



VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

**I-VIII SEM SCHEMES FOR UG – EEE
2020-21 ADMITTED BATCH**

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : FIRST SEMESTER (2020 – 2021)

| B.E (EEE) I Semester | | | | | | | | |
|----------------------|---|-----------------------|----------|----------|-----------------------|---------------|------------|-----------|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20HS110EH | English Language and Communication -I | 2 | - | - | 3 | 60 | 40 | 2 |
| U20BS110MA | Engineering Mathematics-I | 3 | - | - | 3 | 60 | 40 | 3 |
| U20BS010CH | Engineering Chemistry | 3 | 1 | - | 3 | 60 | 40 | 4 |
| U20ES120CS | Programming for Problem Solving | 3 | - | - | 3 | 60 | 40 | 3 |
| U20ES010CE | Basic Engineering Mechanics | 3 | - | - | 3 | 60 | 40 | 3 |
| PRACTICALS | | | | | | | | |
| U20HS111EH | English Language and Communication Skills Lab-I | - | - | 2 | 3 | 50 | 30 | 1 |
| U20BS011CH | Chemistry Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20ES121CS | Programming for Problem Solving Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20ES111ME | Engineering Workshop-I | - | - | 2 | 3 | 50 | 30 | 1 |
| TOTAL | | 14 | 1 | 8 | - | 500 | 320 | 19 |
| GRAND TOTAL | | 23 | | | | 820 | | 19 |

Note: 1. One hour is allocated for Library/Sports/Proctorial Interaction
2. Three hours are allocated for PDC/CC/TC/RC

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : FIRST SEMESTER (2020 – 2021)

| B.E (EEE) I Semester | | | | | | | | | |
|--|----------------------------------|-----------------------|---|-----|-----------------------|---------------|-----|---|---------|
| <u>INTERDISCIPLINARY COURSES OFFERED BY EEE TO IT</u> | | | | | | | | | |
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | | Credits |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | | |
| | | L | T | P/D | | SEE | CIE | | |
| THEORY | | | | | | | | | |
| U20ES010EE | Basic Electrical Engineering | 2 | - | - | 3 | 60 | 40 | 2 | |
| PRACTICALS | | | | | | | | | |
| U20ES011EE | Basic Electrical Engineering Lab | - | - | 2 | 3 | 50 | 30 | 1 | |

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : SECOND SEMESTER (2020 – 2021)

| B.E (EEE) II Semester | | | | | | | | |
|-----------------------|--|-----------------------|----------|-----------|-----------------------|---------------|------------|-----------|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20HS210EH | English Language and Communication-II | 2 | - | - | 3 | 60 | 40 | 2 |
| U20BS210MA | Engineering Mathematics-II | 3 | - | - | 3 | 60 | 40 | 3 |
| U20BS210PH | Quantum Mechanics and Material Science | 3 | 1 | - | 3 | 60 | 40 | 4 |
| U20ES210EE | Circuit Theory | 2 | - | - | 3 | 60 | 40 | 2 |
| U20ES030CE | Engineering Drawing | 1 | - | 2 | 3 | 60 | 40 | 2 |
| U20ES210CE | Engineering Mechanics | 3 | - | - | 3 | 60 | 40 | 3 |
| PRACTICALS | | | | | | | | |
| U20HS211EH | English Language and Communication Skills Lab-II | - | - | 2 | 3 | 50 | 30 | 1 |
| U20BS011PH | Applied Physics Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20ES211EE | Electrical Circuits Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20ES221ME | Engineering Workshop - II | - | - | 2 | 3 | 50 | 30 | 1 |
| TOTAL | | 14 | 1 | 10 | - | 560 | 360 | 20 |
| GRAND TOTAL | | 25 | | | | 920 | | 20 |

Note: 1. One hour is allocated for Library/Sports/Proctorial Interaction
2. Two hours are allocated for PDC/CC/TC/RC

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : SECOND SEMESTER (2020 – 2021)

| B.E (EEE) II Semester | | | | | | | | |
|--|----------------------------------|-----------------------|---|-----|-----------------------|---------------|-----|---------|
| INTTERDISCIPLINARY COURSES OFFERED BY EEE TO CSE, ECE | | | | | | | | |
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20ES010EE | Basic Electrical Engineering | 2 | - | - | 3 | 60 | 40 | 2 |
| LABORATORY | | | | | | | | |
| U20ES011EE | Basic Electrical Engineering Lab | - | - | 2 | 3 | 50 | 30 | 1 |

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)

B.E. – EEE : THIRD SEMESTER (2021 – 2022)

| B.E (EEE) III Semester | | | | | | | | |
|------------------------|---|-----------------------|-----------|-----------|-----------------------|---------------|------------|-----------|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20HS330EH | Skill Development Course-I (Communications Skills-I) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20BS330MA | Skill Development Course-II (Aptitude-I) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20BS310MA | Partial Differential Equations and Transform Calculus | 3 | - | - | 3 | 60 | 40 | 3 |
| U20ES310EC | Electronics Engineering - I | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC310EE | Electrical Network Analysis | 2 | 1 | - | 3 | 60 | 40 | 3 |
| U20PC320EE | Electromagnetic Field Theory | 3 | 1 | - | 3 | 60 | 40 | 4 |
| U20OE3XXXX | Open Elective-I | 2 | - | - | 3 | 60 | 40 | 2 |
| U20MC310ME | Introduction to Entrepreneurship | 1 | - | - | 2 | 40 | 30 | 0 |
| PRACTICALS | | | | | | | | |
| U20ES311EC | Electronics Engineering – I Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PC311EE | Electrical Network Analysis Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| TOTAL | | 16 | 02 | 04 | | 500 | 330 | 19 |
| GRAND TOTAL | | 22 | | | | 830 | | 19 |

Student should acquire one online course certification equivalent to two credits during III Sem to VII sem.

Note: 1. Two hours are allocated for Library/Sports/Proctorial Interaction

2. Two hours are allocated for CCA-I

3. Two hours are allocated for ECA-I

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : THIRD SEMESTER (2021 – 2022)

| B.E (EEE) III Semester | | | | | | | | | |
|---|--|-----------------------|---|-----|-----------------------|---------------|-----|---------|--|
| <u>INTERDISCIPLINARY COURSES OFFERED BY EEE TO Civil</u> | | | | | | | | | |
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | Credits | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | | |
| | | L | T | P/D | | SEE | CIE | | |
| THEORY | | | | | | | | | |
| U20ES310EE | Basic Electrical Engineering for Civil Engineers | 2 | - | - | 3 | 60 | 40 | 2 | |
| PRACTICALS | | | | | | | | | |
| U20ES311EE | Basic Electrical Engineering for Civil Engineers Lab | - | - | 2 | 3 | 50 | 30 | 1 | |

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : FOURTH SEMESTER (2021 – 2022)

| B.E (EEE) IV Semester | | | | | | | | |
|--|--|-----------------------|-----------|-----------|-----------------------|---------------|------------|-----------|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20BS430MA | Skill Development Course-III (Aptitude-II) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20PE430EE | Skill Development Course-IV (Technical Skills-I) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20HS010EH | Human Values and Professional Ethics -I | 1 | - | - | 2 | 40 | 30 | 1 |
| U20BS410MA | Numerical methods, Probability and Statistics | 3 | - | - | 3 | 60 | 40 | 3 |
| U20ES410EC | Electronics Engineering-II | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC410EE | Digital Electronics | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC420EE | Electrical Measurements & Instrumentation | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC430EE | Electrical machines - I | 2 | 1 | - | 3 | 60 | 40 | 3 |
| U20OE4XXXX | Open Elective-II | 3 | - | - | 3 | 60 | 40 | 3 |
| PRACTICALS | | | | | | | | |
| U20ES411EC | Electronics Engineering Lab-II | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PC421EE | Electrical Measurements and Instrumentation Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PC431EE | Electrical Machines - I Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| TOTAL | | 20 | 01 | 06 | - | 630 | 420 | - |
| GRAND TOTAL | | 27 | | | | 1050 | | 24 |
| Student should acquire one online course certification equivalent to two credits during III Sem to VII sem. | | | | | | | | |

- Note: 1. One hour is allocated for Library/Sports/Proctorial Interaction**
2. Two hours are allocated for CCA-II
3. Two hours are allocated for CC/TC/RC

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : FOURTH SEMESTER (2021 – 2022)

| B.E (EEE) IV Semester | | | | | | | | | |
|---|--|-----------------------|---|-----|-----------------------|---------------|-----|---------|--|
| INTERDISCIPLINARY COURSES OFFERED BY EEE TO MECH | | | | | | | | | |
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits | |
| | | L | T | P/D | | SEE | CIE | | |
| THEORY | | | | | | | | | |
| U20ES410EE | Basic Electrical and Electronics Engineering | 2 | - | - | 3 | 60 | 40 | 2 | |
| PRACTICALS | | | | | | | | | |
| U20ES411EE | Basic Electrical and Electronics Engineering Lab | - | - | 2 | 3 | 50 | 30 | 1 | |

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)

B.E. – EEE : FIFTH SEMESTER (2022 – 2023)

B.E (EEE) V Semester

| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | Credits |
|--|--|-----------------------|----------|----------|-----------------------|---------------|------------|-----------|
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20HS510EH | Skill Development Course-V (Communication Skills-II) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20PE510EE | Skill Development Course-VI (Technical Skills-II) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20PC510EE | Power Systems - I | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC520EE | Microprocessors & Microcontrollers Applications | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC530EE | Linear Integrated Circuits and Applications | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC540EE | Electrical Machines-II | 3 | 1 | - | 3 | 60 | 40 | 4 |
| U20OE5XXXX | Open Elective -III | 3 | - | - | 3 | 60 | 40 | 3 |
| U20MC010CE | Environmental Science | 2 | - | - | 3 | 60 | 40 | - |
| PRACTICALS | | | | | | | | |
| U20PC521EE | Microprocessors & Microcontrollers Applications Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PC531EE | Linear Integrated Circuits and Digital Electronics Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PC541EE | Electrical Machines Lab-II | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PW519EE | Mini Project | | | 2 | - | - | 30 | 1 |
| TOTAL | | 19 | 1 | 8 | | 590 | 420 | 22 |
| GRAND TOTAL | | 28 | | | - | 1010 | | 22 |
| Student should acquire one online course certification equivalent to two credits during III Sem to VII sem. | | | | | | | | |

- Note: 1. One hour is allocated for Library/Sports/Proctorial Interaction**
2. Two hours are allocated for CCA-III
3. Two hours are allocated for ECA-II

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)

B.E. – EEE : SIXTH SEMESTER (2022 – 2023)

| B.E (EEE) VI Semester | | | | | | | | |
|--|--|------------------------------|----------|------------|------------------------------|----------------------|------------|----------------|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits |
| | | L | T | P/D | | SEE | CIE | |
| THEORY | | | | | | | | |
| U20BS610MA | Skill Development Course-VII (Aptitude-III) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20PE610EE | Skill Development Course-VIII (Technical Skills-III) | 1 | - | - | 2 | 40 | 30 | 1 |
| U20HS040EH | Economics and finance for Engineers | 2 | - | - | 3 | 60 | 40 | 2 |
| U20HS020EH | Human Values and Professional Ethics II | 1 | - | - | 2 | 40 | 30 | 1 |
| U20PC610EE | Power Systems - II | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC620EE | Power Electronics | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC630EE | Linear Control Systems | 3 | - | - | 3 | 60 | 40 | 3 |
| U20PC640EE | Signals & Systems | 3 | - | - | 3 | 60 | 40 | 3 |
| U20OE6XXXX | Open Elective -IV | 3 | - | - | 3 | 60 | 40 | 3 |
| PRACTICALS | | | | | | | | |
| U20PC621EE | Power Electronics and Simulation Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PC631EE | Control Systems and Simulation Lab | - | - | 2 | 3 | 50 | 30 | 1 |
| U20PW619EE | Theme Based Project | - | - | 2 | - | - | 30 | 1 |
| TOTAL | | 20 | 0 | 6 | | 580 | 420 | 23 |
| GRAND TOTAL | | 26 | | | | 1000 | | 23 |
| Student should acquire one online course certification equivalent to two credits during III Sem to VII sem. | | | | | | | | |

- Note: 1. One hour is allocated for Library/Sports/Proctorial Interaction**
2. Four hours are allocated for CCA-IV

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : SEVENTH SEMESTER (2023 – 2024)

| B.E (EEE) VII Semester | | | | | | | | | |
|--|-------------------------------|-----------------------|-----------|----------|-----------------------|---------------|------------|-----------|--|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits | |
| | | L | T | P/D | | SEE | CIE | | |
| THEORY | | | | | | | | | |
| U20PC710EE | Switchgear and Protection | 3 | - | - | 3 | 60 | 40 | 3 | |
| U20PC720EE | Digital Signal Processing | 3 | - | - | 3 | 60 | 40 | 3 | |
| U20PE7XXEE | Professional Elective -I | 3 | - | - | 3 | 60 | 40 | 3 | |
| U20PE7XXEE | Professional Elective -II | 3 | - | - | 3 | 60 | 40 | 3 | |
| U20PE7XXEE | Professional Elective –III | 3 | - | - | 3 | 60 | 40 | 3 | |
| U20PE7XXEE | Professional Elective –IV | 3 | - | - | 3 | 60 | 40 | 3 | |
| PRACTICALS | | | | | | | | | |
| U20PC711EE | Power Systems Lab | - | - | 2 | 3 | 50 | 30 | 1 | |
| U20PC721EE | Digital Signal Processing Lab | - | - | 2 | 3 | 50 | 30 | 1 | |
| U20PW719EE | Project Seminar | - | - | 2 | - | - | 30 | 1 | |
| TOTAL | | 18 | 00 | 6 | | 460 | 330 | 21 | |
| GRAND TOTAL | | 24 | | | | 790 | 21 | | |
| Student should acquire one online course certification equivalent to two credits during III Sem to VII sem. | | | | | | | | | |

VASAVI COLLEGE OF ENGINEERING (AUTONOMOUS)
SCHEME OF INSTRUCTION AND EXAMINATION (R-20)
B.E. – EEE : EIGHTH SEMESTER (2023 – 2024)

| B.E (EEE) VIII Semester | | | | | | | | | |
|-------------------------|---------------------------|-----------------------|-----------|-----------|-----------------------|---------------|------------|-----------|--|
| Course Code | Name of the Course | Scheme of Instruction | | | Scheme of Examination | | | | |
| | | Hours per Week | | | Duration in Hrs | Maximum Marks | | Credits | |
| | | L | T | P/D | | SEE | CIE | | |
| THEORY | | | | | | | | | |
| U20PE8XXEE | Professional Elective –V | 3 | - | - | 3 | 60 | 40 | 3 | |
| U20PE8XXEE | Professional Elective –VI | 3 | - | - | 3 | 60 | 40 | 3 | |
| PRACTICALS | | | | | | | | | |
| U20PW819EE | Project / Internship | - | - | 12 | VIVA- VOCE | 50 | 50 | 6 | |
| TOTAL | | 6 | - | 12 | | 170 | 130 | 12 | |
| GRAND TOTAL | | | 18 | | | 300 | | 12 | |

| Total Credits | Actual |
|--|---------------|
| 1st Semester | 19 |
| 2nd Semester | 20 |
| 3rd Semester | 19 |
| 4th Semester | 24 |
| 5th Semester | 22 |
| 6th Semester | 23 |
| 7th Semester | 21 |
| 8th Semester | 12 |
| Online NPTEL certification course 8 weeks/ 12 weeks | 02 |
| Total credits | 162 |

| S.No | Power Systems | Power Electronics | Industrial Control Systems |
|-------------|---|---|---|
| 1 | High Voltage DC Transmission | Electrical Drives and Static Control | Mathematical Methods in control Systems |
| 2 | Power System Operation and Control | Wind and Solar Energy Systems | Advanced control systems |
| 3 | Distributed Generation | Electric and Hybrid Vehicles | Industrial IOT |
| 4 | Electrical Machine Design | Power Quality | Programmable logic Controllers & Applications |
| 5 | AI applications to Power Systems | Switched mode Power conversion | SCADA system and application |
| 6 | Electrical Power Distribution Engineering | Advanced Modulation techniques for Power Converters | Smart Grid |

OPEN ELECTIVES OFFERED TO EEE DEPARTMENT

| | III- Semester (2 Credits) | IV- Semester (3 Credits) | V- Semester (3 Credits) | VI- Semester (3 Credits) |
|-------------------|--|--|--|---|
| ECE | Basics of Communication Engineering | Programming for Engineers | Sensors for Engineering Applications | INTERNET OF THINGS |
| CIVIL | Green Buildings | Disaster Management | Spatial Information technology (GIS/Remote Sensing / GPS) | Project Management |
| MECHANICAL | Geometric Modelling | Optimization Methods | Introduction to Robotics and Applications <i>Introduction to Automobile Engineering</i> | Additive Manufacturing and its applications |
| IT | Introduction to Data Structures <i>Introduction to Linux</i> | Introduction to object oriented Programming <i>Introduction to scripting languages</i> | Introduction to Database Management Systems <i>Introduction to statistical programming</i> | Introduction to Web Application development <i>Introduction to Machine Learning</i> |
| CSE | Introduction to Python Programming | Data Structures | Introduction to Java Programming | Introduction to DBMS |
| PHYSICS | Smart Materials and Applications | Introduction to Opto Electronic Devices <i>Thin film technology and applications</i> | Vaccum technology and Applications | Fundamentals of nano materials and Applications |
| CHEMISTRY | Battery Science and Technology <i>Corrosion Science and its Applications</i> | - | - | - |
| MATHS | Basics of Cryptology | Linear Algebra and Applications | Discrete Mathematics | - |
| HSS | - | Basics of Entrepreneurship | Advances in Entrepreneurship | Technical Writing and Professional Presentation |
| | - | - | Technical Writing and Professional Presentation | English for competitive Exams |

OPEN ELECTIVES OFFERED BY EEE DEPARTMENT

| B.E. III SEMESTER | | | | |
|--------------------------|-----------------|-------------------|---|----------------|
| S.No. | Elective | Code | Title | credits |
| 1 | OE - I | U20OE310EE | Non Conventional Energy Sources | 2 |
| B.E. V SEMESTER | | | | |
| 1 | OE – III | U20OE510EE | Solar Power and applications | 3 |
| B.E. VI SEMESTER | | | | |
| 1 | OE – IV | U20OE610EE | Electrical Installation and Safety | 3 |

Proposed Open Elective Streams for EEE Students

| S. No. | Open Elective Streams | Course Code | Open Electives Titles | No. of Credits | Semester |
|---------------|------------------------------|--------------------|---|-----------------------|-----------------|
| 1 | Basic Sciences (Maths) | U19OE310MA | Basics of Cryptology | 2 | III |
| | | U19OE410MA | Linear Algebra & Applications | 3 | IV |
| | | U19OE520MA | Discrete Mathematics | 3 | V |
| 2 | Basic Sciences (Physics) | U19OE310PH | Smart Materials and Applications | 2 | III |
| | | U19OE410PH | Introduction to Opto Electronic Devices | 3 | IV |
| | | U19OE420PH | Thin Film Technology and Applications | 3 | IV |
| | | U19OE510PH | Vacuum Technology & Applications | 3 | V |
| | | U19OE610PH | Fundamentals of Nano materials and Applications | 3 | VI |
| 3 | Basic Sciences (Chemistry) | U19OE300CH | Battery Science and Technology | 2 | III |
| | | U19OE310CH | Corrosion Science and its Applications | 2 | III |
| 4 | H&SS (English) | U19OE410EH | Basics of Entrepreneurship | 3 | IV |
| | | U19OE510EH | Advances in Entrepreneurship | 3 | V |
| | | U19OE010EH | Technical Writing and Professional Presentation | 3 | V |
| | | U19OE610EH | English for Competitive Exams | 3 | VI |
| | | U19OE010EH | Technical Writing and Professional Presentation | 3 | VI |
| 5 | Civil Engg. Stream | U19OE310CE | Green Buildings | 2 | III |
| | | U19OE410CE | Disaster Management | 3 | IV |
| | | U19OE510CE | Spatial Information Technologies (GIS/Remote Sensing/GPS) | 3 | V |
| | | U19OE610CE | Project Management | 3 | VI |
| 6 | CSE Stream | U19OE310CS | Introduction to Python Programming | 2 | III |
| | | U19OE410CS | Introduction to Data Structures | 3 | IV |
| | | U19OE510CS | Introduction to Java Programming | 3 | V |
| | | U19OE610CS | Introduction to Databases | 3 | VI |
| | | U19OE620CS | Introduction to Web Technologies | 3 | VI |
| 7 | IT Stream | U19OE310IT | Introduction to Data Structures | 2 | III |
| | | U19OE320IT | <i>Introduction to Linux</i> | 2 | III |
| | | U19OE410IT | Introduction to Object Oriented Programming | 3 | IV |
| | | U19OE420IT | <i>Introduction to Scripting Languages</i> | 3 | IV |

Proposed Open Elective Streams for EEE Students

| S. No. | Open Elective Streams | Course Code | Open Electives Titles | No. of Credits | Semester |
|---------------|------------------------------|--------------------|--|-----------------------|-----------------|
| 8 | ECE Stream | U19OE320EC | Basics of Communication Engineering | 2 | III |
| | | U19OE410EC | Mathematical Programming for Engineers | 3 | IV |
| | | U19OE510EC | Sensors for Engineering Applications | 3 | V |
| | | U19OE610EC | Internet of Things | 3 | VI |
| 9 | Mech. Engg. Stream | U19OE310ME | Geometrical Modelling | 2 | III |
| | | U19OE410ME | Optimization Methods for Engineers | 3 | IV |
| | | U19OE510ME | <i>Introduction to Robotics and Applications</i> | 3 | V |
| | | U19OE520ME | Introduction to Automobile Engineering | 3 | V |
| | | U19OE610ME | Additive Manufacturing and Applications | 3 | VI |

T H A N K Y O U