

| Maharashtra State Board Of Technical Education, Mumbai        |                                           |                                                                                                             |             |                        |                        |                          |    |    |                                                     |                             |                       |                                |                   |       |       |                                              |       |      |       |                        |             |     |     |  |
|---------------------------------------------------------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------|-------------|------------------------|------------------------|--------------------------|----|----|-----------------------------------------------------|-----------------------------|-----------------------|--------------------------------|-------------------|-------|-------|----------------------------------------------|-------|------|-------|------------------------|-------------|-----|-----|--|
| Learning and Assessment Scheme for Post S.S.C Diploma Courses |                                           |                                                                                                             |             |                        |                        |                          |    |    |                                                     |                             |                       |                                |                   |       |       |                                              |       |      |       |                        |             |     |     |  |
| Programme Name                                                |                                           | : Diploma In Computer Technology / Computer Engineering / Computer Science & Engineering / Computer Science |             |                        |                        |                          |    |    |                                                     |                             |                       |                                |                   |       |       |                                              |       |      |       |                        |             |     |     |  |
| Programme Code                                                |                                           | : CM / CO / CW / SE                                                                                         |             |                        |                        |                          |    |    |                                                     |                             |                       | With Effect From Academic Year |                   |       |       | : 2023-24                                    |       |      |       |                        |             |     |     |  |
| Duration Of Programme                                         |                                           | : 6 Semester                                                                                                |             |                        |                        |                          |    |    |                                                     |                             |                       | Duration                       |                   |       |       | : 12 Weeks (Industry) + 10 Weeks (Institute) |       |      |       |                        |             |     |     |  |
| Semester                                                      |                                           | : Fifth                                                                                                     |             | NCrF Entry Level : 4.0 |                        |                          |    |    |                                                     | Scheme                      |                       |                                |                   | : K   |       |                                              |       |      |       |                        |             |     |     |  |
| Sr No                                                         | Course Title                              | Abbreviation                                                                                                | Course Type | Course Code            | Total IKS Hrs for Sem. | Learning Scheme          |    |    |                                                     |                             |                       | Credits                        | Assessment Scheme |       |       |                                              |       |      |       |                        |             |     |     |  |
|                                                               |                                           |                                                                                                             |             |                        |                        | Actual Contact Hrs./Week |    |    | Self Learning (Activity/ Assignment /Micro Project) | Notional Learning Hrs /Week | Paper Duration (hrs.) |                                | Theory            |       |       | Based on LL & TL                             |       |      |       | Based on Self Learning | Total Marks |     |     |  |
|                                                               |                                           |                                                                                                             |             |                        |                        | CL                       | TL | LL |                                                     |                             |                       |                                |                   |       |       | Practical                                    |       |      |       |                        |             |     |     |  |
|                                                               |                                           |                                                                                                             |             |                        |                        |                          |    |    |                                                     |                             |                       |                                | FA-TH             | SA-TH | Total |                                              | FA-PR |      | SA-PR |                        |             | SLA |     |  |
|                                                               |                                           |                                                                                                             |             |                        |                        |                          |    |    |                                                     |                             |                       |                                |                   |       | Max   | Min                                          | Max   | Min  | Max   | Min                    |             | Max | Min |  |
| (All Compulsory)                                              |                                           |                                                                                                             |             |                        |                        |                          |    |    |                                                     |                             |                       |                                |                   |       |       |                                              |       |      |       |                        |             |     |     |  |
| 1                                                             | OPERATING SYSTEM                          | OSY                                                                                                         | DSC         | 315319                 | -                      | 5                        | -  | 2  | 2                                                   | 9                           | 3                     | 3                              | 30                | 70    | 100   | 40                                           | 25    | 10   | 25@   | 10                     | 25          | 10  | 175 |  |
| 2                                                             | SOFTWARE ENGINEERING                      | STE                                                                                                         | DSC         | 315323                 | -                      | 4                        | -  | 4  | 1                                                   | 9                           | 3                     | 3                              | 30                | 70    | 100   | 40                                           | 25    | 10   | 25@   | 10                     | 25          | 10  | 175 |  |
| 3                                                             | ENTREPRENEURSHIP DEVELOPMENT AND STARTUPS | ENDS                                                                                                        | AEC         | 315002                 | -                      | 1                        | -  | 2  | -                                                   | 3                           | 1                     | -                              | -                 | -     | -     | 50                                           | 20    | 25@  | 10    | -                      | -           | 75  |     |  |
| 4                                                             | SEMINAR AND PROJECT INITIATION COURSE     | SPI                                                                                                         | AEC         | 315003                 | -                      | -                        | -  | 1  | 2                                                   | 3                           | 1                     | -                              | -                 | -     | -     | 25                                           | 10    | 25@  | 10    | 25                     | 10          | 75  |     |  |
| 5                                                             | INTERNSHIP(12 WEEKS)                      | ITR                                                                                                         | INP         | 315004                 | -                      | -                        | -  | -  | -                                                   | 36 - 40                     | 10                    | -                              | -                 | -     | -     | 100                                          | 40    | 100# | 40    | -                      | -           | 200 |     |  |
| Elective 1 (Any - One )                                       |                                           |                                                                                                             |             |                        |                        |                          |    |    |                                                     |                             |                       |                                |                   |       |       |                                              |       |      |       |                        |             |     |     |  |
| 6                                                             | ADVANCE COMPUTER NETWORK                  | ACN                                                                                                         | DSE         | 315321                 | -                      | 4                        | -  | 2  | -                                                   | 6                           | 2                     | 3                              | 30                | 70    | 100   | 40                                           | 25    | 10   | 25#   | 10                     | -           | -   | 150 |  |
|                                                               | CLOUD COMPUTING                           | CLC                                                                                                         | DSE         | 315325                 | -                      | 4                        | -  | 2  | -                                                   | 6                           | 2                     | 3                              | 30                | 70    | 100   | 40                                           | 25    | 10   | 25#   | 10                     | -           | -   | 150 |  |
|                                                               | DATA ANALYTICS                            | DAN                                                                                                         | DSE         | 315326                 | -                      | 4                        | -  | 2  | -                                                   | 6                           | 2                     | 3                              | 30                | 70    | 100   | 40                                           | 25    | 10   | 25#   | 10                     | -           | -   | 150 |  |
| Total                                                         |                                           |                                                                                                             |             |                        |                        | 14                       |    | 11 | 5                                                   |                             | 20                    |                                | 90                | 210   | 300   |                                              | 250   |      | 225   |                        | 75          |     | 850 |  |

| Sr<br>No                                                                                                                                                                                                                                                                  | Course Title | Abbreviation | Course Type | Course Code | Total IKS Hrs for Sem. | Learning Scheme          |    |    |                                                     | Credits | Assessment Scheme           |                       |        |       |       |                  |       |     |  |                        |     |             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|-------------|-------------|------------------------|--------------------------|----|----|-----------------------------------------------------|---------|-----------------------------|-----------------------|--------|-------|-------|------------------|-------|-----|--|------------------------|-----|-------------|
|                                                                                                                                                                                                                                                                           |              |              |             |             |                        | Actual Contact Hrs./Week |    |    | Self Learning (Activity/ Assignment /Micro Project) |         | Notional Learning Hrs /Week | Paper Duration (hrs.) | Theory |       |       | Based on LL & TL |       |     |  | Based on Self Learning |     | Total Marks |
|                                                                                                                                                                                                                                                                           |              |              |             |             |                        | Practical                |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
|                                                                                                                                                                                                                                                                           |              |              |             |             |                        | CL                       | TL | LL |                                                     |         |                             |                       | FA-TH  | SA-TH | Total | FA-PR            | SA-PR | SLA |  |                        |     |             |
|                                                                                                                                                                                                                                                                           |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  | Max                    | Min |             |
|                                                                                                                                                                                                                                                                           |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| <b>Abbreviations :</b> CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, FA - Formative Assessment,SA -Summative Assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment                                                          |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| <b>Legends :</b> @ Internal Assessment, # External Assessment, *# On Line Examination , @\$ Internal Online Examination                                                                                                                                                   |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| <b>Note :</b>                                                                                                                                                                                                                                                             |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 1. FA-TH represents average of two class tests of 30 marks each conducted during the semester.                                                                                                                                                                            |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 2. If candidate is not securing minimum passing marks in FA-PR of any course then the candidate shall be declared as "Detained" in that semester.                                                                                                                         |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 3. If candidate is not securing minimum passing marks in SLA of any course then the candidate shall be declared as fail and will have to repeat and resubmit SLA work.                                                                                                    |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 4. Notional Learning hours for the semester are (CL+LL+TL+SL)hrs.* 10 Weeks                                                                                                                                                                                               |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 5. 1 credit is equivalent to 30 Notional hrs.                                                                                                                                                                                                                             |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 6. * Self learning hours shall not be reflected in the Time Table.                                                                                                                                                                                                        |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| 7. * Self learning includes micro project / assignment / other activities.                                                                                                                                                                                                |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| <b>Note:</b> Notional learning hours for <b>internship represents the student engagement hours.</b>                                                                                                                                                                       |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |
| <b>Course Category :</b> Discipline Specific Course Core (DSC) , Discipline Specific Elective (DSE) , Value Education Course (VEC) , Intern./Apprenti./Project./Community (INP) , AbilityEnhancement Course (AEC) , Skill Enhancement Course (SEC) , GenericElective (GE) |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |  |                        |     |             |

| Maharashtra State Board Of Technical Education, Mumbai                                                                     |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
|----------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------|-------------|-------------|------------------------|--------------------------|----|----|-----------------------------------------------------|-----------------------------|-----------------------|---------|-------------------|-------|-------|------------------|-----|-------|-----|------------------------|-------------|-----|-----|-----|
| Learning and Assessment Scheme for Post S.S.C Diploma Courses                                                              |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| Programme Name : Diploma In Computer Technology / Computer Engineering / Computer Science & Engineering / Computer Science |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| Programme Code : CM / CO / CW / SE With Effect From Academic Year : 2023-24                                                |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| Duration Of Programme : 6 Semester Duration : 12 Weeks (Industry) + 10 Weeks (Institute)                                   |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| Semester : Fifth NCrF Entry Level : 4.0 Scheme : K                                                                         |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| Sr No                                                                                                                      | Course Title                              | Abbreviation | Course Type | Course Code | Total IKS Hrs for Sem. | Learning Scheme          |    |    |                                                     |                             |                       | Credits | Assessment Scheme |       |       |                  |     |       |     |                        |             |     |     |     |
|                                                                                                                            |                                           |              |             |             |                        | Actual Contact Hrs./Week |    |    | Self Learning (Activity/ Assignment /Micro Project) | Notional Learning Hrs /Week | Paper Duration (hrs.) |         | Theory            |       |       | Based on LL & TL |     |       |     | Based on Self Learning | Total Marks |     |     |     |
|                                                                                                                            |                                           |              |             |             |                        | CL                       | TL | LL |                                                     |                             |                       |         |                   |       |       | Practical        |     |       |     |                        |             |     |     |     |
|                                                                                                                            |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         | FA-TH             | SA-TH | Total | FA-PR            |     | SA-PR |     | SLA                    |             |     |     |     |
|                                                                                                                            |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       | Max              | Max | Max   | Min |                        |             | Max | Min | Max |
| (All Compulsory)                                                                                                           |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| 1                                                                                                                          | OPERATING SYSTEM                          | OSY          | DSC         | 315319      | -                      | 5                        | -  | 2  | 2                                                   | 9                           | 3                     | 3       | 30                | 70    | 100   | 40               | 25  | 10    | 25@ | 10                     | 25          | 10  | 175 |     |
| 2                                                                                                                          | SOFTWARE ENGINEERING                      | STE          | DSC         | 315323      | -                      | 4                        | -  | 4  | 1                                                   | 9                           | 3                     | 3       | 30                | 70    | 100   | 40               | 25  | 10    | 25@ | 10                     | 25          | 10  | 175 |     |
| 3                                                                                                                          | ENTREPRENEURSHIP DEVELOPMENT AND STARTUPS | ENDS         | AEC         | 315002      | -                      | 1                        | -  | 2  | -                                                   | 3                           | 1                     | -       | -                 | -     | -     | 50               | 20  | 25@   | 10  | -                      | -           | 75  |     |     |
| 4                                                                                                                          | SEMINAR AND PROJECT INITIATION COURSE     | SPI          | AEC         | 315003      | -                      | -                        | -  | 1  | 2                                                   | 3                           | 1                     | -       | -                 | -     | -     | 25               | 10  | 25@   | 10  | 25                     | 10          | 75  |     |     |
| 5                                                                                                                          | INTERNSHIP(12 WEEKS)                      | ITR          | INP         | 315004      | -                      | -                        | -  | -  | -                                                   | 36 - 40                     | 10                    | -       | -                 | -     | -     | 100              | 40  | 100#  | 40  | -                      | -           | 200 |     |     |
| Elective 1 (Any - One )                                                                                                    |                                           |              |             |             |                        |                          |    |    |                                                     |                             |                       |         |                   |       |       |                  |     |       |     |                        |             |     |     |     |
| 6                                                                                                                          | ADVANCE COMPUTER NETWORK                  | ACN          | DSE         | 315321      | -                      | 4                        | -  | 2  | -                                                   | 6                           | 2                     | 3       | 30                | 70    | 100   | 40               | 25  | 10    | 25# | 10                     | -           | -   | 150 |     |
|                                                                                                                            | CLOUD COMPUTING                           | CLC          | DSE         | 315325      | -                      | 4                        | -  | 2  | -                                                   | 6                           | 2                     | 3       | 30                | 70    | 100   | 40               | 25  | 10    | 25# | 10                     | -           | -   | 150 |     |
|                                                                                                                            | DATA ANALYTICS                            | DAN          | DSE         | 315326      | -                      | 4                        | -  | 2  | -                                                   | 6                           | 2                     | 3       | 30                | 70    | 100   | 40               | 25  | 10    | 25# | 10                     | -           | -   | 150 |     |
| Total                                                                                                                      |                                           |              |             |             |                        | 14                       |    | 11 | 5                                                   |                             | 20                    |         | 90                | 210   | 300   |                  | 250 |       | 225 |                        | 75          |     | 850 |     |

| Sr<br>No                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Course Title | Abbreviation | Course Type | Course Code | Total IKS Hrs for Sem. | Learning Scheme          |    |    |                                                     | Credits | Assessment Scheme           |                       |        |       |       |                  |       |     |     |                        |     |             |
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|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |             |             |                        | Actual Contact Hrs./Week |    |    | Self Learning (Activity/ Assignment /Micro Project) |         | Notional Learning Hrs /Week | Paper Duration (hrs.) | Theory |       |       | Based on LL & TL |       |     |     | Based on Self Learning |     | Total Marks |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |             |             |                        | Practical                |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |     |                        |     |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |             |             |                        | CL                       | TL | LL |                                                     |         |                             |                       | FA-TH  | SA-TH | Total | FA-PR            | SA-PR | SLA |     |                        |     |             |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       | Max | Min | Max                    | Min |             |
| <b>Abbreviations :</b> CL- Classroom Learning , TL- Tutorial Learning, LL-Laboratory Learning, FA - Formative Assessment,SA -Summative Assessment, IKS - Indian Knowledge System, SLA - Self Learning Assessment<br><b>Legends :</b> @ Internal Assessment, # External Assessment, *# On Line Examination , @\$ Internal Online Examination<br><b>Note :</b><br>1. FA-TH represents average of two class tests of 30 marks each conducted during the semester.<br>2. If candidate is not securing minimum passing marks in FA-PR of any course then the candidate shall be declared as "Detained" in that semester.<br>3. If candidate is not securing minimum passing marks in SLA of any course then the candidate shall be declared as fail and will have to repeat and resubmit SLA work.<br>4. Notional Learning hours for the semester are (CL+LL+TL+SL)hrs.* 10 Weeks<br>5. 1 credit is equivalent to 30 Notional hrs.<br>6. * Self learning hours shall not be reflected in the Time Table.<br>7. * Self learning includes micro project / assignment / other activities.<br><b>Note:</b> Notional learning hours for <b>internship represents the student engagement hours.</b><br><b>Course Category :</b> Discipline Specific Course Core (DSC) , Discipline Specific Elective (DSE) , Value Education Course (VEC) , Intern./Apprenti./Project./Community (INP) , AbilityEnhancement Course (AEC) , Skill Enhancement Course (SEC) , GenericElective (GE) |              |              |             |             |                        |                          |    |    |                                                     |         |                             |                       |        |       |       |                  |       |     |     |                        |     |             |