



BVVS

BASAVESHWAR ENGINEERING COLLEGE, BAGALKOTE

Department of Information Science and Engineering

**UG SCHEME OF TEACHING AND EXAMINATION
(Admitted from 2022-2023 onwards)**

Applicable to students admitted in AY 22-23 to 1st sem and through lateral entry in AY 23-24 to 3rd sem (2nd NEP Batch)

Presented By
Dr. S. P Bagarashetti
Professor and Head

Department of Information Science and Engineering
Creditsplit-upforUndergraduateprogram

Break-upofcreditsforB.E(Common toallBranches)

Forthe Studentsadmittedfrom2022-2023onwards,basedonNEP (2nd NEP Batch)

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|-------------|------------|------------|-------------|------------|------------|------------|------------|--------------|-------------|--------------|
| 1. | 08 | 09 | 02 | 1 | | | | | | 20 |
| 2. | 08 | 09 | 02 | 1 | | | | | | 20 |
| 3. | 03 | | | 3(Dep) | 14 | | | | | 20 |
| 4. | 03 | | 01 | | 16 | | | | | 20 |
| 5. | | | 01 | 2(ss) | 09 | 03 | 03 | 02 | | 20 |
| 6. | | | | | 14 | 03 | 03 | | | 20 |
| 7. | | | 03 | | 03 | 06 | | 12 | | 24 |
| 8. | | | | 3(MOOCs) | | | 3(MOOCs) | | 10 | 16 |
| Tot. | 22 | 18 | 09 | 10 | 56 | 12 | 09 | 14 | 10 | 160 |

**Proposed Curriculum Framework for BEC (Based on revised Guidelines from VTU
(For the Students admitted from 2022-2023 onwards)**

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| S.N. | Category | VTU New (old) | BEC (old) | BEC (New) |
|--------------|--|------------------|----------------|--------------|
| 1. | HSMC: HSS (2 English, 1 Kannada, 1 UHV, 1 Constitution, 1 EV), 3 HRM (Offered by Dept) = 9 AEC (1 Scientific foundations of Health, 1 Innovation and design Thinking, 2 SS, 3 MOOCS, 3 Dept. specific) = 10 | 16 (10) | 10 | 19 |
| 2. | BSC: Basic Science Courses (Physics, Chemistry and Mathematics) | 22 (23) | 23 | 22 |
| 3. | ESC/ETC: Engineering Science Courses (Basic Elect/Electronics/Computer/Mechanics/Workshop/Drawing etc.) | 24 (20) | 19 | 18 |
| 4. | PCC: Professional Core Courses | 59 (46) | 49 | 56 |
| 5. | PEC: Professional Elective Courses relevant to the branch with at least one course either fully or partially supported by industry | 12 (09) | 12 | 12 |
| 6. | OEC: Open Electives Courses/ Subjects from other technical/Arts/Commerce (3 MOOCS + 6) | 12 (04) | 9 + 11 = 20 | 09 |
| 7. | Mini (2) and Major projects (12)/Industrial Internships (10) | 15 (33) | 26 | 24 |
| 8. | Mandatory Course: PE, Yoga, NSS, Bridge course Maths 1 and 2 (lateral Entry) | 00 (04) | 01 | 00 |
| Total | | 160 | 160 | 160 |

Department of Information Science and Engineering
B. E. I semester Scheme of Teaching and Examinations

(Effective from the academic year 2022-23)

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

Department of Information Science and Engineering

B. E. II semester Scheme of Teaching and Examinations

(Effective from the academic year 2022-23)

| Sl. No. | Course | | | TD | Credits | Teaching Hours/Week | | | Examination | | | |
|--|----------|------------------------|--------------------------------------|-----------------------|---------|---------------------|----------|-------------------|-------------------|-----------|-----------|-------------|
| | Category | Code | Title | | | TheoryLecture | Tutorial | Practical/Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | | L | T | P | | | | |
| 1 | BSC(IC) | 22UMA103C | Mathematics forComputer Sciences - I | Maths | 4 | 3 | 0 | 2 | 3 | 50 | 50 | 100 |
| 2 | BSC(IC) | 22UCH111C | Chemistry forComputer Sciences | Chemistry | 4 | 3 | 0 | 2 | 3 | 50 | 50 | 100 |
| 3 | ESC | 22UCS119C | Principles of Programming using C | Computer Science | 3 | 2 | 0 | 2 | 3 | 50 | 50 | 100 |
| 4 | ESC-I | 22UXXXXXE | EngineeringScienceCourse-I | Respective Engg. Dept | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 5 | ETC-I | 22USXXXXE | EmergingTechnologyCourse-I | Any Engg. Dept | 3 | 2 | 0 | 2 | 3 | 50 | 50 | 100 |
| 6 | HSSM | 22UHS124C | Communicative English | Humanities | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 7 | HSSM | 22UHS126C 22UHS127C | Kannada – SK Kannada - BK | Humanities | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 8 | AEC | 22UHS129C | Innovation and Design Thinking | Any Dept | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| Total | | | | | 20 | 16 | 0 | 08 | 18 | 400 | 400 | 800 |
| 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 InternalEvaluation,SEE-SemesterEnd Examination,IC–IntegratedCourse(TheoryCourseIntegratedwithPracticalCourse) | | | | | | | | | | | | |

| Sem | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|-----|-----|-----|------|-----|-----|-----|-----|-------|------|-------|
| 1 | 08 | 09 | 02 | 1 | | | | | | 20 |
| 2 | 08 | 09 | 02 | 1 | | | | | | 20 |

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

Department of Information Science and Engineering
3rd Semester

| Sl. No. | Course | | | TD | Credits | Teaching Hours/Week | | | Examination | | | |
|--|----------|-----------|--|-----------------------|---------|---------------------|----------|-------------------|-------------------|-----------|-----------|-------------|
| | Category | Code | Title | | | TheoryLecture | Tutorial | Practical/Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | | L | T | P | | | | |
| 1 | BSC(IC) | 22UMA203C | MathematicsforComputer Sciences - II | Maths | 4 | 3 | 0 | 2 | 3 | 50 | 50 | 100 |
| 2 | BSC(IC) | 22UPH207C | Physics forComputer Sciences | Physics | 4 | 3 | 0 | 2 | 3 | 50 | 50 | 100 |
| 3 | ESC | 22UME223C | CAED | Civil / Mechanical | 3 | 2 | 0 | 2 | 3 | 50 | 50 | 100 |
| 4 | ESC-I | 22UXXXXE | Engineering ScienceCourse-I | Respective Engg. Dept | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 5 | PLC-I | 22USXXXXE | Programming Language Course-I | Any Engg. Dept | 3 | 2 | 0 | 2 | 3 | 50 | 50 | 100 |
| 6 | HSSM | 22UHS224C | Professional writing skills in English | Humanities | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 7 | HSSM | 22UHS225C | IndianConstitution | Humanities | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 8 | AEC | 22UHS228C | ScientificFoundationsofHealth | Any Dept | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| Total | | | | | 20 | 16 | 0 | 08 | 18 | 400 | 400 | 800 |
| 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 InternalEvaluation,SEE-SemesterEnd Examination,IC–IntegratedCourse(TheoryCourseIntegratedwithPracticalCourse) | | | | | | | | | | | | |

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sl.N o. | Course | | | Credits | Teaching Hours/Week | | | | Examination | | |
|------------|----------|-----------|---|---------|------------------------|----------|-----------------------|----------------------|-------------|-----------|-------------|
| | Category | Code | Title | | TheoryLe cture | Tutorial | Practical/D rawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | L | T | P | | | | |
| 1 | BSC | 22UMA301C | Numerical Techniques and Integral Transforms | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 2 | PCC | 22UIS305C | Advanced Web Programming (Integrated) | 4 | 3 | 0 | 2 | 5 | 50 | 50 | 100 |
| 3 | PCC | 22UIS304C | Logic Design(integrated) | 4 | 3 | 0 | 2 | 5 | 50 | 50 | 100 |
| 4 | PCC | 22UIS314C | Computer Organization | 4 | 4 | 0 | 0 | 4 | 50 | 50 | 100 |
| 5 | PCC | 22UIS303C | Data Structures | 4 | 3 | 2 | 0 | 5 | 50 | 50 | 100 |
| 6 | PCC | 22UIS381L | Data Structures Lab | 1 | 0 | 0 | 2 | 2 | 50 | 50 | 100 |
| 7 | BSC | 22UMA300M | Bridge Course Mathematics - I | 0 | 2 | 0 | 2 | 4 | 50 | 50 | 100 |
| 8 | MC | UHS002M | National Service Scheme | 0 | 0 | 0 | 2 | 2 | 100 | 0 | 100 |
| | | UHS003M | Physical Education(Sports and Athletics) | | | | | | | | |
| | | UHS001M | Yoga | | | | | | | | |
| 9 | | AAP | AICTE Activity Points | | | | | | | | |
| Total | | | | 20 | 17 | 2 | 10 | 29 | 400 | 400 | 800 |

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|------|-----|-----|------|-----|-----|-----|-----|-------|------|-------|
| 3 | 03 | | | | 17 | | | | | 20 |

Department of Information Science and Engineering
4th Semester

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sl.No. | Course | | | Credits | Teaching Hours/Week | | | | Examination | | |
|--------|----------|-----------|---|---------|---------------------|----------|-------------------|-------------------|-------------|-----------|-------------|
| | Category | Code | Title | | TheoryLecture | Tutorial | Practical/Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | L | T | P | | | | |
| 1 | BSC | 22UMA401C | Engineering Mathematics - IV | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 2 | HSSM | 22UISXXXC | Universal Human Values - II | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 3 | PCC | 22UIS403C | Analysis and Design of Algorithms(Integrated) | 4 | 3 | 0 | 2 | 5 | 50 | 50 | 100 |
| 4 | PCC | 22UIS412C | Object Oriented Modelling and Design (Integrated) | 4 | 3 | 0 | 2 | 5 | 50 | 50 | 100 |
| 5 | PCC | 22UIS417C | Database Management Systems | 4 | 3 | 2 | 0 | 5 | 50 | 50 | 100 |
| 6 | PCC | 22UIS413C | Software Engineering | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 7 | PCC | 22UIS421L | Database Application Laboratory | 1 | 0 | 0 | 2 | 2 | 50 | 50 | 100 |
| 8 | BSC | 22UMA400M | Bridge course Mathematics - II | 0 | 2 | 0 | 0 | 2 | 50 | 50 | 100 |
| 9 | MC | UHS002M | National Service Scheme | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| | | UHS003M | Physical Education(Sports and Athletics) | | | | | | | | |
| | | UHS001M | Yoga | | | | | | | | |
| 10 | | AAP | AICTE Activity Points | | | | | | | | |
| Total | | | | 20 | 18 | 2 | 6 | 26 | 400 | 400 | 800 |

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|------|-----|-----|------|-----|-----|-----|-----|-------|------|-------|
| 04 | 03 | | 1 | | 16 | | | | | 20 |

Department of Information Science and Engineering
5th Semester

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sl.No. | Course | | | Credits | Teaching Hours/Week | | | | Examination | | |
|--------|----------|-----------|--|---------|---------------------|----------|-------------------|-------------------|-------------|-----------|-------------|
| | Category | Code | Title | | TheoryLecture | Tutorial | Practical/Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | L | T | P | | | | |
| 1 | HSSM | | Environmental Studies | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 2 | AEC | | Soft Skills | 2 | 2 | 0 | 0 | 2 | 50 | 50 | 100 |
| 3 | PCC | 22UIS504C | Advanced Java Programming | 3 | 2 | 0 | 2 | 4 | 50 | 50 | 100 |
| 4 | PCC | 22UIS509C | Operating Systems | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 5 | PCC | 22UBTXXXC | Biology for Engineers | 2 | 2 | 0 | 0 | 2 | 50 | 50 | 100 |
| 6 | PEC | 22UISXXXE | Professional Elective Course – I | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 7 | OEC | 22UISXXXN | Open Elective Course - I | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 8 | PCC | 22UIS521L | Advanced Java Programming lab | 1 | | | | | | | |
| 9 | PROJ | 22UIS531P | Miniproject | 2 | 0 | 0 | 2 | 2 | 50 | 50 | 100 |
| 10 | MC | UHS002M | National Service Scheme | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| | | UHS003M | Physical Education(Sports and Athletics) | | | | | | | | |
| | | UHS001M | Yoga | | | | | | | | |
| 11 | | AAP | AICTE Activity Points | | | | | | | | |
| Total | | | | 20 | 16 | 0 | 6 | 22 | 400 | 400 | 800 |

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|------|-----|-----|------|--------|-----|-----|-----|-------|------|-------|
| 5 | | | 01 | 2 (SS) | 10 | 03 | 03 | 02 | | 21 |

Department of Information Science and Engineering

6th Semester

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sl.N o. | Course | | | Credits | Teaching Hours/Week | | | | Examination | | |
|------------|----------|-----------|---|---------|------------------------|----------|-----------------------|----------------------|-------------|-----------|-------------|
| | Category | Code | Title | | TheoryLe cture | Tutorial | Practical/D rawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | L | T | P | | | | |
| 1 | PCC | 22UIS613C | Computer Networks | 3 | 2 | 0 | 2 | 5 | 50 | 50 | 100 |
| 2 | PCC | 22UIS617C | Discrete Mathematical Structures | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 3 | AEC | | Microcontroller and Embedded Systems (Integrated) | 3 | 2 | 0 | 2 | 4 | 50 | 50 | 100 |
| 4 | PCC | 22UIS615C | Theory of Computations | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 5 | AEC | 22UHS600C | Indian Knowledge Systems | 1 | 1 | 0 | 0 | 1 | 50 | 50 | 100 |
| 6 | PEC | 22UISXXXE | Professional Elective Course - II | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 7 | OEC | 22UISXXXN | Open Elective Course - II | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 8 | PCC | 22UIS612L | Computer Networks Lab | 1 | 0 | 0 | 2 | 2 | 50 | 50 | 100 |
| 9 | PROJ. | -- | Pre-Project Work | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | MC | UHS002M | National Service Scheme | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 |
| | | UHS003M | Physical Education(Sports and Athletics) | | | | | | | | |
| | | UHS001M | Yoga | | | | | | | | |
| 11 | | AAP | AICTE Activity Points | | | | | | | | |
| Total | | | | 20 | 18 | 0 | 4 | 22 | 350 | 350 | 700 |

Note: Pre-Project Work – 1) Batch Formulation, 2) Project Allocation and Guide Allotment, 3) Problem Identification and Formulation, and 4) Literature Survey – Minimum 10 papers are to be surveyed.

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|------|-----|-----|------|-----|-----|-----|-----|-------|------|-------|
| 6 | | | | 03 | 10 | 03 | 03 | | | 19 |

Department of Information Science and Engineering

7th Semester

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sl.No | Course | | | Credits | Teaching Hours/Week | | | | Examination | | |
|-------|----------|-----------|---|---------|---------------------|----------|-------------------|-------------------|-------------|-----------|-------------|
| | Category | Code | Title | | TheoryLecture | Tutorial | Practical/Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | L | T | P | | | | |
| 1 | HSSM | 22UIS706H | Management and Entrepreneurship | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 2 | PCC | 22UIS704C | Cyber Crime and Digital Forensic (Integrated) | 3 | 2 | 0 | 2 | 4 | 50 | 50 | 100 |
| 3 | PEC | 22UISXXXE | Professional Elective Course– III | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 4 | PEC | 22UISXXXE | Professional Elective Course - IV | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 5 | PROJ | 22UIS717P | Project Work | 12 | 0 | 0 | 12 | 12 | 50 | 50 | 100 |
| Total | | | | 24 | 10 | 0 | 18 | 28 | 250 | 250 | 500 |

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|------|-----|-----|------|-----|-----|-----|-----|-------|------|-------|
| 7 | | | 03 | | 03 | 06 | | 12 | | 24 |

Department of Information Science and Engineering

8th Semester

Applicable to students admitted in AY 22-23 to 1stsem and through lateral entry in AY 23-24 to 3rdsem (2nd NEP Batch)

| Sl.No. | Course | | | Credits | Teaching Hours/Week | | | | Examination | | |
|--------|----------|-----------|------------|---------|---------------------|----------|-------------------|-------------------|-------------|-----------|-------------|
| | Category | Code | Title | | TheoryLecture | Tutorial | Practical/Drawing | Duration in hours | CIE Marks | SEE Marks | Total Marks |
| | | | | | L | T | P | | | | |
| 1 | AEC | 22UISXXXO | MOOCS | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 2 | OEC | 22UISXXXO | MOOCS | 3 | 3 | 0 | 0 | 3 | 50 | 50 | 100 |
| 3 | INT | 22UIS808L | Internship | 10 | 0 | 0 | 10 | 10 | 50 | 50 | 100 |
| Total | | | | 16 | 6 | 0 | 10 | 16 | 150 | 150 | 300 |

| Sem. | BSC | ESC | HSSM | AEC | PCC | PEC | OEC | Proj. | Int. | Total |
|------|-----|-----|------|-----------|-----|-----|-----------|-------|------|-------|
| 8 | | | | 3 (MOOCS) | | | 3 (MOOCS) | | 10 | 16 |