> 3. Natural Language Processing | PE | 3 | - | - | 3 |
| 4 | $\begin{aligned} & \text { CS3916 } \\ & \text { CS3917 } \\ & \text { CS3918 } \\ & \hline \end{aligned}$ | Professional Elective - IV <br> 1. Cloud Computing <br> 2. Quantum Computing <br> 3. Digital Forensics | PE | 3 | - | - | 3 |
| 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 |  | English for Research Paper Writing | AC | 2 | - | - | - |
|  |  |  | Total: | 14 | - | 14 | 19 |

III Semester

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | Course Code | Name of the Course / Laboratory |  | $\begin{array}{\|c} \begin{array}{c} \text { No.of hours } \\ \text { per week } \end{array} \\ \hline \end{array}$ |  |  | No. of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |
| 1 | $\begin{aligned} & \text { CS3922 } \\ & \text { CS3923 } \end{aligned}$ | Professional Elective - V <br> 1. Deep Learning <br> 2. Recommender Systems <br> 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 <br> 1. Courses Offered by Other Departments <br> 2. MOOCs-2 (NPTEL/SWAYAM)-Any 12 <br> Week Course on Engineering/ <br> 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 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| SI <br> No. | Course <br> Code | Name of the Course / Laboratory |  |


| Open Elective-I | CS3924 | Soft Computing Techniques |
| :--- | :--- | :--- |



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Gudlavalleru - 521356 , Krishna District. A.P.

## COURSE STRUCTURE

I Semester

| SI. <br> 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

| SI. <br> 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 $\quad$ T: Tutorial $\quad \mathbf{P}:$ Practical


| III Semester |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | 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

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

Master of Business Administration - R20


