# SESHADRI RAO <br> GUDLAVALLERU ENGINEERING COLLEGE <br> (An Autonomous Institute with Permanent Affiliation to JNTUK, Kakinada) 

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(Approved by AICTE, New Delhi and Permitted by A.P. State Government)
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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 2019-2020.

| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 1. | Computer aided drafting lab | CE2502 | B. Tech-CE | Employability |
| 2. | Linear Algebra and Differential Equations | MA2501 | B. Tech-CE | Employability |
| 3. | Integral Transforms and Multiple integrals | MA2503 | B. Tech-CE | Employability |
| 4. | Engineering Physics | PH2501 | B. Tech-CE | Employability |
| 5. | Engineering Physics Lab | PH2503 | B. Tech-CE | Skill Development |
| 6. | Engineering Chemistry | CH2501 | B. Tech-CE | Employability |
| 7. | Engineering Chemistry Lab | CH2502 | B. Tech-CE | Skill Development |
| 8. | Engineer and Society | EN2502 | B. Tech-CE | Employability |
| 9. | Problem solving using C | CT2501 | B. Tech-CE | Employability |
| 10. | Engineering Drawing | ME2501 | B. Tech-CE | Skill Development |
| 11. | Engineering Mechanics | CE2501 | B. Tech-CE | Employability |
| 12. | Applied Mechanics lab and building trade practice | CE2503 | B. Tech-CE | Skill Development |
| 13. | Mechanics of Solids | CE2504 | B. Tech-CE | Employability |
| 14. | Mechanics of Fluids | CE2505 | B. Tech-CE | Employability |
| 15. | Surveying | CE2507 | B. Tech-CE | Employability |
| 16. | Building Planning and Drawing | CE2508 | B. Tech-CE | Employability |
| 17. | Survey Field Work | CE2510 | B. Tech-CE | Skill Development |
| 18. | Building materials and construction | CE2506 | B. Tech-CE | Employability |
| 19. | Hydraulic and Hydraulic Machines | CE2512 | B. Tech-CE | Employability |
| 20. | Concrete Technology | CE2513 | B. Tech-CE | Employability |

(Sponsored by A.A.N.M. \& V.V.R.S.R. Educational Society, Gudlavalleru)

| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 21. | Fluid Mechanics \& Hydraulic Machines Lab | CE2517 | B. Tech-CE | Skill Development |
| 22. | Concreter Technology Lab | CE2518 | B. Tech-CE | Skill Development |
| 23. | Mini Project | CE2547 | B. Tech-CE | Skill Development |
| 24. | Mechanics of Solids Lab | CE2509 | B. Tech-CE | Skill Development |
| 25. | Structural Analysis | CE2511 | B. Tech-CE | Employability |
| 26. | Engineering Geology and Geomatics | CE2514 | B. Tech-CE | Employability |
| 27. | Interior Design | CE2519 | B. Tech-CE | Employability |
| 28. | Building Bye Laws and Scientific Planning | CE2520 | B. Tech-CE | Employability |
| 29. | Theory of Structures | CE2522 | B. Tech-CE | Employability |
| 30. | Geotechnical Engineering | CE2523 | B. Tech-CE | Employability |
| 31. | Hydrology and Water Resources Engineering | CE2524 | B. Tech-CE | Employability |
| 32. | Water and Waste Water Engineering | CE2525 | B. Tech-CE | Employability |
| 33. | Water and Waste Water Engineering Lab | CE2533 | B. Tech-CE | Skill Development |
| 34. | Infrastructure Development | CE2534 | B. Tech-CE | Employability |
| 35. | Foundation Engineering | CE2536 | B. Tech-CE | Employability |
| 36. | Highway Engineering | CE2537 | B. Tech-CE | Employability |
| 37. | Highway Engineering Lab | CE2546 | B. Tech-CE | Skill Development |
| 38. | Smart Buildings and Automation | CE2548 | B. Tech-CE | Employability |
| 39. | Building Information Modelling | CE2549 | B. Tech-CE | Employability |
| 40. | Building Services | CE2516 | B. Tech-CE | Employability |
| 41. | Electrical Materials | EE2515 | B. Tech-CE | Employability |
| 42. | Control Systems Engineering | EE2516 | B. Tech-CE | Employability |
| 43. | Elements of Manufacturing Processes | ME2520 | B. Tech-CE | Employability |
| 44. | Automotive Engineering | ME2521 | B. Tech-CE | Employability |
| 45. | Fundamentals of Communications | EC2532 | B. Tech-CE | Employability |
| 46. | Computer Graphics | CT2514 | B. Tech-CE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 47. | Systems Software | CT2515 | B. Tech-CE | Employability |
| 48. | Web Programming | IT2502 | B. Tech-CE | Employability |
| 49. | Mathematical Cryptography | MA2516 | B. Tech-CE | Employability |
| 50. | Semiconductor Physics | PH2508 | B. Tech-CE | Employability |
| 51. | Geo informatics | CE2503 | B. Tech-CE | Employability |
| 52. | Environmental Sanitation | CE2531 | B. Tech-CE | Employability |
| 53. | Power Systems Engineering | EE2524 | B. Tech-CE | Employability |
| 54. | Elements of Mechanical Transmission | ME2532 | B. Tech-CE | Employability |
| 55. | Material Handling Equipment | ME2533 | B. Tech-CE | Employability |
| 56. | Introduction to MEMS | EC2544 | B. Tech-CE | Employability |
| 57. | Data Science | CS2508 | B. Tech-CE | Employability |
| 58. | Virtual and Augmented Reality | CT2524 | B. Tech-CE | Employability |
| 59. | Quality, Reliability and Operations Research | MA2517 | B. Tech-CE | Employability |
| 60. | Hydrology | CE2543 | B. Tech-CE | Employability |
| 61. | Planning for Sustainable Development | CE2544 | B. Tech-CE | Employability |
| 62. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-CE | Employability |
| 63. | Material Science | ME2541 | B. Tech-CE | Employability |
| 64. | Bio-Medical Engineering | EC2507 | B. Tech-CE | Employability |
| 65. | Node and Angular JS | CS2512 | B. Tech-CE | Employability |
| 66. | Cyber Security | CS2513 | B. Tech-CE | Employability |
| 67. | Software Project Management | CT2531 | B. Tech-CE | Employability |
| 68. | Elements of Stochastic Processes | MA2518 | B. Tech-CE | Employability |
| 69. | Academic Communication | EG2505 | B. Tech-CE | Employability |
| 70. | Advanced Strength of Materials | CE2526 | B. Tech-CE | Employability |
| 71. | GIS and GPS | CE2527 | B. Tech-CE | Employability |
| 72. | Green Buildings | CE2528 | B. Tech-CE | Employability |
| 73. | Construction Management | CE2529 | B. Tech-CE | Employability |
| 74. | Ground Improvement Techniques | CE2542 | B. Tech-CE | Employability |
| 75. | Elements of Electrical Circuits | EE2507 | B. Tech-EEE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 76. | Elements of Mechanical Engineering | ME2503 | B. Tech-EEE | Employability |
| 77. | Linear Algebra and Differential Equations | MA2501 | B. Tech-EEE | Employability |
| 78. | Integral transforms and Vector Calculus | MA2504 | B. Tech-EEE | Employability |
| 79. | Solid State Physics | PH2504 | B. Tech-EEE | Employability |
| 80. | Solid State Physics Lab | PH2505 | B. Tech-EEE | Skill Development |
| 81. | Applied Chemistry | CH2503 | B. Tech-EEE | Employability |
| 82. | Engineer and Society | EN2502 | B. Tech-EEE | Entrepreneurship |
| 83. | Problem solving using C | CT2501 | B. Tech-EEE | Employability |
| 84. | DC Machines and Transformers | EE2508 | B. Tech-EEE | Employability |
| 85. | Electric Circuit Analysis | EE2509 | B. Tech-EEE | Employability |
| 86. | Numerical Methods with Computer Applications | MA2507 | B. Tech-EEE | Employability |
| 87. | Analog Electronics | EC2503 | B. Tech-EEE | Employability |
| 88. | Mechanical Engineering Lab | ME2504 | B. Tech-EEE | Skill Development |
| 89. | Electric Circuits Lab | EE2511 | B. Tech-EEE | Skill Development |
| 90. | Analog Electronics Lab | EC2504 | B. Tech-EEE | Skill Development |
| 91. | Digital Circuit Design | EC2505 | B. Tech-EEE | Employability |
| 92. | Engineering Economics and Project Management | BA2501 | B. Tech-EEE | Entrepreneurship |
| 93. | Induction and Synchronous Machines | EE2513 | B. Tech-EEE | Employability |
| 94. | Digital Circuit Design Lab | EC2506 | B. Tech-EEE | Skill Development |
| 95. | Biomedical Engineering | EC2507 | B. Tech-EEE | Employability |
| 96. | Computer Organisation and Architecture | CT2512 | B. Tech-EEE | Employability |
| 97. | Introduction to Quantum Mechanics for Engineers | EE2518 | B. Tech-EEE | Employability |
| 98. | Optional Elective-II MOOCS | EE2519 | B. Tech-EEE | Employability |
| 99. | Mechatronics | ME2549 | B. Tech-EEE | Employability |
| 100. | Electrical Measurements and Instrumentation | EE2520 | B. Tech-EEE | Employability |
| 101. | Signals and Systems | EC2508 | B. Tech-EEE | Employability |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill Development |
| :---: | :---: | :---: | :---: | :---: |
| 102. | Power Systems II | EE2521 | B. Tech-EEE | Employability |
| 103. | Control Systems Lab | EE2525 | B. Tech-EEE | Skill Development |
| 104. | Electrical Machines II Lab | EE2526 | B. Tech-EEE | Skill Development |
| 105. | Mini Project | EE2527 | B. Tech-EEE | Skill Development |
| 106. | Electrical Systems and Simulation Lab | EE2533 | B. Tech-EEE | Skill Development |
| 107. | Electrical Measurements and Instrumentation Lab | EE2524 | B. Tech-EEE | Skill Development |
| 108. | Control System Design | EE2528 | B. Tech-EEE | Employability |
| 109. | Probability and Fuzzy Mathematics | MA2511 | B. Tech-EEE | Employability |
| 110. | Microprocessors, Microcontrollers and Its Applications | EC2510 | B. Tech-EEE | Employability |
| 111. | Microprocessors, Microcontrollers and Its Applications Lab | EC2515 | B. Tech-EEE | Skill Development |
| 112. | Data Base Management Systems | CT2513 | B. Tech-EEE | Employability |
| 113. | Nano Electronics | EC2516 | B. Tech-EEE | Employability |
| 114. | Solar and Wind Energy Systems | EE2535 | B. Tech-EEE | Employability |
| 115. | Optional Elective- IV MOOCS | EE2529 | B. Tech-EEE | Employability |
| 116. | Optional Elective- VI MOOCS | EE2536 | B. Tech-EEE | Employability |
| 117. | Electrical Materials | EE2515 | B. Tech-EEE | Employability |
| 118. | Control Systems Engineering | EE2516 | B. Tech-EEE | Employability |
| 119. | Automotive Engineering | ME2521 | B. Tech-EEE | Employability |
| 120. | Fundamentals of Communications | EC2532 | B. Tech-EEE | Employability |
| 121. | Computer Graphics | CT2514 | B. Tech-EEE | Employability |
| 122. | Systems Software | CT2515 | B. Tech-EEE | Employability |
| 123. | Web Programming | IT2502 | B. Tech-EEE | Employability |
| 124. | Mathematical Cryptography | MA2516 | B. Tech-EEE | Employability |
| 125. | Semiconductor Physics | PH2508 | B. Tech-EEE | Employability |
| 126. | Material Handling Equipment | ME2533 | B. Tech-EEE | Employability |
| 127. | Introduction to MEMS | EC2544 | B. Tech-EEE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill Development |
| :---: | :---: | :---: | :---: | :---: |
| 128. | Data Science | CS2508 | B. Tech-EEE | Employability |
| 129. | Virtual and Augmented Reality | CT2524 | B. Tech-EEE | Employability |
| 130. | Quality, Reliability and Operations Research | MA2517 | B. Tech-EEE | Employability |
| 131. | Planning for Sustainable Development | CE2544 | B. Tech-EEE | Employability |
| 132. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-EEE | Employability |
| 133. | Material Science | ME2541 | B. Tech-EEE | Employability |
| 134. | Bio-Medical Engineering | EC2507 | B. Tech-EEE | Employability |
| 135. | Node and Angular JS | CS2512 | B. Tech-EEE | Employability |
| 136. | Cyber Security | CS2513 | B. Tech-EEE | Employability |
| 137. | Software Project Management | CT2531 | B. Tech-EEE | Employability |
| 138. | Elements of Stochastic Processes | MA2518 | B. Tech-EEE | Employability |
| 139. | Academic Communication | EG2505 | B. Tech-EEE | Employability |
| 140. | Switch Gear and Protection | EE2522 | B. Tech-EEE | Employability |
| 141. | Computer Networks | CT2519 | B. Tech-EEE | Employability |
| 142. | Pulse and Integrated Circuits | EC2509 | B. Tech-EEE | Employability |
| 143. | Data Structures | CT2505 | B. Tech-EEE | Employability |
| 144. | Digital Signal Processing | EC2511 | B. Tech-EEE | Employability |
| 145. | Embedded System Design | EC2512 | B. Tech-EEE | Employability |
| 146. | Principles of VLSI Design | EC2513 | B. Tech-EEE | Employability |
| 147. | DSP Processors and Architecture | EC2514 | B. Tech-EEE | Employability |
| 148. | Engineering Graphics | ME2505 | B. Tech-ME | Employability |
| 149. | Linear Algebra and Differential Equations | MA2501 | B. Tech-ME | Employability |
| 150. | Integral Transforms and Multiple integrals | MA2503 | B. Tech-ME | Employability |
| 151. | Engineering Physics Lab | PH2503 | B. Tech-ME | Skill Development |
| 152. | Physics for Engineers | PH2502 | B. Tech-ME | Employability |
| 153. | Industrial Chemistry | CH2505 | B. Tech-ME | Employability |
| 154. | Industrial Chemistry Lab \& Engg. Mechanics Lab | ME2508 | B. Tech-ME | Skill Development |
| 155. | Engineer and Society | EN2502 | B. Tech-ME | Entrepreneurship |
| 156. | Problem Solving Using C | CT2501 | B. Tech-ME | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 157. | Engineering Mechanics | CE2501 | B. Tech-ME | Employability |
| 158. | Computer Aided Engineering Drawing | ME256 | B. Tech-ME | Skill Development |
| 159. | Engineering Workshop | ME2507 | B. Tech-ME | Skill Development |
| 160. | Elements of Electrical and Electronics Engineering | EE2501 | B. Tech-ME | Employability |
| 161. | Solid Mechanics | ME2512 | B. Tech-ME | Employability |
| 162. | Engineering Metallurgy | ME2513 | B. Tech-ME | Employability |
| 163. | Electrical and Electronics Engineering Lab | EE2502 | B. Tech-ME | Skill Development |
| 164. | Solid Mechanics and Metallurgy Lab | ME2514 | B. Tech-ME | Skill Development |
| 165. | Computer Aided Modelling Lab | ME2515 | B. Tech-ME | Skill Development |
| 166. | Manufacturing Processes | ME2516 | B. Tech-ME | Employability |
| 167. | Applied Thermodynamics | ME2517 | B. Tech-ME | Employability |
| 168. | Thermal Engineering Lab | ME2522 | B. Tech-ME | Skill Development |
| 169. | Machine Dynamics Lab | ME2524 | B. Tech-ME | Skill Development |
| 170. | Control Systems | EE2512 | B. Tech-ME | Employability |
| 171. | Nano Technology | ME2525 | B. Tech-ME | Employability |
| 172. | Digital Logic Design | CT2506 | B. Tech-ME | Employability |
| 173. | Numerical and Statistical Methods | MA2509 | B. Tech-ME | Employability |
| 174. | Metal Cutting and Machine Tools | ME2527 | B. Tech-ME | Employability |
| 175. | Computer Aided Engineering Analysis Lab | ME2548 | B. Tech-ME | Skill Development |
| 176. | Computer Aided Machine Drawing Lab | ME2536 | B. Tech-ME | Skill Development |
| 177. | Computer Graphics | CT2514 | B. Tech-ME | Employability |
| 178. | Design of Machine Members | ME2539 | B. Tech-ME | Employability |
| 179. | Embedded System Design | EC2512 | B. Tech-ME | Employability |
| 180. | Engineering Economics and Accountancy | BA2503 | B. Tech-ME | Entrepreneurship |
| 181. | Fluid Mechanics and Turbo Machinery Lab | ME2534 | B. Tech-ME | Skill Development |
| 182. | Fuzzy Logic Systems | EE2503 | B. Tech-ME | Employability |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on <br> Employability/ <br> Entreneurship/ <br> Skill |
| :---: | :--- | :--- | :--- | :--- |
| 183. | Heat Transfer | ME2540 | B. Tech-ME | Employability |
| 184. | Heat Transfer Lab | ME2546 | B. Tech-ME | Skill Development |
| 185. | Mechatronics | ME2549 | B. Tech-ME | Employability |
| 186. | Micro Processors and <br> Interfacing | EC2520 | B. Tech-ME | Employability |
| 187. | Turbo Machinery | ME2528 | B. Tech-ME | Employability |
| 188. | Elements of Civil Engineering | CE2515 | B. Tech-ME | Employability |
| 189. | Electrical Materials | EE2515 | B. Tech-ME | Employability |
| 190. | Control Systems Engineering | EE2516 | B. Tech-ME | Employability |
| 191. | Elements of Manufacturing <br> Processes | ME2520 | B. Tech-ME | Employability |
| 192. | Automotive Engineering | ME2521 | B. Tech-ME | Employability |
| EE2544 | B. Tech-ME | Employability |  |  |
| 193. | Introduction to <br> Microprocessors and <br> Microcontrollers | Planning for Sustainable <br> Development | EC2531 | B. Tech-ME |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 210. | Electrical and Hybrid Vehicles | EE2531 | B. Tech-ME | Employability |
| 211. | Bio-Medical Engineering | EC2507 | B. Tech-ME | Employability |
| 212. | Node and Angular JS | CS2512 | B. Tech-ME | Employability |
| 213. | Cyber Security | CS2513 | B. Tech-ME | Employability |
| 214. | Software Project Management | CT2531 | B. Tech-ME | Employability |
| 215. | Elements of Stochastic Processes | MA2518 | B. Tech-ME | Employability |
| 216. | Academic Communication | EG2505 | B. Tech-ME | Employability |
| 217. | Assistive Technologies | EC2523 | B. Tech-ME | Employability |
| 218. | Power Plant Instrumentation | EE2532 | B. Tech-ME | Employability |
| 219. | Data Structures | CT2505 | B. Tech-ME | Employability |
| 220. | Database Management Systems | CT2513 | B. Tech-ME | Employability |
| 221. | Mechanical Vibrations | ME2530 | B. Tech-ME | Employability |
| 222. | Mechanics of Composite Materials | ME2531 | B. Tech-ME | Employability |
| 223. | Non-Conventional Sources of Energy | ME2529 | B. Tech-ME | Employability |
| 224. | Principles of Finite Element Method | ME2543 | B. Tech-ME | Employability |
| 225. | Robotics | ME2544 | B. Tech-ME | Employability |
| 226. | Problem Solving Through Computer Programming | CT2502 | B. Tech-ECE | Employability |
| 227. | Computer Programming Lab | CT2503 | B. Tech-ECE | Skill Development |
| 228. | Linear Electrical Networks | EE2504 | B. Tech-ECE | Employability |
| 229. | Linear Algebra and Differential Equations | MA2501 | B. Tech-ECE | Employability |
| 230. | Integral transforms and Vector Calculus | MA2504 | B. Tech-ECE | Employability |
| 231. | Numerical Methods \& Complex Analysis | MA2505 | B. Tech-ECE | Employability |
| 232. | Solid State Physics | PH2504 | B. Tech-ECE | Employability |
| 233. | Solid State Physics Lab | PH2505 | B. Tech-ECE | Skill Development |
| 234. | Applied Chemistry | CH2503 | B. Tech-ECE | Employability |
| 235. | Engineer and Society | EN2502 | B. Tech-ECE | Entrepreneurship |
| 236. | Probability Theory and Stochastic Process | EC2524 | B. Tech-ECE | Employability |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 237. | Electronic Devices | EC2525 | B. Tech-ECE | Employability |
| 238. | Engineering Economics And Project Management | BA2501 | B. Tech-ECE | Entrepreneurship |
| 239. | Elements of Electrical Engineering | EE2505 | B. Tech-ECE | Employability |
| 240. | Electronic Devices Lab | EC2527 | B. Tech-ECE | Skill Development |
| 241. | Analog Circuits | EC2529 | B. Tech-ECE | Employability |
| 242. | Analog Communications | EC2530 | B. Tech-ECE | Employability |
| 243. | Fundamentals of Communications | EC2532 | B. Tech-ECE | Employability |
| 244. | Digital Circuit Design | EC2505 | B. Tech-ECE | Employability |
| 245. | Fundamentals of Data Structures | CS2501 | B. Tech-ECE | Employability |
| 246. | Analog Circuits Lab | EC2533 | B. Tech-ECE | Skill Development |
| 247. | Digital Circuit Design Lab | EC2506 | B. Tech-ECE | Skill Development |
| 248. | Electronic Switching Systems | EC2534 | B. Tech-ECE | Employability |
| 249. | Introduction to Python Programming | CS2502 | B. Tech-ECE | Employability |
| 250. | Database Management Systems | CT2513 | B. Tech-ECE | Employability |
| 251. | Mathematical Cryptography | MA2516 | B. Tech-ECE | Employability |
| 252. | Linear Integrated Circuits Applications | EC2536 | B. Tech-ECE | Employability |
| 253. | Digital Communications | EC2537 | B. Tech-ECE | Employability |
| 254. | Antennas and Wave Propagation | EC2538 | B. Tech-ECE | Employability |
| 255. | Principles of VLSI Design | EC2539 | B. Tech-ECE | Employability |
| 256. | CAD for VLSI | EC2540 | B. Tech-ECE | Employability |
| 257. | Computer Organization | EC2541 | B. Tech-ECE | Employability |
| 258. | Computer And Communication Networks | EC2542 | B. Tech-ECE | Employability |
| 259. | Biomedical Engineering | EC2507 | B. Tech-ECE | Employability |
| 260. | Introduction To MEMS | EC2544 | B. Tech-ECE | Employability |
| 261. | Linear Integrated Circuits Applications Lab | EC2545 | B. Tech-ECE | Skill Development |
| 262. | Analog and Digital Communications Lab | EC2546 | B. Tech-ECE | Skill Development |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 263. | Microprocessors, Microcontrollers and Applications | EC2510 | B. Tech-ECE | Employability |
| 264. | Analog IC Design | EC2549 | B. Tech-ECE | Employability |
| 265. | Nano Electronics | EC2516 | B. Tech-ECE | Employability |
| 266. | Smart Antennas | EC2550 | B. Tech-ECE | Employability |
| 267. | Coding Theory | EC2551 | B. Tech-ECE | Employability |
| 268. | Microprocessor and Microcontroller Interfacing Lab | EC2515 | B. Tech-ECE | Skill Development |
| 269. | VLSI Lab | EC2553 | B. Tech-ECE | Skill Development |
| 270. | Data Warehousing and Data Mining | CT2528 | B. Tech-ECE | Employability |
| 271. | Mechatronics | ME2549 | B. Tech-ECE | Employability |
| 272. | Quality, Reliability and Operations Research | MA2517 | B. Tech-ECE | Employability |
| 273. | Elements of Stochastic process | MA2518 | B. Tech-ECE | Employability |
| 274. | Problem Solving through Computer Programming | CT2502 | B. Tech-CSE | Employability |
| 275. | Computer Programming Lab | CT2503 | B. Tech-CSE | Skill Development |
| 276. | Python Programming | CT2504 | B. Tech-CSE | Employability |
| 277. | Linear Algebra and Integral Transforms | MA2502 | B. Tech-CSE | Employability |
| 278. | Numerical Methods and Differential Equations | MA2506 | B. Tech-CSE | Employability |
| 279. | Applied Physics | PH2506 | B. Tech-CSE | Employability |
| 280. | Applied Physics Lab | PH2507 | B. Tech-CSE | Skill Development |
| 281. | Engineer and Society | EN2502 | B. Tech-CSE | Entrepreneurship |
| 282. | Data Structure | CT2505 | B. Tech-CSE | Employability |
| 283. | UNIX programming Lab | CS2503 | B. Tech-CSE | Skill Development |
| 284. | Computer Organization and Architecture | CT2512 | B. Tech-CSE | Employability |
| 285. | Database Management Systems Lab | CT2516 | B. Tech-CSE | Skill Development |
| 286. | Operating Systems Lab | CS2504 | B. Tech-CSE | Skill Development |
| 287. | Computer Graphics | CT2514 | B. Tech-CSE | Employability |
| 288. | Compiler Design | CT2518 | B. Tech-CSE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 289. | Computer Networks | CS2519 | B. Tech-CSE | Employability |
| 290. | Web Technologies | CT2520 | B. Tech-CSE | Employability |
| 291. | C\#.NET | CS2506 | B. Tech-CSE | Employability |
| 292. | Advanced Data Structures | CT2522 | B. Tech-CSE | Employability |
| 293. | Software Testing Methodologies | CT2523 | B. Tech-CSE | Employability |
| 294. | Principles of Programming Languages | CS2507 | B. Tech-CSE | Employability |
| 295. | Computer Networks and Compiler Design lab | CS2509 | B. Tech-CSE | Skill Development |
| 296. | Data Warehousing Data Mining | CT2528 | B. Tech-CSE | Employability |
| 297. | Design and Analysis of Algorithms | CT2527 | B. Tech-CSE | Employability |
| 298. | Cyber Security | CS2513 | B. Tech-CSE | Employability |
| 299. | Node and Angular JS | CS2512 | B. Tech-CSE | Employability |
| 300. | Software Project Management | CT2531 | B. Tech-CSE | Employability |
| 301. | Scripting Languages | CT2529 | B. Tech-CSE | Employability |
| 302. | Artificial Intelligence | CT2521 | B. Tech-CSE | Employability |
| 303. | UML and Design patterns | CS2511 | B. Tech-CSE | Employability |
| 304. | Graph Theory | CS2514 | B. Tech-CSE | Employability |
| 305. | Web Technologies lab | CS2516 | B. Tech-CSE | Skill Development |
| 306. | Data Mining lab | CT2525 | B. Tech-CSE | Skill Development |
| 307. | Quality, Reliability and Operations Research | MA2517 | B. Tech-CSE | Employability |
| 308. | Elements of Stochastic process | MA2518 | B. Tech-CSE | Employability |
| 309. | Managerial Economics and Financial Analysis | BA2502 | B. Tech-CSE | Entrepreneurship |
| 310. | Digital Logic Design | CT2506 | B. Tech-CSE | Employability |
| 311. | Oops Through JAVA | CT2507 | B. Tech-CSE | Employability |
| 312. | Data Structures Lab | CT2508 | B. Tech-CSE | Skill Development |
| 313. | Object Oriented Programming Lab | CT2509 | B. Tech-CSE | Skill Development |
| 314. | Operating Systems | CT2510 | B. Tech-CSE | Employability |
| 315. | Data Science | CS2508 | B. Tech-CSE | Employability |
| 316. | Virtual and augmented Reality | CT2524 | B. Tech-CSE | Employability |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on <br> Employability/ <br> Eneneurship/ <br> Skill |
| ---: | :--- | :---: | :---: | :--- |
| 317. | Open Source Software | IT2505 | B. Tech-CSE | Employability |
| Development |  |  |  |  |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill Development |
| :---: | :---: | :---: | :---: | :---: |
| 346. | Scripting Languages | CT2529 | B. Tech-IT | Employability |
| 347. | Computer Networks and Data Mining Lab | IT2513 | B. Tech-IT | Skill Development |
| 348. | Open Source Software | IT2505 | B. Tech-IT | Employability |
| 349. | Software Project Management | CT2531 | B. Tech-IT | Employability |
| 350. | Quality, Reliability and Operations Research | MA2517 | B. Tech-IT | Employability |
| 351. | Elements of Stochastic process | MA2518 | B. Tech-IT | Employability |
| 352. | Oops through JAVA | Ct2507 | B. Tech-IT | Employability |
| 353. | Digital Logic Design | CT2506 | B. Tech-IT | Employability |
| 354. | Compiler Design | CT2518 | B. Tech-IT | Employability |
| 355. | Operating Systems | CT2510 | B. Tech-IT | Skill Development |
| 356. | Operating Systems and Compiler Design Lab | IT2507 | B. Tech-IT | Skill Development |
| 357. | Design and Analysis of Algorithms | CT2527 | B. Tech-IT | Employability |
| 358. | Data Warehousing and Data Mining | CT2528 | B. Tech-IT | Employability |
| 359. | Objective Oriented Analysis and Design | IT2510 | B. Tech-IT | Employability |
| 360. | Computer Networks | CT2519 | B. Tech-IT | Employability |
| 361. | Virtual and Augmented Reality | CT2524 | B. Tech-IT | Employability |
| 362. | Node and Angular JS | CT2512 | B. Tech-IT | Employability |
| 363. | Cyber Security | CS2513 | B. Tech-IT | Employability |
| 364. | Academic Communication | EG2505 | B. Tech-IT | Employability |
| 365. | DATA Science | CS2508 | B. Tech-IT | Employability |
| 366. | Finite Element Method | CE1540 | B. Tech-CE | Employability |
| 367. | Managerial Economics And Financial analysis | BA1502 | B. Tech-CE | Entrepreneurship |
| 368. | Advanced Structural Analysis | CE1541 | B. Tech-CE | Employability |
| 369. | Advanced Environmental Engineering | CE1542 | B. Tech-CE | Employability |
| 370. | Design And Drawing of Irrigation Structures | CE1543 | B. Tech-CE | Employability |
| 371. | Design of Industrial Structures | CE1544 | B. Tech-CE | Employability |
| 372. | Air Pollution and its Control | CE1545 | B. Tech-CE | Employability |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill Development |
| :---: | :---: | :---: | :---: | :---: |
| 373. | Architecture and Town planning | CE1547 | B. Tech-CE | Employability |
| 374. | Building services | CE1548 | B. Tech-CE | Employability |
| 375. | Structural Engineering lab | CE1549 | B. Tech-CE | Skill Development |
| 376. | Transportation Engineering Lab | CE1550 | B. Tech-CE | Skill Development |
| 377. | Computer Applications in Civil Engineering Lab | CE1551 | B. Tech-CE | Skill Development |
| 378. | Advanced Concrete structures | CE1552 | B. Tech-CE | Employability |
| 379. | Docks and Harbour Engineering | CE1555 | B. Tech-CE | Employability |
| 380. | Industrial Waste Management | CE1557 | B. Tech-CE | Employability |
| 381. | Global Positioning Systems | CE1560 | B. Tech-CE | Employability |
| 382. | Industrial/Practical Training | CE1562 | B. Tech-CE | Skill Development |
| 383. | Statistical Methods using R Software | MA1510 | B. Tech-CE | Employability |
| 384. | HVDC Transmission Systems | EE1537 | B. Tech-EEE | Employability |
| 385. | Electrical Machine Design | EE1539 | B. Tech-EEE | Employability |
| 386. | Programmable Logic Controller | EE1540 | B. Tech-EEE | Employability |
| 387. | Computer Organization \& Architecture | CS1505 | B. Tech-EEE | Employability |
| 388. | Electrical Costing \& Estimation | EE1546 | B. Tech-EEE | Employability |
| 389. | Modelling and Analysis of Electrical Machines | EE1547 | B. Tech-EEE | Employability |
| 390. | High Voltage Engineering | EE1548 | B. Tech-EEE | Employability |
| 391. | EHV AC/ DC Transmission Systems | EE1551 | B. Tech-EEE | Employability |
| 392. | Power Plant Instrumentation | EE1552 | B. Tech-EEE | Employability |
| 393. | Electrical Safety Management | EE1553 | B. Tech-EEE | Employability |
| 394. | Industrial/ Practical Training | EE1554 | B. Tech-EEE | Skill Development |
| 395. | Statistical Methods using R Software | MA1510 | B. Tech-EEE | Employability |
| 396. | Electrical Systems Simulation Lab | EE1514 | B. Tech-EEE | Skill Development |
| 397. | Power Systems Lab | EE1545 | B. Tech-EEE | Skill Development |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 398. | Micro processors and Micro controllers Lab | EC1512 | B. Tech-EEE | Skill Development |
| 399. | Heat Transfer | ME1540 | B. Tech-ME | Employability |
| 400. | CAD / CAM Lab | ME1549 | B. Tech-ME | Skill Development |
| 401. | Heat Transfer Lab | ME1550 | B. Tech-ME | Skill Development |
| 402. | Computational Methods for Engineers Lab | ME1551 | B. Tech-ME | Skill Development |
| 403. | Computational Fluid Dynamics | ME1541 | B. Tech-ME | Employability |
| 404. | Robotics | ME1542 | B. Tech-ME | Employability |
| 405. | Interactive Computer Graphics | ME1543 | B. Tech-ME | Employability |
| 406. | Mechanical Vibrations | ME1544 | B. Tech-ME | Employability |
| 407. | Production Planning and Control | ME1545 | B. Tech-ME | Employability |
| 408. | Tribology | ME1546 | B. Tech-ME | Employability |
| 409. | Refrigeration \& Air Conditioning | ME1547 | B. Tech-ME | Employability |
| 410. | Fracture Mechanics | ME1548 | B. Tech-ME | Employability |
| 411. | Condition Monitoring | ME1553 | B. Tech-ME | Employability |
| 412. | Rapid Prototyping | ME1554 | B. Tech-ME | Employability |
| 413. | Design for Manufacturing \& Assembly | ME1555 | B. Tech-ME | Employability |
| 414. | Supply Chain Management | ME1559 | B. Tech-ME | Employability |
| 415. | Statistical Methods using R Software | MA1510 | B. Tech-ME | Employability |
| 416. | Industrial / Practical Training | ME1562 | B. Tech-ME | Skill Development |
| 417. | Electronic Measurements and Instrumentation | EC1545 | B. Tech-ECE | Employability |
| 418. | Microcontrollers and Embedded Systems | EC1546 | B. Tech-ECE | Employability |
| 419. | Sensors and Instrumentation | EC1548 | B. Tech-ECE | Employability |
| 420. | Advanced Computer Architecture | CS1524 | B. Tech-ECE | Employability |
| 421. | DSP Architecture and Applications | EC1549 | B. Tech-ECE | Employability |
| 422. | FPGA Design | EC1550 | B. Tech-ECE | Employability |
| 423. | Digital TV Engineering | EC1551 | B. Tech-ECE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 424. | Digital Image Processing | EC1552 | B. Tech-ECE | Employability |
| 425. | Embedded Real Time Operating Systems | EC1553 | B. Tech-ECE | Employability |
| 426. | Assistive Technologies | EC1554 | B. Tech-ECE | Employability |
| 427. | Introduction to Embedded Systems | EC1555 | B. Tech-ECE | Employability |
| 428. | Microwave and Optical Communications Lab | EC1557 | B. Tech-ECE | Skill Development |
| 429. | VLSI and Embedded Systems Lab | EC1558 | B. Tech-ECE | Skill Development |
| 430. | Testing and Verification of VLSI Circuits | EC1559 | B. Tech-ECE | Employability |
| 431. | Low Power VLSI Design | EC1563 | B. Tech-ECE | Employability |
| 432. | Software Engineering | EC1565 | B. Tech-ECE | Employability |
| 433. | Bio-Medical Instrumentation | EC1566 | B. Tech-ECE | Employability |
| 434. | Internet of Things | EC1567 | B. Tech-ECE | Employability |
| 435. | Consumer Electronics | EC1568 | B. Tech-ECE | Employability |
| 436. | Industrial/Practical Training | EC1569 | B. Tech-ECE | Skill Development |
| 437. | Statistical Methods using R Software | MA1510 | B. Tech-ECE | Employability |
| 438. | Information Security | CS1522 | B. Tech-CSE | Employability |
| 439. | Embedded Systems | CS1525 | B. Tech-CSE | Employability |
| 440. | Bio-Informatics | CS1526 | B. Tech-CSE | Employability |
| 441. | Distributed Systems | CS1527 | B. Tech-CSE | Employability |
| 442. | Mobile Application Development | CS1520 | B. Tech-CSE | Employability |
| 443. | Digital Image Processing | CT1521 | B. Tech-CSE | Employability |
| 444. | Parallel Computing | CS1528 | B. Tech-CSE | Employability |
| 445. | Software Testing Methodologies | CT1522 | B. Tech-CSE | Employability |
| 446. | Real Time Systems | IT2512 | B. Tech-CSE | Employability |
| 447. | Web Services | CS1529 | B. Tech-CSE | Employability |
| 448. | Information Security Lab | CS1523 | B. Tech-CSE | Skill Development |
| 449. | Multi Media Application Development lab | CT1523 | B. Tech-CSE | Skill Development |
| 450. | Distributed Data Bases | CT1524 | B. Tech-CSE | Employability |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 451. | Software Project Management | CT1525 | B. Tech-CSE | Employability |
| 452. | Semantic Web | CS1533 | B. Tech-CSE | Employability |
| 453. | Machine Learning | CS1534 | B. Tech-CSE | Employability |
| 454. | Cloud Computing | CT1520 | B. Tech-CSE | Employability |
| 455. | Wireless Networks | CS1535 | B. Tech-CSE | Employability |
| 456. | Big Data | CT1519 | B. Tech-CSE | Employability |
| 457. | Social Networks | CS1519 | B. Tech-CSE | Employability |
| 458. | e- Waste Management | CS1531 | B. Tech-CSE | Employability |
| 459. | Management Information Systems | CS1532 | B. Tech-CSE | Employability |
| 460. | Advanced Computer Architecture | CS1524 | B. Tech-CSE | Employability |
| 461. | Statistical Methods using R Software | MA1510 | B. Tech-CSE | Employability |
| 462. | Industrial/Practical Training | CS1536 | B. Tech-CSE | Skill Development |
| 463. | Data Warehousing and Data Mining | CT1517 | B. Tech-IT | Employability |
| 464. | Multimedia Application Development | IT1522 | B. Tech-IT | Employability |
| 465. | Distributed Databases | CT1524 | B. Tech-IT | Employability |
| 466. | Human Computer Interaction | CT1518 | B. Tech-IT | Employability |
| 467. | Bio-Metrics | IT1523 | B. Tech-IT | Employability |
| 468. | Software Testing Methodologies | CT1522 | B. Tech-IT | Employability |
| 469. | Information Retrieval Systems | IT1524 | B. Tech-IT | Employability |
| 470. | Digital Image Processing | CT1521 | B. Tech-IT | Employability |
| 471. | Mobile Computing | IT1525 | B. Tech-IT | Employability |
| 472. | Software Project Management | CT1525 | B. Tech-IT | Employability |
| 473. | Mobile Application Lab | IT1527 | B. Tech-IT | Skill Development |
| 474. | Multimedia Application Development Lab | CT1523 | B. Tech-IT | Skill Development |
| 475. | Free and Open Source Software Lab | IT1526 | B. Tech-IT | Skill Development |
| 476. | E-Commerce | IT1529 | B. Tech-IT | Employability |
| 477. | Cloud Computing | CT1520 | B. Tech-IT | Employability |
| 478. | Business Intelligence | IT1530 | B. Tech-IT | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 479. | Big Data | CT1519 | B. Tech-IT | Employability |
| 480. | Soft Computing | IT1531 | B. Tech-IT | Employability |
| 481. | Computer Forensics | IT1532 | B. Tech-IT | Employability |
| 482. | Software Quality Assurance | IT1533 | B. Tech-IT | Employability |
| 483. | Industrial / Practical Training | IT1534 | B. Tech-IT | Skill Development |
| 484. | Elements of Mechanical Engineering | ME1526 | B. Tech-IT | Employability |
| 485. | Network Management Systems | IT1519 | B. Tech-IT | Employability |
| 486. | Fundamentals of E-Commerce | IT1520 | B. Tech-IT | Employability |
| 487. | Statistical Methods using R Software | MA1510 | B. Tech-IT | Employability |
| 488. | Ground Improvement Techniques | CE2906 | M. Tech-SE | Employability |
| 489. | Advanced Concrete <br> Technology and Structural Engineering lab | CE2908 | M. Tech-SE | Skill Development |
| 490. | Research Methodologies | BA2901 | M. Tech-SE | Employability |
| 491. | Advanced Design of Steel Structures | CE2912 | M. Tech-SE | Employability |
| 492. | Advanced Design of Steel Structures | CE2903 | M. Tech-SE | Employability |
| 493. | Fracture Mechanics of Concrete | CE2914 | M. Tech-SE | Employability |
| 494. | Design of Sub-structures | CE2915 | M. Tech-SE | Employability |
| 495. | High Rise Buildings | CE2917 | M. Tech-SE | Employability |
| 496. | Computational Methods in Engineering | MA2901 | M. Tech-SE | Employability |
| 497. | Theory of Elasticity | CE2901 | M. Tech-SE | Employability |
| 498. | Structural Dynamics | CE2902 | M. Tech-SE | Employability |
| 499. | Stability of Structures | CE2904 | M. Tech-SE | Employability |
| 500. | Earth Quake Resistance Designer | CE2909 | M. Tech-SE | Employability |
| 501. | Finite Element Analysis | CE2910 | M. Tech-SE | Employability |
| 502. | Theory of Plates and Shells | CE2911 | M. Tech-SE | Employability |
| 503. | Computer Applications in Structural Engineering Lab | CE2919 | M. Tech-SE | Skill Development |
| 504. | Linear and Non-Linear Optimization technique | MA2902 | M. Tech-PEED | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 505. | Advanced Electric Drives | EE2912 | M. Tech-PEED | Employability |
| 506. | Research Methodology | EE2910 | M. Tech-PEED | Employability |
| 507. | Application of Power Electronics to Power Systems | EE2915 | M. Tech-PEED | Employability |
| 508. | Advanced Digital Control Systems | EE3915 | M. Tech-PEED | Employability |
| 509. | Computational Methods in Engineering | MA2901 | M. Tech-PEED | Employability |
| 510. | ARM Architecture and Programming | EC2901 | M. Tech-PEED | Employability |
| 511. | Analysis of Power Electronic Converters | EE2902 | M. Tech-PEED | Employability |
| 512. | Electrical Machine Modelling and analysis | EE2903 | M. Tech-PEED | Employability |
| 513. | Modern Control Theory | EE2904 | M. Tech-PEED | Employability |
| 514. | Power Electronic and systems Simulation Lab | EE2905 | M. Tech-PEED | Skill Development |
| 515. | Switched Mode Power Converters | EE2912 | M. Tech-PEED | Employability |
| 516. | Power Electronics and Electric Drives Lab | EE2919 | M. Tech-PEED | Skill Development |
| 517. | HVDC Transmission system | EE2907 | M. Tech-PEED | Employability |
| 518. | AI Techniques | EE2917 | M. Tech-PEED | Employability |
| 519. | Advanced Mechanics of Solids | ME2901 | M. Tech-MD | Employability |
| 520. | Analysis and Synthesis of Mechanisms | ME2902 | M. Tech-MD | Employability |
| 521. | Mechanical Vibrations | ME2903 | M. Tech-MD | Employability |
| 522. | Gear Engineering | ME2904 | M. Tech-MD | Employability |
| 523. | Rotor Dynamics | ME2905 | M. Tech-MD | Employability |
| 524. | Experimental Stress Analysis | ME2906 | M. Tech-MD | Employability |
| 525. | Product Design | ME2907 | M. Tech-MD | Employability |
| 526. | Machine Dynamics Lab | ME2908 | M. Tech-MD | Skill Development |
| 527. | Research Methodologies | ME2905 | M. Tech-MD | Employability |
| 528. | Finite Element Methods | ME2909 | M. Tech-MD | Employability |
| 529. | Design with Advanced Materials | ME2910 | M. Tech-MD | Employability |
| 530. | Design for Manufacturing and Assembly | ME2911 | M. Tech-MD | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on Employability/ Entrepreneurship/ Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 531. | Fracture Mechanics | ME2912 | M. Tech-MD | Employability |
| 532. | Condition Monitoring | ME2913 | M. Tech-MD | Employability |
| 533. | Rapid Tooling and Prototyping | ME2914 | M. Teeh-MD | Employability |
| 534. | Theory of Elasticity | ME2915 | M. Tech-MD | Employability |
| 535. | Geometric Modelling | ME2916 | M. Tech-MD | Employability |
| 536. | Tribology | ME2917 | M. Tech-MD | Employability |
| 537. | Modelling and Analysis Lab | ME2918 | M. Tech-MD | Skill Development |
| 538. | Linear and Non-Linear Optimization Techniques | MA3902 | M. Tech-VLSI\&ES | Employability |
| 539. | Advanced Digital Design | EC3904 | M. Tech-VLSI\&ES | Employability |
| 540. | Advanced Microcontrollers | EC3905 | M. Tech-VLSI\&ES | Employability |
| 541. | CMOS VLSI circuits | EC3906 | M. Tech-VLSI\&ES | Employability |
| 542. | Testing \& Testability of VLSI circuits | EC3907 | M. Tech-VLSI\&ES | Employability |
| 543. | VLSI Digital Signal Processing | EC3908 | M. Tech-VLSI\&ES | Employability |
| 544. | Real Time Operating systems | EC3909 | M. Tech-VLSI\&ES | Employability |
| 545. | Embedded Processors | EC3910 | M. Tech-VLSI\&ES | Employability |
| 546. | VLSI Design Lab | EC3911 | M. Tech-VLSI\&ES | Skill Development |
| 547. | Research Methodologies | HS3901 | M. Tech-VLSI\&ES | Employability |
| 548. | VLSI System Design | EC3912 | M. Tech-VLSI\&ES | Employability |
| 549. | Hardware and Software CoDesign | EC3913 | M. Tech-VLSI\&ES | Employability |
| 550. | Internet of Things | EC3914 | M. Tech-VLSI\&ES | Employability |
| 551. | ASIC System Design | EC3915 | M. Tech-VLSI\&ES | Employability |
| 552. | Advances in VLSI Design | EC3916 | M. Tech-VLSI\&ES | Employability |
| 553. | Embedded Computing Architectures | EC3917 | M. Tech-VLSI\&ES | Employability |
| 554. | Advanced Computer Networks | EC3918 | M. Tech-VLSI\&ES | Employability |
| 555. | System-on-Chip Design | EC3919 | M. Tech-VLSI\&ES | Employability |
| 556. | VLSI Interconnects | EC3920 | M. Tech-VLSI\&ES | Employability |
| 557. | RF VLSI design | EC3921 | M. Tech-VLSI\&ES | Employability |
| 558. | Advanced Digital Signal Processing | EC3922 | M. Tech-VLSI\&ES | Employability |
| 559. | Internet of Things Lab | EC3923 | M. Tech-VLSI\&ES | Skill Development |
| 560. | Statistics with R Programming | MA2903 | M. Tech-CSE | Employability |


| S. No | Name of the Course | Course Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 561. | Advanced Data Structures \& Algorithm Analysis | CS2901 | M. Tech-CSE | Employability |
| 562. | Object Oriented Software Engineering | CS2903 | M. Tech-CSE | Employability |
| 563. | Business Intelligence | CS2904 | M. Tech-CSE | Employability |
| 564. | Advanced Data Structures \&Algorithm and R Programming Lab | CS2908 | M. Tech-CSE | Employability |
| 565. | Research Methodology | HS3901 | M. Tech-CSE | Employability |
| 566. | Information Security | CS2909 | M. Tech-CSE | Employability |
| 567. | Scripting Languages | CS2910 | M. Tech-CSE | Employability |
| 568. | Data Analytics ** | CS2911 | M. Tech-CSE | Employability |
| 569. | Advanced Operating Systems | CS2912 | M. Tech-CSE | Employability |
| 570. | Machine Learning | CS2913 | M. Tech-CSE | Employability |
| 571. | Software Testing Methodologies | CS2914 | M. Tech-CSE | Employability |
| 572. | Soft Computing | CT2901 | M. Tech-CSE | Employability |
| 573. | Information Security \& Scripting Languages Lab | CS2916 | M. Tech-CSE | Skill Development |
| 574. | Business Environment and Legislation | BA2904 | MBA | Employability |
| 575. | Business Law | BA2905 | MBA | Employability |
| 576. | E-Business | BA2915 | MBA | Entrepreneurship |
| 577. | Training \& Development | BA2921 | MBA | Entrepreneurship |
| 578. | Industrial Relations and Labour Laws | BA2922 | MBA | Entrepreneurship |
| 579. | Sales \& Distribution <br> Management | BA2925 | MBA | Entrepreneurship |
| 580. | Compensation Management | BA2928 | MBA | Entrepreneurship |
| 581. | Qualitative Analysis for Business decisions | NA2901 | MBA | Employability |
| 582. | Business Communication | EG2901 | MBA | Employability |
| 583. | Perspectives of management | BA2901 | MBA | Employability |
| 584. | Manage real economics | BA2902 | MBA | Employability |
| 585. | Accounting for Mangers | BA2903 | MBA | Employability |
| 586. | Information Technology Lab for Business Management | BA2906 | MBA | Skill Development |


| S. No | Name of the Course | Course <br> Code | Programme Name | Focus on <br> Employability/ <br> Entrepreneurship/ <br> Skill <br> Development |
| :---: | :---: | :---: | :---: | :---: |
| 587. | Financially Management | BA2907 | MBA | Employability |
| 588. | Business Research Methods | MA2903 | MBA | Employability |
| 589. | Marketing Management | BA2908 | MBA | Employability |
| 590. | Human Resources <br> Management | BA2909 | MBA | Employability |
| 591. | Protection and Operation Management | BA2910 | MBA | Employability |
| 592. | International Business | BA2911 | MBA | Employability |
| 593. | Organization and behaviour | BA2912 | MBA | Employability |



IQAC


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

## COURSE STRUCTURE

I Year - I Semester

| SI. <br> No. | $\begin{gathered} \text { Course } \\ \text { Code } \end{gathered}$ | Name of the Course / Laboratory | No.of Periods per week |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 4 \end{aligned}$ | $T$ | P |  |
| 1 | EG2501 | Functional English |  |  |  | 3 |
| 2 | MA2501 | Linear Algebra \& Differential Equations | 4 | 1 | - | 4 |
| 3 | EN2502 | Engineer and Society | 3 | - | - | 2 |
| 4 | CH2501 | Engineering Chemistry | 3 | - | - | 2 |
| 5 | CT2501 | Problem Solving Using C* | 4 | - | 2 | 4 |
| 6 | ME2501 | Engineering Drawing | 1 | - | 4 | 3 |
| 7 | EG2502 | Functional English Lab | - | - | 2 | 1 |
| 8 | CH2502 | Engineering Chemistry Lab | - | - | 2 | 1 |
| Total |  |  | 19 | 1 | 10 | 20 |

* Integrated Course with Theory and Laboratory

I Year - II Semester

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

L: Lecture
T: Tutorial
P: Practical



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

II 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 | 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 <br> Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \end{gathered}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $L^{\prime}$ | $\mathrm{T}$ | 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) | - | - |  | - |
| 10 | $\begin{aligned} & \text { CE2519 } \\ & \text { CE2520 } \\ & \text { CT2505 } \\ & \hline \end{aligned}$ | 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


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

III Year - I Semester

| 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 | $\begin{aligned} & \mathrm{T} \\ & 1 \end{aligned}$ | $\mathbf{P}$ |  |
| 1 | CE2522 | Theory of Structures | 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 | CE2534 ME2509 CT2507 | 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 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

III Year - II Semester

| $\begin{array}{\|c\|} \hline \text { SI. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | $\begin{array}{c\|} \hline \text { No.of Periods } \\ \text { per week } \\ \hline \end{array}$ |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathrm{L} \\ & 3 \end{aligned}$ | T |  |  |
| 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 | $\begin{aligned} & \text { CE2548 } \\ & \text { CE2549 } \\ & \text { CT2513 } \\ & \hline \end{aligned}$ | Optional Elective - V <br> i) Smart Buildings and Automation <br> iii) 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 the Department) |  |  |  |  |

* Integrated Course with Theory and Laboratory

L: Lecture T:Tutorial P:Practical
Civil Engineering


Open Elective - I

| $\begin{gathered} \text { St. } \\ \text { No. } \end{gathered}$ |  | Title of the Subject | Department <br> 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 (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

| $\begin{array}{\|c\|} \hline \text { Sl. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of <br> Credits <br> 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 $\quad$ T:Tutorial $\quad \mathbf{P}:$ Practical


Open Elective - III

| SI. |  | Title of the Subject | Department Offering the Subject | No.of Periods per week $\qquad$ |  |  | No.ofCredits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  |  | L | T | $\mathbf{P}$ |  |
| 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

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



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

Professional Electives

| $\begin{array}{\|c} \text { Sl. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \mathrm{CE} 2526 \\ & \text { CE2527 } \\ & \mathrm{CE} 2528 \\ & \mathrm{CE} 2529 \end{aligned}$ | Professional Elective - I <br> i) Advanced Strength of Materials <br> ii) GIS and GPS <br> iii) Green Buildings <br> iv) Construction Management | 4 | - | - | 3 |
|  | $\left.\begin{aligned} & \mathrm{CE} 2539 \\ & \mathrm{CE} 2540 \\ & \mathrm{CE} 2541 \\ & \mathrm{CE} 2542 \end{aligned} \right\rvert\,$ | 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 |
|  | $\begin{aligned} & \text { CE2554 } \\ & \text { CE2555 } \\ & \text { CE2556 } \\ & \text { CE2557 } \end{aligned}$ | Professional Elective - III <br> i) Pre-stressed Concrete <br> ii) Advanced Foundation Engineering <br> iii) Traffic Engineering <br> iv) Industrial Wastewater Management | 4 | - | - | 3 |
|  | $\left\|\begin{array}{l} \text { CE2558 } \\ \text { CE2559 } \\ \text { CE2560 } \\ \text { CE2561 } \end{array}\right\|$ | Professional Elective - IV <br> i) Advanced Design of RC Structures <br> ii) Hydraulic Structures <br> iii) Geosynthetics <br> iv) Disaster Preparedness and Planning | 4 | $\cdot$ | - | 3 |
|  | $\left\|\begin{array}{l} \mathrm{CE} 2568 \\ \mathrm{CE} 2569 \\ \mathrm{CE} 2570 \\ \mathrm{CE} 2571 \end{array}\right\|$ | 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 |
|  | $\begin{aligned} & \text { CE2572 } \\ & \text { CE2573 } \\ & \text { CE2574 } \\ & \text { CE2575 } \\ & \hline \end{aligned}$ | 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


I Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 4 \end{aligned}$ | $\mathrm{T}$ | P |  |
| 1 | EG2501 | Functional English |  |  |  | 3 |
| 2 | MA2501 | Linear Algebra \& Differential Equations | 4 | 1 | - | 4 |
| 3 | EN2502 | Engineer and Society, | 3 | - | - | 2 |
| 4 | CH2503 | Applied Chemistry | 3 | - | - | 2 |
| 5 | CT2501 | Problem Solving Using C ${ }^{*}$ | 4 | - | 2 | 4 |
| 6 | ME2501 | Engineering Drawing | 1 | - | 4 | 3 |
| 7 | EG2502 | Functional English Lab | - | - | 2 | 1 |
| 8 | CH2504 | Applied Chemistry Lab | - | - | 2 | 1 |
| Total |  |  | 19 | 1 | 10 | 20 |

* Integrated Course with Theory and Laboratory

I 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 | EG2503 | Professional Communication | 3 | - | - | 2 |
| 2 | MA2504 | Integral Transforms and Vector Calculus | 4 | 1 | - | 4 |
| 3 | EE2507 | Elements of Electrical Circuits | 3 | 1 | - | 3 |
| 4 | PH2504 | Solid State Physics | 4 | - | - | 3 |
| 5 | EN2501 | Environmental Studies | 3 | - | - | 2 |
| 6 | ME2503 | Elements of Mechanical Engineering | 3 | 1 | - | 3 |
| 7 | EG2504 | Professional Communication Lab | - | - | 4 | 2 |
| 8 | PH2505 | Solid State Physics Lab | - | - | 2 | 1 |
|  |  | Total | 20 | 3 | 6 | 20 |

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


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

* Integrated Course with Theory and Laboratory

II Year - II Semester

| Sl. | 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 | EC2505 | Digital Circuit Design | 3 | 1 | - | 3 |
| 2 | EE2512 | Control Systems | 3 | 1 | - | 3 |
| 3 | BA2501 | Engineering Economics and Project Management | 3 | - | - | 2 |
| 4 | EE2513 | Induction and Synchronous Machines | 3 | 1 | - | 3 |
| 5 | EE2514 | Electromagnetic Fields | 3 | 1 | - | 3 |
| 6 |  | Open Elective-I (see list of Open Electives) | 4 | - | - | 3 |
| 7 | EC2506 | Digital Circuit Design Lab | - | - | 4 | 2 |
| 8 | EE2517 | Electrical Machines - 1 Lab | - | - | 4 | 2 |
|  |  | Total | 19 | 4 | 8 | 21 |
| 9 | SG2501 | Sports and Games / Cultural (Mandatory Non-Credit Course) | - | - | 2 | - |
| 10 | $\begin{aligned} & \mathrm{EC} 2507 \\ & \mathrm{CT} 2512 \\ & \mathrm{EE} 2518 \end{aligned}$ | 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 |

L: Lecture T:Tutorial P: Practical


III Year - I Semester

| $\begin{array}{\|l\|} \hline \text { Sl. } \\ \text { No. } \end{array}$ | 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 | $\begin{aligned} & \mathrm{ME} 2549 \\ & \text { CT2507 } \\ & \mathrm{EE} 2528 \\ & \hline \end{aligned}$ | 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 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

III Year - II 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 | EE2530 | Power Electronics | 3 | 1 | - | 3 |
| 2 | MA2511 | Probability and Fuzzy Mathematics | 3 | 1 | - | 3 |
| 3 | EC2510 M | icroprocessors, Microcontrollers and Its Applications ** | 3 | 1 | - | 3 |
| 4 |  | Professional Elective - II | 4 | - | - | 3 |
| 5 |  | Open Elective-III(see list of Open Electives) | 4 | - | - | 3 |
| 6 | EE2533 | Electrical Systems Simulation Lab | - | - | 4 | 2 |
| 7 | EE2534 | Electrical Measurements \& Instrumentation Lab | - | - | 4 | 2 |
| 8 | EC2515 M | icroprocessors, Microcontrollers and Its Applications Lab | - | - | 4 | 2 |
|  |  | Total | 17 | 3 | 12 | 21 |
| 9 | $\begin{array}{\|l} \hline \text { CT2513 } \\ \text { EC2516 } \\ \text { EE2535 } \end{array}$ | 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 by |  |  |  |  |

* Project Based Theory Course

L: Lecture T:Tutorial P: Practical

Electrical and Electronics Engineering


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 (Other than ME) | ME | 4 | - | - | 3 |
| 7 | EC2531 | Introduction to MPMC (Other than ECE/EEE/CSE/IT) | ECE | 4 | - | - | 3 |
| 8 | EC2532 | Fundamentals of Communications (Other than ECE) | ECE | 4 | - | - | 3 |
| 9 | CT2514 | Computer Graphics (Other than IT) | CSE | 4 | - | - | 3 |
| 10 | CT2507 | Object Oriented Programming through Java (other than CSE \& IT) | CSE | 4 | - | - | 3 |
| 11 | CT2515 | Systems Software | IT | 4 | - | - | 3 |
| 12 | IT2502 | Web Programming(Other than CSE \& IT) | IT | 4 | - | - | 3 |
| 13 | MA2516 | Mathematical Cryptography(Other than CSE) | BS\&H | 4 | - | - | 3 |
| 14 | PH2508 | Semiconductor Physics (Other than ECE) | BS\&H | 4 | - | - | 3 |

Open Elective - II

| Sl. |  | 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 $\quad$ T: Tutorial P:Practical |  |
| :--- | :--- | :--- |
| Electrical and Electronics Engineering | $\mathbf{2 5}$ |



Open Elective - III

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week $\qquad$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 |
|  | MA2518 | Elements of Stochastic Processes | BS\&H | 4 | - | - | 3 |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

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


| L: Lecture | T:Tutorial | P: Practical |
| :--- | :--- | :--- |



## Professional Electives

| $\begin{array}{\|c} \text { St. } \\ \text { No. } \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of 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 |
|  | CS2513 EC2518 EE2540 EE2541 | 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 | 3 | 7 1 - 1 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 |

L: Lecture T:Tutorial P: Practical


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 | $\bar{P}$ |  |
| 1 | EG2501 | Functional English |  |  |  | 3 |
| 2 | MA2501 | Linear Algebra \& Differential Equations | 4 | 1 | - | 4 |
| 3 | PH2502 | Physics for Engineers | 3 | 1 | - | 3 |
| 4 | EN2501 | Environmental Studies | 3 | - | - | 2 |
| 5 | CT2501 | Problem Solving Using C * | 4 | - | 2 | 4 |
| 6 | ME2505 | Engineering Graphics | 1 | - | 4 | 3 |
| 7 | EG2502 | Functional English Lab | - | - | 2 | 1 |
| 8 | PH2503 | Engineering Physics Lab | - | - | 2 | 1 |
| Total |  |  | 19 | 2 | 10 | 21 |

* Integrated Course with Theory and Laboratory

I Year - II Semester

| $\begin{aligned} & \text { Sl. } \\ & \text { No. } \end{aligned}$ | CourseCode | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EG2503 | Professional Communication | 3 | - | - | 2 |
| 2 | MA2503 | Integral Transforms and Multiple Integrals | 3 | 1 | - | 3 |
| 3 | EN2502 | Engineer \& Society | 3 | - | - | 2 |
| 4 | CH2505 | Industrial Chemistry | 3 | 1 | - | 3 |
| 5 | CE2501 | Engineering Mechanics | 4 | 1 | - | 4 |
| 6 | ME2506 | Computer Aided Engineering Drawing | - | - | 2 | 1 |
| 7 | ME2507 | Engineering Workshop | - | - | 2 | 1 |
| 8 | EG2504 | Professional Communication Lab | - | - | 4 | 2 |
| 9 | ME2508 | Industrial Chemistry Lab \& Engg. Mechanics Lab | - | - | 2 | 1 |
|  |  | Total | 16 | 3 | 10 | 19 |

L: Lecture
T: Tutorial
P: Practical


II Year - I Semester

| $\begin{array}{\|c\|} \hline \mathrm{SI} . \\ \mathrm{No} . \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | 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 <br> (Mandatory Non-Credit Course) | - | - | 2 | - |

II Year - II Semester

| $\begin{array}{\|c} \mathrm{SI} . \\ \mathrm{No} . \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | ME25I6 | Manufacturing Processes | $\begin{aligned} & \mathrm{L} \\ & 4 \end{aligned}$ |  | P |  |
| 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) | - | - | 2 | - |
| 10 | $\begin{aligned} & \mathrm{EE} 2512 \\ & \text { ME2525 } \\ & \text { CT2506 } \end{aligned}$ | Optional Elective - I <br> i) Control Systems <br> ii) Nano Technology <br> iii) Digital Logic Design | - | - | - | 3 |
| 11 | ME2526 | Optional Elective - II (MOOCs) student shall opt from teh list of MOOCs given by the | - | - | - | nent |

## Mechanical Engineering

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III Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | P | T | . |  |
| 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

| $\begin{aligned} & \text { Sl. } \\ & \text { No. } \end{aligned}$ | Course Code | Name of the Course / Laboratory | $\begin{gathered} \text { No.of Periods } \\ \text { per week } \\ \hline \end{gathered}$ |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L4 | T | $\mathbf{P}$ |  |
| 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 | $\cdot$ | - | 2 | 1 |
| Total |  |  | 21 | 3 | 10 | 23 |
| 10  <br> CT2507  <br> ME2549  <br> EC2512iii)  |  | 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 by | bye | 保 | ment) |  |

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

Mechanical Engineering


Open Elective - I

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of Credits 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 (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

| SI. |  | Title of the Subject | Department Offering the |  | P |  | No.of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 0. |  |  | 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 $\quad$ T:Tutorial $\quad$ : Practical
Mechanical Engineering


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Gudlavalleru Engineering College
Seshadri Rao Knowledge Village
Gudlavaileru-521 356, Krishn'

## A.P.

Open Elective - III

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

| $\left\lvert\, \begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}\right.$ |  | Title of the Subject | Department Offering the | No.of Periods per week $\qquad$ |  |  | No.of <br> Credits 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2562 | Disaster Management (Other than CE) | CE | 4 | - | - |  |
| 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
Mechanical Engineering


## Professional Electives

| SI. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 | $4$ |  | P | 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 |
|  | $\begin{aligned} & \text { MA2515 } \\ & \text { ME2555 } \\ & \text { ME2556 } \\ & \text { ME2557 } \end{aligned}$ | 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 |
|  | $\left\lvert\, \begin{aligned} & \text { ME2567 } \\ & \text { ME2568 } \\ & \text { ME2569 } \\ & \text { ME2570 } \end{aligned}\right.$ | 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 |
|  | $\begin{aligned} & \text { ME2571 } \\ & \text { ME2572 } \\ & \text { ME2573 } \\ & \text { ME2574 } \\ & \hline \end{aligned}$ | 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 $\quad \mathbf{T}:$ Tutorial $\quad \mathbf{P}:$ Practical
Mechanical Engineering
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I Year - I Semester

| $\begin{array}{\|l} \text { Sl. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | $\mathbf{P}$ |  |
| 1 | EG2501 | Functional English |  |  |  | 3 |
| 2 | MA2501 | Linear Algebra \& Differential Equations | 4 | 1 | - | 4 |
| 3 | EN2502 | Engineer \& Society | 3 | - | - | 2 |
| 4 | PH2504 | Solid State Physics | 4 | - | - | 3 |
| 5 | CT2502 | Problem Solving through Computer Programming | 4 | - | - | 3 |
| 6 | EG2502 | Functional English Lab | - | - | 2 | 1 |
| 7 | PH2505 | Solid State Physics Lab | - | - | 2 | 1 |
| 8 | CT2503 | Computer Programming Lab | - | - | 4 | 2 |
|  |  | Total | 19 | 1 | 8 | 19 |

I Year - II 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 | EG2503 | Professional Communication | 3 | - | - | 2 |
| 2 | MA2504 | Integral Transforms and Vector Calculus | 4 | 1 | - | 4 |
| 3 | CH2503 | Applied Chemistry | 3 | - | - | 2 |
| 4 | EN2501 | Environmental Studies | 3 | - | - | 2 |
| 5 | EE2504 | Linear Electrical Networks | 3 | - | - | 2 |
| 6 | MA2505 | Numerical Methods \& Complex Analys | 3 | 1 | - | 3 |
| 7 | ME2501 | Engineering Drawing | 1 | - | 4 | 3 |
| 8 | EG2504 | Professional Communication Lab | - | - | 4 | 2 |
| 9 | CH2504 | Applied Chemistry Lab | - | - | 2 | 1 |
|  |  | Total | 20 | 2 | 10 | 21 |

L: Lecture T:Tutorial P: Practical

Electronics and Communication Engineering



Seshadri Rao Gudlavalleru Engineering College

Seshadri Rao Kncwlestas Village
Gudlavalleru-521 356, F...... District.A.P.

II Year - I Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credit |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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

| $\begin{array}{\|c\|} \hline \mathrm{SI} \\ \mathrm{No} . \\ \hline \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathbf{L}^{\mathbf{p}^{\prime}}$ | $T$ | 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 | 3 | . | - | 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 |

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


III Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.ofCredits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathbf{L}$ | $\begin{aligned} & \mathrm{T} \\ & \mathrm{I} \end{aligned}$ | $\mathbf{P}$ |  |
| 1 | EC2536 | Linear Integrated Circuits Applications |  |  |  | 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 | $\begin{array}{\|l\|} \hline \text { CT2528 } \\ \text { ME2549 } \\ \mathrm{EC} 2544 \\ \hline \end{array}$ | 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 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

III Year - II Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \mathbf{L} \\ & 4 \end{aligned}$ | $\mathrm{T}$ | $\mathbf{P}$ |  |
| 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 | - | $\stackrel{-}{-}$ | 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> iii) 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
Electronics and Communication Engineering


Open Elective - I

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of <br> Credits 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 (Other than ME) | ME | 4 | - | - | 3 |
| 7 | EC2531 | Introduction to MPMC (Other than ECE/EEE/CSE/IT) | ECE | 4 | - | - | 3 |
| 8 | EC2532 | Fundamentals of Communications (Other than ECE) | ECE | 4 | - | - | 3 |
| 9 | CT2514 | Computer Graphics (Other than IT) | CSE | 4 | - | - | 3 |
| 10 | CT2507 | Object Oriented Programming through Java (other than CSE \& IT) | CSE | 4 | - | - | 3 |
| 11 | CT2515 | Systems Software | IT | 4 | - | - | 3 |
| 12 | IT2502 | Web Programming(Other than CSE \& IT) | IT | 4 | - | - | 3 |
| 13 | MA2516 | Mathematical Cryptography(Other than CSE) | BS\&H | 4 | - | - | 3 |
| 14 | PH2508 | Semiconductor Physics (Other than ECE) | BS\&H | 4 | - | - | 3 |

Open Elective - II

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week |  |  | No.of <br> Credits <br> 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 $\quad T$ :Tutorial $\quad P$ : Practical
Electronics and Communication Engineering


Open Elective - III

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


Professional Electives

| Sl. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2540 \\ \mathrm{EC2541} \\ \mathrm{EC} 2542 \\ \mathrm{EC} 2507 \end{array}\right\|$ | Professional Elective - I <br> i) CAD for VLSI <br> ii) Computer Organization <br> iii) Computer and Communication Networks <br> iv) Biomedical Engineering | L 4 | - | - | 3 |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2549 \\ \mathrm{EC2516} \\ \mathrm{EC} 2550 \\ \mathrm{EC} 2551 \end{array}\right\|$ | Professional Elective - II <br> i) Analog IC Design <br> ii) Nano Electronics <br> iii) Smart Antennas <br> iv) Coding Theory | 4 | - | - | 3 |
|  | $\begin{array}{\|l\|} \mathrm{EC} 2557 \\ \mathrm{EC} 2558 \\ \mathrm{EC} 2559 \\ \mathrm{EC} 2514 \end{array}$ | 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 |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2560 \\ \mathrm{EC} 2561 \\ \mathrm{EC} 2562 \\ \mathrm{EC} 2518 \end{array}\right\|$ | 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 |
|  | $\left\|\begin{array}{l} \mathrm{EC} 2569 \\ \mathrm{EC} 2570 \\ \mathrm{EC} 2571 \\ \mathrm{EC} 2572 \end{array}\right\|$ | 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 |
|  | $\left\|\begin{array}{l} \mathrm{EC2573} \\ \mathrm{EC} 2574 \\ \mathrm{EC} 2575 \\ \mathrm{EC} 2576 \end{array}\right\|$ | 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
27


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

I Year - I Semester

| $\begin{aligned} & \text { SI. } \\ & \text { No. } \end{aligned}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\begin{aligned} & \hline \mathbf{L} \\ & 4 \end{aligned}$ | $\mathrm{T}$ | P |  |
| 1 | EG2501 | Functional English |  |  |  | 3 |
| 2 | MA2502 | Linear Algebra and Integral Transforms | 4 | 1 | - | 4 |
| 3 | CH2506 | Chemistry | 4 | - | - | 3 |
| 4 | EN2501 | Environmental Studies | 3 | - | - | 2 |
| 5 | EE2506 | Basic Electrical Engineering | 3 | - | - | 2 |
| 6 | CT2502 | Problem Solving through Computer Programming | 4 | - | - | 3 |
| 7 | EG2502 | Functional English Lab | - | - | 2 | 1 |
| 8 | CT2503 | Computer Programming Lab | - | - | 4 | 2 |
| Total |  |  | 22 | 1 | 6 | 20 |

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 | EG2503 | Professional Communication | 3 | - | - | 2 |
| 2 | MA2506 | Numerical Methods and Differential Equations | 4 | 1 | - | 4 |
| 3 | PH2506 | Applied Physics | 4 | - | - | 3 |
| 4 | EN2502 | Engineer and Society | 3 | - | - | 2 |
| 5 | EC2501 | Elements of Electronics Engineering | 3 | 1 | - | 3 |
| 6 | CT2504 | Python Programming * | 3 | - | 2 | 3 |
| 7 | EG2504 | Professional Communication Lab | - | - | 4 | 2 |
| 8 | PH2507 | Applied Physics Lab | - | - | 2 | 1 |
|  |  | Total | 20 | 2 | 8 | 20 |

* Integrated Course with Theory and Laboratory
L: Lecture
I : Tutorial
P: Practical

Computer Science and Engineering


|  | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $L$ | T | P |  |
| 1 | BA2502 | Managerial Economics and Financial Analysis | 3 | - | - | 2 |
| 2 | 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

| $\begin{aligned} & \text { St. } \\ & \text { No. } \end{aligned}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | 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 | $\cdot$ | - | 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 given |  |  | ment) | 2 |

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

Computer Science and Engineering

| PRINCTPAL |
| :---: |
|  |  |
|  |
| Seshadri Rao Knowledge |
|  |

III Year - I Semester

| 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 | 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 | $\begin{aligned} & \mathrm{CT} 2526 \\ & \mathrm{EC} 2511 \\ & \mathrm{EE} 2512 \end{aligned}$ | 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 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

III Year - II Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | $\mathbf{P}$ |  |
| 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 <br> (OR) <br> Any other Elective Depending on Industry Needs | 4 | - | - | 3 |
| 6 |  | Open Elective-III(see list of Open Electives) | 4 | - | - | 3 |
| 7 | CS2514 | Data Mining Lab | - | - | 4 | 2 |
| 8 | CS2515 | Mini Project | - | - | 4 | 2 |
|  |  | Total | 18 | 1 | 10 | 19 |
| 9 | $\begin{aligned} & \mathrm{CS} 2516 \\ & \text { EC2512 } \\ & \text { EE2554 } \\ & \hline \end{aligned}$ | 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 P:Practical
Computer Science and Engineering


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 | 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

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


Open Elective - III

| $\begin{array}{\|l\|} \hline \text { St. } \\ \text { No. } \end{array}$ |  | Title of the Subject | Department Offering the Subject | No.of Periods per week $\qquad$ |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |
| 1 | CE2543 | Hydrology (Other than CE) | CE | 4 | - | - | 3 |
| 2 | CE2544 | Planning for Sustainable Development | CE | 4 | - | - | 3 |
| 3 | EE2531 | Electrical and Hybrid Vehicles | EEE | 4 | - | - | 3 |
| 4 | EE2532 | Power Plant Instrumentation | EEE | 4 | - | - | 3 |
| 5 | ME2541 | Material Science (Other than ME) | ME | 4 | - | - | 3 |
| 6 | ME2542 | Renewable Energy Sources (Other than ME) | ME | 4 | - | - | 3 |
| 7 | EC2523 | Assistive Technologies (Other than ECE) | ECE | 4 | - | - | 3 |
| 8 | EC2507 | Bio-Medical Engineering (Other than EEE \& ECE) | ECE | 4 | - | - | 3 |
| 9 | CS2512 | Node and Angular JS | CSE | 4 | - | - | 3 |
| 10 | CS2513 | Cyber Security | CSE | 4 | - | - | 3 |
| 11 | CT2529 | Scripting Languages (Other than CSE) | IT | 4 | - | - | 3 |
| 12 | CT2531 | Software Project Management (Other than CSE) | IT | 4 | - | - | 3 |
|  | 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 <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |
| 1 | CE2562 | Disaster Management | CE | 4 | - | - |  |
|  |  | (Other than CE) ${ }^{\text {a }}$ ( ${ }^{\text {a }}$ |  |  |  |  |  |
| 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 |
|  | OCS2522 | Business Intelligence \& Decision Suppor Systems | CSE | 4 | - | - | 3 |
|  | 1 IT2521 | Adhoc and Sensor Networks | IT | 4 | - | - | 3 |
|  | 2 CT2537 | Information Retrieval Systems | IT | 4 | - | - | 3 |
|  | 3 MA2514 | (Other than CSE) Fuzzy Logic (Other than EEE, ME \& CSE) | BS\&H | 4 | - | - | 3 |

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


## Professional Electives

| SI. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 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 | T | P | 3 |
|  | $\begin{aligned} & \text { CT2521 } \\ & \text { CT2529 } \\ & \text { EC2520 } \\ & \text { CT2531 } \end{aligned}$ | 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 |
|  | CS2527 CT2540 CT2532 CT2541 | Professional Elective - V <br> i) Web Mining <br> ii) Cloud Computing <br> iii) Agile Software Development Process <br> iv) Blockchain Technologies | 4 | - | - | 3 |
|  | CS2528 CT2539 CS2529 CS2530 | 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 $\quad$ P: Practical
Computer Science and Engineering
27


I Year-I Semester

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L4 | T | $\overline{\mathbf{P}}$ |  |
| 1 | EG2501 | Functional English |  |  |  | 3 |
| 2 | MA2502 | Linear Algebra \& Integral Transforms | 4 | 1 | - | 4 |
| 3 | PH2506 | Applied Physics | 4 | - | - | 3 |
| 4 | EN2501 | Environmental Studies | 3 | - | - | 2 |
| 5 | CT2502 | Problem Solving through Computer Programming | 4 | - | - | 3 |
| 6 | EG2502 | Functional English Lab | - | - | 2 | 1 |
| 7 | PH2507 | Applied Physics Lab | - | - | 2 | 1 |
| 8 | CT2503 | Computer Programming Lab | - | - | 4 | 2 |
|  |  | Total | 19 | 1 | 8 | 19 |

I Year - II Semester

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ | $\begin{array}{\|c} \text { Course } \\ \text { Code } \end{array}$ | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathrm{L}$ | T | P |  |
| 1 | EG2503 | Professional Communication | 3 | - | - | 2 |
| 2 | MA2506 | Numerical Methods and Differential Equations | 4 | 1 | - | 4 |
| 3 | CH2506 | Chemistry | 4 | - | - | 3 |
| 4 | EN2502 | Engineer \& Society | 3 | - | - | 2 |
| 5 | EC2501 | Elements of Electronics Engineering | 3 | 1 | - | 3 |
| 6 | CT2504 | Python Programming * | 3 | - | 2 | 3 |
| 7 | EG2504 | Professional Communication Lab | - | - | 4 | 2 |
| 8 | EC2502 | Elements of Electronics Engineering Lab | - | - | 4 | 2 |
|  |  | Total | 20 | 2 | 10 | 21 |

* Integrated Course with Theory and Laboratory
L: Lecture
T: Tutorial
P: Practical


II Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathbf{L}$ | $\mathbf{T}$ | 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

| SI. <br> No. | Course 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 | $\begin{aligned} & \text { IT2503 } \\ & \text { EC2508 } \\ & \text { EE2506 } \\ & \hline \end{aligned}$ | 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 | Dep | ent |  |

* Integrated Course with Theory and Laboratory

L: Lecture T:Tutorial P: Practical


III Year - I Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | 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 | 1 T2507 | Operating Systems and Compiler Design Lab | - | - | 4 | 2 |
| 8 | CT2525 | Web Technologies Lab | - | - | 4 | 2 |
|  |  | Total | 21 | 3 | 8 | 22 |
| 9 | $\begin{aligned} & \mathrm{IT} 2508 \\ & \mathrm{EC} 2522 \\ & \mathrm{CE} 2549 \\ & \hline \end{aligned}$ | Optional Elective - III <br> i) Object Oriented Programming through $\mathrm{C}++$ <br> ii) Data Communication <br> iii) Building Information Modelling | - | - | - | 3 |
| 10 | IT2509 | Optional Elective - IV (MOOCs) | - | - | - | 2 |
|  |  | Students shall opt from the list of MOOCs given by the Department) |  |  |  |  |

III Year - II Semester

| Sl. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\begin{aligned} & \mathbf{T} \\ & 1 \end{aligned}$ | $P$ |  |
| 1 | CT2527 | Design and Analysis of Algorithms | 3 |  |  | 3 |
| 2 | CT2528 | Data Warehousing and Data Maining | 4 | - | - | 3 |
| 3 | IT2510 | 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 | IT2513 | 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 iii) Robotics | - | - | - | 3 |
| 9 | IT2516 | 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 T:Tutorial P:Practical
Information Technology


Open Elective - I

| Sl. |  | Title of the Subject | Department <br> 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 (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 | - | - | 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

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

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

Information Technology


Open Elective - III

| SI. |  | Title of the Subject | Department Offering the |  |  |  | No.of |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | Subject | L | T | P | Credits |
| 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 |
|  | EG2505 | Academic Communication | ENGLISH | 4 | - | - | 3 |

Open Elective - IV

| SI. <br> No. |  | Title of the Subject | Department Offering the | No.of Periods per week $\qquad$ |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Subject | L | T | P |  |
| 1 | CE2562 | Disaster Management (Other than CE ) | CE | 4 | - | - |  |
| 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 | - | - |  |
| 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 |
|  | CS2522 | Business Intelligence \& Deeision Support Systems | CSE | 4 | - | - | 3 |
|  | 1 IT2521 | Adhoc and Sensor Networks | IT | 4 | - | - | 3 |
|  | CT2537 | Information Retrieval Systems (Other than CSE) | IT | 4 | - | - | 3 |
|  | 3 MA 2514 | Fuzzy Logic (Other than EEE, ME \& CSE) | BS\&H | 4 | - | - | 3 |

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

Information Technology


Gudlavalleru Engineering College
Seshadri Rao Knowledge Village
Gudlavalleru-521356, Krishna Dis'rict. A.P.

## Professional Electives

| $\begin{array}{\|c\|} \hline \text { St. } \\ \text { No. } \\ \hline \end{array}$ | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
|  | CT2521 EC2512 CT2514 CT2522 | Professional Elective - I <br> i) Artificial Intelligence <br> ii) Embedded System Design <br> iii) Computer Graphics <br> iv) Advanced Data Structures | 4 | - |  | 3 |
|  | $\left\lvert\, \begin{aligned} & \text { IT2511 } \\ & \text { IT2512 } \\ & \text { CT2530 } \\ & \text { CT2532 } \end{aligned}\right.$ | 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 |
|  | IT2519 CT2536 IT2520 CT2533 | Professional Elective - IV <br> i) Business Intelligence <br> ii) Mobile Computing <br> iii) Multimedia Tools <br> iv) Cryptography and Network Security | 4 | - | - | 3 |
|  | $\begin{array}{\|l\|} \text { IT2525 } \\ \text { IT2526 } \\ \text { CT2524 } \\ \text { IT2527 } \end{array}$ | Professional Elective - V <br> i) Steganography and Biometrics <br> ii) Parallel Computing <br> iii) Virtual and Augmented Reality <br> iv) E-Commerce | 4 | - | - | 3 |
|  | CT2535 CT2540 CT2541 IT2528 | Professional Elective - VI <br> i) Internet of Things <br> ii) Cloud Computing <br> iii) Blockchain Technologies <br> iv) Design Patterns | 4 | - | - | 3 |

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


IV Year - I Semester


IV Year - II Semester

| SI.No | Subject <br> Cods | Name of the Course / Laboratory | No.ofPeriodsper week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | CE1552 <br> CE1553 <br> CE1554 <br> CE1555 | Elective - IV <br> Advanced Concrete Structures <br> Environmental Impact, Assessment \& Management Soil Dynamics \& Machine Foundations Docks \& Harbour Engineering | 3+1* |  | 3 |
| $\begin{aligned} & 5 \\ & 6 \\ & 7 \\ & 8 \end{aligned}$ | CE1556 <br> CE1557 <br> CE1558 <br> CE1559 | Elective - V <br> Pavement Analysis \& Design Induastrial Waste Management and Water Development \& Management Repair and Rehabilitation of Structures | 3+1* | - | 3 |
| 9 |  | Self Study Course (see the list of Self Study Courses) |  |  | 2 |
| 10 | CE1562 | Industrial / Practical Training | - | - | 4 |
| 11 | CE1563 | Project Work | - | 9 | 9 |
|  |  | Total | 20 | 9 | 21 |



Open Elective - I

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1522 | Remote Sensing and GIS <br> Techniques | CE | 3+1* | - | 3 |
| 2 | CE1523 | Elements of Civil Engineering (other than CE) | CE | 3+1* | - | 3 |
| 3 | EE1522 | Modeling and Simulation of Engineering Systems | EEE | $3+1^{*}$ | - | 3 |
| 4 | ME1525 | RenewableEnergy SourcesElements ofMechanicalEngineering(other thanME) | ME | 3+1* | - | 3 |
| 5 | ME1526 |  | ME | 3+1* | - | 3 |
| 6 | CS1507 | Computer Networks (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 7 | CT1506 | Object Oriented Programming (other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 8 | CS1501 | Data Structures Using C (other than EEE,ECE,CSE\&IT) | CSE | 2+1* | - | 3 |
| 9 | CS1508 | Cyber LawsOpen SourceSoftwareFundamentals of DataBase ManagementSystems (otherthan CSE \& IT) | CSE | 3+1* | - | 3 |
| 10 | IT1505 |  | IT | 3+1* | - | 3 |
| 11 | IT1506 |  | IT | 3+1* | - | 3 |
| 12 | MA1507 | Fuzzy Mathematics | Maths | $3+1 *$ | - | 3 |



Open Elective - II

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1534 | DisasterManagementSolid WasteManagement (otherthan CE) | CE | $3+1$ * | - | 3 |
| 2 | CE1535 |  | CE | 3+1* | - | 3 |
| 3 | EE1531 | Energy Audit, Conservation and Management | EEE | 3+1* | - | 3 |
| 4 | ME1535 | Material Science (other than ME) Automotive Electronics Introduction to MP\&MC (other than EEE, ECE, CSE \& IT) | ME | $3+1$ * | - | 3 |
| 5 | EC1540 |  | ECE | 3+1* | - | 3 |
| 6 | EC1541 |  | ECE | 3+1* | - | 3 |
| 7 | CT1525 | Cloud Computing (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 8 | CS1511 | Web Technologies(other than CSE \& IT) | CSE | $2+1^{*}$ | - | 3 |
| 9 | CS1513 | Virtual Reality | CSE | $3+1 *$ | - | 3 |
| 10 | IT1510 | Scripting Languages Big Data (other than CSE \& IT) Multi-variate analysis and Special Functions | IT | 3+1* | - | 3 |
| 11 | IT1511 |  | IT | 3+1* | - | 3 |
| 12 | MA1509 |  | Maths | $3+{ }^{*}$ | - | 3 |




Gudlavalleru E.igintering College
Seshadri Rao Kincwiedge Village
-..नllava1"nri. $52 ; 356$, Krishna District. A.P

Open Elective - III

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods per week |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1548 | Building Services (other than CE) <br> Modern Optimization Techniques | CE | 3+1* | - | 3 |
| 2 | EE1542 |  | EEE | 3+1* | - | 3 |
| 3 | EE1543 | Electrical Power Utilization (other than EEE) | EEE | 3+1* | - | 3 |
| 4 | ME1542 | Robotics (other than ME) Assistive Technologies Introduction to Embedded <br> Systems(other than ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1554 |  | ECE | 3+1* | - | 3 |
| 6 | EC1555 |  | ECE | 3+1* | - | 3 |
| 7 | CS1519 | Social Networks | CSE | $3+1 *$ | - | 3 |
| 8 | CS1520 | Mobile Application Development (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 9 | CS1521 | Real-TimeSystemsNetworkManagementSystems | CSE | $3+1$ * | - | 3 |
| 10 | IT1520 |  | IT | 3+1* | - | 3 |
| 11 | IT1521 | Fundamentals of ECommerce (other than (SE\& IT) | IT | 3+1* | - | 3 |
| 12 | MA1510 | Statistical Methods using R Software | Maths | 3+1* | - | 3 |



## Self Study Courses

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: |
| 1 | CE1560 | Global Positioning Systems | CE | 2 |
| 2 | CE1561 | Interior Design | CE | 2 |
| 3 | EE1553 | Electrical Safety Management | EEE | 2 |
| 4 | ME1560 | Green Engineering | ME | 2 |
| 5 | ME1561 | Managing Innovation \& Entrepreneurship | ME | 2 |
| 6 | EC1566 | Internet of Things | ECE | 2 |
| 7 | EC1567 | Consumer Electronics | ECE | 2 |
| 8 | CS1531 | e-Waste Management | CSE | 2 |
| 9 | CS1532 | Management Information Systems | CSE | 2 |
| 10 | IT1528 | Information \& Communication Technology | IT | 2 |
| 11 | BA1503 | Organizational Behaviour | MBA | 2 |
| 12 |  | MOOCs | -- | 2 |



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IV Year - I Semester

| SI.No | Subject Cods | Name of the Course / Laboratory | No.ofPeriodsper week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | P |  |
| 1 | EE1534 | Power System Analysis | 3+1* | - | 3 |
| 2 | EE1535 | Utilization of Electrical Energy | 3+1* | - | 3 |
|  |  | Core Elective - II |  |  |  |
| 3 | EE1536 | Electrical Distribution Systems |  |  |  |
| 4 | EE1537 | HVDC Transmission Systems | $3+1 *$ | - | 3 |
| 5 | EE1534 | VLSI Design |  |  |  |
| 6 | EE1538 | Special Electrical Machines |  |  |  |
|  |  | Core Elective - III |  |  |  |
| 7 | EE1539 | Electrical Machine Design |  |  |  |
| 8 | EE1540 | Programmable Logic Controller | $3+1$ * | - | 3 |
| 9 | CS1505 | Computer Organization \& Architecture |  |  |  |
| 10 | EE1541 | Flexible AC Transmission System |  |  |  |
| 11 |  | Open Elective - III (see the list of Open Electives) | $3+{ }^{*}$ | - | 3 |
| 12 | EC1512 | Microprocessors and Microcontrollers Lab | - | 3 | 2 |
| 13 | EE1544 | Electrical Systems Simulation Lab | - | 3 | 2 |
| 14 | EE1545 | Power Systems Lab |  | 3 | 2 |
|  |  | Total | 20 | 9 | 21 |

## IV Year - II Semester

\begin{tabular}{|c|c|c|c|c|c|}
\hline SI.No \& Subject Cods \& Name of the Course / Laboratory \& \multicolumn{2}{|l|}{No.of
Periods
per week} \& \multirow[t]{2}{*}{No.of Credits} <br>
\hline \& \& \& L \& P \& <br>
\hline \& \& Elective - IV \& \multirow{11}{*}{$3+1 *$

$3+1^{*}$} \& \multirow{5}{*}{-} \& \multirow{6}{*}{3} <br>
\hline 1 \& EE1546 \& Electrical Costing \& Estimation \& \& \& <br>
\hline 2 \& EE1547 \& Modeling and Analysis of Electrical Machines \& \& \& <br>
\hline 3 \& EE1548 \& High Voltage Engineering \& \& \& <br>
\hline 4 \& EC1533 \& Digital Signal Processing \& \& \& <br>
\hline \& \& Elective - V \& \& \& <br>
\hline 5 \& EE1549 \& Digital Control Systems \& \& \& <br>
\hline 6 \& EE1550 \& AI Techniques \& \& - \& <br>
\hline 7 \& EE1551 \& EHV AC/DC Transmission Systems \& \& \& <br>
\hline 8 \& EE1552 \& Power Plant Instrumentation \& \& \& 3 <br>
\hline 9 \& \& Self Study Course (see the list of Self Study Courses) \& \& - \& 2 <br>
\hline 10 \& EE1554 \& Industrial / Practical Training \& - \& - \& 4 <br>
\hline 11 \& EE1555 \& Project Work \& - \& 9 \& 9 <br>
\hline \& \& Total \& 8 \& 9 \& 21 <br>
\hline
\end{tabular}

Open Elective - I

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | $\begin{gathered} \text { No.of Periods per } \\ \text { week } \end{gathered}$ |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1522 | Remote Sensing and GIS Techniques | CE | $3+1 *$ | - | 3 |
| 2 | CE1523 | Elements of Civil Engineering (other than CE) | CE | $3+1^{*}$ | - | 3 |
| 3 | EE1522 | Modeling and Simulation of Engineering Systems | EEE | $3+1^{*}$ | - | 3 |
| 4 | ME1525 | RenewableEnergy SourcesElements ofMechanicalEnginceringlother thanME) | ME | $3+1$ * | - | 3 |
| 5 | ME1526 |  | ME | 3+1* | - | 3 |
| 6 | CS1507 | Computer Networks (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 7 | CT1506 | Object Oriented Programming (other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 8 | CS1501 | Data Structures Using C (other than EEE,ECE,CSE\&(T) | CSE | 2+1* | - | 3 |
| 9 | CS1508 | Cyber Laws | CSE | 3+1* | - | 3 |
| 10 | IT1505 | Open Source Software | IT | $3+1 *$ | - | 3 |
| 11 | IT1506 | Fundamentals of Data Base Management Systems (other than CSE \& IT) | IT | 3+1* | - | 3 |
| 12 | MA1507 | Fuzzy Mathematics | Maths | $3+1$ * | - | 3 |

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Seshadri Rao Knowledge Villags
Gudlavalleru - 521356 , Krishna District. A.P.

Open Elective - II

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | $\begin{gathered} \text { No.of Periods per } \\ \text { week } \end{gathered}$ |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1534 | DisasterManagementSolid WasteManagement (otherthan CE) | CE | 3+1* | - | 3 |
| 2 | CE1535 |  | CE | 3+1* | - | 3 |
| 3 | EE1531 | Energy Audit, Conservation and Management | EEE | 3+1* | - | 3 |
| 4 | ME1535 | Material Science(other than ME)AutomotiveElectronicsIntroduction toMP\&MC(other thanEEE, ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1540 |  | ECE | $3+1$ * | - | 3 |
| 6 | EC1541 |  | ECE | 3+1* | - | 3 |
| 7 | CT1525 | Cloud Computing (other than CSE \& IT) | CSE | $3+1^{*}$ | - | 3 |
| 8 | CS1511 | Web Technologies(other than CSE \& 1T) | CSE | 2+1* | - | 3 |
| 9 | CS1513 | Virtual Reality | CSE | 3+1* | - | 3 |
| 10 | IT1510 | ScriptingLanguagesBig Data (otherthan CSE \& IT)Multi-variateanalysis and SpecialFunctions | IT | $3+1 *$ | - | 3 |
| 11 | IT1511 |  | $1 T$ | 3+1* | - | 3 |
| 12 | MA1509 |  | Maths | 3+1* | - | 3 |



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Seshadri Rao Knowledge Village
Gudlayalleru-521 356, Kishna District. A.P

Open Elective - III

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1548 | Building Services (other than CE) <br> Modern Optimization Techniques | CE | 3+1* | - | 3 |
| 2 | EE1542 |  | EEE | 3+1* | - | 3 |
| 3 | EE1543 | Electrical Power Utilization (other than EEE) | EEE | 3+1* | - | 3 |
| 4 | ME1542 | Robotics (other than ME) Assistive <br> Technologies Introduction to Embedded Systems(other than ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1554 |  | ECE | 3+1* | - | 3 |
| 6 | EC1555 |  | ECE | 3+1* | - | 3 |
| 7 | CS1519 | Social Networks | CSE | $3+1^{*}$ | - | 3 |
| 8 | CS1520 | Mobile Application Development (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 9 | CS1521 | Real-Time <br> Systems <br> Network <br> Management Systems | CSE | $3+1$ * | - | 3 |
| 10 | IT1520 |  | IT | 3+1* | - | 3 |
| 11 | IT1521 | Fundamentals of E Commerce (other than CSE \& IT) | IT | 3+1* | - | 3 |
| 12 | MA1510 | Statistical Methods using R Software | Maths | 3+1* | - | 3 |



## Self Study Courses

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: |
| 1 | CE1560 | Global Positioning Systems | CE | 2 |
| 2 | CE1561 | Interior Design | CE | 2 |
| 3 | $\begin{aligned} & \text { EE1553 } \\ & \text { ME1560 } \\ & \hline \end{aligned}$ | Electrical Safety Management | EEE | 2 |
| 4 |  | Green Engineering | ME | 2 |
| 5 | $\begin{aligned} & \text { ME1561 } \\ & \text { EC1566 } \\ & \hline \end{aligned}$ | Managing <br>  <br> Entrepreneurship | ME | 2 |
| 6 |  | Internet of Things | ECE | 2 |
| 7 | EC1567 | Consumer Electronics | ECE | 2 |
| 8 | CS1531 | e-Waste <br> Management | CSE | 2 |
| 9 | CS1532 | Management Information Systems | CSE | 2 |
| 10 | IT1528 | Information \& Communication Technology | IT | 2 |
| 11 | BA1503 | Organizational Behaviour | MBA | 2 |
| 12 |  | MOOCs | -- | 2 |



IV Year - I Semester

| SI.No | Subject Cods | Name of the Course / Laboratory | No.ofPeriodsper week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | ME1539 | CAD / CAM | 3+1* | - | 3 |
| 2 | ME1540 | Heat Transfer | $3+{ }^{*}$ | - | 3 |
| $\begin{aligned} & 3 \\ & 4 \\ & 5 \\ & 6 \\ & \hline \end{aligned}$ | ME1541 <br> ME1542 <br> ME1543 <br> ME1544 | Elective - II <br> Computational Fluid Dynamics Robotics <br> Interactive Computer Graphics <br> Mechanical Vibrations | 3+1* | - | 3 |
| $\begin{array}{\|l} 7 \\ 8 \\ 9 \\ 10 \\ \hline \end{array}$ | ME1545 <br> ME1546 <br> ME1547 <br> ME1548 | Elective - III <br> Production Planning and Control <br> Tribology <br> Refrigeration \& Air Conditioning <br> Fracture Mechanics | 3+1* | - | 3 |
| 11 |  | Open Elective - III (see the list of Open Electives) | 3+1* | - | 3 |
| 12 | ME1549 | CAD / CAM Lab | - | 3 | 2 |
| 13 | ME1550 | Heat Transfer Lab | - | 3 | 2 |
| 14 | ME1551 | Computational Methods for Engineers Lab | - | 3 | 2 |
|  |  | Total | 20 | 9 | 21 |

IV Year - II Semester

| SI.No | Subject Cods | Name of the Course / Laboratory | No.of Periods per week L |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 2 | $\begin{aligned} & \text { ME1552 } \\ & \text { ME1553 } \end{aligned}$ | Elective - IV <br> Condition Monitoring |  |  |  |
| 3 4 | ME1554 <br> ME1555 | Rapid Prototyping <br> Power Plant Engineering <br> Design for Manufacturing \& Assembly | $3+1 *$ | - | 3 |
| $\begin{aligned} & 5 \\ & 6 \\ & 7 \\ & 8 \end{aligned}$ | ME1556 <br> ME1557 <br> ME1558Au <br> ME1559 | Elective - V <br> Nanotechnology <br> Gas Dynamics \& Jet Propulsion mation in Manufacturing <br> Supply Chain Management | 3+1* | - | 3 |
| 9 |  | Self Study Course (see the list of Self Study Courses) |  |  | 2 |
| 10 | ME1562 | Industrial / Practical Training | - | - | 4 |
| 11 | ME1563 | Project Work | - | 9 | 9 |
|  |  | Total | 20 | 9 | 21 |



Open Elective - I

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1522 | Remote Sensing and GIS <br> Techniques | CE | 3+1* | - | 3 |
| 2 | CE1523 | Elements of Civil Engineering (other than CE) | CE | $3+1^{*}$ | - | 3 |
| 3 | EE1522 | Modeling and Simulation of Engineering Systems | EEE | 3+1* | - | 3 |
| 4 | ME1525 | RenewableEnergy SourcesElements ofMechanicalEnginecring(other thanME) | ME | 3+1* | - | 3 |
| 5 | ME1526 |  | ME | 3+1* | - | 3 |
| 6 | CS1507 | Computer Networks (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 7 | CT1506 | Object Oriented Programming (other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 8 | CS1501 | Data Structures Using C (other than EEE,ECE,CSE\&IT) | CSE | 2+1* | - | 3 |
| 9 | CS1508 | Cyber Laws | CSE | 3+1* | - | 3 |
| 10 | IT1505 | Open SourceSoftwareFundamentals of DataBase ManagementSystems (otherthan CSE \& IT) | IT | 3+1* | - | 3 |
| 11 | IT1506 |  | IT | $3+1^{*}$ | - | 3 |
| 12 | MA1507 | Fuzzy <br> Mathematics | Maths | $3+1 *$ | - | 3 |




Open Elective - II

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | $\begin{gathered} \text { No.of Periods per } \\ \text { week } \end{gathered}$ |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1534 | DisasterManagementSolid WasteManagement (otherthan CE) | CE | 3+1* | - | 3 |
| 2 | CE1535 |  | CE | 3+1* | - | 3 |
| 3 | EE1531 | Energy Audit, Conservation and Management | EEE | 3+1* | - | 3 |
| 4 | ME1535 | Material Science (other than ME) Automotive Electronics Introduction to MP\&MC (other than EEE, ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1540 |  | ECE | 3+1* | - | 3 |
| 6 | EC1541 |  | ECE | 3+1* | - | 3 |
| 7 | CT1525 | Cloud Computing (other than CSE \& IT) | CSE | $3+1 *$ | - | 3 |
| 8 | CS1511 | Web Technologies(other than CSE \& IT) | CSE | $2+1^{*}$ | - | 3 |
| 9 | CS1513 | Virtual Reality | CSE | $3+1 *$ | - | 3 |
| 10 | IT1510 | Scripting Languages Big Data (other than CSE \& IT) <br> Multi-variate analysis and Special Functions | IT | $3+1 *$ | - | 3 |
| 11 | IT1511 |  | IT | 3+1* | - | 3 |
| 12 | MA1509 |  | Maths | $3+1^{*}$ | - | 3 |



Open Elective - III

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1548 | Building Services (other than CE ) | CE | 3+1* | - | 3 |
| 2 | EE1542 | Modern Optimization Techniques | EEE | $3+1^{*}$ | - | 3 |
| 3 | EE1543 | Electrical Power Utilization (other than EEE) | EEE | 3+1* | - | 3 |
| 4 | ME1542 | Robotics (other than ME) Assistive Technologies Introduction to Embedded <br> Systems(other than ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1554 |  | ECE | 3+1* | - | 3 |
| 6 | EC1555 |  | ECE | 3+1* | - | 3 |
| 7 | CS1519 | Social Networks | CSE | 3+1* | - | 3 |
| 8 | CS1520 | Mobile Application Development (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 9 | CS1521 | Real-TimeSystemsNetworkManagementSystems | CSE | 3+1* | - | 3 |
| 10 | IT1520 |  | IT | 3+1* | - | 3 |
| 11 | IT1521 | Fundamentals of ECommerce (other than CSE \& IT) | IT | 3+1* | - | 3 |
| 12 | MA1510 | Statistical Methods using R Software | Maths | $3+1$ * | - | 3 |




## Self Study Courses

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: |
| 1 | CE1560 | Global Positioning Systems | CE | 2 |
| 2 | CE1561 | Interior Design | CE | 2 |
| 3 | EE1553 | Electrical Safety Management | EEE | 2 |
| 4 | ME1560 | Green Engineering | ME | 2 |
| 5 | ME1561 | Managing <br>  <br> Entrepreneurship | ME | 2 |
| 6 | EC1566 | Internet of Things | ECE | 2 |
| 7 | EC1567 | Consumer Electronics | ECE | 2 |
| 8 | CS1531 | e-Waste Management | CSE | 2 |
| 9 | CS1532 | Management Information Systems | CSE | 2 |
| 10 | IT1528 | Information \& Communication Technology | IT | 2 |
| 11 | BA1503 | Organizational Behaviour | MBA | 2 |
| 12 |  | MOOCs | -- | 2 |



IV Year - I Semester

| SI.No | SubjectCods | Name of the Course / Laboratory | No.of Periods per week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | P |  |
| 1 | $\begin{aligned} & \text { EC1545 } \\ & \text { EC1546 } \\ & \hline \end{aligned}$ | Electronic Measurements and Instrumentation | $3+1$ * | . | 3 |
| 2 |  | Microcontrollers and Embedded Systems | $3+1$ * | - | 3 |
| $\begin{aligned} & 3 \\ & 4 \\ & 5 \\ & 6 \end{aligned}$ | $\begin{aligned} & \text { EC1547Cell } \\ & \text { EC1548 } \\ & \text { CS1524 } \\ & \text { EC1549 } \end{aligned}$ | Core Elective - II <br> lar and Mobile Communications <br> Sensors and Instrumentation Advanced Computer Architecture DSP Architecture and Applications | 3+1* | - | 3 |
| $\begin{aligned} & 7 \\ & 8 \\ & 9 \\ & 10 \end{aligned}$ | $\begin{aligned} & \text { EC1550 } \\ & \text { EC1551 } \\ & \text { EC1552 } \\ & \text { EC1553 } \end{aligned}$ | Core Elective - III <br> FPGA Design <br> Digital TV Engineering <br> Digital Image Processing <br> Embedded Real Time Operating Systems | 3+1* | - | 3 |
| 11 |  | Open Elective - III (see the list of Open Electives) | $3+1$ * | - | 3 |
| 12 | EC1556 | Digital Signal Processing Lab | - | 3 | 2 |
| 13 | EC1557 | Microwave and Optical Communications Lab | - | 3 | 2 |
| 14 | EC1558 | VLSI and Embedded Systems Lab |  | 3 | 2 |
|  |  | Total | 20 | 9 | 21 |

IV Year - II Semester

| SI.No | Subject | Name of the Course / Laboratory | No.of Periods per week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | P |  |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | $\begin{aligned} & \text { EC1559 } \\ & \text { EC1560 } \\ & \text { EC1561 } \\ & \text { EC1562 } \end{aligned}$ | Elective - IV <br> Testing and Verification of VLSI Circuits Speech Processing <br> Satellite Communications <br> Wireless Sensor Networks | $3+1 *$ | . | 3 |
| $\begin{aligned} & 5 \\ & 6 \\ & 7 \\ & 8 \end{aligned}$ | EC1563 <br> EC1564 <br> EC1565 <br> EC1566 | Elective - V <br> Lower Power VLSI Design <br> Radar Engineering <br> Software Engineering <br> Biomedical Instrumentation | 3+1* | - | 3 |
| 9 | EC1568 | Self Study Course (see the list of Self Study Courses) | - | - | $2$ |
| 11 | EC1569 | Project Work | - | 9 | 9 |
|  |  | Total | 8 | 9 | 21 |



Open Elective - I

| SI, No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1522 | Remote Sensing and GIS <br> Techniques | CE | $3+1 *$ | - | 3 |
| 2 | CE1523 | Elements of Civil Engineering (other than CE) | CE | $3+1^{*}$ | - | 3 |
| 3 | EE1522 | Modeling and Simulation of Engineering Systems | EEE | 3+1* | - | 3 |
| 4 | ME1525 | RenewableEnergy SourcesElements ofMechanicalEngineering(other thanME) | ME | $3+1$ * | - | 3 |
| 5 | ME1526 |  | ME | $3+1 *$ | - | 3 |
| 6 | CS1507 | Computer Networks (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 7 | CT1506 | Object Oriented Programming (other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 8 | CS1501 | Data Structures Using C (other than EEE,ECE,CSE\&TT) | CSE | 2+1* | - | 3 |
| 9 | CS1508 | Cyber LawsOpen SourceSoftwareFundamentals of DataBase ManagementSystems (otherthan CSE \& IT) | CSE | 3+1* | - | 3 |
| 10 | IT1505 |  | IT | 3+1* | - | 3 |
| 11 | IT1506 |  | $1 T$ | 3+1* | - | 3 |
| 12 | MA1507 | Fuzzy <br> Mathematics | Maths | 3+1* | - | 3 |



Seshadri Rao Gudlavalleru Engineering College

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Open Elective - II

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods per week |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1534 | Disaster <br> Management | CE | 3+1* | - | 3 |
| 2 | CE1535 | Management (other than CE) | CE | 3+1* | - | 3 |
| 3 | EE1531 | Energy Audit, Conservation and Management | EEE | 3+1* | - | 3 |
| 4 | ME1535 | Material Science (other than ME) Automotive Electronics Introduction to MP\&MC (other than EEE, ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1540 |  | ECE | 3+1* | - | 3 |
| 6 | EC1541 |  | ECE | 3+1* | - | 3 |
| 7 | CT1525 | Cloud Computing (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 8 | CS1511 | Web Technologies(other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 9 | CS1513 | Virtual Reality | CSE | 3+1* | - | 3 |
| 10 | IT1510 | ScriptingLanguagesBig Data (otherthan CSE \& IT)Multi-variateanalysis and SpecialFunctions | IT | 3+1* | - | 3 |
| 11 | IT1511 |  | IT | 3+1* | - | 3 |
| 12 | MA1509 |  | Maths | 3+1* | - | 3 |




Open Elective - III

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1548 | Building Services (other than CE) <br> Modern Optimization Techniques | CE | 3+1* | - | 3 |
| 2 | EE1542 |  | EEE | 3+1* | - | 3 |
| 3 | EE1543 | Electrical Power Utilization (other than EEE) | EEE | 3+1* | - | 3 |
| 4 | ME1542 | Robotics (other than ME) Assistive <br> Technologies Introduction to Embedded Systems(other than ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1554 |  | ECE | 3+1* | - | 3 |
| 6 | EC1555 |  | ECE | 3+1* | - | 3 |
| 7 | CS1519 | Social Networks | CSE | 3+1* | - | 3 |
| 8 | CS1520 | Mobile Application Development (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 9 | CS1521 | Real-Time <br> Systems <br> Network <br> Management Systems | CSE | 3+1* | - | 3 |
| 10 | IT1520 |  | IT | 3+1* | - | 3 |
| 11 | IT1521 | Fundamentals of ECommerce (other than CSE \& IT) | IT | 3+1* | - | 3 |
| 12 | MA1510 | Statistical Methods using R Software | Maths | 3+1* | - | 3 |



## Self Study Courses

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: |
| 1 | CE1560 | Global Positioning Systems | CE | 2 |
| 2 | CE1561 | Interior Design | CE | 2 |
| 3 | $\begin{aligned} & \text { EE1553 } \\ & \text { ME1560 } \end{aligned}$ | Electrical Safety Management | EEE | 2 |
| 4 |  | Green Engineering | ME | 2 |
| 5 | $\begin{aligned} & \text { ME1561 } \\ & \text { EC1566 } \\ & \hline \end{aligned}$ | Managing Innovation \& Entrepreneurship | ME | 2 |
| 6 |  | Internet of Things | ECE | 2 |
| 7 | EC1567 | Consumer Electronics | ECE | 2 |
| 8 | CS1531 | e-Waste <br> Management | CSE | 2 |
| 9 | CS1532 | Management Information Systems | CSE | 2 |
| 10 | IT1528 | Information \& Communication Technology | IT | 2 |
| 11 | BA1503 | Organizational Behaviour | MBA | 2 |
| 12 |  | MOOCs | -- | 2 |



| St.No | Subject Cods | Name of the Course / Laboratory | No.of <br> Periods <br> per week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | P |  |
| 1 | CS1522 | Information Security | 3+1* | - | 3 |
| 2 | CS1520 | Mobile Application Development | $3+1 *$ | - | 3 |
| $\begin{aligned} & 3 \\ & 4 \\ & 5 \\ & 6 \end{aligned}$ | $\begin{aligned} & \text { CT1519 } \\ & \text { CS1524 } \\ & \text { CS1525 } \\ & \text { CS1526 } \end{aligned}$ | Core Elective - II <br> Digital Image Processing <br> Advanced Computer Architecture <br> Embedded Systems <br> Bio-Informatics | 3+1* | - | 3 |
| $\begin{aligned} & 7 \\ & 8 \\ & 9 \\ & 10 \end{aligned}$ | $\begin{array}{\|l} \text { CS1527 } \\ \text { CS1528 } \\ \text { CT1520 } \\ \text { CS1529 } \end{array}$ | Core Elective - III <br> Distributed Systems <br> Parallel Computing <br> Software Testing Methodologies <br> Web Services | 3+1* | - | 3 |
| 11 |  | Open Elective - III (see the list of Open Electives) | $3+1 *$ | - | 3 |
| 12 | CS1523 | Information Security Lab | - | 3 | 2 |
| 13 | CT1521 | Mobile Application Development Lab | - | 3 | 2 |
| 14 | CT1522 | Multi Media Application Development Lab |  | 3 | 2 |
|  |  | Total | 20 | 9 | 21 |

IV Year - II Semester

| SI.No | Subject Cods | Name of the Course/Laboratory | $\begin{gathered} \text { No.of } \\ \text { Periods } \\ \text { per week } \end{gathered}$ |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | P |  |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | CT1524 <br> CT1525 <br> CS1533 <br> CT1519 | Elective - IV <br> Distributed Data Bases <br> Software Project Management <br> Semantic Web <br> Big Data | 3+1* | - | 3 |
| $\begin{aligned} & 1 \\ & 2 \\ & 3 \\ & 4 \end{aligned}$ | CS1534 <br> CT1520 <br> CT1526 <br> CS1535 | Elective - V <br> Machine Learing Cloud Computing Pattern Rcognition Wireless Networks | 3+1* | - | 3 |
| 5 | CS1536 | Self Study Course (see the list of Self Study Courses) <br> Industrial / Practical Training | - | - | $\begin{aligned} & 2 \\ & 4 \end{aligned}$ |
| 7 | CS1537 | Project Work | - | 9 | 9 |
|  |  | Total | 8 | 9 | 21 |

Open Elective - I

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods perweek |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1522 | Remote Sensing and GIS Techniques | CE | 3+1* | - | 3 |
| 2 | CE1523 | Elements of Civil Engineering (other than CE) | CE | 3+1* | - | 3 |
| 3 | EE1522 | Modeling and Simulation of Engineering Systems | EEE | 3+1* | - | 3 |
| 4 | ME1525 | RenewableEnergy SourcesElements ofMechanialEngineering(other thanME) | ME | $3+1^{*}$ | - | 3 |
| 5 | ME1526 |  | ME | 3+1* | - | 3 |
| 6 | CS1507 | Computer Networks (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 7 | CT1506 | Object Oriented Programming (other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 8 | CS1501 | Data Structures Using C (other than EEE,ECE,CSE\&IT) | CSE | $2+1 *$ | - | 3 |
| 9 | CS1508 | Cyber LawsOpen SourceSoftwareFundamentals of DataBase ManagementSystems (otherthan CSE \& IT) | CSE | 3+1* | - | 3 |
| 10 | IT1505 |  | IT | 3+1* | - | 3 |
| 11 | IT1506 |  | IT | $3+1 *$ | - | 3 |
| 12 | MA1507 | Fuzzy Mathematics | Maths | $3+1 *$ | - | 3 |



Open Elective - II

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods per week |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1534 | DisasterManagementSolid WasteManagement (otherthan CE) | CE | 3+1* | - | 3 |
| 2 | CE1535 |  | CE | 3+1* | - | 3 |
| 3 | EE1531 | Energy Audit, Conservation and Management | EEE | 3+1* | - | 3 |
| 4 | ME1535 | Material Science (other than ME) Automotive Electronics Introduction to MP\&MC (other than EEE, ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1540 |  | ECE | 3+1* | - | 3 |
| 6 | EC1541 |  | ECE | 3+1* | - | 3 |
| 7 | CT1525 | Cloud Computing (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 8 | CS1511 | Web Technologies(other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 9 | CS1513 | Virtual Reality | CSE | 3+1* | - | 3 |
| 10 | IT1510 | ScriptingLanguagesBig Data (otherthan CSE \& IT)Multi-variateanalysis and SpecialFunctions | IT | 3+1* | - | 3 |
| 11 | IT1511 |  | IT | $3+1 *$ | - | 3 |
| 12 | MA1509 |  | Maths | 3+1* | - | 3 |



Open Elective - III

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | $\begin{aligned} & \text { No.of Periods per } \\ & \text { week } \end{aligned}$ |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1548 | Building Services (other than CE) <br> Modern Optimization Techniques | CE | 3+1* | - | 3 |
| 2 | EE1542 |  | EEE | 3+1* | - | 3 |
| 3 | EE1543 | Electrical Power Utilization (other than EEE) | EEE | 3+1* | - | 3 |
| 4 | ME1542 | Robotics (other than ME) <br> Assistive <br> Technologies Introduction to Embedded <br> Systems(other than ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1554 |  | ECE | 3+1* | - | 3 |
| 6 | EC1555 |  | ECE | 3+1* | - | 3 |
| 7 | CS1519 | Social Networks | CSE | 3+1* | - | 3 |
| 8 | CS1520 | Mobile Application Development (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 9 | CS1521 | Real-TimeSystemsNetworkManagementSystems | CSE | 3+1* | - | 3 |
| 10 | IT1520 |  | IT | 3+1* | - | 3 |
| 11 | IT1521 | Fundamentals of ECommerce (other than CSE \& IT) | IT | 3+1* | - | 3 |
| 12 | MA1510 | Statistical Methods using R Software | Maths | 3+1* | - | 3 |




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## Self Study Courses

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: |
| 1 | CE1560 | Global Positioning Systems | CE | 2 |
| 2 | CE1561 | Interior Design | CE | 2 |
| 3 | EE1553 | Electrical Safety Management | EEE | 2 |
| 4 | ME1560 | Green Engineering | ME | 2 |
| 5 | ME1561 | Managing Innovation \& Entrepreneurship | ME | 2 |
| 6 | EC1566 | Internet of Things | ECE | 2 |
| 7 | EC1567 | Consumer Electronics | ECE | 2 |
| 8 | CS1531 | e-Waste Management | CSE | 2 |
| 9 | CS1532 | Management Information Systems | CSE | 2 |
| 10 | IT1528 | Information \& Communication Technology | IT | 2 |
| 11 | BA1503 | Organizational Behaviour | MBA | 2 |
| 12 |  | MOOCs | -- | 2 |



IV Year -
Semester

| SI.No | Subject Cods | Name of the Course / Laboratory | No.ofPeriodsper week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | P |  |
| 1 | CT1517 | Data Warehousing and Data Mining | 3+1* | - | 3 |
| 2 | IT1522 | Multimedia Application Development | 3+1* | - | 3 |
|  |  | Core Elective - II |  |  |  |
| 3 | CT1523 | Distributed Databases |  |  |  |
| 4 | CT1518 | Human Computer Interaction | $3+1 *$ | - | 3 |
| 5 | IT1523 | Bio-Metrics |  |  |  |
| 6 | CT1520 | Software Testing Methodologies |  |  |  |
|  |  | Core Elective - III |  |  |  |
| 7 | IT1524 | Information Retrieval Systems |  |  |  |
| 8 | CT1519 | Digital Image Processing | 3+1* | - | 3 |
| 9 | IT1525 | Mobile Computing |  |  |  |
| 10 | CT1524 | Software Project Management |  |  |  |
| 11 |  | Open Elective - III (see the list of Open | 3+1* |  |  |
| 12 | CT1521 | Mobile Application Lab | - | 3 | $\begin{aligned} & 3 \\ & 2 \end{aligned}$ |
| 13 | CT1522 | Multimedia Application Development Lab | - | 3 | 2 |
| 14 | IT1526 | Free and Open Source Software Lab |  | 3 | 2 |
|  |  | Total | 20 | 9 | 21 |

IV Year - II Semester

| SI.No | Subject <br> Cods | Name of the Course / Laboratory | No.of Periods per week |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | P |  |
|  |  | Elective - IV | 3+1* | . | 3 |
| 1 | IT1529 | E-Commerce |  |  |  |
| 2 | CT1526 | Pattern Recognition |  |  |  |
| 3 | CT1520 | Cloud Computing |  |  |  |
| 4 | IT1530 | Business Intelligence |  |  |  |
|  |  | Elective - V |  | - |  |
| 1 | CT1519 | Big Data |  |  |  |
| 2 | IT1531 | Soft Computing |  |  |  |
| 3 | IT1532 | Computer Forensics |  |  |  |
| 4 | IT1533 | Software Quality Assurance |  |  | 3 |
| 5 |  | Self Study Course (see the list of Self Study Courses) <br> Industrial / Practical Training | $3+1^{*}$ | - | 2 |
| 6 | IT1534 |  | - | - | 4 |
| 7 | IT1535 | Project Work | - | 9 | 9 |
|  |  | Total | 8 | 9 | 21 |



Open Elective - I

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods per week |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1522 | Remote Sensing and GIS <br> Techniques | CE | 3+1* | - | 3 |
| 2 | CE1523 | Elements of Civil Engineering (other than CE) | CE | 3+1* | - | 3 |
| 3 | EE1522 | Modeling and Simulation of Engineering Systems | EEE | 3+1* | - | 3 |
| 4 | ME1525 | RenewableEnergy SourcesElements ofMechanicalEngineering(other thanME) | ME | 3+1* | - | 3 |
| 5 | ME1526 |  | ME | 3+1* | - | 3 |
| 6 | CS1507 | Computer Networks (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 7 | CT1506 | Object Oriented Programming (other than CSE \& IT) | CSE | 2+1* | - | 3 |
| 8 | CS1501 | Data Structures Using C (other than EEE,ECE,CSE\&TT | CSE | 2+1* | - | 3 |
| 9 | CS1508 | Cyber LawsOpen SourceSoftwareFundamentals of DataBase ManagementSystems (otherthan CSE \& IT) | CSE | 3+1* | - | 3 |
| 10 | IT1505 |  | IT | 3+1* | - | 3 |
| 11 | IT1506 |  | IT | 3+1* | - | 3 |
| 12 | MA1507 | Fuzzy Mathematics | Maths | $3+1$ * | - | 3 |



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Open Elective - II

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of Periods per week |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1534 | DisasterManagementSolid WasteManagement (otherthan CE) | CE | $3+1 *$ | - | 3 |
| 2 | CE1535 |  | CE | 3+1* | - | 3 |
| 3 | EE1531 | Energy Audit, Conservation and Management | EEE | 3+1* | - | 3 |
| 4 | ME1535 | Material Science (other than ME) Automotive Electronics Introduction to MP\&MC (other than EEE, ECE, CSE \& IT) | ME | 3+1* | - | 3 |
| 5 | EC1540 |  | ECE | $3+1^{*}$ | - | 3 |
| 6 | EC1541 |  | ECE | 3+1* | - | 3 |
| 7 | CT1525 | Cloud Computing (other than CSE \& IT) | CSE | 3+1* | - | 3 |
| 8 | CS1511 | $\frac{\text { Web }}{\text { Technologies(other }}$ than CSE \& IT) | CSE | 2+1* | - | 3 |
| 9 | CS1513 | Virtual Reality | CSE | 3+1* | - | 3 |
| 10 | IT1510 | Scripting <br> Languages <br> Big Data (other than CSE \& IT) <br> Multi-variate analysis and Special Functions | IT | 3+1* | - | 3 |
| 11 | IT1511 |  | IT | 3+1* | - | 3 |
| 12 | MA1509 |  | Maths | 3+1* | - | 3 |



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Open Elective - III

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | $\begin{gathered} \text { No.of Periods per } \\ \text { week } \end{gathered}$ |  | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | P |  |
| 1 | CE1548 | Building Services (other than CE) Modern Optimization Techniques | CE | 3+1* | - | 3 |
| 2 | EE1542 |  | EEE | 3+1* | - | 3 |
| 3 | EE1543 | Electrical Power Utilization (other than EEE) | EEE | $3+1^{*}$ | - | 3 |
| 4 | ME1542 | Robotics (other than ME) Assistive Technologies Introduction to Embedded <br> Systems(other than ECE, CSE \& IT) | ME | $3+1^{*}$ | - | 3 |
| 5 | EC1554 |  | ECE | 3+1* | - | 3 |
| 6 | EC1555 |  | ECE | $3+1^{*}$ | - | 3 |
| 7 | CS1519 | Social Networks | CSE | 3+1* | - | 3 |
| 8 | CS1520 | Mobile Application Development (other than CSE \& IT) | CSE | $3+1^{*}$ | - | 3 |
| 9 | CS1521 | Real-Time Systems Network Management Systems | CSE | $3+1^{*}$ | - | 3 |
| 10 | IT1520 |  | IT | 3+1* | - | 3 |
| 11 | IT1521 | Fundamentals of ECommerce (other than (SE\& IT) | IT | $3+1^{*}$ | - | 3 |
| 12 | MA1510 | Statistical Methods using R Software | Maths | $3+1 *$ | - | 3 |



## Self Study Courses

| SI. No. | Subject Cods | Title of the Subject | Department Offering the Subject | No.of. Credits |
| :---: | :---: | :---: | :---: | :---: |
| 1 | CE1560 | Global Positioning <br> Systems | CE | 2 |
| 2 | CE1561 | Interior Design | CE | 2 |
| 3 | EE1553 | Electrical Safety Management | EEE | 2 |
| 4 | ME1560 | Green Engineering | ME | 2 |
| 5 | ME1561 | Managing Innovation \& Entrepreneurship | ME | 2 |
| 6 | EC1566 | Internet of Things | ECE | 2 |
| 7 | EC1567 | Consumer Electronics | ECE | 2 |
| 8 | CS1531 | e-Waste <br> Management | CSE | 2 |
| 9 | CS1532 | Management Information Systems | CSE | 2 |
| 10 | IT1528 | Information \& Communication Technology | IT | 2 |
| 11 | BA1503 | Organizational <br> Behaviour | MBA | 2 |
| 12 |  | MOOCs | -- | 2 |



## COURSE STRUCTURE

## I Semester

| $\begin{array}{\|l} \text { Sl. } \\ \text { No. } \end{array}$ | $\begin{array}{\|l} \text { Course } \\ \text { Code } \end{array}$ | Name of the Course / Laboratory | No.of Periodsper week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | MA2901 | Computational Methods in Engineering | 4 | - | - | 3 |
| 2 | CE2901 | Theory of Elasticity | 4 | - | - | 3 |
| 3 | CE2902 | Structural Dynamics | 4 | - | - | 3 |
| 4 | CE2903 | Advanced Design of Concrete Structrures | 4 | - | - | 3 |
| 5 | CE2904 | Stability of Structures | 4 | - | - | 3 |
| 6 |  | Professional Elective - I | 4 | - | - | 3 |
| 7 | CE2908 | Advanced Concrete Technology and Structural Engineering Lab | - | - | 4 | 2 |
|  |  | Total | 24 | - | 4 | 20 |

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 |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | CE2909 | Earthquake Resistant Design | 4 | - | - | 3 |
| 2 | CE2910 | Finite Element Analysis | 4 | - | - | 3 |
| 3 | CE2911 | Theory of Plates and Shells | 4 | - | - | 3 |
| 4 | HS2901 | Research Methodologies | 4 | - | - | 3 |
| 5 |  | Professional Elective - II | 4 | - | - | 3 |
| 6 |  | Professional Elective - III | 4 | - | - | 3 |
| 7 | CE2918 | Computer Applications in Structural Engineering Lab | - | - | 4 | 2 |
| 8 |  | Seminar | - | - | - | 2 |
|  |  | Total | 24 | - | 4 | 22 |

L: Lecture T:Tutorial P:Practical
M.Tech - Structural Engineering (CE) - R17


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## III Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per wedk |  |  | $\begin{gathered} \text { No.of } \\ \text { Credits } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | $\begin{aligned} & \mathbf{P} \\ & 4 \end{aligned}$ |  |
| 1 |  | Term Paper | - |  |  | 2 |
| 2 |  | Dissertation (Initiated in third semester) | - | - | - | - |
|  |  | Total | - | - | 4 | 2 |

IV Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L |  | $\begin{gathered} \hline \mathbf{P} \\ 52 \end{gathered}$ |  |
| 1 |  | Dissertation <br> (Carried out in third \& Fourth Semester |  |  |  | 34 |
|  |  | Total | - | - | 52 | 34 |

## Professional Electives:

Professional Elective - I
CE2905 Advanced Concrete Technology
CE2906 Ground Improvement Techniques
CE2907 Structural Optimization

Professional Elective - II
CE2912 Advanced Design of Steel Structures
CE2913 Pre-Stressed Concrete
CE2914 Fracture Mechanics of Concrete

Professional Elective - III
CE2915 Design of Sub-Structures
CE2916 Design of Bridge Structures
CE2917 High Rise Buildings



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COURSE STRUCTURE

## 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 | MA2902 | Linear and Non-Linear Optimization | 4 | - | - | 3 |
| 2 | EC2901 | ARM Architecture and Programming** | 3 | - | 2 | 3 |
| 3 | EE2902 | Analysis of Power Electronic Converters | 4 | - | - | 3 |
| 4 | EE2903 | Electrical Machine Modeling and Analysis | 4 | - | - | 3 |
| 5 | EE2904 | Modern Control Theory | 4 | - | - | 3 |
| 6 |  | Professional Elective - I | 4 | - | - | 3 |
| 7 | EE2908 | Power Electronic System Simulation Lab | - | - | 4 | 2 |
|  |  | Total | 23 | - | 6 | 20 |

## II Semester

| $\begin{array}{\|l} \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periodsper week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | HS2901 | Research Methodology | 4 | - | - | 3 |
| 2 | EE2911 | Advanced Digital Control Systems | 4 | - | - | 3 |
| 3 | EE2912 | Switched Mode Power Converters ** | 3 | - | 2 | 3 |
| 4 | EE2913 | Advanced Electric Drives | 4 | - | - | 3 |
| 5 |  | Professional Elective - II | 4 | - | - | 3 |
| 6 |  | Professional Elective - III | 4 | - | - | 3 |
| 7 | EE2919 | Power Electronics and Electric Drives Lab | - | - | 4 | 2 |
| 8 |  | Seminar | - | - | - | 2 |
| Total |  |  | 23 | - | 6 | 22 |

** Project Based Theory Course
L: Lecture $\quad$ T:Tutorial $\quad$ : Practical
M.Tech - Electrical Engineering (EE) - R17


III Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\begin{aligned} & \mathrm{P} \\ & 4 \end{aligned}$ |  |
| 1 |  | Term Paper |  |  |  | 2 |
| 2 |  | Dissertation (Initiated in third semester) | - | - | - | - |
|  |  | Total | - | - | 4 | 2 |

IV Semester

| Sl. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\begin{gathered} \mathbf{P} \\ 52 \end{gathered}$ |  |
| 1 |  | Dissertation <br> (Carried out in third \& Fourth Semester | - | - |  | 34 |
|  |  | Total | - | - | 52 | 34 |

## Professional Electives:

Professional Elective - I
EE2905 Power Semiconductor Devices \& Protection
EE2906 Special Machines and Control
EE2907 HVDC Transmission Systems
Professional Elective - II
EE2914 Renewable Energy Storage Systems
EE2915 Application of power Electronics to Power Systems
EE2916 Custom Power Devices

Professional Elective - III
EC2902 Digital Signal Processing and Applications
EE2917 AI Techniques
EE2918 Smart Grids
M.Tech - Electrical Engineering (EE) - R17



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## 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 | MA2901 | Computational Methods in Egnineering | 4 | - | - | 3 |
| 2 | ME2901 | Advanced Mechanics of Solids | 4 | - | - | 3 |
| 3 | ME2902 | Analysis and Synthesis of Mechanisms | 4 | - | - | 3 |
| 4 | ME2903 | Mechancial Vibrations ** | 3 | - | 2 | 3 |
| 5 | ME2904 | Gear Engineering | 4 | - | - | 3 |
| 6 |  | Professional Elective - I | 4 | - | - | 3 |
| 7 | ME2908 | Machine Dynaics Lab | - | - | 4 | 2 |
|  |  | Total | 23 | - | 6 | 20 |

## II Semester

| $\begin{array}{\|l\|l} \text { Sl. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periodsper week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | $\mathrm{T}$ | P |  |
| 1 | HS2901 | Research Methodologies | 4 |  |  | 3 |
| 2 | ME2909 | Finite Element Methods ** | 3 | - | 2 | 3 |
| 3 | ME2910 | Design with Advacned Materials | 4 | - | - | 3 |
| 4 | ME2911 | Design for Manufacturing and Assembly | 4 | - | - | 3 |
| 5 |  | Professional Elective - II | 4 | - | - | 3 |
| 6 |  | Professional Elective - III | 4 | - | - | 3 |
| 7 | ME2918 | Modeling and Analysis Lab | - | - | 4 | 2 |
| 8 |  | Seminar | - | - | - | 2 |
| Total |  |  | 23 | - | 6 | 22 |

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


## III Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | $\begin{aligned} & \hline \mathbf{P} \\ & 4 \end{aligned}$ |  |
| 1 |  | Term Paper |  |  |  | 2 |
| 2 |  | Dissertation (Initiated in third semester) | - | - | - | - |
|  |  | Total | - | - | 4 | 2 |

IV Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods per week |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | $\mathbf{L}$ | $\mathrm{T}$ | $\begin{aligned} & \hline \mathbf{P} \\ & 52 \end{aligned}$ |  |
| 1 |  | Dissertation (Carried out in third \& Fourth Semester |  |  |  | 34 |
|  |  | Total | - | - | 52 | 34 |

## Professional Electives:

Professional Elective - I

| ME2905 | Rotor Dynamics |
| :--- | :--- |
| ME2906 | Experimental Stress Analysis |
| ME2907 | Product Design |

Professional Elective - II
ME2912 Fracture Mechanics
ME2913 Condition Monitoring
ME2914 Rapid Tooling and Prototyping

Professional Elective - III
ME2915 Theory of Elasticity
ME2916 Geometric Modeling
ME2917 Tribology
M.Tech - Mahcine Design (ME) - R17


COURSE STRUCTURE

## I Semester

| SI. <br> No. 1 | Course <br> Code <br> MA3902 | Name of the Course / Laboratory <br> Linear and Non-Linear Optimization Techniques | No. of Hours per week |  |  | No. of Credits 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
|  |  |  | 3 | - | - |  |
| 2 | EC3903 | Embedded System Design ** | 3 | - | - | 3 |
| 3 | EC3904 | Advanced Digital Design | 3 | - | - | 3 |
| 4 | EC3905 | Advanced Microcontrollers | 3 | - | - | 3 |
| 5 | EC3906 | CMOS VLSI circuits | 3 | - | - | 3 |
| 6 |  | Professional Elective - I | 3 | - | - | 3 |
| 7 | EC3911 | VLSI Design Lab | - | - | 4 | 2 |
|  |  | Total | 18 | - | 4 | 20 |

## II Semester

| $\begin{gathered} \text { SI. } \\ \text { No. } \end{gathered}$ | Course Code | Name of the Course / Laboratory | No. of Hours per week |  |  | No. of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | HS3901 | Research Methodologies | 3 | - | - | 3 |
| 2 | EC3912 | VLSI System Design ** | 3 | - | - | 3 |
| 3 | EC3913 | Hardware and Software Co-Design | 3 | - | - | 3 |
| 4 | EC3914 | Internet of Things | 3 | - | - | 3 |
| 5 |  | Professional Elective - II | 3 | - | - | 3 |
| 6 |  | Professional Elective - III | 3 | - | - | 3 |
| 7 | EC3923 | Internet of Things Lab | - | - | 4 | 2 |
| 8 | EC3924 | Seminar | - | - | 4 | 2 |
|  |  | Total | 18 | - | 8 | 22 |

** Project Based Theory Course
L: Lecture $\quad T$ : Tutorial $P$ : Practical
M.Tech - VLSI Design and Embedded Systems (ECE) - R19



Gudlavalleru Engineering College
Seshadri Rao Knowledge Village
Gudiavalleru - 521355 , Krishna District. A.P.

## III Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No. of Hours per week |  |  | No. of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EC3925 | Dissertation (Part-A) | - | - | - | - |

IV Semester

| SI. | Course Code | Name of the Course / Laboratory | No. of Hours per week |  |  | No. of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No. |  |  | L | T | P |  |
| 1 | EC3925 | Dissertation (Part-B) | - | - | - | 28 |
|  |  | Total | - | - | - | 28 |

## Professional Electives:

Professional Elective - I
EC3907 Testing \& Testability of VLSI
circuits EC3908 VLSI Digital Signal
Processing EC3909 Real Time Operating
systems EC3910 Embedded Processors
Professional Elective - II
EC3915 ASIC System Design
EC3916 Advances in VLSI Design
EC3917 Embedded Computing Architectures
EC3918 Advanced Computer Networks
Professional Elective - III
EC3919 System-on-Chip Design
EC3920 VLSI Interconnects
EC3921 RF VLSI design
EC3922 Advanced Digital Signal Processing


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Gudlavalleru Engineering College
Seshadri Rao Knowledge Village
Gudlavalleru - 521350 , Krishna District. A.P.

## COURSE STRUCTURE

## I 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 | MA2903 | Statistics with R Programming | 4 | - | - | 3 |
| 2 | CS2901 | Advanced Data Structures \& Algorithm Analysis | 4 | - | - | 3 |
| 3 | CS2902 | Wireless Networks | 4 | - | - | 3 |
| 4 | CS2903 | Object Oriented Software Engineering | 4 | - | - | 3 |
| 5 | CS2904 | Business Intelligence ** | 3 | - | 2 | 3 |
| 6 |  | Professional Elective - I | 4 | - | - | 3 |
| 7 |  | Advanced Data Structures \&Algorithm and R Programming Lab | - | - | 4 | 2 |
|  |  | Total | 23 | - | 6 | 20 |

## II Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | HS2901 | Research Methodology | 4 | - | - | 3 |
| 2 | CS2909 | Information Security | 3 | - | 2 | 3 |
| 3 | CS2910 | Scripting Languages | 4 | - | - | 3 |
| 4 | CS2911 | Data Analytics ** | 3 | - | 2 | 3 |
| 5 |  | Professional Elective - II | 4 | - | - | 3 |
| 6 |  | Professional Elective - III | 4 | - | - | 3 |
| 7 | CS2917 | Information Security \& Scripting Languages Lab | - | - | 4 | 2 |
| 8 |  | Seminar | - | - | - | 2 |
|  |  | Total | 23 | - | 6 | 22 |

** Project Based Theory Course
L: Lecture $\quad \mathrm{T}$ : Tutorial $\quad \mathrm{P}$ : Practical
M.Tech - Computer Science and Engineering (CSE) - R17

## III Semester

| SI. <br> No. | Course <br> Code | Name of the Course / Laboratory | No.of Periods |  |  | No.of <br> Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | r wee |  |  |
|  |  |  | L | T | P |  |
| 1 |  | Term Paper | - | - | 4 | 2 |
| 2 |  | Dissertation (Initiated in third semester) | - | - | - | - |
| Total |  |  | - | - | 4 | 2 |

IV Semester

| $\begin{array}{\|l} \text { SI. } \\ \text { No. } \end{array}$ | Course Code | Name of the Course / Laboratory | No.of Periods pel r wee k |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 |  | Dissertation <br> (Carried out in third \& Fourth Semester) | - | - | 52 | 34 |
|  |  | Total | - | - | 52 | 34 |

## Professional Electives:

## Professional Elective - I

| CS2905 | Advanced Computer Architecture |
| :--- | :--- |
| CS2906 | Digital Image Processing |
| CS2907 | E-Commerce |

Professional Elective - II

| CS2912 | Advanced Operating Systems |
| :--- | :--- |
| CS2913 | Machine Learning |
| CS2914 | Software Testing Methodologies |

Professional Elective - III

| CT2901 | Cloud Computing |
| :--- | :--- |
| CS2915 | Soft Computing |
| CS2916 | Internet of Things |




## COURSE STRUCTURE

1 Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No. of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | EG2901 | Business Communication | 4 | - | - | 3 |
| 2 | MA2901 | Quantitative Analysis for Business Decisions | 3 | 1 | - | 3 |
| 3 | BA2901 | Perspectives of Management | 4 | - | - | 3 |
| 4 | BA2902 | Managerial Economics | 4 | - | - | 3 |
| 5 | BA2903 | Accounting for Managers | 4 | - | - | 3 |
| 6 | BA2904 | Business Environment and Legislation | 4 | - | - | 3 |
| 7 | BA2905 | Business Law | 4 | - | - | 3 |
| 8 | BA2906 | Information Technology Lab for Business Management | - | - | 4 | 2 |
|  |  | Total | 27 | 1 | 4 | 23 |

II Semester

| SI. <br> No. | Course Code | Name of the Course / Laboratory | No.of Periods per week |  |  | No.ofCredits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | L | T | P |  |
| 1 | MA2903 | Business Research Methods | 3 | 1 | - | 3 |
| 2 | BA2907 | Financial Management | 4 | - | - | 3 |
| 3 | BA2908 | Marketing Management | 4 | - | - | 3 |
| 4 | BA2909 | Human Resource Management | 4 | - | - | 3 |
| 5 | BA2910 | Production \& Operations Management | 4 | - | - | 3 |
| 6 | BA2911 | International Business | 4 | - | - | 3 |
| 7 | BA2912 | Organizational Behaviour | 4 | - | - | 3 |
|  |  | Total | 27 | 1 | - | 21 |

L: Lecture
T: Tutorial
P: Practical

Master of Business Administration - R17

III Semester

| $\begin{array}{\|l\|} \text { SI. } \\ \text { No. } \end{array}$ | $\begin{array}{\|c} \text { Course } \\ \text { Code } \end{array}$ | Name of the Course / Laboratory |  | No.of Periods per week |  |  | No.of Credits |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | L | T | P |  |
| 1 | BA2913 | Business Policy \& Strategic Management |  |  | - | - | 3 |
| 2 | BA2914 | Logistics \& Supply Chain Management |  | 4 | - | - | 3 |
| 3 | BA2915 | E-Business |  | 4 | - | - | 3 |
| 4 | BA2916 | 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 | 0 | 0 | 24 |


| IV 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 |  |  | No.of Credits |
|  |  |  |  | 4 | $\mathrm{T}$ | P |  |
| 1 | BA2923 | Entrepreneurship \& Project Management |  |  |  |  | 3 |
| 2 |  | Specialisation - V | Marketing subjects common to all | 4 | - | - | 3 |
| 3 |  | Specialisation - VI |  | 4 | - | - | 3 |
| 4 |  | Specialisation - VII | Finance (or) HR | 4 | - | - | 3 |
| 5 |  | Specialisation - VIII |  | 4 | - | - | 3 |
| 6 |  | Project Report |  | - | - | - | 6 |
| 7 |  | Comprehensive Viva-Voce |  | - | - | - | 1 |
|  |  | Total |  | 20 | 0 | 0 | 22 |

Specialisations:

| III Semester | IV Semester |
| :--- | :--- |
| Marketing | Marketing |
| BA2917 Advertising \& Brand Management | BA2924 Marketing of Services |
| BA2918 Consumer Behaviour | BA2925 Sales \& Distribution Management |
| Finance | Finance |
| BA2919 Security Analysis \& Portfolio Mgt. | BA2926 Financial Derivatives |
| BA2920 International Financial Management | BA2927 Financial Institutions and Services |
| HR | HR |
| BA2921 Training and Development: | BA2928 Compensation Management. |
| BA2922 Industrial Relations and | BA2929 Management of Change and |
| Labour Laws |  |



