|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Amrutvahini College of Engineering, Sangamner**  **Department of Information Technology**  **CO-PO-PSO Attainment Matrix (Academic Year: 2020-21)** | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|  | Course Code | Course Title | |  | | | PO1  EK | | PO2  PA | PO3  DD | | PO4  CPI | | | PO5  MTU | | | PO6  E&S | | PO7  ES | PO8  Eth | PO9  TW | PO10  Com. | | PO11  PMF | PO12  LL | PSO1 | PSO2 | PSO3 |
| FE SEM I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 1 | C101 | Engineering Mathematics - I | |  | | | 3 | | 3 | -- | | -- | | | -- | | | -- | | -- | 1 | 2 | 1 | | -- | 2 | 1 | 1 | - |
| 2 | C102 | Engineering Physics | |  | | | 2 | | 3 | -- | | -- | | | -- | | | -- | | -- | 2 | 3 | 3 | | -- | 3 | 1 | - | - |
| 3 | C103 | System in Mechanical Engineering | |  | | | 3 | | 1 | 1 | | 1 | | | -- | | | -- | | -- | -- | -- | 3 | | -- | 2 | - | - | - |
| 4 | C104 | Basic Electrical Engineering | |  | | | 3 | | 3 | 1 | | -- | | | -- | | | 2 | | 2 | 1 | 1 | 2 | | 2 | 3 | 1 | - | - |
| 5 | C105 | Programming and Problem Solving | |  | | | 2 | | 3 | 2 | | 2 | | | 2 | | | 2 | | -- | 2 | -- | 1 | | -- | 3 | 1 | 1 | - |
| 6 | C106 | Workshop Practices | |  | | | 2 | | 2 | 2 | | 2 | | | 2 | | | 2 | | 2 | 2 | -- | 2 | | 3 | 2 | - | - | - |
| 7 | C107 | Audit Course 1 | |  | | | 2 | | 1 | 1 | | -- | | | -- | | | 2 | | 3 | 3 | 2 | 1 | | 1 | 3 | 1 | - | - |
| FE SEM II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 | C108 | Engineering Mathematics - II | |  | | | 3 | | 3 | -- | | -- | | | -- | | | -- | | -- | -- | 2 | 2 | | -- | 3 | 1 | 1 | - |
| 9 | C109 | Engineering Chemistry | |  | | | 2 | | 1 | 2 | | 2 | | | 2 | | | 1 | | 2 | 1 | 2 | 1 | | 2 | 2 | 1 | - | - |
| 10 | C110 | Basic Electronics Engineering | |  | | | 3 | | 2 | 3 | | 3 | | | 2 | | | 3 | | 2 | 2 | 3 | 3 | | -- | 3 | 1 | - | - |
| 11 | C111 | Engineering Mechanics | |  | | | 3 | | 3 | 2 | | 3 | | | 1 | | | 2 | | 3 | 3 | 3 | 2 | | -- | 1 | 1 | - | - |
| 12 | C112 | Engineering Graphics | |  | | | 2 | | 2 | 1 | | 1 | | | 1 | | | -- | | -- | -- | -- | 3 | | -- | 2 | - | - | - |
| 13 | C113 | Project Based Learning | |  | | | 2 | | 2 | 2 | | 1 | | | 1 | | | 1 | | 2 | 2 | 2 | 1 | | 2 | 2 | 1 | - | 1 |
| 14 | C114 | Audit Course 2 | |  | | | 2 | | 2 | 1 | | -- | | | -- | | | 2 | | 3 | 3 | 2 | 3 | | -- | 3 | 1 | - | - |
| SE-SEM-I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 15 | C19-201 | Discrete Mathematics | |  | | | 3 | | 2 | 2 | | 2 | | | 1 | | | 1 | | -- | -- | -- | 1 | | -- | 2 | 1 | 1 | -- |
| 16 | C19-202 | Logic Design and Computer Organization and Logic Design and Computer Organization Lab | |  | | | 2 | | 2 | 2 | | 2 | | | 1 | | | 1 | | -- | 2 | 3 | 1 | | 3 | 3 | 2 | 3 | 3 |
| 17 | C19-203 | Data Structures and Algorithms and Data Structures and Algorithms Lab | |  | | | 2 | | 3 | 3 | | 3 | | | - | | | 3 | | - | - | - | - | | - | - | 2 | 1 | 3 |
| 18 | C19-204 | Object Oriented programming and Object Oriented programming Lab | |  | | | 3 | | 3 | 3 | | 3 | | | 2 | | | 3 | | --- | --- | -- | 2 | | -- | 2 | 1 | 3 | 3 |
| 19 | C19-205 | Basics of Computer Network | |  | | | 3 | | 3 | 3 | |  | | | 3 | | | 3 | | 1 | 2 |  |  | |  | 2 |  |  |  |
| 20 | C19-206 | Soft Skill Lab | |  | | | 3 | | 3 | 2 | | 2 | | | 2 | | | 1 | | 1 | 2 | 3 | 3 | | 1 | 2 | 2 | 2 | 1 |
| SE-SEM-II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 21 | C19-207 | Engineering Mathematics -III | |  | | | 1 | | 1 | 1 | | 1 | | | 1 | | | -- | | 1 | -- | 1 | 1 | | -- | -- | 2 | 2 | 1 |
| 22 | C19-208 | Processor Architecture and Programming Skill Development Laboratory | |  | | | 2 | | 2 | 2 | | 2 | | | 3 | | | 2 | | -- | -- | -- | -- | | -- | 2 | 2 | 2 | 1 |
| 23 | C19-209 | Database Management System and Database Management System Lab | |  | | | 2 | | 2 | 3 | | 2 | | | 2 | | | 1 | | 2 | -- | -- | -- | | -- | 2 | 2 | 2 | 3 |
| 24 | C19-210 | Computer Graphics and Computer Graphics Laboratory | |  | | | 1 | | 1 | 1 | | 1 | | | 1 | | | -- | | 1 | -- | 1 | 2 | | -- | --- | 1 | 1 | 2 |
| 25 | C19-211 | Software Engineering | |  | | | 2 | | 1 | 2 | | 1 | | | 3 | | | 1 | | 2 | 3 | 3 | 2 | | 3 | 1 | 2 | 3 | 3 |
| 26 | C19-212 | Project Based Learning | |  | | | 3 | | 3 | 3 | | 2 | | | 3 | | | 2 | | 2 | 1 | 3 | 3 | | 1 | 3 | 2 | 3 | 2 |
| TE-SEM-I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 27 | C15-301 | Theory of computation |  | | | 3 | | 3 | | 2 | 3 | | | | 2 | 1 | | | -- | | -- | -- | -- | | -- | 1 | 2 | 2 | 1 |
| 28 | C15-302 | Database Management Systems and DBMS Laboratory |  | | | 2 | | 3 | | 2 | 3 | | | | 2 | 2 | | | 1 | | --- | 2 | 3 | | --- | 3 | 2 | 2 | 3 |
| 29 | C15-303 | Software Engineering and project Management |  | | | 2 | | 1 | | 2 | 1 | | | | 3 | 1 | | | 2 | | 3 | 3 | 2 | | 3 | 1 | 2 | 3 | 3 |
| 30 | C15-304 | Operating system and operating system laboratory |  | | | 2 | | 1 | | 2 | 2 | | | | 2 | 1 | | | 1 | | 1 | 2 | 1 | | 1 | 2 | 3 | 3 | 2 |
| 31 | C15-305 | Human-Computer Interaction |  | | | 2 | | 3 | | 2 | 3 | | | | 2 | 2 | | | 1 | | --- | 2 | 3 | | --- | 3 | 2 | 2 | 3 |
| 32 | C15-306 | Software Laboratory-III |  | | | 2 | | 3 | | 3 | 2 | | | | 3 | 1 | | | 2 | | 1 | 3 | 3 | | 2 | 3 | 2 | 2 | 2 |
| TE-SEM-II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 33 | C15-307 | Computer Network Technology and software laboratory I | | |  | 3 | | 3 | | 3 | 3 | | 3 | | | 1 | | | 1 | | 1 | -- | 2 | | 2 | 1 | 2 | 2 | 1 |
| 34 | C15-308 | Systems Programm-ing& software laboratory II | | |  | 2 | | 3 | | 3 | 2 | | 2 | | | 1 | | | -- | | -- | 3 | 1 | | -- | 2 | 2 | 2 | 3 |
| 35 | C15-309 | Design andAnalysis of Algorithms and software lab-II | | |  | 3 | | 2 | | 2 | 2 | | 2 | | | -- | | | -- | | -- | -- | -- | | -- | 1 | 2 | 3 | 1 |
| 36 | C15-310 | Cloud Computing | | |  | 2 | | 2 | | 2 | 2 | | 2 | | | 2 | | | 2 | | 2 | ---- | 2 | | ---- | 2 | 2 | 1 | 3 |
| 37 | C15-311 | Data Science & Big Data Analytics | | |  | 2 | | 2 | | 3 | 2 | | 2 | | | 2 | | | -- | | 1 | 2 | -- | | -- | 2 | 2 | 3 | 1 |
| 38 | C15-312 | Project Based Seminar | | |  | 3 | | 3 | | 3 | 2 | | 3 | | | 2 | | | 2 | | 1 | 3 | 3 | | -- | 3 | 2 | 3 | 2 |
| BE-SEM-I | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 39 | C15-401 | Information and cyber security and Software Lab-III | | |  | 2 | | 2 | | 1 | 2 | | 1 | | | 2 | | | 1 | | 1 | 2 | 1 | 1 | | 1 | 1 | 1 | 2 |
| 40 | C15-402 | Machine learning and applications and Computer laboratory VII | | |  | 2 | | 3 | | 2 | 2 | | 3 | | | 1 | | | --- | | 1 | 2 | 2 | 1 | | 1 | 2 | 2 | 2 |
| 41 | C15-403 | Software design and modeling and computer laboratory VIII | | |  | 2 | | 2 | | 8 | 2 | | 2 | | | 2 | | | --- | | 3 | 3 | 6 | 1 | | 1 | 1 | 1 | 2 |
| 42 | C15-404 | Wireless communication | | |  | 2 | | 2 | | 1 | 2 | | 2 | | | -- | | | -- | | 0 | -- | -- | -- | | 3 | 2 | 2 | 3 |
| 43 | C15-405 | Usability Engineering | | |  | 2 | | 2 | | 2 | 2 | | 3 | | | 3 | | | 2 | | 2 | 2 | 3 | - | | 2 | 2 | 2 | 2 |
| 44 | C15-406 | Software testing and quality assurance | | |  | 2 | | 2 | | 1 | 2 | | 2 | | | -- | | | -- | | 1 | -- | -- | -- | | 2 | 2 | 2 | 2 |
| 45 | C15-408 | Project phase I | | |  | 2 | | 2 | | 3 | 3 | | 3 | | | 3 | | | 2 | | 2 | 3 | 2 | 3 | | 3 | 2 | 2 | 2 |
| BE-SEM-II | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 46 | C15-409 | Distributed computing system and computer laboratory IX | | |  | 2 | | 2 | | 3 | 2 | | | 3 | | | 2 | | 2 | | 1 | 2 | 2 | 1 | | 3 | 3 | 3 | 2 |
| 47 | C15-410 | Ubiquitous Computing and Computer laboratory X | | |  | 2 | | 2 | | 1 | 2 | | | 1 | | | 2 | | 2 | | 2 | 1 | 1 | 1 | | 0 | 2 | 1 | 1 |
| 48 | C15-411 | Internet of things | | |  | 3 | | 2 | | 2 | 2 | | | 2 | | | -- | | -- | | -- | -- | -- | -- | | 1 | 2 | 3 | 1 |
| 49 | C15-413 | Rural Technologies and Community Development | | |  | 2 | | 2 | | 2 | 2 | | | 3 | | | 2 | | 2 | | 2 | 2 | 3 | - | | 2 | 2 | 2 | 2 |
| 50 | C15-414 | Social media analytics | | |  | 2 | | 2 | | 3 | 3 | | | 3 | | | 3 | | 2 | | 2 | 1 | 2 | -- | | 2 | 2 | 2 | 2 |
| 51 | C15-415 | Project work | | |  | 2 | | 2 | | 3 | 3 | | | 3 | | | 3 | | 2 | | 2 | 3 | 2 | 3 | | 3 | 2 | 2 | 2 |
| Sum of PO-PSO | | | | |  | 111 | | 112 | | 103 | 92 | | | 89 | | | 71 | | 56 | | 60 | 77 | 87 | 36 | | 101 | 80 | 78 | 71 |
| Average of PO-PSO mapping | | | | |  | 2 | | 2 | | 2 | 2 | | | 2 | | | 2 | | 2 | | 2 | 2 | 2 | 2 | | 2 | 2 | 2 | 2 |