

*Progressive Education Society's*  
**Modern College of Arts, Science and Commerce (Autonomous), Shivajinagar, Pune 5**

**(An Autonomous College Affiliated to Savitribai Phule Pune University)**

**Framework of Syllabus**  
**For**  
**B. B. A. (Computer Application)**

Choice Based Credit System (CBCS) Syllabus under National Education Policy (NEP)

**To be implemented from Academic Year 2024-2025**

## Level 4.5 (First Year) Semester I

| Course Type                              | Course Code                    | Course Title  | Credits   |           | Teaching Scheme<br>Hr/Week |           | Evaluation Scheme and<br>Max Marks |     |            |
|--|--------------------------------|---|-----------|-----------|----------------------------|-----------|------------------------------------|-----|------------|
|  |                                |   | TH        | PR        | TH                         | PR        | CE                                 | ESE | Total      |
| Subject 1<br>T(2) + (T/P)(2)<br>or T(4)  | 24BaBbcU1101                   | Procedure Oriented Programming Using C Language   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
|  | 24BaBbcU1102                   | Lab Course on 24BaBbcU1101  |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| Subject 2<br>T(2) + (T/P) (2)<br>or T(4) | 24BaBbcU1201/<br>24BaBbcU1203  | Programming Principles & Algorithms & Computer Fundamentals / Database Management Systems (From AY 2026-27) | 2         |           | 2                          |           | 20                                 | 30  | 50         |
|  | 24BaBbcU1202/<br>24BaBbcU1204  | Lab Course on 24BaBbcU1201/ Lab Course on 24BaBbcU1203 (From AY 2026-27)                                    |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| Subject 3<br>T(2) + (T/P) (2)<br>or T(4) | 24BaBbcU1301                   | Computer Technology - I<br>(Web Design I)   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
|  | 24BaBbcU1302                   | Lab Course on 24BaBbcU1301  |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| IKS T(2)                                 | 24CpCopU1901                   | Generic IKS   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| GE/OE<br>(T/P) (2)                       | 24BaBbcU1401                   | Office Administration I (Microsoft Word)  | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| SEC<br>(P) (2)                           | 24BaBbcU1601                   | Lab Course on Statistical Tools Using R Package   |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| AEC T(2)                                 | 24CpCopU1701 /<br>24CpCopU1702 | MIL-I (Hindi) / MIL-I (Marathi)   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| VECT (2)                                 | 24CpCopU1801                   | EVS-I   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| <b>Total</b>                             |                                |   | <b>14</b> | <b>08</b> | <b>14</b>                  | <b>16</b> |                                    |     | <b>550</b> |

## Level 4.5 (First Year) Semester II

| Course Type                          | Course Code   | Course Title  | Credits   |           | Teaching Scheme<br>Hr/Week |           | Evaluation Scheme and<br>Max Marks |     |            |
|--------------------------------------|---|---|-----------|-----------|----------------------------|-----------|------------------------------------|-----|------------|
|                                      |   |   | TH        | PR        | TH                         | PR        | CE                                 | ESE | Total      |
| Subject 1<br>T(2)+ T/P(2)<br>or T(4) | 24BaBbcU2101  | Advanced 'C Programming   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
|                                      | 24BaBbcU2102  | Lab Course on 24BaBbcU2101  |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| Subject 2<br>T(2)+ T/P(2)<br>or T(4) | 24BaBbcU2201/<br>24BaBbcU2203   | Database Management System /<br>Python Programming<br>(From AY 2026-27)   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
|                                      | 24BaBbcU2202/<br>24BaBbcU2204   | Lab Course on 24BaBbcU2201/<br>Lab Course on 24BaBbcU2203<br>From (AY 2026-27)                                      |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| Subject 3<br>T(2)+ T/P(2)<br>or T(4) | 24BaBbcU2301  | Computer Technology - II<br>(Web Design II)   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
|                                      | 24BaBbcU2302  | Lab Course on 24BaBbcU2301  |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| GE/OE<br>(T/P)(2)                    | 24BaBbcU2401  | Office Administration II (MS<br>Power Point)  | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| SEC P(2)                             | 24BaBbcU2601  | Lab Course on Operations<br>Research  |           | 2         |                            | 4         | 20                                 | 30  | 50         |
| AEC T(2)                             | 24CpCopU2703  | English Communication Skills I  | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| VEC T(2)                             | 24CpCopU2801  | Democracy, Election and<br>Governance   | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| CC(2)                                | 24CpCopU2001/24CpCopU2011 /<br>24CpCopU2021 /24CpCopU2031 /<br>24CpCopU2041 /24CpCopU2051 /<br>24CpCopU2061 /24CpCopU2071 | Physical Education /Cultural<br>Activities /NSS /NCC /Fine Arts /<br>Applied Arts /Visual Arts /<br>Performing Arts | 2         |           | 2                          |           | 20                                 | 30  | 50         |
| <b>Total</b>                         |   |   | <b>14</b> | <b>08</b> | <b>14</b>                  | <b>16</b> |                                    |     | <b>550</b> |

## Level 5.0 (Second Year) Semester III

| Course Type                            | Course Code               | Course Title  | Credits   |           | Teaching Scheme<br>Hr/Week |           | Evaluation Scheme and<br>Max Marks |    |            |
|--|---------------------------|---|-----------|-----------|----------------------------|-----------|------------------------------------|----|------------|
|  |                           |   | TH        | PR        | TH                         | PR        | CE                                 | EE | Total      |
| Major Core<br>T(2+2 or 4),<br>(T/P)(2) | 24BaBbcU3101/24BaBbcU3104 | Data Structure Using C /<br>Advanced Python (From AY 2026-27)                                       | 2         |           | 2                          |           | 20                                 | 30 | 50         |
|  | 24BaBbcU3102              | Relational Database Management System   | 2         |           | 2                          |           | 20                                 | 30 | 50         |
|  | 24BaBbcU3103              | Lab Course on 24BaBbcU3101 &<br>24BaBbcU3102 <b>OR</b> Lab Course on<br>24BaBbcU3102 & 24BaBbcU3104 |           | 2         |                            | 4         | 20                                 | 30 | 50         |
| VSC P(2)                               | 24BaBbcU3501              | Lab Course on Social Media Marketing  |           | 2         |                            | 4         | 20                                 | 30 | 50         |
| IKS (T/P)(2)                           | 24BaBbcU3901              | Vedic Mathematics   | 2         |           | 2                          |           | 20                                 | 30 | 50         |
| FP P(2)                                | 24BaBbcU3002              | Field Project I   |           | 2         |                            | 4         | 20                                 | 30 | 50         |
| Minor<br>(T/P) (2+2 or 4)              | 24BaBbcU3301              | Computer Technology - III<br>(Data Mining and Data Warehousing)                                     | 4         |           | 4                          |           | 40                                 | 60 | 100        |
| GE/OE (T/P) (2)                        | 24BaBbcU3401              | Office Administration III<br>(Basics of MS- Excel)  | 2         |           | 2                          |           | 20                                 | 30 | 50         |
| AEC T(2)                               | 24CpCopU3703              | English Communication Skills II   | 2         |           | 2                          |           | 20                                 | 30 | 50         |
| CC T(2)                                | 24CpCopU3001              | Online Course on Yoga   | 2         |           | 2                          |           | 20                                 | 30 | 50         |
| <b>Total</b>                           |                           |   | <b>16</b> | <b>06</b> | <b>16</b>                  | <b>12</b> |                                    |    | <b>550</b> |

## Level 5.0 (Second Year) Semester IV

| Course Type                      | Course Code                 | Course Title   | Credits |    | Teaching Scheme<br>Hr/Week |    | Evaluation Scheme<br>and<br>Max Marks |    |       |
|----------------------------------|-----------------------------|--|---------|----|----------------------------|----|---------------------------------------|----|-------|
|                                  |                             |  | TH      | PR | TH                         | PR | CE                                    | EE | Total |
| Major Core T(2+2 or 4), (T/P)(2) | 24BaBbcU4101                | Object Oriented Programming concepts using Java  | 2       |    | 2                          |    | 20                                    | 30 | 50    |
|                                  | 24BaBbcU4102/24BaBbcU4104   | Programming in Python/Data Structures using C (From AY 2026-27)                        | 2       |    | 2                          |    | 20                                    | 30 | 50    |
|                                  | 24BaBbcU4103                | Lab Course on 24BaBbcU4101 & 24BaBbcU4102 OR Lab Course on 24BaBbcU4101 & 24BaBbcU4104 |         | 2  |                            | 4  | 20                                    | 30 | 50    |
| VSC P(2)                         | 24BaBbcU4501                | Lab Course on Object Oriented Software Engineering                                     |         | 2  |                            | 4  | 20                                    | 30 | 50    |
| CEP P(2)                         | 24CpCopU4003                | Community Engagement Project   |         | 2  |                            | 4  | 20                                    | 30 | 50    |
| Minor (T/P)(2+2 or 4)            | 24BaBbcU4301                | Computer Technology - IV (Artificial Intelligence)                                     | 4       |    | 4                          |    | 40                                    | 60 | 100   |
| GE/OE (T/P) (2)                  | 24BaBbcU4401                | Office Administration IV (Advanced Excel)  | 2       |    | 2                          |    | 20                                    | 30 | 50    |
| SEC T(2)                         | 24BaBbcU4601                | Basics of Management   | 2       |    | 2                          |    | 20                                    | 30 | 50    |
| AEC T(2)                         | 24CpCopU4701 / 24CpCopU4702 | MIL-II (Hindi) / MIL-II (Marathi)  | 2       |    | 2                          |    | 20                                    | 30 | 50    |
| CC T(2)                          | 24CpCopU4001                | Health and Wellness  | 2       |    | 2                          |    | 20                                    | 30 | 50    |
| <b>Total</b>                     |                             |  | 16      | 06 | 16                         | 12 |                                       |    | 550   |

## Level 5.5 (Third Year) Semester V

| Course Type  | Course Code  | Course Title                                 | Credits |    | Teaching Scheme<br>Hr/Week |    | Evaluation Scheme and<br>Max Marks |    |       |
|--|--------------|--|---------|----|----------------------------|----|------------------------------------|----|-------|
|  |              |  | TH      | PR | TH                         | PR | CE                                 | EE | Total |
| Major Core<br>T(2+2+2+2 or 4 +<br>2+2 or 4 + 4)<br>P(2+2 or 4) | 24BaBbcU5101 | Advanced Java                                | 2       |    | 2                          |    | 20                                 | 30 | 50    |
|  | 24BaBbcU5102 | Web Technology                               | 2       |    | 2                          |    | 20                                 | 30 | 50    |
|  | 24BaBbcU5103 | Computer Networks                            | 4       |    | 4                          |    | 40                                 | 60 | 100   |
|  | 24BaBbcU5104 | Lab Course on 24BaBbcU5101 &<br>24BaBbcU5102 |         | 2  |                            | 4  | 20                                 | 30 | 50    |
|  | 24BaBbcU5105 | Lab Course on Generative AI (Open AI)        |         | 2  |                            | 4  | 20                                 | 30 | 50    |
| Major Elective<br>(T/P) (2+2 or 4)                             | 24BaBbcU5201 | Operating System Concepts                    | 4       |    | 4                          |    | 40                                 | 60 | 100   |
|  | <b>OR</b>    |  |         |    |                            |    |                                    |    |       |
|  | 24BaBbcU5202 | Information Security Systems                 | 4       |    | 4                          |    | 40                                 | 60 | 100   |
| VSC P(2)   | 24BaBbcU5501 | Lab Course on Software Testing Tools         |         | 2  |                            | 4  | 20                                 | 30 | 50    |
| FP (2)   | 24BaBbcU5001 | Field Project II                             |         | 2  |                            | 4  | 20                                 | 30 | 50    |
| Minor<br>(T/P) (2)   | 24BaBbcU5301 | Computer Technology - V (Cloud Computing)    | 2       |    | 2                          |    | 20                                 | 30 | 50    |

|              |  |  |           |           |           |           |  |  |            |
|--------------|--|--|-----------|-----------|-----------|-----------|--|--|------------|
| <b>Total</b> |  |  | <b>14</b> | <b>08</b> | <b>14</b> | <b>16</b> |  |  | <b>550</b> |
|--------------|--|--|-----------|-----------|-----------|-----------|--|--|------------|

### Level 5.5 (Third Year) Semester VI

| Course Type  | Course Code                  | Course Title                               | Credits |    | Teaching Scheme<br>Hr/Week |    | Evaluation Scheme and<br>Max Marks |    |       |
|--|------------------------------|--|---------|----|----------------------------|----|------------------------------------|----|-------|
|  |                              |  | TH      | PR | TH                         | PR | CE                                 | EE | Total |
| Major Core<br>T(2+2+2+2 or<br>4+2+2 or 4+4)<br>P(2+2 or 4) | 24BaBbcU6101                 | Mobile Application Development             | 4       |    | 4                          |    | 40                                 | 60 | 100   |
|  | 24BaBbcU6102                 | Angular JS                                 | 2       |    | 2                          |    | 20                                 | 30 | 50    |
|  | 24BaBbcU6103                 | Lab Course on 24BaBbcU6101                 |         | 2  |                            | 4  | 20                                 | 30 | 50    |
|  | 24BaBbcU6104                 | Lab Course on 24BaBbcU6102                 |         | 2  |                            | 4  | 20                                 | 30 | 50    |
|  | 24BaBbcU6105                 | Lab Course on Generative AI (Hugging Face) |         | 2  |                            | 4  | 20                                 | 30 | 50    |
| Major Elective<br>(T/P) (2+2 or 4)                         | 24BaBbcU6201                 | Recent Trends in Information Technology    | 4       |    | 4                          |    | 40                                 | 60 | 100   |
|  | <b>OR</b>                    |  |         |    |                            |    |                                    |    |       |
|  | 24BaBbcU6202                 | Software Project Management                | 4       |    | 4                          |    | 40                                 | 60 | 100   |
| VSC P(2)   | 24BaBbcU6501                 | Block Chain                                | 2       |    | 2                          |    | 20                                 | 30 | 50    |
| OJT (2)  | <a href="#">24BaBbcU6004</a> | <a href="#">On Job Training</a>            |         | 4  |                            | 8  | 40                                 | 60 | 100   |

|              |  |  |           |           |           |           |  |  |            |
|--------------|--|--|-----------|-----------|-----------|-----------|--|--|------------|
| <b>Total</b> |  |  | <b>12</b> | <b>10</b> | <b>12</b> | <b>20</b> |  |  | <b>550</b> |
|--------------|--|--|-----------|-----------|-----------|-----------|--|--|------------|