Visvesvaraya Technological University, Belagavi
**Scheme of Teaching and Examinations-2022**
Outcome-Based Education (OBE)and Choice Based Credit System(CBCS)
(Effective from the academic year 2022-23)

**I Semester (CSE Stream)** **(Physics Group)**

| Sl. No | Course and course code | | Course titlee | TD/PSB | Teaching Hours/Week | | | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | SDA | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | S | | | | | |
| 1 | *ASC(IC) | **22MATS11 | Mathematics for CSE Stream-I | Maths | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 2 | #ASC(IC) | 22PHYS12 | Physics for CSE stream | Physics | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 3 | ESC | 22POP13 | Principles of Programming Using C | CSE | 2 | 0 | 2 | 0 | 03 | 50 | 50 | 100 | 03 |
| 4 | ESC-I | 22ESC14x | Engineering Science Course-I | Respective Engg Dept | 3 | 0 | 0 | 0 | 03 | 50 | 50 | 100 | 03 |
| 5 | ETC-I | 22ETC15x | Emerging Technology Course-I | Any Dept | 3 | 0 | 0 | 0 | 03 | 50 | 50 | 100 | 03 |
| | OR | | | | | | | | | | | | |
| | PLC-I | 22PLC15x | Programming Languages Course-I | | 2 | 0 | 2 | 0 | 03 | | | | |
| 6 | AEC | 22ENG16 | Communicative English | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| 7 | HSMC | 22KSK17<br>22KBK17 | Samskrutika Kannada/ Balake Kannada | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | | OR | | | | | | | | | | |
| | | 20ICO17 | Indian Constitution | | | | | | | | | | |
| 8 | AEC/SDC | 22IDT18 | Innovation and Design Thinking | Any Dept | 1 | 0 | 0 | 0 | 02 | 50 | 50 | 100 | 01 |
| | | | OR | | | | | | | | | | |
| | | 22SFH18 | Scientific Foundations of Health | | 1 | 0 | 0 | 0 | 01 | | | | |
| **TOTAL** | | | | | | | | | | **400** | **400** | **800** | **20** |

**SDA**-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**-Emerging Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and management Course, **SDC**- Skill Development Course, **CIE**–Continuous Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

| | |
|---|---|
| **Credit Definition:**<br>1-hour Lecture **(L)** per week=**1Credit**<br>2-hoursTutorial**(T)** per week=**1Credit**<br>2-hours Practical / Drawing (**P**) per week=**1Credit**<br>**2-**hous Skill Development Actives **(SDA)** per week = **1 Credit** | 04-Credits courses are to be designed for 50 hours of Teaching-Learning Session<br>04-Credits (IC) are to be designed for 40 hours' theory and 12-14 hours of practical sessions<br>03-Credits courses are to be designed for 40 hours of Teaching-Learning Session<br>02- Credits courses are to be designed for 25 hours of Teaching-Learning Session<br>01-Credit courses are to be designed for 12-15 hours of Teaching-Learning sessions |
| **Student's Induction Program:** Motivating (Inspiring) Activities under the Induction program – The main aim of the induction program is to provide newly admitted students a broad understanding of society, relationships, and values. Along with the knowledge and skill of his/her study, students' character needs to be nurtured as an essential quality by which he/she would understand and fulfill the responsibility as an engineer. The following activities are to be covered in 21 days. Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local areas, Familiarization with Department/Branch and Innovation, etc. For details, refer the ANNEXURE-I of Induction Programs notification of the University published at the beginning of the 1st semester. | |
| **AICTE Activity Points** to be earned by students admitted to BE/ B.Tech., / B. Plan day college program (For more details refer to Chapter 6, AICTE Activity Point Program, Model Internship Guidelines): Over and above the academic grades, every regular student admitted to the 4 years Degree program and every student entering 4 years Degree programs through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Program. Students transferred from other Universities to the fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, any time during the semester weekends, and holidays, as per the liking and convenience of the student from the year of entry to the program. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) do not affect SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, an Eighth Semester Grade Card shall be issued only after earning the required activity points. Students shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card. | |
| ***-22MATS11** Shall have the 03 hours of theory examination (SEE), however, practical sessions question shall be included in the theory question papers. ** **The mathematics subject should be taught by a single faculty member per division, with no sharing of the course(subject)module-wise by different faculty members.**<br>**#-22PHYS12** SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination<br>**ESC or ETC of 03 credits Courses** shall have only a theory component (L:T :P:S=3:0:0:0) or **if the nature then, of course, required practical learning syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0 ).**<br>**All 01 Credit-** courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ | |

| (ESC-I) Engineering Science Courses-I | | | | | (ETC-I ) Emerging Technology Courses-I | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Code** | **Title** | **L** | **T** | **P** | **Code** | **Title** | **L** | **T** | **P** |
| 22ESC141 | Introduction to Civil Engineering | 3 | 0 | 0 | 22ETC15A | Smart Materials and Systems | 3 | 0 | 0 |
| 22ESC142 | Introduction to Electrical Engineering | 3 | 0 | 0 | 22ETC15B | Green Buildings | 3 | 0 | 0 |
| 22ESC143 | Introduction to Electronics Engineering | 3 | 0 | 0 | 22ETC15C | Introduction to Nano Technology | 3 | 0 | 0 |
| 22ESC144 | Introduction to Mechanical Engineering | 3 | 0 | 0 | 22ETC15D | Introduction to Sustainable Engineering | 3 | 0 | 0 |
| 22ESC145 | Introduction to C Programming | 2 | 0 | 2 | 22ETC15E | Renewable Energy Sources | 3 | 0 | 0 |
| | | | | | 22ETC15F | Waste Management | 3 | 0 | 0 |
| | | | | | 22ETC15G | Emerging Applications of Biosensors | 3 | 0 | 0 |
| | | | | | 22ETC15H | Introduction to Internet of Things (IOT) | 3 | 0 | 0 |
| | | | | | 22ETC15I | Introduction to Cyber Security | 3 | 0 | 0 |
| | | | | | | | | | |
| **(PLC-I) Programming Language Courses-I** | | | | | | | | | |
| **Code** | **Title** | **L** | **T** | **P** | | | | | |
| 22PLC15A | Introduction to Web Programming | 2 | 0 | 2 | | | | | |
| 22PLC15B | Introduction to Python Programming | 2 | 0 | 2 | | | | | |
| 22PLC15C | Basics of JAVA programming | 2 | 0 | 2 | | | | | |
| 22PLC15D | Introduction to C++ Programming | 2 | 0 | 2 | | | | | |
| **The course 22ESC145/245, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by ANY DEPARTMENT** | | | | | | | | | |

- The student has to select one course from the ESC-I group.
- CSE/ISE and allied branches Students shall opt for any one of the courses from the ESC-I group **except, 22ESC145-Introduction to C Programming**
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-I or PLC-I group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

Visvesvaraya Technological University, Belagavi
**Scheme of Teaching and Examinations-2022**
Outcome-Based Education (OBE)and Choice Based Credit System(CBCS)
(Effective from the academic year 2022-23)

**II Semester (CSE Stream)** **(For students attended 1st semester under Physics Group)**

| Sl. No | Course and Course Code | | Course Title | TD/PSB | Teaching Hours/Week | | | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | SDA | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | S | | | | | |
| 1 | *ASC(IC) | **22MATS21 | Mathematics for CSE Stream-II | Maths | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 2 | #ASC(IC) | 22CHES22 | Chemistry for CSE Stream | Chemistry | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 3 | ESC | 22CED23 | Computer-Aided Engineering Drawing | Civil/Mech Engg dept | 2 | 0 | 2 | 0 | 03 | 50 | 50 | 100 | 03 |
| 4 | ESC-II | 22ESC24x | Engineering Science Course-II | Respective Engg. Dept | 3 | 0 | 0 | 0 | 03 | 50 | 50 | 100 | 03 |
| 5 | PLC-II | 22ETC25x | Programming Language Course-II | Any Dept | 2 | 00 | 2 | 0 | 03 | 50 | 50 | 100 | 03 |
| | OR | | | | | | | | | | | | |
| | ETC-II | 2PLC25x | Emerging Technology Course-II | | 3 | 0 | 0 | 0 | 03 | | | | |
| 6 | AEC | 22PWS26 | Professional Writing Skills in English | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| 7 | HSMS | 22ICO27 | Indian Constitution | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | OR | | | | | | | | | | | |
| | | 22KSK27/ 22KBK27 | Samskrutika Kannada/ Balake Kannada | | 1 | 0 | 0 | 0 | | | | | |
| 8 | HSMS | 22SFH28 | Scientific Foundations of Health | Any Dept | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | | OR | | | | | | | | | | |
| | | 22IDT28 | Innovation and Design Thinking | | 1 | 0 | 0 | 0 | 01 | | | | |
| | | | | **TOTAL** | | | | | | **400** | **400** | **800** | **20** |

**SDA**-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**- Emerging Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and management Course, **SDC**- Skill Development Course, **CIE**–Continuous

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

| Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course) |
|---|
| ***-22MATS21** Shall have the 03 hours of theory examination(SEE), however, practical sessions question shall be included in the theory question papers. **** **The mathematics subject should be taught by a single faculty member per division, with no sharing of the course(subject)module-wise by different faculty members.**<br>**#-22CHES22-** SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination<br>**ESC or ETC of 03 credits Courses** shall have only a theory component (L:T :P:S=3:0:0:0) or if the nature the of course required experimental learning syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0 ),<br>**All 01 Credit-** courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ |

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

| (ESC-II) Engineering Science Courses-II | | | | | (ETC-II) Emerging Technology Courses-II | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Code** | **Title** | **L** | **T** | **P** | **Code** | **Title** | **L** | **T** | **P** |
| 22ESC241 | Introduction to Civil Engineering | 3 | 0 | 0 | 22ETC25A | Smart materials and Systems | 3 | 0 | 0 |
| 22ESC242 | Introduction to Electrical Engineering | 3 | 0 | 0 | 22ETC25B | Green Buildings | 3 | 0 | 0 |
| 22ESC243 | Introduction to Electronics Engineering | 3 | 0 | 0 | 22ETC25C | Introduction to Nano Technology | 3 | 0 | 0 |
| 22ESC244 | Introduction to Mechanical Engineering | 3 | 0 | 0 | 22ETC25D | Introduction to Sustainable Engineering | 3 | 0 | 0 |
| 22ESC245 | Introduction to C Programming | 2 | 0 | 2 | 22ETC25E | Renewable Energy Sources | 3 | 0 | 0 |
| | | | | | 22ETC25F | Waste Management | 3 | 0 | 0 |
| | | | | | 22ETC25G | Emerging Applications of Biosensors | 3 | 0 | 0 |
| | | | | | 22ETC25H | Introduction to Internet of Things(IoT) | 3 | 0 | 0 |
| | | | | | 22ETC25I | Introduction to Cyber Security | 3 | 0 | 0 |
| | | | | | | | | | |
| **(PLC-II) Programming Language Courses-II** | | | | | | | | | |
| **Code** | **Title** | **L** | **T** | **P** | | | | | |
| 22PLC25A | Introduction to Web Programming | 2 | 0 | 2 | | | | | |
| 22PLC25B | Introduction to Python Programming | 2 | 0 | 2 | | | | | |
| 22PLC25C | Basics of JAVA programming | 2 | 0 | 2 | | | | | |
| 22PLC25D | Introduction to C++ Programming | 2 | 0 | 2 | | | | | |
| **The course 22ESC145/245, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by ANY DEPARTMENT** | | | | | | | | | |

- The student has to select one course from the ESC-II group.
- CSE/ISE and allied branches Students shall opt for any one of the courses from the ESC-II group **except, 22ESC245-Introduction to C Programming**
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-II or PLC-II group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa

Visvesvaraya Technological University, Belagavi

**Scheme of Teaching and Examinations-2022**

Outcome-Based Education(OBE)and Choice Based Credit System(CBCS)

(Effective from the academic year 2022-23)

**I Semester (CSE Stream)** **(For Chemistry Group)**

| Sl. No | Course and Course Code | | Course Title | TD/PSB | Teaching Hours/Week | | | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | SDA | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | S | | | | | |
| 1 | *ASC(IC) | **22MATS11 | Mathematics for CSE Stream-I | Maths | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 2 | #ASC(IC) | 22CHES12 | Chemistry for CSE Stream | Chemistry | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 3 | ESC | 22CED13 | Computer-Aided Engineering Drawing | Civil/Mech Engg dept | 2 | 0 | 2 | 0 | 03 | 50 | 50 | 100 | 03 |
| 4 | ESC-I | 22ESC14x | Engineering Science Course-I | Respective Engg Dept | 3 | 0 | 0 | 0 | 03 | 50 | 50 | 100 | 03 |
| 5 | ETC-I | 22ETC15x | Emerging Technology Course-I | Any Dept | 3 | 0 | 0 | 0 | 03 | 50 | 50 | 100 | 03 |
| | OR | | | | | | | | | | | | |
| | PLC-I | 22PLC15x | Programming Language Course-I | | 2 | 0 | 2 | 0 | 03 | | | | |
| 6 | AEC | 22ENG16 | Communicative English | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| 7 | HSMS | 22ICO17 | Indian Constitution | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | OR | | | | | | | | | | | |
| | | 22KSK17/ 22KBK17 | Samskrutika Kannada/ Balake Kannada | | 1 | 0 | 0 | 0 | | | | | |
| 8 | HSMS | 22SFH18 | Scientific Foundations of Health | Any Dept | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | | OR | | | | | | | | | | |
| | | 22IDT18 | Innovation and Design Thinking | | 1 | 0 | 0 | 0 | 02 | | | | |
| | | | **TOTAL** | | | | | | | **400** | **400** | **800** | **20** |

**SDA**-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**- Emerging

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and management Course, **SDC**- Skill Development Course, **CIE** -Continuous Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

***-22MATS11** Shall have the 03 hours of theory examination (SEE), however, practical sessions question shall be included in the theory question papers. **** The mathematics subject should be taught by a single faculty member per division, with no sharing of the course(subject)module-wise by different faculty members.**

**#-22CHES12-** SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination

**ESC or ETC of 03 credits Courses** shall have only a theory component (L:T :P:S=3:0:0:0) or if the nature the of course required experimental learning syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0 ),

**All 01 Credit-** courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ

| **Credit Definition:** | |
|---|---|
| 1-hour Lecture **(L)** per week=**1Credit** | 04-Credits courses are to be designed for 50 hours of Teaching-Learning Session |
| 2-hoursTutorial**(T)** per week=**1Credit** | 04-Credits (IC) are to be designed for 40 hours' theory and 12-14 hours of practical sessions |
| 2-hours Practical / Drawing (**P**) per week=**1Credit** | 03-Credits courses are to be designed for 40 hours of Teaching-Learning Session |
| **2-**hous Skill Development Actives **(SDA)** per week = **1 Credit** | 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session |
| | 01-Credit courses are to be designed for 12-15 hours of Teaching-Learning sessions |

**Student's Induction Program:** Motivating (Inspiring) Activities under the Induction program – The main aim of the induction program is to provide newly admitted students a broad understanding of society, relationships, and values. Along with the knowledge and skill of his/her study, students' character needs to be nurtured as an essential quality by which he/she would understand and fulfill the responsibility as an engineer. The following activities are to be covered in 21 days. Physical Activity, Creative Arts, Universal Human Values, Literary, Proficiency Modules, Lectures by Eminent People, Visits to Local areas, Familiarization with Department/Branch and Innovation, etc. For details, refer the ANNEXURE-I of Induction Programs notification of the University published at the beginning of the 1st semester.

**AICTE Activity Points** to be earned by students admitted to BE/ B.Tech., / B. Plan day college program (For more details refer to Chapter 6, AICTE Activity Point Program, Model Internship Guidelines): Over and above the academic grades, every regular student admitted to the 4 years Degree program and every student entering 4 years Degree programs through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Program. Students transferred from other Universities to the fifth semester are required to earn 50 Activity Points from the year of entry to VTU. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, any time during the semester weekends, and holidays, as per the liking and convenience of the student from the year of entry to the program. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) do not affect SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, an Eighth Semester Grade Card shall be issued only after earning the required activity points. Students shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

| (ESC-I) Engineering Science Courses-I | | | | | (ETC-I ) Emerging Technology Courses-I | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Code** | **Title** | **L** | **T** | **P** | **Code** | **Title** | **L** | **T** | **P** |
| 22ESC141 | Introduction to Civil Engineering | 3 | 0 | 0 | 22ETC15A | Smart Materials and Systems | 3 | 0 | 0 |
| 22ESC142 | Introduction to Electrical Engineering | 3 | 0 | 0 | 22ETC15B | Green Buildings | 3 | 0 | 0 |
| 22ESC143 | Introduction to Electronics Engineering | 3 | 0 | 0 | 22ETC15C | Introduction to Nano Technology | 3 | 0 | 0 |
| 22ESC144 | Introduction to Mechanical Engineering | 3 | 0 | 0 | 22ETC15D | Introduction to Sustainable Engineering | 3 | 0 | 0 |
| 22ESC145 | Introduction to C Programming | 2 | 0 | 2 | 22ETC15E | Renewable Energy Sources | 3 | 0 | 0 |
| | | | | | 22ETC15F | Waste Management | 3 | 0 | 0 |
| | | | | | 22ETC15G | Emerging Applications of Biosensors | 3 | 0 | 0 |
| | | | | | 22ETC15H | Introduction to Internet of Things (IOT) | 3 | 0 | 0 |
| | | | | | 22ETC15I | Introduction to Cyber Security | 3 | 0 | 0 |
| | | | | | | | | | |
| **(PLC-I) Programming Language Courses-I** | | | | | | | | | |
| **Code** | **Title** | **L** | **T** | **P** | | | | | |
| 22PLC15A | Introduction to Web Programming | 2 | 0 | 2 | | | | | |
| 22PLC15B | Introduction to Python Programming | 2 | 0 | 2 | | | | | |
| 22PLC15C | Basics of JAVA programming | 2 | 0 | 2 | | | | | |
| 22PLC15D | Introduction to C++ Programming | 2 | 0 | 2 | | | | | |
| **The course 22ESC145/245, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by ANY DEPARTMENT** | | | | | | | | | |

- The student has to select one course from the ESC-I group.
- CSE/ISE & allied branch students shall opt for any one of the courses from the ESC-I group **except, 22ESC145-Introduction to C Programming**
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-I or PLC-I group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

Visvesvaraya Technological University, Belagavi
**Scheme of Teaching and Examinations-2022**
Outcome-Based Education(OBE)and Choice Based Credit System(CBCS)
(Effective from the academic year 2022-23)

**II Semester (CSE Streams)** **(For students who attended 1st semester under Chemistry Group)**

| Sl. No | Course and Course Code | | Course Title | TD/PSB | Teaching Hours/Week | | | | Examination | | | | Credits |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Theory Lecture | Tutorial | Practical/ Drawing | SDA | Duration in hours | CIE Marks | SEE Marks | Total Marks | |
| | | | | | L | T | P | S | | | | | |
| 1 | *ASC(IC) | **22MATS21 | Mathematics for CSEStream -II | Maths | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 2 | #ASC(IC) | 22PHYS22 | Physics for CSE Stream | Physics | 2 | 2 | 2 | 0 | 03 | 50 | 50 | 100 | 04 |
| 3 | ESC | 22POP23 | Principles of Programming Using C | CSE | 2 | 0 | 2 | 0 | 03 | 50 | 50 | 100 | 03 |
| 4 | ESC-II | 22ESC24x | Engineering Science Course-II | Respective Engg dept | 3 | 0 | 0 | 0 | 03 | 50 | 50 | 100 | 03 |
| 5 | ETC-II | 22ETC25x | Programming Language Course-II | Any Dept | 2 | 00 | 2 | 0 | 03 | 50 | 50 | 100 | 03 |
| | OR | | | | | | | | | | | | |
| | PLC-II | 22PLC25x | Emerging Technology Course-II | | 3 | 0 | 0 | 0 | 03 | | | | |
| 6 | AEC | 22PWS26 | Professional Writing Skills in English | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| 7 | HSMC | 22KSK27 22KBK27 | Samskrutika Kannada/ Balake Kannada | Humanities | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | | OR | | | | | | | | | | |
| | | 20ICO27 | Indian Constitution | | | | | | | | | | |
| 8 | AEC/SDC | 22IDT28 | Innovation and Design Thinking | Any Dept | 1 | 0 | 0 | 0 | 01 | 50 | 50 | 100 | 01 |
| | | | OR | | | | | | | | | | |
| | | 22SFH28 | Scientific Foundations of Health | | 1 | 0 | 0 | 0 | 01 | | | | |
| | | | | **TOTAL** | | | | | | **400** | **400** | **800** | **20** |

**SDA**-Skill Development Activities, **TD/PSB**- Teaching Department / Paper Setting Board, **ASC**-Applied Science Course, **ESC**- Engineering Science Courses, **ETC**- Emerging Technology Course, **AEC**- Ability Enhancement Course, **HSMS**-Humanity and Social Science and management Course, **SDC**- Skill Development Course, **CIE**–Continuous Internal Evaluation, **SEE**- Semester End Examination, **IC** – Integrated Course (Theory Course Integrated with Practical Course)

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

***-22MATS21** Shall have the 03 hours of theory examination(SEE), however, practical sessions question shall be included in the theory question papers. ****The mathematics subject should be taught by a single faculty member per division, with no sharing of the course(subject)module-wise by different faculty members.***

**#-22PHYS22** SEE shall have the 03 hours of theory examination and 02-03 hours of practical examination

**ESC or ETC of 03 credits Courses** shall have only a theory component (L:T :P:S=3:0:0:0) or **if the nature of the of course required experimental learning syllabus shall be designed as an Integrated course (L:T:P:S= 2:0:2:0 ).All 01 Credit-** courses shall have the SEE of 01 hours duration and the pattern of the question paper shall be MCQ

## 20112022/V6 Tentative scheme for Computer Science and Engineering and allied branches (CSE/ISE and BT all allied branches of CSE)

| (ESC-II) Engineering Science Courses-II | | | | | (ETC-II) Emerging Technology Courses-II | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Code** | **Title** | **L** | **T** | **P** | **Code** | **Title** | **L** | **T** | **P** |
| 22ESC241 | Introduction to Civil Engineering | 3 | 0 | 0 | 22ETC25A | Smart materials and Systems | 3 | 0 | 0 |
| 22ESC242 | Introduction to Electrical Engineering | 3 | 0 | 0 | 22ETC25B | Green Buildings | 3 | 0 | 0 |
| 22ESC243 | Introduction to Electronics Engineering | 3 | 0 | 0 | 22ETC25C | Introduction to Nano Technology | 3 | 0 | 0 |
| 22ESC244 | Introduction to Mechanical Engineering | 3 | 0 | 0 | 22ETC25D | Introduction to Sustainable Engineering | 3 | 0 | 0 |
| 22ESC245 | Introduction to C Programming | 2 | 0 | 2 | 22ETC25E | Renewable Energy Sources | 3 | 0 | 0 |
| | | | | | 22ETC25F | Waste Management | 3 | 0 | 0 |
| | | | | | 22ETC25G | Emerging Applications of Biosensors | 3 | 0 | 0 |
| | | | | | 22ETC25H | Introduction to Internet of Things (IoT) | 3 | 0 | 0 |
| | | | | | 22ETC25I | Introduction to Cyber Security | 3 | 0 | 0 |
| | | | | | | | | | |
| **(PLC-II) Programming Language Courses-II** | | | | | | | | | |
| **Code** | **Title** | **L** | **T** | **P** | | | | | |
| 22PLC25A | Introduction to Web Programming | 2 | 0 | 2 | | | | | |
| 22PLC25B | Introduction to Python Programming | 2 | 0 | 2 | | | | | |
| 22PLC25C | Basics of JAVA programming | 2 | 0 | 2 | | | | | |
| 22PLC25D | Introduction to C++ Programming | 2 | 0 | 2 | | | | | |
| **The course 22ESC145/245, Introduction to C Programming, and all courses under PLC and ETC groups can be taught by ANY DEPARTMENT** | | | | | | | | | |

- The student has to select one course from the ESC-II group.
- Civil Engineering Students shall opt for any one of the courses from the ESC-II group **except, 22ESC245-Introduction to C Programming**
- The students have to opt for the courses from ESC group without repeating the course in either 1st or 2nd semester
- The students must select one course from either ETC-II or PLC-II group.
- If students study the subject from ETC-I in 1st semester he/she has to select the course from PLC-II in the 2nd semester and vice-versa