



# **NEW HORIZON COLLEGE OF ENGINEERING**

Autonomous College Permanently Affiliated to VTU, Approved by AICTE & UGC  
Accredited by NAAC with 'A' Grade, Accredited by NBA

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

## **10<sup>th</sup> BOARD OF STUDIES MEETING**

### **Minutes of Meeting ACADEMIC YEAR 2024-25**

**DATE** : 22-06-2024  
**VENUE** : A104 – Netaji Subhash Chandra Bose Block, NHCE  
**TIME** : 10.30 AM-1:30 PM

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## **AGENDA FOR THE MEETING**

- 1. Welcome address by the chairman of BOS**
- 2. Presentation by chairman of BOS about department achievements**
- 3. Presentation of proceedings of the previous BOS meeting by chairman of BOS**
- 4. Proposed course details of 7<sup>th</sup> and 8<sup>th</sup> semester for 2021-2025 Batch, 5<sup>th</sup> and 6<sup>th</sup> semester for 2022-2026 Batch , 3<sup>rd</sup> and 4<sup>th</sup> semester for 2023- 2027 Batch and First Year Core courses**
- 5. Presentation of draft of scheme & syllabus for the commencement semesters of (Particulars-4) schemes for ratification**
- 6. Recommendations/ suggestions of BOS members**
- 7. Implementation of recommendation of BOS members**
- 8. Approval of scheme & syllabus of agenda 4,5**
- 9. Vote of thanks by the chairman of BOS**

## LIST OF MEMBERS-BOARD OF STUDIES

### DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

A.Y: 2024-25

| S. No | Category   | Nomination of the committee | Name of the person         | Designation & Affiliation   |
|-------|--|-----------------------------|----------------------------|---|
| 1     | Head of the Department   | Chairperson                 | Dr. B Rajalakshmi          | Professor & Head of the Department,<br>Dept of CSE, NHCE<br><a href="mailto:hod_cse@newhorizonindia.edu">hod_cse@newhorizonindia.edu</a><br>9841711347  |
| 2     | Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC) | Principal                   | Dr. Manjunatha             | Head of the Institution,<br>New Horizon College of Engineering,<br><a href="mailto:principal@newhorizonindia.edu">principal@newhorizonindia.edu</a><br>+91-80-662977 Extn: 5002               |
|       |  | NITK                        | Dr. Annappa<br>(ONLINE)    | Professor,<br>Department of Computer Science and Engineering,<br>National Institute of Technology,<br>Surathkal<br><a href="mailto:annappa@nitk.ac.in">annappa@nitk.ac.in</a>                 |
|       |  | Dean Academics              | Dr. R J Anandhi            | Professor & Dean Academics,<br>New Horizon College of Engineering,<br><a href="mailto:dean.academics@newhorizonindia.edu">dean.academics@newhorizonindia.edu</a><br>91-80-66297777 Extn: 2026 |
| 3     | Faculty member at different level with different specialization                            | <b>Members</b>              |                            |   |
|       |  | 1                           | Dr.J.Maruthupandi          | Associate Professor, Dept of CSE, NHCE<br><a href="mailto:dr.maruthupandi_cse_nhce@newhorizonindia.edu">dr.maruthupandi_cse_nhce@newhorizonindia.edu</a><br>9080055715                        |
|       |  | 2                           | Dr.M.Dhanalakshmi          | Professor, Dept of CSE, NHCE<br><a href="mailto:dr.dhanalakshmi.nhce@newhorizonindia.edu">dr.dhanalakshmi.nhce@newhorizonindia.edu</a><br>8073295578  |
|       |  | 3                           | Dr.Santhosh Krishna B V    | Associate Professor, Dept of CSE, NHCE<br><a href="mailto:santhoshkbv@newhorizonindia.edu">santhoshkbv@newhorizonindia.edu</a><br>8610196443  |
|       |  | 4                           | Dr. Ashok K                | Associate Professor, Dept of CSE, NHCE<br><a href="mailto:ashok@newhorizonindia.edu">ashok@newhorizonindia.edu</a> 9747339431   |
|       |  | 5                           | Dr. Sonali Jagadish Mahure | Associate Professor, Dept of CSE, NHCE<br><a href="mailto:dr.sonalijm_cse_nhce@newhorizonindia.edu">dr.sonalijm_cse_nhce@newhorizonindia.edu</a><br>8263909205                                |
|       |  | 6                           | Dr. Santosh Kumar B        | Assistant Professor(Senior Grade)<br>Dept of CSE, NHCE<br><a href="mailto:santhoshk@newhorizonindia.edu">santhoshk@newhorizonindia.edu</a><br>9342995348                                      |

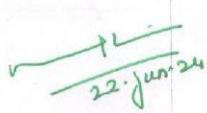
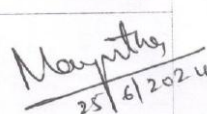

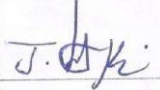
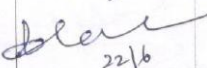


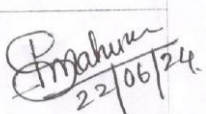
|   |  |                |                               |   |
|---|--|----------------|-------------------------------|---|
| 4 | Subject expert from outside the college nominated by Academic Council  | <b>Members</b> |                               |   |
|   |  | 1              | <b>Dr.Jagdish S Kallimani</b> | Professor & Head, Dept of AI&ML, MSRIT, Bangalore.<br><a href="mailto:hod_aiml@msrit.edu">hod_aiml@msrit.edu</a><br>9844094962  |
| 5 | Experts from outside the college nominated by VTU  | <b>Member</b>  |                               |   |
|   |  | 1              | <b>Dr.B.R.Shambhavi</b>       | Professor & Head, Dept. of CSE<br>BMS College of Engineering – Bengaluru<br><a href="mailto:shambhavibr.ise@bmsce.ac.in">shambhavibr.ise@bmsce.ac.in</a><br>9886784959              |
| 6 | Representative from Industry / Corporate sector / allied area related to placements, nominated by Academic Council | <b>Members</b> |                               |   |
|   |  | 1              | <b>Mr.Ashish Narayan</b>      | <u>Senior Cloud Architect,</u><br><u>Wipro Limited, Bangalore</u><br><a href="mailto:ashish.narayan7@gmail.com">ashish.narayan7@gmail.com</a><br><u>7022453655</u>                  |
| 7 | Meritorious alumni nominated by Principal  | <b>Members</b> |                               |   |
|   |  | 1              | <b>Ms.Shreya Pradeep</b>      | Software Engineer<br>Lowe's, Bangalore<br><a href="mailto:shreya.pradeep@lowes.com">shreya.pradeep@lowes.com</a><br>9739537679  |
|   |  | <b>Members</b> |                               |   |
| 8 | Co-opted members   | 1              | <b>Dr.Nirmala M</b>           | <u>Professor, Dept of CSE, NHCE</u><br><a href="mailto:dr.nirmalam.nhce@newhorizonindia.edu">dr.nirmalam.nhce@newhorizonindia.edu</a><br><u>9626689838</u>                          |
|   |  | 2              | <b>Ms. Pramilarani K</b>      | Sr. Asst. Professor, Dept of CSE, NHCE<br><a href="mailto:pramilaranik@newhorizonindia.edu">pramilaranik@newhorizonindia.edu</a> ,8971471249  |
|   |  | 3              | <b>Ms. Soja Rani S</b>        | Sr. Asst. Professor, Dept of CSE, NHCE<br><a href="mailto:sojars@newhorizonindia.edu">sojars@newhorizonindia.edu</a> ,9482598037  |
|   |  | 4              | <b>Ms.Srividhya G</b>         | Sr. Asst. Professor, Dept of CSE, NHCE<br><a href="mailto:srividhyag.nhce@newhorizonindia.edu">srividhyag.nhce@newhorizonindia.edu</a> ,9566507553                                  |
|   |  | 5              | <b>Ms. Chitra</b>             | Sr. Asst. Professor, Dept of CSE, NHCE<br><a href="mailto:chitra_cse_nhce@newhorizonindia.edu">chitra_cse_nhce@newhorizonindia.edu</a> ,9341728272                                  |
|   |  | 6              | <b>Mr.Anis Mirza</b>          | Director- Corporate Relations Learning & Development, Placements and IIIC<br>Department of HRD<br><a href="mailto:tpo@newhorizonindia.edu">tpo@newhorizonindia.edu</a> , 9900072558 |


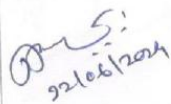



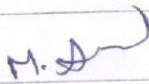
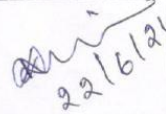
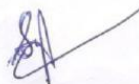
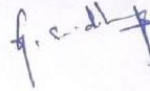
## LIST OF MEMBERS PRESENT



**NEW HORIZON COLLEGE OF ENGINEERING, BANGALORE  
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**LIST OF MEMBERS-BOARD OF STUDIES**

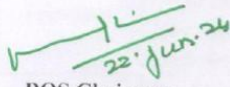
**A.Y: 2024-25 (Attendance Sheet)      Date : 22.06.24**

| S. No          | Category   | Nomination of the committee | Name of the person<br>Designation & Affiliation  | Signature   |
|----------------|--|-----------------------------|--|---|
| 1              | Head of the Department   | Chairperson                 | Dr. B Rajalakshmi<br>Professor & Head of the Department,<br>Dept of CSE,<br>New Horizon College of Engineering                       | <br>22-Jun-24  |
| 2              | Special Invitees (one academician from Institution of National Eminence, IIT,NIT,IIM,IISC) | Principal                   | Dr. Manjunatha<br>Head of the Institution,<br>New Horizon College of Engineering   | <br>25/6/2024 |
|                |  | NITK                        | Dr. Annappa (ONLINE)<br>Professor,<br>Department of Computer Science and Engineering,<br>National Institute of Technology, Surathkal |   |
|                |  | Dean Academics              | Dr. R J Anandhi<br>Professor & Dean Academics,<br>New Horizon College of Engineering   |              |
| <b>Members</b> |  |                             |  |   |
| 3              | Faculty member at different level with different specialization                            | 1                           | Dr. J.Maruthupandi<br>Associate Professor, Dept of CSE,NHCE  |              |
|                |  | 2                           | Dr.M.Dhanalakshmi,<br>Professor, Dept of CSE, NHCE   | <br>22/6     |
|                |  | 3                           | Dr.Santhosh Krishna B V<br>Associate Professor,<br>Dept of CSE, NHCE   | <br>22/6     |
|                |  | 4                           | Dr. Ashok K<br>Associate Professor,<br>Dept of CSE, NHCE   |              |
| 5              |  |                             | Dr. Sonali Jagadish Mahure<br>Associate Professor,<br>Dept of CSE, NHCE  | <br>22/06/24 |

|   |  |         |   |  |
|---|--|---------|---|--|
|   |  | 6       | Dr. Santosh Kumar B<br>Assistant Professor(Senior<br>Grade)<br>Dept of CSE, NHCE                            |               |
| 4 | Subject expert<br>from outside<br>the college<br>nominated by<br>Academic<br>Council   | Members |   |  |
|   |  | 1       | Dr.Jagdish S Kallimani<br>Professor & Head,<br>Dept of AI&ML,<br>MSRIT, Bangalore.                          | <br>22/6/2024 |
| 5 | Experts from<br>outside the<br>college<br>nominated by<br>VTU  | Member  |   |  |
|   |  | 1       | Dr.B.R.Shambhavi (ONLINE)<br>Professor & Head,<br>Dept. of CSE<br>BMS College of Engineering -<br>Bengaluru |               |
| 6 | Representative<br>from Industry /<br>Corporate<br>sector / allied<br>area related to<br>placements,<br>nominated by<br>Academic<br>Council | Members |   |  |
|   |  | 1       | Mr.Ashish Narayan<br>Senior Cloud Architect,<br>Wipro Limited, Bangalore                                    |             |
| 7 | Meritorious<br>alumni<br>nominated by<br>Principal   | Members |   |  |
|   |  | 1       | Ms.Shreya Pradeep<br>Software Engineer<br>Lowe's, Bangalore   |             |
| 8 | Co-opted<br>members  | Members |   |  |
|   |  | 1       | Dr.Nirmala M<br>Professor, Dept of CSE, NHCE  |             |
|   |  | 2       | Ms. Pramilarani K<br>Sr. Asst. Professor,<br>Dept of CSE, NHCE  | <br>22/6/24 |
|   |  | 3       | Ms. Soja Rani S<br>Sr. Asst. Professor,<br>Dept of CSE, NHCE  |             |
|   |  | 4       | Ms.Srividhya G<br>Sr. Asst. Professor, Dept of CSE,<br>NHCE   |             |

|  |  |   |   |   |
|--|--|---|---|---|
|  |  | 5 | <b>Ms. Chitra</b><br>Sr. Asst. Professor, Dept of CSE,<br>NHCE  |  |
|  |  | 6 | <b>Mr. Anis Mirza</b><br>Director- Corporate Relations<br>Learning & Development,<br>Placements and IIIC<br>Department of HRD |  |

  
BOS Member  
Secretary

  
BOS Chairman  
& HOD CSE

  
Dean Academics

  
Principal



## **AGENDA -1**

### **Welcome Address by the Chairman of BOS**

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The 10<sup>th</sup> Board of Studies meeting for Department of Computer Science and Engineering was scheduled on 22<sup>nd</sup> June 2024 at 10.00 AM.

At the outset, Chairperson **Dr. B. Rajalakshmi** – Professor & Head – Department of Computer Science and Engineering, welcomed all the members to the 10<sup>th</sup> Board of Studies meeting.

The Chairperson further expressed special thanks to **Dr.B.R.Shambhavi**, an expert, nominated by VTU, Special Invitees from NIT Surathkal, **Dr. Annappa** and a subject expert from outside the college nominated by Academic Council **Dr.Jagdish S Kallimani**, Professor & Head, Department of AI &ML, MSRIT, Bangalore.

The chairperson also expressed her gratitude to industrial nominee by Academic Council, **Mr.Ashish Narayan**, Senior Cloud Architect, Wipro Limited, Bangalore, for sparing the time from his busy schedule to attend the meeting.

The meeting was also attended by meritorious alumnus **Ms.Shreya Pradeep**, Software Engineer Lowe's, Bangalore, nominated by the Principal, Co-opted members **Dr.Nirmala M, Ms. Pramilarani K, Ms. Soja Rani S, Ms. Srividhya, Ms. Chitra, Mr. Anis Mirza – Director IIC, HRD**, and internal faculty members **Dr. J.Maruthupandi (BoS Member Secretary), Dr.M.Dhanalakshmi, Dr.Santhosh Krishna B V, Dr. Ashok K, Dr. Sonali Jagadish Mahure and Dr. Santosh Kumar B** with different specialization.

**AGENDA -2**

**Presentation by chairman of BOS about department achievements**

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Chairperson of BOS Dr. B. Rajalakshmi, Professor & Head, Department of Computer Science and Engineering, presented the achievements of the department in the current academic year 2024-25.

**AGENDA -3**

**Presentation of proceedings of the previous BOS meeting by chairman of BOS**

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Chairperson of BOS Dr. B. Rajalakshmi, Professor & Head, Department of Computer Science and Engineering, briefed the proceedings of previous BOS meeting acknowledging their contribution for betterment in framing the scheme & syllabus.

**AGENDA -4**

**Proposed course details of 7th and 8th semester for 2021-2025 Batch, 5th and 6th semester for 2022-2026 Batch , 3rd and 4th semester for 2023- 2027 Batch and First Year Core courses.**

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**NEW HORIZON COLLEGE OF ENGINEERING**  
**B. E. in Computer Science and Engineering**  
**Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)**

| VII Semester |                        |           |                                    |                |                     |   |    |   |                 |               |            |            |            |
|--------------|------------------------|-----------|------------------------------------|----------------|---------------------|---|----|---|-----------------|---------------|------------|------------|------------|
| S. No.       | Course and Course Code |           | Course Title                       | BoS            | Credit Distribution |   |    |   | Overall Credits | Contact Hours | Marks      |            |            |
|              |                        |           |                                    |                | L                   | T | P  | S |                 |               | CIE        | SEE        | Total      |
| 1            | IPCC                   | 21CSE71   | Full Stack Technologies            | CS             | 2                   | 0 | 1  | 0 | 3               | 4             | 50         | 50         | 100        |
| 2            | PCC                    | 21CSE72   | Prompt Engineering                 | CS             | 3                   | 0 | 0  | 0 | 3               | 3             | 50         | 50         | 100        |
| 3            | PROJ                   | 21CSE73   | Project Work                       | CS             | 0                   | 0 | 12 | 0 | 12              | 0             | 100        | 100        | 200        |
| 4            | AEC                    | 21CSK74   | Scientific Foundations of Health   | CS             | 1                   | 0 | 0  | 0 | 1               | 1             | 50         | 50         | 100        |
| 5            | OEC                    | 23NHOP7XX | Industrial Open Elective Course-II | Offering Dept. | 3                   | 0 | 0  | 0 | 3               | 3             | 50         | 50         | 100        |
| <b>Total</b> |                        |           |                                    |                |                     |   |    |   | <b>22</b>       | <b>11</b>     | <b>300</b> | <b>300</b> | <b>600</b> |

**PCC:** Professional Core Course, **IPCC:** Integrated Professional Core Course, **PCCL:** Professional Core Course laboratory, **PEC:** Professional Elective Course, **OEC:** Open Elective Course, **PROJ:** Projectwork, **L:** Lecture, **T:** Tutorial, **P:** Practical **S:** SDA: Self Study for Skill Development, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

|      |                |  |                             |  |
|------|----------------|--|-----------------------------|--|
| NCMC | <b>21NSS84</b> | National Service Scheme (NSS)                  | NSS coordinator             | <p>All students have to register for any one of the courses namely National Service Scheme, Physical Education (PE) (Sports and Athletics) and Yoga with the concerned coordinator of the course during the first week of V semester. The activities shall be carried out from (for 4 semesters) between V semester to VIII semester.</p> <p>SEE in the above courses shall be conducted during VIII semester examinations and the accumulated CIE marks shall be added to the SEE marks.</p> <p>Successful completion of the registered course is mandatory for the award of the degree.</p> <p>The events shall be reflected in the calendar prepared for the NSS, PE and Yoga activities.</p> |
|      | <b>21PES84</b> | Physical Education (PE) (Sports and Athletics) | Physical Education Director |  |
|      | <b>21YOG84</b> | Yoga   | Yoga Teacher                |  |

**Industrial Open Elective Course (OEC):** Credit for OEC is 03 (L: T: P: S) can be considered as(3: 0: 0: 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

**Project Work:**

The objective of the Project work is

- (i) To encourage independent learning and the innovative attitude of the students.
- (ii) To develop interactive attitude, communication skills, organization, time management, and presentation skills.
- (iii) To impart flexibility and adaptability.
- (iv) To inspire team working.
- (v) To expand intellectual capacity, credibility, judgment and intuition.
- (vi) To adhere to punctuality, setting and meeting deadlines.
- (vii) To install responsibilities to oneself and others.
- (viii) To train students to present the topic of project work in a seminar without any fear, face the audience confidently, enhance communication skills, involve in group discussion to present and exchange ideas.

**CIE procedure for Project Work:**

**(1) Single discipline:** The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two senior faculty members of the Department, one of whom shall be the Guide.

The CIE marks awarded for the project work, shall be based on the evaluation of the project work Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batchmates.

**(2) Interdisciplinary:** Continuous Internal Evaluation shall be group-wise at the college level with the participation of all guides of the college. Participation of external guide/s, if any, is desirable. The CIE marks awarded for the project work, shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

**SEE procedure for Project Work:** The SEE marks awarded for the project work shall be based on the evaluation of project work Report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25.

|   |   |
|---|---|
| <p><b>Credit Definition:</b><br/>         1-hour Lecture (L) per week=1Credit<br/>         2-hours Tutorial (T) per week=1Credit<br/>         2-hours Practical / Drawing (P) per week=1Credit<br/>         2-hous Self Study for Skill Development (SDA) per week = 1 Credit</p> | <p>03-Credits courses are to be designed for 40 hours in 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 15 hours of Teaching-Learning Sessions</p> |
|---|---|

**NEW HORIZON COLLEGE OF ENGINEERING**  
**B. E. in Computer Science and Engineering**  
**Scheme of Teaching and Examinations for 2021- 2025 BATCH (2021 Scheme)**

| <b>VIII Semester</b> |                        |          |  |                             |                     |   |    |   |                 |               |            |            |            |
|----------------------|------------------------|----------|--|-----------------------------|---------------------|---|----|---|-----------------|---------------|------------|------------|------------|
| S. No.               | Course and Course Code |          | Course Title   | BoS                         | Credit Distribution |   |    |   | Overall Credits | Contact Hours | CIE        | SEE        | Total      |
|                      |                        |          |  |                             | L                   | T | P  | S |                 |               |            |            |            |
| 1                    | PEC                    | 21CSE81X | Professional Elective Course-III                           | CSE                         | 3                   | 0 | 0  | 0 | 3               | 3             | 50         | 50         | <b>100</b> |
| 2                    | SEM                    | 21CSE82  | Technical Seminar  | CSE                         | 0                   | 0 | 1  | 0 | 1               | 0             | 50         | -          | <b>50</b>  |
| 3                    | INT                    | 21CSE83  | Research Internship/ Industry Internship /Rural Internship | CSE                         | 0                   | 0 | 12 | 0 | 12              | 0             | 100        | 100        | <b>200</b> |
| 4                    | NCMC                   | 21NSS84  | National Service Scheme (NSS)                              | NSS coordinator             | 0                   | 0 | 0  | 0 | 0               | 0             | 50         | 50         | <b>100</b> |
|                      |                        | 21PES84  | Physical Education (PE) (Sports and Athletics)             | Physical Education Director |                     |   |    |   |                 |               |            |            |            |
|                      |                        | 21YOG84  | Yoga   | Yoga Teacher                |                     |   |    |   |                 |               |            |            |            |
| <b>Total</b>         |                        |          |  |                             |                     |   |    |   | <b>16</b>       | <b>3</b>      | <b>250</b> | <b>200</b> | <b>450</b> |

**NCMC:** Non-Credit Mandatory Course, **AEC:** Ability Enhancement Course, **SEM:** Seminar, **INT:** Industry Internship/Research Internship / Rural Internship, **L:** Lecture, **T:** Tutorial, **P:** Practical **S:** SDA: Self Study for Skill Development, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

| Professional Elective Course-III |  |          |             |
|----------------------------------|--|----------|-------------|
| 21CSE811                         | High Performance Computing               | 21CSE814 | Block Chain |
| 21CSE812                         | Green IT and Sustainability              | 21CSE815 | Metaverse   |
| 21CSE813                         | Mathematical Foundation for Data Science |          |             |

**Elucidation:**

**Research/Industry Internship** shall be carried out at an Industry, NGO, MSME, Innovation center, Incubation center, Start-up, center of Excellence (CoE), Study Centre established in the parent institute and/or at reputed research organizations/institutes.

The mandatory Research internship / Industry internship / Rural Internship is for **24 weeks**. The internship shall be considered as a head of passing and shall be considered for the award of a degree. Those, who do not take up/complete the internship shall be declared to fail and shall have to complete it during the subsequent SEE examination after satisfying the internship requirements.

**Research internship:** A research internship is intended to offer the flavor of current research going on in the research field. It helps students get familiarized with the field and imparts the skill required for carrying out research.

**Industry internship:** Is an extended period of work experience undertaken by students to supplement their degree for professional development. It also helps them learn to overcome unexpected obstacles and successfully navigate organizations, perspectives, and cultures. Dealing with contingencies helps students recognize, appreciate, and adapt to organizational realities by tempering their knowledge with practical constraints.

The faculty coordinator or mentor has to monitor the student's internship progress and interact with them to guide for the successful completion of the internship.

The students are permitted to carry out the internship anywhere in India or abroad. University shall not bear any expenses incurred in respect of the internship.

With the consent of the internal guide and Principal of the Institution, students shall be allowed to carry out the internship at their hometown (within or outside the state or abroad), provided favorable facilities are available for the internship and the student remains regularly in contact with the internal guide.

**Non- credit mandatory courses (NMC):**

**National Service Scheme/ Physical Education (Sport and Athletics)/Yoga:**

(1) Securing 40 % or more in CIE, 35 % or more marks in SEE and 40 % or more in the sum total of CIE + SEE leads to successful completion of the registered course.

(2) In case, students fail to secure 35 % marks in SEE, they have to appear for SEE during the subsequent examinations conducted by the University.

(3) In case, any student fails to register for NSS, PE or Yoga / fails to secure the minimum 40 % of the prescribed CIE marks, he/she shall be deemed to have not completed the requirements of the course. In such a case, the student has to fulfill the course requirements during subsequently to earn the qualifying CIE marks subject to the maximum programme period.

(4) Successful completion of the course shall be indicated as satisfactory in the grade card. Non-completion of the course shall be indicated as Unsatisfactory.

(5) These courses shall not be considered for vertical progression as well as for the calculation of SGPA and CGPA, but completion of the courses shall be mandatory for the award of degree.

**TECHNICAL SEMINAR(21XXX82):**The objective of the seminar is to inculcate self-learning, present the seminar topic confidently, enhance communication skill, involve in group discussion for exchange of ideas. Each student, under the guidance of a Faculty, shall choose, preferably, a recent topic of his/her interest relevant to the programme of specialization.

- (i) Carry out literature survey, systematically organize the content.
- (ii) Prepare the report with own sentences, avoiding a cut and paste act.
- (iii) Type the matter to acquaint with the use of Micro-soft equation and drawing tools or any such facilities.
- (iv) Present the seminar topic through PowerPoint slides.
- (v) Answer the queries and involve in debate/discussion.
- (vi) Submit a typed report with a list of references.

The participants shall take part in the discussion to foster a friendly and stimulating environment in which the students are motivated to reach high standards and become self-confident.

**Evaluation Procedure:**

The CIE marks for the seminar shall be awarded (based on the relevance of the topic, presentation skill, participation in the question-and-answer session, and quality of report) by the committee constituted for the purpose by the Head of the Department. The committee shall consist of three teachers from the department with the senior-most acting as the Chairman.

**Marks distribution for CIE of the course:**

Seminar Report: 25 marks

Presentation skill: 10 marks

Technical Paper Publication: 15 marks.

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| <b>V Semester</b> |                               |          |  |                             |                            |          |          |          |                         |                      |              |            |              |
|-------------------|-------------------------------|----------|--|-----------------------------|----------------------------|----------|----------|----------|-------------------------|----------------------|--------------|------------|--------------|
| <b>S. No.</b>     | <b>Course and Course Code</b> |          | <b>Course Title</b>                            | <b>BoS</b>                  | <b>Credit Distribution</b> |          |          |          | <b>Over all Credits</b> | <b>Contact Hours</b> | <b>Marks</b> |            |              |
|                   |                               |          |  |                             | <b>L</b>                   | <b>T</b> | <b>P</b> | <b>S</b> |                         |                      | <b>CIE</b>   | <b>SEE</b> | <b>Total</b> |
| 1                 | HSMS                          | 22CSE51  | Software Engineering and Project Management    | CS                          | 3                          | 0        | 0        | 0        | 3                       | 3                    | 50           | 50         | <b>100</b>   |
| 2                 | PCC                           | 22CSE52  | Design and Analysis of Algorithms              | CS                          | 3                          | 0        | 0        | 0        | 3                       | 3                    | 50           | 50         | <b>100</b>   |
| 3                 | PCCL                          | 22CSL52  | Design and Analysis of Algorithms Lab          | CS                          | 0                          | 0        | 1        | 0        | 1                       | 2                    | 50           | 50         | <b>100</b>   |
| 4                 | PCC                           | 22CSE53  | Database Management Systems                    | CS                          | 3                          | 0        | 0        | 0        | 3                       | 3                    | 50           | 50         | <b>100</b>   |
| 5                 | PCCL                          | 22CSL53  | Database Management Systems Lab                | CS                          | 0                          | 0        | 1        | 0        | 1                       | 2                    | 50           | 50         | <b>100</b>   |
| 6                 | PEC                           | 22CSE54X | Professional Elective Course-I                 | CS                          | 3                          | 0        | 0        | 0        | 3                       | 3                    | 50           | 50         | <b>100</b>   |
| 7                 | AEC                           | 22RMK55  | Research Methodology and IPR                   | CS                          | 2                          | 0        | 0        | 0        | 2                       | 2                    | 50           | 50         | <b>100</b>   |
| 8                 | AEC                           | 22SDK56  | Critical and Creative Thinking Skills          | CS                          | 0                          | 0        | 1        | 0        | 1                       | 2                    | 50           | --         | <b>50</b>    |
| 9                 | UHV                           | 22ESK57  | Environmental Studies                          | Any Dept                    | 1                          | 0        | 0        | 0        | 1                       | 1                    | 50           | 50         | <b>100</b>   |
| 10                | PROJ                          | 22CSE58  | Mini Project                                   | CS                          | 0                          | 0        | 1        | 0        | 1                       | 0                    | 50           | 50         | <b>100</b>   |
| 11                | NCMC                          | 22NSS50  | National Service Scheme (NSS)                  | NSS coordinator             | 0                          | 0        | 0        | 0        | 0                       | 2                    | 50           | --         | <b>50</b>    |
|                   |                               | 22PED50  | Physical Education (PE) (Sports and Athletics) | Physical Education Director |                            |          |          |          |                         |                      |              |            |              |



|       |  |         |      |                 |  |  |  |  |           |           |            |            |             |
|-------|--|---------|------|-----------------|--|--|--|--|-----------|-----------|------------|------------|-------------|
|       |  | 22YOG50 | Yoga | Yoga<br>Teacher |  |  |  |  |           |           |            |            |             |
| Total |  |         |      |                 |  |  |  |  | <b>19</b> | <b>23</b> | <b>550</b> | <b>450</b> | <b>1000</b> |

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **NMC:** Non-Credit Mandatory Course, **AEC:** Ability Enhancement Course, **PEC:** Professional Elective Course, **PROJ:** Mini Project work  
**L:** Lecture, **T:** Tutorial, **P:** Practical **S:** SDA: Self Study for Skill Development, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation

| <b>Professional Elective Course-I</b> |                                     |          |                           |
|---------------------------------------|-------------------------------------|----------|---------------------------|
| 22CSE541                              | Finite Automata and Compiler Design | 22CSE544 | Artificial Intelligence   |
| 22CSE542                              | Introduction to Cloud Computing     | 22CSE545 | Advanced Java Programming |
| 22CSE543                              | Fundamentals of Data Science        |          |                           |

**22XXX51(HSMS)**- This course must be pertaining to economics and management of the concerned degree program. The course syllabus should have both economics and management topics and the course title should bear the word Management.

**For IT allied Branches:** Software Product Management

**For Core Branches:** Engineering Economics and Management / Industrial Management and Entrepreneurship

**Mini-project work:** Mini Project is a laboratory-oriented/hands on course that will provide a platform to students to enhance their practical knowledge and skills by the development of small systems/application etc. Based on the ability/abilities of the student/s and recommendation of the mentor.

A student can do mini project as

**(i)** A group of 2 if mini project work is single discipline (applicable to all IT allied branches)

**(ii)** A group of 2-4 if mini project work is single discipline (applicable to all Core Branches)

**(iii)** A group of 2 -4 students if the Mini Project work is a multidisciplinary (Applicable to all Branches)

**CIE procedure for Mini-project:**

**(i) Single discipline:** The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

**(ii) Interdisciplinary:** Continuous Internal Evaluations shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

**Professional Elective Courses (PEC):** A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses can be added to supplement the latest trend and advanced technology in the selected stream of engineering.

**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.

**Credit Definition:**

1-hour Lecture (L) per week=1Credit

2-hours Tutorial (T) per week=1Credit

2-hours Practical / Drawing (P) per week=1Credit

2-hous Self Study for Skill Development (SDA) per

03-Credits courses are to be designed for 40 hours in Teaching-Learning Session

02- Credits courses are to be designed for 25 hours of Teaching-Learning Session

01-Credit courses are to be designed for 15 hours of Teaching-

week = 1 Credit

Learning Sessions

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| VI Semester |                        |           |                                      |                |                     |   |   |   |                  |               |       |     |       |
|-------------|------------------------|-----------|--------------------------------------|----------------|---------------------|---|---|---|------------------|---------------|-------|-----|-------|
| S. No.      | Course and Course Code |           | Course Title                         | BoS            | Credit Distribution |   |   |   | Over all Credits | Contact Hours | Marks |     |       |
|             |                        |           |                                      |                | L                   | T | P | S |                  |               | CIE   | SEE | Total |
| 1           | PCC                    | 22CSE61   | Data Mining and Machine Learning     | CS             | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 2           | PCCL                   | 22CSL61   | Data Mining and Machine Learning Lab | CS             | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 3           | PCC                    | 22CSE62   | Computer Networks                    | CS             | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 4           | PCCL                   | 22CSL62   | Network Simulation Lab               | CS             | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 5           | PCC                    | 22CSE63   | Cyber Security Essentials            | CS             | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 6           | PEC                    | 22CSE64X  | Professional Elective Course-II      | CS             | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 7           | PROJ                   | 22CSE65   | Project Phase-I                      | CS             | 0                   | 0 | 2 | 0 | 2                | 0             | 50    | 50  | 100   |
| 8           | SDA                    | 22SDK66   | Problem Solving Skills               | CS             | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | --  | 50    |
| 9           | AEC                    | 22CSE67X  | Ability Enhancement Course           | CS             | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 10          | OEC                    | 23NHOP6XX | Industrial Open Elective Course-I    | Offering Dept. | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 11          | NCMC                   | 22NSS60   | National Service Scheme              | NSS            | 0                   | 0 | 0 | 0 | 0                | 2             | 50    | --  | 50    |

|       |  |         |   |                             |  |  |  |  |           |           |            |            |             |
|-------|--|---------|---|-----------------------------|--|--|--|--|-----------|-----------|------------|------------|-------------|
|       |  | (NSS)   | coordinator                                       |                             |  |  |  |  |           |           |            |            |             |
|       |  | 22PED60 | Physical Education (PE)<br>(Sports and Athletics) | Physical Education Director |  |  |  |  |           |           |            |            |             |
|       |  | 22YOG60 | Yoga  | Yoga Teacher                |  |  |  |  |           |           |            |            |             |
| Total |  |         |   |                             |  |  |  |  | <b>21</b> | <b>25</b> | <b>550</b> | <b>450</b> | <b>1000</b> |

**PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **NCMC:** Non-Credit Mandatory Course, **AEC:** Ability Enhancement Course, **PEC:** Professional Elective Course, **OEC:** Open Elective Course, **PROJ:** Projectwork, **L:** Lecture, **T:** Tutorial, **P:** Practical **S:** **SDA:** Self Study for Skill Development, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

#### Professional Elective Course-II

|          |                                      |          |                        |
|----------|--------------------------------------|----------|------------------------|
| 22CSE641 | Web of Things and IOT                | 22CSE644 | Block Chain Technology |
| 22CSE642 | Cloud Architecture Design & Security | 22CSE645 | Advanced Databases     |
| 22CSE643 | High Performance Computing           |          |                        |

#### Ability Enhancement Course-V

|          |                          |          |                        |
|----------|--------------------------|----------|------------------------|
| 22CSE671 | Mobile App Development   | 22CSE674 | Embedded Programming   |
| 22CSE672 | Data Visualization Tools | 22CSE675 | Containerization tools |
| 22CSE673 | Wearable Technologies    |          |                        |

**Industrial Open Elective Courses-I:**

Credit for OEC is 03 (L: T: P: S) can be considered as(3: 0: 0 : 0). The teaching and learning of these Courses will be based on hands-on. The Course Assessment will be based on CIE and SEE in practical mode. This Courses will be offered by Centre of Excellence to students of all the branches. Registration to Industrial open electives shall be documented and monitored on college level.

**Project Phase-I:** Students have to discuss with the mentor/guide and with their help he/she has to complete the literature survey and prepare the report and finally define the problem statement for the project work.

**Professional Elective Courses (PEC):** A professional elective (PEC) course is intended to enhance the depth and breadth of educational experience in the Engineering and Technology curriculum. Multidisciplinary courses can be added to supplement the latest trend and advanced technology in the selected stream of engineering.

**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.

|   |  |
|---|--|
| <p><b>Credit Definition:</b><br/> 1-hour Lecture (L) per week=1Credit<br/> 2-hours Tutorial (T) per week=1Credit<br/> 2-hours Practical / Drawing (P) per week=1Credit<br/> 2-hous Self Study for Skill Development (SDA) per</p> | <p>03-Credits courses are to be designed for 40 hours in 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 15 hours of Teaching-</p> |
|---|--|

|                 |                   |
|-----------------|-------------------|
| week = 1 Credit | Learning Sessions |
|-----------------|-------------------|

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| III Semester |                        |           |  |                             |                     |   |   |   |                 |               |       |     |       |
|--------------|------------------------|-----------|--|-----------------------------|---------------------|---|---|---|-----------------|---------------|-------|-----|-------|
| S. No.       | Course and Course Code |           | Course Title                                   | BoS                         | Credit Distribution |   |   |   | Overall Credits | Contact Hours | Marks |     |       |
|              |                        |           |  |                             | L                   | T | P | S |                 |               | CIE   | SEE | Total |
| 1            | BSC                    | 22CSE31   | Mathematical Foundation for Computing Sciences | BS                          | 3                   | 0 | 0 | 0 | 3               | 3             | 50    | 50  | 100   |
| 2            | PCC                    | 22CSE32   | Digital Logic Design                           | CS                          | 3                   | 0 | 0 | 0 | 3               | 3             | 50    | 50  | 100   |
| 3            | PCCL                   | 22CSL32   | Digital Logic Design Laboratory                | CS                          | 0                   | 0 | 1 | 0 | 1               | 2             | 50    | 50  | 100   |
| 4            | PCC                    | 22CSE33   | Problem Solving using Data Structures          | CS                          | 3                   | 0 | 0 | 0 | 3               | 3             | 50    | 50  | 100   |
| 5            | PCCL                   | 22CSL33   | Problem Solving using Data Structures Lab      | CS                          | 0                   | 0 | 1 | 0 | 1               | 2             | 50    | 50  | 100   |
| 6            | PLC                    | 22CSE34 X | Programming Language Course                    | CS                          | 2                   | 0 | 1 | 0 | 3               | 3             | 50    | 50  | 100   |
| 7            | AEC                    | 22CSE35 X | Ability Enhancement Course - III               | CS                          | 0                   | 0 | 1 | 0 | 1               | 2             | 50    | 50  | 100   |
| 8            | BSC                    | 22BIK36   | Bio Inspired Design and Innovation             | MECH                        | 3                   | 0 | 0 | 0 | 3               | 3             | 50    | 50  | 100   |
| 9            | UHV                    | 22SCK37   | Social Connect and Responsibility              | Any Dept                    | 0                   | 0 | 1 | 0 | 1               | 2             | 50    | --  | 50    |
| 10           | NCMC                   | 22NSS30   | National Service Scheme (NSS)                  | NSS coordinator             | 0                   | 0 | 0 | 0 | 0               | 2             | 50    | --  | 50    |
|              |                        | 22PED30   | Physical Education (PE) (Sports and Athletics) | Physical Education Director |                     |   |   |   |                 |               |       |     |       |
|              |                        | 22YOG30   | Yoga   | Yoga Teacher                |                     |   |   |   |                 |               |       |     |       |
| Total        |                        |           |  |                             |                     |   |   |   | 19              | 25            | 500   | 400 | 900   |

|    |      |           |                              |    |   |   |   |   |   |   |    |    |    |
|----|------|-----------|------------------------------|----|---|---|---|---|---|---|----|----|----|
| 11 | NCMC | 22DMAT31* | Basic Applied Mathematics -I | BS | 0 | 0 | 0 | 0 | 0 | 2 | 50 | -- | 50 |
|----|------|-----------|------------------------------|----|---|---|---|---|---|---|----|----|----|

**BSC:** Basic Science Course, **PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **NCMC:** Non-Credit Mandatory Course, **AEC:** Ability Enhancement Course, **L:** Lecture, **T:** Tutorial, **P:** Practical **S:** SDA: Self Study for Skill Development, **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, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation

**22DMAT311\*:** This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

#### Programming Language Course(PLC)

|          |                                  |          |                     |
|----------|----------------------------------|----------|---------------------|
| 22CSE341 | Linux System Programming         | 22CSE344 | Programming for IoT |
| 22CSE342 | Advanced Excel for Data Analysis | 22CSE345 | Ruby Programming    |
| 22CSE343 | Prompt Engineering               |          |                     |

#### Ability Enhancement Course-III

|          |                                    |          |                     |
|----------|------------------------------------|----------|---------------------|
| 22CSE351 | Web Design Technologies            | 22CSE354 | NLP toolkit         |
| 22CSE352 | Game Development Libraries         | 22CSE355 | Web Analytics Tools |
| 22CSE353 | Data Analytics Tools and Libraries |          |                     |

**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 event 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.

#### Credit Definition:

1-hour Lecture (L) per week=1Credit  
 2-hours Tutorial (T) per week=1Credit  
 2-hours Practical / Drawing (P) per week=1Credit  
 2-hous Self Study for Skill Development (SDA)  
 per week = 1 Credit

03-Credits courses are to be designed for 40 hours in Teaching-Learning Session  
 02- Credits courses are to be designed for 25 hours of Teaching-Learning Session  
 01-Credit courses are to be designed for 15 hours of Teaching-Learning Sessions



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| IV Semester |                        |           |  |                             |                     |   |   |   |                  |               |       |     |       |
|-------------|------------------------|-----------|--|-----------------------------|---------------------|---|---|---|------------------|---------------|-------|-----|-------|
| S. No.      | Course and Course Code |           | Course Title                           | BoS                         | Credit Distribution |   |   |   | Over all Credits | Contact Hours | Marks |     |       |
|             |                        |           |  |                             | L                   | T | P | S |                  |               | CIE   | SEE | Total |
| 1           | BSC                    | 22CSE41   | Discrete Mathematics and Graph Theory  | BS                          | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 2           | PCC                    | 22CSE42   | Computer Architecture with ARM         | CS                          | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 3           | PCCL                   | 22CSL42   | ARM Processor Lab                      | CS                          | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 4           | PCC                    | 22CSE43   | Object-Oriented Programming            | CS                          | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 5           | PCCL                   | 22CSL43   | Object-Oriented Programming Lab        | CS                          | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 6           | PCC                    | 22CSE44   | Operating System                       | CS                          | 3                   | 0 | 0 | 0 | 3                | 3             | 50    | 50  | 100   |
| 7           | PCCL                   | 22CSL44   | Operating System Lab                   | CS                          | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 8           | PLC                    | 22CSE45 X | Programming Language Course            | CS                          | 2                   | 0 | 1 | 0 | 3                | 3             | 50    | 50  | 100   |
| 9           | AEC                    | 22CSE46 X | Ability Enhancement Course – IV        | CS                          | 0                   | 0 | 1 | 0 | 1                | 2             | 50    | 50  | 100   |
| 10          | UHV                    | 22UHK47   | Universal Human Values and Life Skills | Any Dept                    | 1                   | 0 | 0 | 0 | 1                | 2             | 50    | 50  | 100   |
| 11          | PROJ                   | 22XXX48   | Mini Project                           | CS                          | 0                   | 0 | 1 | 0 | 1                | 0             | 50    | 50  | 100   |
| 12          | NCMC                   | 22NSS40   | National Service Scheme                | NSS coordinator             | 0                   | 0 | 0 | 0 | 0                | 2             | 50    | --  | 50    |
|             |                        | 22PED40   | Physical Education and Sports          | Physical Education Director |                     |   |   |   |                  |               |       |     |       |

|              |  |             |      |                 |  |  |  |  |  |           |           |            |            |                  |
|--------------|--|-------------|------|-----------------|--|--|--|--|--|-----------|-----------|------------|------------|------------------|
|              |  | 22YOG4<br>0 | Yoga | Yoga<br>Teacher |  |  |  |  |  |           |           |            |            |                  |
| <b>Total</b> |  |             |      |                 |  |  |  |  |  | <b>21</b> | <b>27</b> | <b>600</b> | <b>550</b> | <b>115<br/>0</b> |

|    |      |           |                              |    |   |   |   |   |   |   |    |    |           |
|----|------|-----------|------------------------------|----|---|---|---|---|---|---|----|----|-----------|
| 13 | NCMC | 22DMAT41* | Basic Applied Mathematics-II | BS | 0 | 0 | 0 | 0 | 0 | 2 | 50 | -- | <b>50</b> |
|----|------|-----------|------------------------------|----|---|---|---|---|---|---|----|----|-----------|

**BSC:** Basic Science Course, **PCC:** Professional Core Course, **PCCL:** Professional Core Course laboratory, **UHV:** Universal Human Value Course, **NCMC:** Non-Credit Mandatory Course, **AEC:** Ability Enhancement Course, **PROJ:** Mini Projectwork, **L:** Lecture, **T:** Tutorial, **P:** Practical **S:** **SDA:** Self Study for Skill Development, **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, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Evaluation.

**22DMAT41\*:** This non-credit mandatory course to be offered with only CIE and no SEE to Lateral entry students.

#### Programming Language Course(PLC)

|          |                 |          |                                |
|----------|-----------------|----------|--------------------------------|
| 22CSE451 | C# and .NET     | 22CSE454 | Typescript Programming         |
| 22CSE452 | PHP Programming | 22CSE455 | Web Scraping and Data Analysis |
| 22CSE453 | Go Programming  | 22CSE456 | Problem Solving using C++      |

#### Ability Enhancement Course-IV

|          |   |          |                                       |
|----------|---|----------|---------------------------------------|
| 22CSE461 | UI / UX Toolkit                         | 22CSE464 | Tools for Hosting platform            |
| 22CSE462 | Cloud based collaborative tools         | 22CSE465 | Search Engine Optimization Techniques |
| 22CSE463 | Graphics design and photo editing tools |          |                                       |

**Mini-project work:** Mini Project is a laboratory-oriented/hands oncourse that will provide a platform to students to enhance their practical knowledge and skills by thedevelopmentofsmallsystems/applicationsetc.Basedontheability/abilitiesofthestudent/sandrecommendationsofthementor. A student can do mini project as

- (i) A group of 2 if mini project work is single discipline (applicable to all IT allied branches)
- (ii) A group of 2-4 if mini project work is single discipline (applicable to all Core Branches)
- (iii) A group of 2 -4 students if the Mini Project work is a multidisciplinary (Applicable to all Branches)

**CIE procedure for Mini-project:**

(iii) **Single discipline:** The CIE marks shall be awarded by a committee consisting of the Head of the concerned Department and two faculty members of the Department, one of them being the Guide. The CIE marks awarded for the Mini-project work shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates.

(iv) **Interdisciplinary:** Continuous Internal Evaluations shall be group-wise at the college level with the participation of all the guides of the project.

The CIE marks awarded for the Mini-project, shall be based on the evaluation of the project report, project presentation skill, and question and answer session in the percentage ratio of 50:25:25. The marks awarded for the project report shall be the same for all the batch mates

**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.

|   |   |
|---|---|
| <p><b>Credit Definition:</b><br/>           1-hour Lecture (L) per week=1Credit<br/>           2-hours Tutorial (T) per week=1Credit<br/>           2-hours Practical / Drawing (P) per week=1Credit<br/>           2-hour Self Study for Skill Development (SDA) per week = 1 Credit</p> | <p>03-Credits courses are to be designed for 40 hours in 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 15 hours of Teaching-Learning Sessions</p> |
|---|---|



## **AGENDA -5**

### **Presentation of draft of scheme & syllabus for the commencement semesters of (Particulars – 4) schemes for ratification**

The Chairperson presented the draft of scheme and contents of syllabus. The details were scrutinized by the members of the Board.

The presentation for the ratification of a draft scheme and syllabus for semester courses is a crucial step in the academic process. The members formally accepted and appreciated the proposal of new courses. The objective of this presentation is to provide a comprehensive overview of the proposed courses, including their structure, content, assessment methods, and alignment with learning objectives.

In summary, the presentation session for draft scheme and syllabus ratification was very informative aimed at presenting comprehensive details about all intrinsic details of Core (Theory & Lab), Professional Electives, OEC (Open Elective Courses), PLC (Programming Language Courses) and AEC (Ability Enhancement courses). After emphasizing the courses' content, structure, assessment methods, and alignment with learning outcomes, ultimately seeking approval and endorsement from panel of external experts and university nominee.

## **AGENDA -6**

### **Recommendations/ Suggestions of BOS Members**

The following suggestions were given by the BoS members in the scheme and syllabi.

#### **IV Year Scheme and Syllabi (2021 – 2025 Batch)**

1. Prompt Engineering course can be moved to professional elective.
2. In the course Full Stack Technologies, go program can be added, deployment, version control and containerization tool can be added.
3. They suggested to include more online course in VII and VIII semesters, so that it will be useful for the students going for one year Internship

#### **III Year Scheme and Syllabi (2022 – 2026 Batch)**

1. Bioinspired related course can be included in V/VI semester.
2. RMIPR course is too early in 5<sup>th</sup> semester; it can be moved to 6<sup>th</sup> semester.
3. There should be a subject related to economics and management.
4. Lab / Tutorial for cyber security subject should be incorporated for implementation/ demonstration to understand the subject and its essentials or some secure code practices using open source tools can be covered by changing the credits to 3:1:0.
5. Problem solving skills subject may be shifted to earlier semesters.
6. 02 AEC courses should be avoided in a semester and as per VTU it should be up to 5<sup>th</sup> semester only.

#### **II Year Scheme and Syllabi (2023 – 2027 Batch)**

1. Practical hours for the lab courses are not adequate, they suggested to increase the practical hours from 2 to 3 for lab courses.
2. The course Operating System & Design and Analysis course can be interchange.
3. In the IV semester Programming Language course – Haskell Programming can be changed.

#### **I Year Scheme and Syllabi (2024 – 2028 Batch)**

1. Data Structure course not to be taught at the 1<sup>st</sup> year, it can be moved to III semester.
2. C Programming course can be elaborated to have a better understanding at first year level.
3. For all non allied branches of Computer Science, Data Structure course can be offered as elective subject.
4. In Problem solving using Python course, Assignments can be structures as a team based projects and lab questions should focus more on loops, functions and control statements.

## **AGENDA -7**

### **Implementation of Recommendation of BOS Members**

The chairperson constituted the following groups to review and implement the recommendations of the BOS members in the scheme and syllabus of the curriculum based on industry needs

#### **7<sup>th</sup> and 8<sup>th</sup> Semester Courses(2021 - 2025 Batch)**

**Dr.M.Dhanalakshmi, Professor**

#### **5<sup>th</sup> and 6<sup>th</sup> Semester Courses (2022 - 2026 Batch)**

Dr. Sonali

#### **3<sup>rd</sup> and 4<sup>th</sup> Semester Courses (2023 -2027 Batch)**

Ms. Asha Rani Borah

#### **I and II Semester Courses (2024 - 2028 Batch)**

Ms. Sree Nagamanjula Rani

Ms. Senthil Anandhi A

## **AGENDA -8**

### **Approval of scheme & syllabus of agenda 4 & 5**

The Board of Studies members reviewed the modified draft of the scheme & syllabus with their recommendations/suggestions being incorporated appropriately for the following:

- 1. 7<sup>th</sup> and 8<sup>th</sup> semester for 2021-2025 Batch**
- 2. 5<sup>th</sup> and 6<sup>th</sup> semester for 2022-2026 Batch**
- 3. 3<sup>rd</sup> and 4<sup>th</sup> semester for 2023- 2027 Batch**
- 4. First Year Core courses**

Finally, the members approved the draft of the same with the modifications for final implementation.

## **AGENDA -9**

### **Vote Of Thanks bythe Chairman of BOS**

The chairman of BOS thanked the external members for their fruitful participation on behalf of the Principal and the Management. She also thanked **Dr. Annappa,Dr.B.R.Shambhavi ,Dr. Jagdeesh S Kallimani, Mr.Ashish Narayan, and Ms.Shreya Pradeep**and all the other members of the BOS for their active participation.

Dr.B. Rajalakshmi

BOS - Chairman

Prof & Head - CSE