## VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

## B.E. in Electrical & Electronics Engineering Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023-24)

|           |             |                |  | Teaching<br>Department (TD)<br>and Question<br>Paper Setting<br>Board (PSB) | Teaching Hours /Week        |          |                       |     | Examination          |           |           |             |         |
|-----------|-------------|----------------|--|---|-----------------------------|----------|-----------------------|-----|----------------------|-----------|-----------|-------------|---------|
| SI.<br>No | Course      | Course<br>Code |  |   | Theory<br>Lecture           | Tutorial | Practical/<br>Drawing | SDA | Duration in<br>hours | CIE Marks | SEE Marks | Total Marks | Credits |
|           |             |                |  |   |                             |          | P                     | S   | 1                    |           |           |             |         |
| 1         | PCC         | BEE301         | Engineering Mathematics for EEE                              | Maths   | 3                           | 0        | 0                     |     | 03                   | 50        | 50        | 100         | 3       |
| 2         | IPCC        | BEE302         | Electric Circuit Analysis                                    | EEE   | 3                           | 0        | 2                     |     | 03                   | 50        | 50        | 100         | 4       |
| 3         | IPCC        | BEE303         | Analog Electronic Circuits                                   | EEE   | 3                           | 0        | 2                     |     | 03                   | 50        | 50        | 100         | 4       |
| 4         | PCC         | BEE304         | Transformers and Generators                                  | EEE   | 3                           | 0        | 0                     |     | 03                   | 50        | 50        | 100         | 3       |
| 5         | PCCL        | BEEL305        | Transformers and Generators lab                              | EEE   | 0                           | 0        | 2                     |     | 03                   | 50        | 50        | 100         | 1       |
| 6         | ESC         | BEE306x        | ESC/ETC/PLC  | EEE   | 3                           | 0        | 0                     |     | 03                   | 50        | 50        | 100         | 3       |
| 7         | UHV         | BSCK307        | Social Connect and Responsibility                            | Any Department  | 0                           | 0        | 2                     |     | 01                   | 100       |           | 100         | 1       |
|           | AEC/<br>SEC | BEE358x        | Ability Enhancement Course/Skill<br>Enhancement Course - III | EEE   | If the course is a Theory   |          |                       | 01  |                      |           |           |             |         |
| 8         |             |                |  |   | 1                           | 0 0      |                       |     | U1                   | 50        | 50        | 100         | 1       |
| O         |             |                |  |   | If a course is a laboratory |          |                       | 02  | 30                   | 30        | 100       | -           |         |
|           |             |                |  |   | 0                           | 0        | 2                     |     | 02                   |           |           |             |         |
| 9         |             | BNSK359        | National Service Scheme (NSS)                                | NSS coordinator   |                             |          |                       |     |                      |           |           |             |         |
|           | МС          | BPEK359        | Physical Education (PE) (Sports and Athletics)               | Physical Education Director   | 0                           | 0        | 2                     |     |                      | 100       |           | 100         | 0       |
|           |             | BYOK359        | Yoga   | Yoga Teacher  |                             |          |                       |     |                      |           |           |             |         |
|           |             |                |  |   |                             | •        |                       |     | Total                | 550       | 350       | 900         | 20      |

**PCC**: Professional Core Course, **PCCL**: Professional Core Course laboratory, **UHV**: Universal Human Value Course, **MC**: Mandatory Course (Non-credit), **AEC**: Ability Enhancement Course, **SEC**: Skill Enhancement Course, **L**: Lecture, **T**: Tutorial, **P**: Practical **S=SDA**: Skill Development Activity, **CIE**: Continuous Internal Evaluation, **SEE**: Semester End Evaluation. K: This letter in the course code indicates common to all the stream of engineering. ESC: Engineering Science Course, ETC: Emerging Technology Course, PLC: Programming Language Course

III CENAECTED

| Engineering Science Course (ESC/ETC/PLC) |  |          |                                |  |  |  |  |  |
|--|--|----------|--------------------------------|--|--|--|--|--|
| BEE306A                                  | Digital Logic Circuits                         | BEE306C  | Electromagnetic Field Theory   |  |  |  |  |  |
| BEE306B                                  | Electrical Measurements and Instrumentation    | BEE306D  | Physics of Electronic Devices  |  |  |  |  |  |
| Ability Enhancement Course – III         |  |          |                                |  |  |  |  |  |
| BEEL358A                                 | SCI LAB/MATLAB for Transformers and Generators | BEEL358B | 555 IC Laboratory              |  |  |  |  |  |
| BEEL358C                                 | Circuit Laboratory using P Spice               | BEEL358D | Electrical Hardware Laboratory |  |  |  |  |  |

Professional Core Course (IPCC): Refers to Professional Core Course Theory Integrated with practicals of the same course. Credit for IPCC can be 04 and its Teaching–Learning hours (L:T:P) can be considered as (3:0:2) or (2:2:2). The theory part of the IPCC shall be evaluated both by CIE and SEE. The practical part shall be evaluated by only CIE (no SEE). However, questions from the practical part of IPCC shall be included in the SEE question paper. For more details, the regulation governing the Degree of Bachelor of Engineering /Technology (B.E./B.Tech.) 2022-23 may please be referred.

National Service Scheme /Physical Education/Yoga: All students have to register for any one of the courses namely National Service Scheme (NSS), Physical Education (PE)(Sports and Athletics), and Yoga(YOG) with the concerned coordinator of the course during the first week of III semesters. Activities shall be carried out between III semester to the VI semester (for 4 semesters). Successful completion of the registered course and requisite CIE score is mandatory for the award of the degree. The events shall be appropriately scheduled by the colleges and the same shall be reflected in the calendar prepared for the NSS, PE, and Yoga activities. These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the course is mandatory for the award of degree.

## VARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

## B.E. in Electrical & Electronics Engineering Scheme of Teaching and Examinations2022

Outcome Based Education (OBE) and Choice Based Credit System (CBCS) (Effective from the academic year 2023-24)

| IV SEIV   | SEMESTER Teaching Hours / Week |                    |   |   |  |          |                                   | k  | Examination          |           |           |             |         |     |   |
|-----------|--------------------------------|--------------------|---|---|--|----------|-----------------------------------|----|----------------------|-----------|-----------|-------------|---------|-----|---|
| SI.<br>No | Course and<br>Course Code      |                    | Course Title  | Teaching Department (TD) and Question Paper Setting Board (PSB) | Theory Lecture   | Tutorial | Tutorial<br>Practical/<br>Drawing |    | Duration in<br>hours | CIE Marks | SEE Marks | Total Marks | Credits |     |   |
|           |                                |                    |   | ۵   |  | Т        | Р                                 |    |                      |           |           |             |         |     |   |
| 1         | PCC                            | BEE401             | Electric Motors   | EEE   | 3  | 0        | 0                                 |    | 03                   | 50        | 50        | 100         | 3       |     |   |
| 2         | PCC                            | BEE402             | Transmission and Distribution   | EEE   | 4  | 0        | 0                                 |    | 03                   | 50        | 50        | 100         | 4       |     |   |
| 3         | IPCC                           | BEE403             | Microcontrollers  | EEE   | 3  | 0        | 2                                 |    | 03                   | 50        | 50        | 100         | 4       |     |   |
| 4         | PCCL                           | BEEL404            | Electric Motors lab   | EEE   | 0  | 0        | 2                                 |    | 03                   | 50        | 50        | 100         | 1       |     |   |
| 5         | ESC                            | BEE405x            | ESC/ETC/PLC   | EEE   | 3  | 0        | 0                                 |    | 03                   | 50        | 50        | 100         | 3       |     |   |
| 6         | AEC/<br>SEC                    | BEE456x            | Ability Enhancement Course/Skill<br>Enhancement Course- IV                    | EEE   | If the course is Theory  1 0 0  If the course is a lab |          | ,                                 | 01 | 50 50                | 100       | 1         |             |         |     |   |
|           |                                |                    |   |   | 0  | 0        | 2                                 |    | 02                   |           |           |             |         |     |   |
| 7         | BSC                            | BBOK407            | Biology For Engineers   | TD / PSB: BT,<br>CHE,   | 3  | 0        | 0                                 |    | 03                   | 50        | 50        | 100         | 3       |     |   |
| 8         | UHV                            | BUHK408            | Universal human values course   | Any Department  | 1  | 0        | 0                                 |    | 01                   | 50        | 50        | 100         | 1       |     |   |
| 9         | MC                             | BNSK459<br>BPEK459 | National Service Scheme (NSS)  Physical Education (PE) (Sports and Athletics) | NSS coordinator Physical Education Director                     | 0  | 0 0      | 0                                 | 0  | 2                    |           |           | 100         |         | 100 | 0 |
|           |                                | ВУОК459            | Yoga  | Yoga Teacher  |  |          |                                   |    | Total                | 500       | 400       | 900         | 20      |     |   |

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| Ability Enhancement Course / Skill Enhancement Course - IV |   |          |   |  |  |  |  |  |  |
|--|---|----------|---|--|--|--|--|--|--|
| BEEL456A   | Basics of VHDL Lab                        | BEEL456B | Sci Lab / MATLAB for Electrical and Electronic Measurements |  |  |  |  |  |  |
| BEEL456C   | PCB Design Laboratory                     | BEEL456D | Aurdino & Rasberry PI Based Projects                        |  |  |  |  |  |  |
| Engineering Science Course (ESC/ETC/PLC)                   |   |          |   |  |  |  |  |  |  |
| BEE405A  | Electrical Power Generation and Economics | BEE405C  | Engineering Materials                                       |  |  |  |  |  |  |
| BEE405B  | Op-Amp and LIC                            | BEE405D  | Object Oriented Programming                                 |  |  |  |  |  |  |

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