



**BMS INSTITUTE OF TECHNOLOGY & MANAGEMENT**  
(Autonomous Institution Affiliated to VTU, Belagavi)

**B. E. in Computer Science and Engineering**

**Scheme of Teaching and Examinations – 2022 Scheme**  
Outcome-Based Education (OBE) and Choice Based Credit System (CBCS)

**VIII Semester**

| Sl. No.                                                 | Course Category                                                                                                         | Course Code | Course Title                                                   | Teaching Department (TD) and Question Paper Setting Board (PSB) | Credits Distribution                                                                                                    |          |                                         |           | Examination |            |             |                  | Contact Hours/week |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------|----------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------|-----------------------------------------|-----------|-------------|------------|-------------|------------------|--------------------|
|                                                         |                                                                                                                         |             |                                                                |                                                                 | L                                                                                                                       | T        | P                                       | Total     | CIE Marks   | SEE Marks  | Total Marks | SEE Duration (H) |                    |
| 1                                                       | PEC                                                                                                                     | BCS801X     | Professional Elective Course IV (Online courses)               | TD: CS<br>PSB: CS                                               | 3                                                                                                                       | 0        | 0                                       | 3         | 25          | 75         | 100         | 3                | -                  |
| 2                                                       | OEC                                                                                                                     | BCS802X     | Open Elective Course III (Online courses)                      |                                                                 | 3                                                                                                                       | 0        | 0                                       | 3         | 25          | 75         | 100         | 3                | -                  |
| 3                                                       | INT                                                                                                                     | BCS803      | Industry Internship / Research Internship                      | -                                                               | 0                                                                                                                       | 0        | 10                                      | 10        | 100         | 100        | 200         | 3                | 20                 |
| <b>TOTAL</b>                                            |                                                                                                                         |             |                                                                |                                                                 | <b>0</b>                                                                                                                | <b>0</b> | <b>10</b>                               | <b>16</b> | <b>150</b>  | <b>250</b> | <b>400</b>  | <b>-</b>         | <b>20</b>          |
| <b>Professional Elective Course IV (Online courses)</b> |                                                                                                                         |             |                                                                | <b>Open Elective Course III (Online courses)</b>                |                                                                                                                         |          |                                         |           |             |            |             |                  |                    |
| Course Code                                             | NPTEL Course ID                                                                                                         |             | Course Name                                                    | Course Code                                                     | NPTEL Course ID                                                                                                         |          | Course Name                             |           |             |            |             |                  |                    |
| noc26-cs82                                              | <a href="https://onlinecourses.nptel.ac.in/noc26_cs82/preview">https://onlinecourses.nptel.ac.in/noc26_cs82/preview</a> |             | Social Networks                                                | noc26-mg11                                                      | <a href="https://onlinecourses.nptel.ac.in/noc26_mg11/preview">https://onlinecourses.nptel.ac.in/noc26_mg11/preview</a> |          | Business Fundamentals for Entrepreneurs |           |             |            |             |                  |                    |
| noc26-cs81                                              | <a href="https://onlinecourses.nptel.ac.in/noc26_cs81/preview">https://onlinecourses.nptel.ac.in/noc26_cs81/preview</a> |             | Reinforcement Learning                                         | noc26-cmg41                                                     | <a href="https://onlinecourses.nptel.ac.in/noc26_mg41/preview">https://onlinecourses.nptel.ac.in/noc26_mg41/preview</a> |          | E-business                              |           |             |            |             |                  |                    |
| noc26-cs88                                              | <a href="https://onlinecourses.nptel.ac.in/noc26_cs88/preview">https://onlinecourses.nptel.ac.in/noc26_cs88/preview</a> |             | Introduction to Large Language Models (LLMs)                   | noc26-hs78                                                      | <a href="https://onlinecourses.nptel.ac.in/noc26_hs78/preview">https://onlinecourses.nptel.ac.in/noc26_hs78/preview</a> |          | German – I                              |           |             |            |             |                  |                    |
| noc26-cs38                                              | <a href="https://onlinecourses.nptel.ac.in/noc26_cs38/preview">https://onlinecourses.nptel.ac.in/noc26_cs38/preview</a> |             | Introduction to Industry 4.0 and Industrial Internet of Things | noc26-bt43                                                      | <a href="https://onlinecourses.nptel.ac.in/noc26_bt43/preview">https://onlinecourses.nptel.ac.in/noc26_bt43/preview</a> |          | Human Physiology                        |           |             |            |             |                  |                    |
| noc26-cs43                                              | <a href="https://onlinecourses.nptel.ac.in/noc26_cs43/preview">https://onlinecourses.nptel.ac.in/noc26_cs43/preview</a> |             | GPU Architectures and Program                                  | noc26-ce40                                                      | <a href="https://onlinecourses.nptel.ac.in/noc26_ce40/preview">https://onlinecourses.nptel.ac.in/noc26_ce40/preview</a> |          | Industrial Wastewater Treatment         |           |             |            |             |                  |                    |


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|------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-------------|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| noc26-cs60 | <a href="https://onlinecourses.nptel.ac.in/noc26_cs60/preview">https://onlinecourses.nptel.ac.in/noc26_cs60/preview</a> | <b>Advanced Computer</b>                                                   | noc26-hs116 | <a href="https://onlinecourses.nptel.ac.in/noc26_hs116/preview">https://onlinecourses.nptel.ac.in/noc26_hs116/preview</a> | <b>Online Communication in the Digital Age</b>                           |
| noc26-cs70 | <a href="https://onlinecourses.nptel.ac.in/noc26_cs70/preview">https://onlinecourses.nptel.ac.in/noc26_cs70/preview</a> | <b>Human Computer Interaction</b>                                          | noc26-me01  | <a href="https://onlinecourses.nptel.ac.in/noc26_me01/preview">https://onlinecourses.nptel.ac.in/noc26_me01/preview</a>   | <b>Robotics: Basics and Selected Advanced Concepts</b>                   |
| noc26-cs07 | <a href="https://onlinecourses.nptel.ac.in/noc26_cs06/preview">https://onlinecourses.nptel.ac.in/noc26_cs06/preview</a> | <b>Exploratory Data Analysis for Data Science with R Software(English)</b> | noc26-mg60  | <a href="https://onlinecourses.nptel.ac.in/noc26_mg60/preview">https://onlinecourses.nptel.ac.in/noc26_mg60/preview</a>   | <b>Talent Acquisition and Management</b>                                 |
| noc26-cs03 | <a href="https://onlinecourses.nptel.ac.in/noc26_cs03/preview">https://onlinecourses.nptel.ac.in/noc26_cs03/preview</a> | <b>Foundation for Virtual and Augmented Reality Systems</b>                | noc26-mg61  | <a href="https://onlinecourses.nptel.ac.in/noc26_mg61/preview">https://onlinecourses.nptel.ac.in/noc26_mg61/preview</a>   | <b>Leadership and Team Effectiveness</b>                                 |
| noc26-cs17 | <a href="https://onlinecourses.nptel.ac.in/noc26_cs17/preview">https://onlinecourses.nptel.ac.in/noc26_cs17/preview</a> | <b>Secure Computation: Part I</b>                                          | noc26-me98  | <a href="https://onlinecourses.nptel.ac.in/noc26_me98/preview">https://onlinecourses.nptel.ac.in/noc26_me98/preview</a>   | <b>Computer Integrated Manufacturing: From Concept to Implementation</b> |
|            |                                                                                                                         |                                                                            | noc26-bt01  | <a href="https://onlinecourses.nptel.ac.in/noc26_bt01/preview">https://onlinecourses.nptel.ac.in/noc26_bt01/preview</a>   | <b>Healthcare Entrepreneurship</b>                                       |

**Professional Elective / Open Elective Online Courses:** These are ONLINE courses suggested by the respective Board of Studies. Details of these courses shall be made available for students during the VI semester only. Students are required to choose only the courses which are suggested by the respective BoS. Duration of the online course should be of a minimum of 12 weeks. Students can able to complete the specified online courses with a qualifying certificate issued by the competent authority. The online courses can be registered and completed from the VI semester onwards and the credits will be considered during the VIII semester only. The courses are to be chosen from the SWAYAM – NPTEL platform only. The credits earned for these courses will not be considered for claiming the credits under the Honors Degree programme.

**Industry Internship / Research Internship:** The mandatory Industry / Research internship is for 14 to 20 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 examination after satisfying the internship requirements.

**Research internship:** A research internship is intended to offer the flavour 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.

  
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