

1.2.1. Details of courses introduced across all programmes offered during the year

To facilitate multi-disciplinary and global approach expand, the scope of technical education Choice Based Credit System (CBCS)/Elective Course System has been implemented in curriculum.

The following is the list of the programs provides the details of all programmes including new courses offered during the year of A.Y. 2023-24.

| S.NO | Programme Code | Programme Name | Course Code | Course Name |
|------|----------------|----------------|-------------|---|
| 1 | 1 | CIVIL | 23SH1T03 | Chemistry |
| 2 | 1 | CIVIL | 23SH1T04 | Linear Algebra and Calculus |
| 3 | 3 | MECH | 23ME1T01 | Engineering Graphics |
| 4 | 2 | EEE | 23EE1T01 | Basic Electrical and Electronics Engineering |
| 5 | 5 | IT | 23IT1T01 | Introduction to Programming |
| 6 | 1 | CIVIL | 23SH1L03 | Chemistry Lab |
| 7 | 2 | EEE | 23EE1L01 | Electrical and Electronics Engineering Workshop |
| 8 | 5 | IT | 23IT1L01 | Computer Programming Lab |
| 9 | 5 | IT | 23IT1L02 | IT Workshop |
| 10 | 1 | CIVIL | 23PC1P01 | Health and Wellness, Yoga and Sports |
| 11 | 1 | CIVIL | 23SH2T01 | Communicative English |
| 12 | 2 | EEE | 23EE2T03 | Electrical circuit Analysis-I |
| 13 | 1 | CIVIL | 23SH2T02 | Engineering Physics |
| 14 | 1 | CIVIL | 23SH2T05 | Differential equations and Vector Calculus |
| 15 | 3 | MECH | 20ME2T02 | Basic Civil & Mechanical Engineering |
| 16 | 3 | MECH | 23ME2L01 | Engineering Workshop |
| 17 | 1 | CIVIL | 23SH2L01 | Communicative English Lab |
| 18 | 1 | CIVIL | 23SH2L02 | Engineering Physics Lab |
| 19 | 2 | EEE | 23EE2L03 | Electrical Circuits – I Lab |
| 20 | 1 | CIVIL | 23PC2P01 | NCC / NSS / Scouts & Guides / Community service |
| 21 | 1 | CIVIL | 20CE7T01 | Traffic Engineering & Management |
| 22 | 1 | CIVIL | 20CE7T02 | Construction Management & Cost Analysis |
| 23 | 1 | CIVIL | 20CE7T03 | Foundation Engineering |
| 24 | 1 | CIVIL | 20OE7T01 | MEMS(ECE) |
| 25 | 1 | CIVIL | 20OE7T02 | Optimization techniques (ME) |
| 26 | 1 | CIVIL | 20HSE7T01 | Principles of Economics & Management |



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|----|---|-------|----------|--|
| 27 | 1 | CIVIL | 20CE7S05 | Skill Advanced course- |
| 28 | 1 | CIVIL | 20CE7I02 | Summer Internship |
| 29 | 1 | CIVIL | 20CE7T03 | Foundation Engineering |
| 30 | 1 | CIVIL | 20OE7T01 | Digital Marketing |
| 31 | 1 | CIVIL | 20OE7T02 | Human Resource development and OB |
| 32 | 1 | CIVIL | 20CE8P01 | Project-Project work, seminar and internship in Industry |
| 33 | 2 | EEE | 20EE7E02 | DC Drives(PEC-III) |
| 34 | 2 | EEE | 20EE7E03 | BioMedical Engineering(PEC-III) |
| 35 | 2 | EEE | 20EC7E05 | VLSI System(PEC-III) |
| 36 | 2 | EEE | 20CS7E06 | Computer Networks(PEC-III) |
| 37 | 2 | EEE | 20EE7E04 | Solar and wind Energy Systems (PEC-IV) |
| 38 | 2 | EEE | 20EE7E05 | AC Drives (PEC-IV) |
| 39 | 2 | EEE | 20EE7E06 | Digital control system (PEC-IV) |
| 40 | 2 | EEE | 20EC7E06 | Embedded systems and Applications(PEC-IV) |
| 41 | 2 | EEE | 20IT7E06 | Principles of Software Engineering(PEC-IV) |
| 42 | 2 | EEE | 20EE7E09 | Industrial Automation(PEC-V) |
| 43 | 2 | EEE | 20EC7E07 | Digital Image and Video processing(PEC-V) |
| 44 | 2 | EEE | 20IT7E07 | Big-Data(PEC-V) |
| 45 | 2 | EEE | 20EE8P01 | Project/Internship in Industry |
| 46 | 3 | MECH | 20MEXO01 | Optimization Techniques |
| 47 | 3 | MECH | 20MEXO02 | Robotics |
| 48 | 3 | MECH | 20MEXO03 | Industrial Management Sciences |
| 49 | 3 | MECH | 20MEXO04 | Automation in Manufacturing |
| 50 | 3 | MECH | 20ME7E01 | Finite Element Methods |
| 51 | 3 | MECH | 20ME7E04 | Reliability Engineering |
| 52 | 3 | MECH | 20ME7E05 | Mechanical Vibrations |
| 53 | 3 | MECH | 20ME7E08 | Production Planning Control |
| 54 | 3 | MECH | 20ME8P01 | Major Project work, |
| 55 | 4 | ECE | 20EC7E01 | INFORMATION THEORY AND CODING |
| 56 | 4 | ECE | 20EC7E02 | WIRELESS SENSOR NETWORKS |
| 57 | 4 | ECE | 20EC7E03 | OPTICAL COMMUNICATIONS |
| 58 | 4 | ECE | 20EC7E04 | Radar Engineering |
| 59 | 4 | ECE | 20EC7E05 | SATELLITE COMMUNICATIONS |
| 60 | 4 | ECE | 20EC7E06 | Low Power VLSI Design |
| 61 | 4 | ECE | 20EC7E07 | INTERNET OF THINGS |
| 62 | 4 | ECE | 20EC7E08 | MICRO WAVE ENGINEERING |



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| 63 | 4 | ECE | 20EC7E09 | DIGITAL IMAGE PROCESSING |
| 64 | 4 | ECE | 20EC7E10 | PHOTONIC DEVICES |
| 65 | 4 | ECE | 20EC7E11 | CELLULAR MOBILE COMMUNICATION |
| 66 | 4 | ECE | 20EC7E12 | NANO ELECTRONICS |
| 67 | 4 | ECE | 20EC7M01 | MANAGEMENT SCIENCE |
| 68 | 4 | ECE | 20ECX001 | PRINCIPLES OF COMMUNICATIONS |
| 69 | 4 | ECE | 20ECX002 | DIGITAL IMAGE PROCESSING |
| 70 | 4 | ECE | 20EC6O03 | BIO-MEDICAL ENGINEERING |
| 71 | 4 | ECE | 20EC6O04 | Design of IoT Systems |
| 72 | 4 | ECE | 20ECX005 | MEMS |
| 73 | 4 | ECE | 20ECX006 | MECHATRONICS |
| 74 | 5 | CSE | 20CS7E01 | Professional Elective - III |
| 75 | 5 | CSE | | 1. Mobile Computing |
| 76 | 5 | CSE | | 2. Neural Networks and Soft Computing |
| 77 | 5 | CSE | | 3. Ad-hoc and Sensor Networks |
| 78 | 5 | CSE | | 4. Deep Learning Techniques |
| 79 | 5 | CSE | | 5. Information Retrieval System |
| 80 | 5 | CSE | 20CS7E06 | Professional Elective - IV |
| 81 | 5 | CSE | | 1. Distributed systems |
| 82 | 5 | CSE | | 2. Social Networks & Semantic Web |
| 83 | 5 | CSE | | 3. Computer Vision |
| 84 | 5 | CSE | | 4. MOOCS-NPTEL / SWAYAM |
| 85 | 5 | CSE | | 5. Game Theory |
| 86 | 5 | CSE | 20CS7E11 | Professional Elective - V |
| 87 | 5 | CSE | | 1. Block Chain Technologies |
| 88 | 5 | CSE | | 2. Quantum Computing |
| 89 | 5 | CSE | | 3. Ethical Hacking |
| 90 | 5 | CSE | | 4. MOOCS-NPTEL / SWAYAM |
| 91 | 5 | CSE | | 5. Parallel Algorithms |
| 92 | 5 | CSE | 20ME7O01 | Open Elective-III - Optimization techniques - ME |
| 93 | 5 | CSE | 20EC7O03 | Open Elective-IV - Bio Medical Engineering -ECE |
| 94 | 5 | CSE | 20SH7E04 | Humanities and Social Science Elective - Entrepreneurship Development - MBA |
| 95 | 5 | CSE | 20CS7I01 | Summer Internship (During 3 years) |
| 96 | 5 | CSE | 20CS7S01 | Advanced skill-oriented course - II |
| 97 | 5 | CSE | 20CS8P01 | Major Project Work, Seminar, Internship in industry |
| 98 | 12 | IT | 20IT7E01 | Mobile Computing |
| 99 | 12 | IT | 20IT7E07 | Software Testing Methodologies |



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| 100 | 12 | IT | 20IT7E10 | Block Chain Technologies and Applications |
| 101 | 12 | IT | 20ME7001 | Optimization Techniques |
| 102 | 12 | IT | 20EC7003 | Bio Medical Engineering |
| 103 | 12 | IT | 20SH7E01 | Entrepreneurship Development |
| 104 | 12 | IT | 20IT7S01 | Ethereum |
| 105 | 12 | IT | 20IT7I01 | Summer Internship (During 3 Year) |
| 106 | 12 | IT | 20IT8P01 | Project Work / internship in Industry |
| 107 | 44 | CSD | 20CD7E3X | Natural Language Processing |
| 108 | 44 | CSD | 20CD7E3X | Cryptography and Network Security |
| 109 | 44 | CSD | 20CD7E3X | Image and video processing |
| 110 | 44 | CSD | 20CD7E3X | Information security |
| 111 | 44 | CSD | 20CD7E3X | Block Chain Technologies |
| 112 | 44 | CSD | 20CD7E4X | Artificial Intelligence |
| 113 | 44 | CSD | 20CD7E4X | Cloud Computing |
| 114 | 44 | CSD | 20CD7E4X | Computer Vision |
| 115 | 44 | CSD | 20CD7E4X | Human Computer Interaction |
| 116 | 44 | CSD | 20CD7E5X | Social Network Analysis |
| 117 | 44 | CSD | 20CD7E5X | Recommender Systems |
| 118 | 44 | CSD | 20CD7E5X | Data Visualization |
| 119 | 44 | CSD | 20XX7O3X | Introduction to Internet of things |
| 120 | 44 | CSD | 20XX7O4X | Enterprenuershiop development |
| 121 | 44 | CSD | 20CD7E5X | Text Mining |
| 122 | 44 | CSD | 20SH7T01 | Management Science |
| 123 | 44 | CSD | 20CD7PR01 | Industrial/ Research Internship 2 |
| 124 | 44 | CSD | 20CD7S01 | Soft Skills |
| 125 | 44 | CSD | 20CD8P01 | Major Project Work, Seminar, Internship |
| 126 | 43 | CAI | 20CI7E3X | Professional Elective-III 1.Reinforcement Learning 2.Soft Computing 3. Cryptography and Network Security 4. NOSQL Databases 5. Natural Language Processing |
| 127 | 43 | CAI | 20CI7E4X | Professional Elective-IV 1. Robotic Process Automation 2. Cloud Computing 3. Big Data Analytics 4. Block Chain Technologies 5. Image & Video Analytics |

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| 128 | 43 | CAI | 20CI7E5X | Professional Elective-V 1. Social Network Analysis 2. Recommender Systems 3. Computer vision 4. Mining Massive Data Sets 5. Semantic Web |
| 129 | 43 | CAI | 20XX704X | Open Elective - IV |
| 130 | 43 | CAI | 20SH70XX | Management Science |
| 131 | 43 | CAI | 20CI7S01 | Skill Oriented Course -V |
| 132 | 43 | CAI | Minor | Reinforcement Learning\$ Minor courses through SWAYAM |
| 133 | 43 | CAI | 20CI8P1 | Project work - Phase II |



Principal

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