



**SWARNIM**  
STARTUP & INNOVATION  
UNIVERSITY  
WHERE IDEAS COME ALIVE

Swarnnim institute of Technology

Program: Computer Engineering

Academic Year: 2023-24

Year: 1ST - 4TH/FINAL YEAR

THIS DATA IS COMPILED FROM CRITERIA 1.1.1

**CO PO MATRIX ALL COURSES**

| SUBJECT CODE | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | OVERALL CO AVG |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|----------------|
| 23000001     | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0  | 1.0  | 1.0  | 1.0            |
| 23000004     | 2.5 | 2.5 | 2.2 | 2.5 | 2.5 | -   | -   | 2.0 | 2.0 | 3.0  | -    | -    | 2.4            |
| 23000012     | 2.3 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | -    | -    | -    | 1.1            |
| 23000003     | -   | -   | -   | -   | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    | 2.5            |
| 12300001     | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0  | 1.0  | 1.0  | 1.0            |
| 23000006     | 1.3 | 1.3 | 1.3 | 1.5 | 1.0 | -   | -   | -   | -   | -    | 1.0  | 1.0  | 1.2            |
| 23000029     | 1.0 | 1.0 | -   | -   | 1.0 | 1.0 | -   | -   | -   | -    | 1.0  | 1.0  | 1.0            |
| 23000002     | 3.0 | 1.5 | 1.5 | 1.0 | 3.0 | 2.3 | 1.0 | 2.3 | 1.0 | 1.0  | 2.5  | 1.0  | 1.8            |
| 23000005     | 2.5 | 1.5 | 2.8 | 2.3 | 2.5 | -   | -   | -   | -   | -    | -    | -    | 2.3            |
| 23000008     | -   | -   | -   | -   | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    | 2.5            |
| 23000009     | 2.0 | 2.3 | 1.8 | 1.3 | 1.5 | 1.3 | 2.3 | 1.3 | 1.8 | 1.0  | 2.3  | 2.3  | 1.8            |
| 23000010     | 2.2 | 2.6 | 1.6 | 1.8 | 1.8 | -   | -   | -   | -   | -    | -    | -    | 2.0            |
| 23000011     | -   | -   | -   | -   | -   | -   | -   | 2.2 | 2.2 | 2.0  | 2.0  | 1.8  | 2.0            |
| 12300002     | 2.0 | 2.0 | 2.0 | 2.0 | -   | -   | -   | -   | -   | -    | -    | -    | 2.0            |
| 23000030     | -   | -   | -   | -   | -   | -   | -   | 2.5 | 1.7 | 2.5  | 1.7  | 1.7  | 2.0            |
| 23020216     | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | 2.0 | -   | -   | -   | -    | 2.0  | 1.5  | 1.6            |
| 24190203     | -   | -   | -   | -   | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    | 2.5            |
| 24190204     | -   | -   | -   | -   | -   | -   | 2.4 | 2.4 | 2.4 | 1.9  | 2.3  | -    | 2.3            |
| 24190205     | -   | -   | -   | -   | -   | -   | -   | 1.8 | 1.6 | 1.8  | 2.2  | 2.0  | 1.9            |
| 24190206     | -   | -   | -   | -   | -   | -   | -   | 2.0 | 2.2 | 2.3  | 2.3  | 2.1  | 1.9            |
| 24190207     | -   | -   | -   | -   | -   | -   | -   | 2.5 | 2.5 | 2.0  | 2.3  | -    | 2.3            |
| 24190208     | -   | -   | -   | -   | -   | -   | -   | 2.5 | 2.3 | 1.8  | 2.0  | -    | 2.4            |
| 23070301     | 2.4 | 1.8 | 1.8 | 2.4 | 2.2 | 1.0 | 1.0 | 1.0 | 1.5 | 2.8  | 1.3  | 2.8  | 1.79           |
| 23040302     | 2.4 | 2.0 | 2.0 | 2.2 | 2.0 | 2.0 | 1.0 | 3.0 | 1.3 | 2.8  | 1.5  | 1.7  | 2.07           |



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|----------|-----|------|-----|-----|------|-----|------|------|------|-----|------|-----|------|
| 23040301 | 2.4 | 2.0  | 2.4 | 2.4 | 2.2  | 2.0 | 1.0  | 1.0  | 1.3  | 2.8 | 1.6  | 1.3 | 2.0  |
| 23040303 | 2.4 | 2.4  | 2.2 | 2.2 | 2.2  | 1.0 | 2.0  | 2.0  | 1.3  | 2.8 | 1.4  | 1.0 | 2.1  |
| 23000018 | 2.4 | 2.05 | 2.1 | 2.3 | 2.15 | 1.5 | 1.25 | 1.75 | 1.31 | 2.8 | 1.44 | 1.7 | 1.96 |
| 23040401 | 2.4 | 2.2  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.0 | 2.1  |
| 23040402 | 2.4 | 2.2  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 2.8  | 1.4 | 2.1  |
| 23040403 | 2.6 | 2.0  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.0 | 2.1  |
| 23070401 | 2.6 | 2.0  | 2.4 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.4 | 2.1  |
| 23040501 | 2.6 | 2.0  | 2.2 | 2.6 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.6 | 2.1  |
| 23040502 | 2.8 | 2    | 2.2 | 2.4 | 2.2  | 2   | 2.33 | 1    | 2    | 2   | 1.4  | 1   | 2.09 |
| 23040503 | 2.6 | 2.0  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.6  | 1.4 | 2.1  |
| 23040504 | 2.6 | 2.0  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.0 | 2.1  |
| 23040506 | 2.6 | 2.0  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.0  | 1.4 | 2.1  |
| 23040601 | 2.4 | 2.0  | 2.0 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.0 | 2.0  |
| 23040602 | 2.6 | 2.0  | 2.0 | 2.6 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.0  | 1.4 | 2.1  |
| 23040603 | 2.6 | 2.0  | 2.0 | 2.6 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.0  | 1.4 | 2.1  |
| 23040604 | 2.6 | 2.0  | 2.0 | 2.6 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.0 | 2.1  |
| 23040606 | 2.4 | 2.0  | 2.0 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.0 | 2.0  |
| 23040701 | 2.6 | 2.4  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.4  | 1.4 | 2.1  |
| 23040702 | 2.6 | 2.0  | 2.2 | 2.4 | 2.2  | 2.0 | 2.3  | 1.0  | 2.0  | 2.0 | 1.0  | 1.4 | 2.1  |
| 23040802 | 2.4 | 2    | 2   | 2.4 | 2.2  | 2   | 2.33 | 1    | 2    | 2   | 1    | 1.4 | 2.0  |
| AVERAGE  | 2.3 | 1.9  | 2.0 | 2.1 | 2.0  | 1.8 | 2.0  | 1.5  | 1.9  | 2.1 | 1.6  | 1.4 | 2.0  |

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**Swarnnim institute of Technology**

**Program: Computer Engineering**

**Year: 1st to 4th**

**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24**

|              |                |              |          |              |          | IE           |                |  |              |          |
|--------------|----------------|--------------|----------|--------------|----------|--------------|----------------|--|--------------|----------|
| Target level | Internal marks | Target level | External | Target level | CEC      | Target level | Internal marks |  | Target level | External |
| 1            | ≤18            | 1            | ≤42      | 1            | ≤30      | 1            | ≤30            |  | 1            | ≤30      |
| 2            | 19 to 24       | 2            | 43 to 56 | 2            | 31 to 40 | 2            | 31 to 40       |  | 2            | 31 to 40 |
| 3            | ≥26            | 3            | ≥57      | 3            | ≥41      | 3            | ≥40            |  | 3            | ≥40      |

| Course Name                                         | Course Code | Marks   |     |           | Level   |     |           | 30% Internal | 70% External | Tar get |
|-----------------------------------------------------|-------------|---------|-----|-----------|---------|-----|-----------|--------------|--------------|---------|
|                                                     |             | Mid sem | CEC | Exter nal | Mid sem | CEC | Exter nal |              |              |         |
| 1ST SEM                                             |             |         |     |           |         |     |           |              |              |         |
| Maths-I                                             | 23000001    | 18      | 30  | 42        | 1       | 1   | 1         | 0.3          | 0.7          | 1       |
| Fundamentals of Computer Programming                | 23000004    | 18      | 30  | 42        | 1       | 1   | 1         | 0.3          | 0.7          | 1       |
| Elements of Electrical Engineering                  | 23000012    | 18      | 30  | 42        | 1       | 1   | 1         | 0.3          | 0.7          | 1       |
| Elements of Mechanical Engineering                  | 23000003    | 18      | 30  | 42        | 1       | 1   | 1         | 0.3          | 0.7          | 1       |
| Environmental Studies                               | 23000006    | 18      | 30  | 42        | 1       | 1   | 1         | 0.3          | 0.7          | 1       |
| Orientation Program in Startuo and Entreprenuirship | 12300001    | 30      |     |           | 1       | 1   | 1         | 0.3          | 0.7          | 1       |
| Workshop                                            | 23000029    |         |     | 60        |         | 60  | 1         |              | 1            | 1       |
| Electronic Workshop                                 | 23000002    |         |     | 60        |         | 60  | 1         |              | 1            | 1       |
| 2ND SEM                                             |             |         |     |           |         |     |           |              |              |         |
| ENGINEERING PHYSICS                                 | 23000005    | 18      | 30  | 42        | 1       | 1   | 1         | 0.3          | 0.7          | 1       |





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|--------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| COMMUNICATION SKILLS                 | 23000008 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| BASIC ELECTRONICS                    | 23000009 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| MATHS-II                             | 23000010 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ENGINEERING GRAPHICS                 | 23000011 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ELEMENTS OF CIVIL ENGINEERING        | 23000030 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| CHEMISTRY                            | 23020216 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Personality Development              | 24190203 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Web Technology                       | 24190204 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Introduction to Cloud Technology     | 24190205 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Graphics & Design        | 24190206 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mentoring and Counselling            | 24190207 | 30 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Open Project / MOOC                  | 24190208 | 60 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| BASIC PROGRAM IN ENTREPRENURESHIP    | 12300002 | 30 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>III SEM</b>                       |          |    |    |    |   |   |   |     |     |   |
| Maths-3                              | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Digital Electronics                  | 23070301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Database Management System           | 23040301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Data Structure And Algorithm         | 23040302 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Computer Network                     | 23040303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>IV SEM</b>                        |          |    |    |    |   |   |   |     |     |   |
| Maths-4                              | 23000018 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Operating System                     | 23040401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Object Oriented Programming with C++ | 23040402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| System Software                      | 23040403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |



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|------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Computer Organization and MicroProcessor | 23070401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>V SEM</b>                             |          |    |    |    |   |   |   |     |     |   |
| Object Oriented Programming with JAVA    | 23040501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Theory of Computation                    | 23040502 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Information Network & Cyber Security     | 23040503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Web Technology                           | 23040504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Computer Graphics and Visulization       | 23040506 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>VI SEM</b>                            |          |    |    |    |   |   |   |     |     |   |
| Wireless Network                         | 23040601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Compiler Design                          | 23040602 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Cloud Computing                          | 23040603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Data Mining and Warehousing              | 23040604 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Advance JAVA                             | 23040606 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>VII SEM</b>                           |          |    |    |    |   |   |   |     |     |   |
| Artificial Intelligence                  | 23040701 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Python Programming                       | 23040702 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>VIII SEM</b>                          |          |    |    |    |   |   |   |     |     |   |
| Programming with XML & JSON              | 23040802 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |



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**Program: Computer Engineering**

**Year: 1st to 4th**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | Percentage |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                               | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |      |
|--------------------------------------|-------------|------|--------------------------|----------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|------|
| I SEMESTER OF ACEDEMIC YEAR 2023-24  |             |      |                          |                                                                      |                                  |                  |                |                           |      |
| Maths-I                              | 23000 001   | INT  | 74                       | 73                                                                   | 98.65                            | 3                | 1.5            | 0.45                      | 2.55 |
|                                      |             | CEC  | 74                       | 37                                                                   | 50                               | 0                |                |                           |      |
|                                      |             | EXT  | 74                       | 56                                                                   | 75.68                            | 3                | 3              | 2.1                       |      |
| Fundamentals of Computer Programming | 23000 004   | INT  | 74                       | 73                                                                   | 98.65                            | 3                | 3              | 0.9                       | 0.9  |
|                                      |             | CEC  | 74                       | 54                                                                   | 72.97                            | 3                |                |                           |      |
|                                      |             | EXT  | 72                       | 11                                                                   | 15.28                            | 0                | 0              | 0                         |      |
| Elements of Electrical Engineering   | 23000 012   | INT  | 74                       | 65                                                                   | 87.84                            | 3                | 3              | 0.9                       | 2.3  |
|                                      |             | CEC  | 74                       | 74                                                                   | 100                              | 3                |                |                           |      |
|                                      |             | EXT  | 73                       | 50                                                                   | 68.49                            | 2                | 3              | 1.4                       |      |
| Elements of Mechanical Engineering   | 23000 003   | INT  | 74                       | 49                                                                   | 66.22                            | 2                | 0              | 0.4                       | 0.4  |
|                                      |             | CEC  | 74                       | 48                                                                   | 64.86                            | 1                |                |                           |      |
|                                      |             | EXT  | 74                       | 25                                                                   | 33.78                            | 0                | 3              | 0                         |      |
| Environmental Studies                | 23000       | INT  | 74                       | 70                                                                   | 94.59                            | 3                | 3              | 0.6                       | 0.6  |



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|                                                     |           |     |    |    |       |   |     |      |      |
|-----------------------------------------------------|-----------|-----|----|----|-------|---|-----|------|------|
|                                                     | 006       | EXT | 74 | 16 | 21.62 | 0 | 0   | 0    |      |
| Orientation Program in Startuo and Entrepreneurship | 12300 001 | INT | 74 | 74 | 100   | 3 | 3   | 0.6  | 0.6  |
|                                                     |           | EXT | 74 | 4  | 5.41  | 0 | 0   | 0    |      |
| Workshop                                            | 23000 029 | EXT | 12 | 12 | 100   | 3 | 3   | 2.1  | 2.1  |
| Electronic Workshop                                 | 23000 002 | EXT | 62 | 62 | 100   | 3 | 3   | 2.1  | 2.1  |
| <b>II SEMESTER OF ACEDEMIC YEAR 2023-24</b>         |           |     |    |    |       |   |     |      |      |
| ENGINEERING PHYSICS                                 | 23000 005 | INT | 67 | 65 | 97.01 | 3 | 3   | 0.9  | 0.9  |
|                                                     |           | CEC | 67 | 64 | 95.52 | 3 |     |      |      |
|                                                     |           | EXT | 67 | 51 | 76.12 | 3 |     |      |      |
| COMMUNICATION SKILLS                                | 23000 008 | INT | 72 | 38 | 52.78 | 0 | 0   | 0    | 0    |
|                                                     |           | EXT | 72 | 24 | 33.33 | 0 |     | 0    |      |
| BASIC ELECTRONICS                                   | 23000 009 | INT | 59 | 59 | 100   | 3 | 3   | 0.9  | 0.9  |
|                                                     |           | CEC | 59 | 59 | 100   | 3 |     |      |      |
|                                                     |           | EXT | 57 | 11 | 19.3  | 0 | 0   | 0    |      |
| MATHS-II                                            | 23000 010 | INT | 76 | 76 | 100   | 3 | 3   | 0.9  | 1.6  |
|                                                     |           | CEC | 76 | 60 | 78.95 | 3 |     |      |      |
|                                                     |           | EXT | 72 | 41 | 56.94 | 1 | 1   | 0.7  |      |
| ENGINEERING GRAPHICS                                | 23000 011 | INT | 67 | 48 | 71.64 | 2 | 2.5 | 0.75 | 1.45 |
|                                                     |           | CEC | 67 | 66 | 98.51 | 3 |     |      |      |
|                                                     |           | EXT | 64 | 36 | 56.25 | 1 | 1   | 0.7  |      |
| ELEMENTS OF CIVIL ENGINEERING                       | 23000 030 | INT | 7  | 7  | 100   | 3 | 3   | 0.9  | 0.9  |
|                                                     |           | CEC | 7  | 7  | 100   | 3 |     |      |      |
|                                                     |           | EXT | 7  | 1  | 14.29 | 0 | 0   | 0    |      |
| BASIC PROGRAM IN ENTREPRENURESHIP                   | 12300 002 | INT | 76 | 45 | 59.21 | 2 | 2   | 0.6  | 0.6  |
|                                                     |           | EXT | 74 | 2  | 2.7   | 0 |     | 0    |      |
| Chemistry                                           | 23020 216 | INT | 8  | 8  | 100   | 3 | 3   | 0.9  | 0.9  |
|                                                     |           | CEC | 8  | 8  | 100   | 3 |     |      |      |
|                                                     |           | EXT | 8  | 3  | 37.5  | 0 | 0   | 0    |      |







|                                      |              |     |    |    |        |   |   |     |     |
|--------------------------------------|--------------|-----|----|----|--------|---|---|-----|-----|
| Personality Development              | 24190<br>203 | INT | 4  | 4  | 100    | 3 | 3 | 0.9 | 3   |
|                                      |              | EXT | 4  | 4  | 100    | 3 | 3 | 2.1 |     |
| Web Technology                       | 24190<br>204 | INT | 3  | 3  | 100    | 3 | 3 | 0.9 | 3   |
|                                      |              | CEC | 3  | 3  | 100    | 3 |   |     |     |
|                                      |              | EXT | 3  | 3  | 100    | 3 |   | 2.1 |     |
| Introduction to Cloud Technology     | 24190<br>205 | INT | 4  | 4  | 100    | 3 | 3 | 0.9 | 3   |
|                                      |              | EXT | 4  | 4  | 100    | 3 |   | 2.1 |     |
| Engineering Graphics & Design        | 24190<br>206 | INT | 4  | 4  | 100    | 3 | 3 | 0.9 | 3   |
|                                      |              | CEC | 4  | 4  | 100    | 3 |   |     |     |
|                                      |              | EXT | 4  | 4  | 100    | 3 |   | 2.1 |     |
| Mentoring and Counselling            | 24190<br>207 | EXT | 4  | 4  | 100    | 3 |   | 2.1 | 2.1 |
| Open Project / MOOC                  | 24190<br>208 | EXT | 4  | 4  | 100    | 3 | 3 | 2.1 | 2.1 |
| III SEMESTER OF ACEDMIC YEAR 2023-24 |              |     |    |    |        |   |   |     |     |
| Maths-3                              | 23000<br>015 | INT | 32 | 32 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |              | CEC | 32 | 32 | 100.00 | 3 |   |     |     |
|                                      |              | EXT | 32 | 3  | 9.38   | 0 |   | 0   |     |
| Digital Electronics                  | 23070<br>301 | INT | 32 | 32 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |              | CEC | 32 | 32 | 100.00 | 3 |   |     |     |
|                                      |              | EXT | 32 | 8  | 25.00  | 0 |   | 0   |     |
| Database Management System           | 23040<br>301 | INT | 32 | 30 | 93.75  | 3 | 3 | 0.9 | 3   |
|                                      |              | CEC | 32 | 30 | 93.75  | 3 |   |     |     |
|                                      |              | EXT | 32 | 25 | 78.13  | 3 |   | 2.1 |     |
| Data Structure And Algorithm         | 23040<br>302 | INT | 32 | 32 | 100.00 | 3 | 0 | 0.6 | 0.6 |
|                                      |              | CEC | 32 | 32 | 100.00 | 3 |   |     |     |
|                                      |              | EXT | 32 | 8  | 25.00  | 0 |   | 0   |     |
| Computer Network                     | 23040<br>303 | INT | 32 | 30 | 93.75  | 3 |   | 0.6 | 0.6 |
|                                      |              | CEC | 32 | 32 | 100.00 | 3 |   | 0   |     |
|                                      |              | EXT | 32 | 5  | 15.63  | 0 |   | 0   |     |
| IV SEMESTER OF ACEDMIC YEAR 2023-24  |              |     |    |    |        |   |   |     |     |
| Maths-4                              | 23000<br>018 | INT | 32 | 25 | 78.13  | 3 | 3 | 0.9 | 3   |
|                                      |              | CEC | 32 | 32 | 100.00 | 3 |   |     |     |





|                                          |              |     |    |    |        |   |     |          |      |
|------------------------------------------|--------------|-----|----|----|--------|---|-----|----------|------|
|                                          |              | EXT | 32 | 12 | 37.50  | 3 |     | 2.1      |      |
| Operating System                         | 23040<br>401 | INT | 32 | 17 | 53.13  | 0 | 1.5 | 0.4<br>5 | 1.15 |
|                                          |              | CEC | 32 | 32 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 32 | 20 | 62.50  | 1 |     |          |      |
| Object Oriented Programming with C++     | 23040<br>402 | INT | 32 | 27 | 84.38  | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 32 | 31 | 96.88  | 3 |     |          |      |
|                                          |              | EXT | 32 | 9  | 28.13  | 0 |     |          |      |
| System Software                          | 23040<br>403 | INT | 32 | 29 | 90.63  | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 32 | 32 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 32 | 10 | 31.25  | 0 |     |          |      |
| Computer Organization and MicroProcessor | 23070<br>401 | INT | 32 | 32 | 100.00 | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 32 | 32 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 32 | 10 | 31.25  | 0 |     |          |      |
| V SEMESTER OF ACEDEMIC YEAR 2023-24      |              |     |    |    |        |   |     |          |      |
| Object Oriented Programming with JAVA    | 23040<br>501 | INT | 40 | 38 | 95.00  | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 40 | 40 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 40 | 18 | 45.00  | 0 |     |          |      |
| Theory of Computation                    | 23040<br>502 | INT | 40 | 40 | 100.00 | 3 | 3   | 0.9      | 3    |
|                                          |              | CEC | 40 | 40 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 40 | 29 | 72.50  | 3 |     |          |      |
| Information Network & Cyber Security     | 23040<br>503 | INT | 40 | 40 | 100.00 | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 40 | 40 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 40 | 6  | 15.00  | 0 |     |          |      |
| Web Technology                           | 23040<br>504 | INT | 40 | 40 | 100.00 | 3 | 3   | 0.9      | 3    |
|                                          |              | CEC | 40 | 40 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 40 | 13 | 32.50  | 3 |     |          |      |
| Computer Graphics and Visulization       | 23040<br>506 | INT | 40 | 40 | 100.00 | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 40 | 40 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 40 | 11 | 27.50  | 0 |     |          |      |
| VI SEMESTER OF ACEDEMIC YEAR 2023-24     |              |     |    |    |        |   |     |          |      |
| Wireless Network                         | 23040<br>601 | INT | 38 | 38 | 100.00 | 3 | 3   | 0.9      | 0.9  |
|                                          |              | CEC | 38 | 38 | 100.00 | 3 |     |          |      |
|                                          |              | EXT | 38 | 12 | 31.58  | 0 |     |          |      |





|                                        |              |     |    |    |        |   |   |     |     |
|----------------------------------------|--------------|-----|----|----|--------|---|---|-----|-----|
| Compiler Design                        | 23040<br>602 | INT | 38 | 38 | 100.00 | 3 | 3 | 0.9 | 2.3 |
|                                        |              | CEC | 38 | 38 | 100.00 | 3 |   |     |     |
|                                        |              | EXT | 38 | 28 | 73.68  | 2 |   | 1.4 |     |
| Cloud Computing                        | 23040<br>603 | INT | 38 | 38 | 100.00 | 3 | 3 | 0.9 | 2.3 |
|                                        |              | CEC | 38 | 38 | 100.00 | 3 |   |     |     |
|                                        |              | EXT | 38 | 27 | 71.05  | 2 |   | 1.4 |     |
| Data Mining and Warehousing            | 23040<br>604 | INT | 38 | 38 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                        |              | CEC | 38 | 38 | 100.00 | 3 |   |     |     |
|                                        |              | EXT | 38 | 19 | 50.00  | 0 |   | 0   |     |
| Advance JAVA                           | 23040<br>606 | INT | 38 | 38 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                        |              | CEC | 38 | 38 | 100.00 | 3 |   | 0.9 |     |
|                                        |              | EXT | 38 | 19 | 50.00  | 0 |   | 0   |     |
| VII SEMESTER OF ACEDEMIC YEAR 2023-24  |              |     |    |    |        |   |   |     |     |
| Artificial Intelligence                | 23040<br>701 | INT | 50 | 41 | 82.00  | 3 | 3 | 0.9 | 0.9 |
|                                        |              | CEC | 50 | 49 | 98.00  | 3 |   |     |     |
|                                        |              | EXT | 50 | 16 | 32.00  | 0 |   | 0   |     |
| Python Programming                     | 23040<br>702 | INT | 50 | 47 | 94.00  | 3 | 3 | 0.9 | 0.9 |
|                                        |              | CEC | 50 | 50 | 100.00 | 3 |   |     |     |
|                                        |              | EXT | 50 | 21 | 42.00  | 0 |   | 0   |     |
| VIII SEMESTER OF ACEDEMIC YEAR 2023-24 |              |     |    |    |        |   |   |     |     |
| Programming with XML & JSON            | 23040<br>802 | INT | 49 | 30 | 61.22  | 1 | 2 | 0.6 | 0.6 |
|                                        |              | CEC | 49 | 48 | 97.96  | 3 |   |     |     |
|                                        |              | EXT | 49 | 24 | 48.98  | 0 |   | 0   |     |



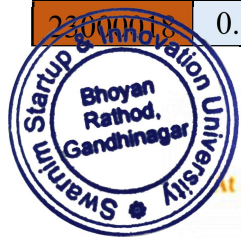


**SWARNIM**  
STARTUP & INNOVATION  
UNIVERSITY  
WHERE IDEAS COME ALIVE

**Swarnnim institute of Technology**  
**Program: Computer Engineering**  
**Year: 1st to 4th**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO1<br>1 | PO1<br>2 |
|----------|------|------|------|------|------|------|------|------|------|------|----------|----------|
| 23000001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33     | 0.33     |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1    | -        | -        |
| 23000012 | 0.77 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | -    | -        | -        |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -        | -        |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33     | 0.33     |
| 23000006 | 0.43 | 0.43 | 0.43 | 0.5  | 0.33 | -    | -    | -    | -    | -    | 0.33     | 0.33     |
| 23000029 | 0.33 | 0.33 | -    | -    | 0.33 | 0.33 | -    | -    | -    | -    | 0.33     | 0.33     |
| 23000002 | 1    | 0.5  | 0.5  | 0.33 | 1    | 0.77 | 0.33 | 0.77 | 0.33 | 0.33 | 0.83     | 0.33     |
| 23000005 | 0.83 | 0.5  | 0.92 | 0.75 | 0.83 | -    | -    | -    | -    | -    | -        | -        |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -        | -        |
| 23000009 | 0.67 | 0.77 | 0.6  | 0.43 | 0.5  | 0.43 | 0.77 | 0.43 | 0.6  | 0.33 | 0.77     | 0.77     |
| 23000010 | 0.73 | 0.87 | 0.53 | 0.6  | 0.6  | -    | -    | -    | -    | -    | -        | -        |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.73 | 0.73 | 0.67 | 0.67     | 0.6      |
| 12300002 | 0.67 | 0.67 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -        | -        |
| 23000030 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.57 | 0.83 | 0.57     | 0.57     |
| 23020216 | 0.33 | 0.5  | 0.67 | 0.67 | 0.33 | 0.67 | -    | -    | -    | -    | 0.67     | 0.5      |
| 24190203 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -        | -        |
| 24190204 | -    | -    | -    | -    | -    | -    | 0.8  | 0.8  | 0.8  | 0.63 | 0.77     | -        |
| 24190205 | -    | -    | -    | -    | -    | -    | -    | 0.6  | 0.53 | 0.6  | 0.73     | 0.67     |
| 24190206 | -    | -    | -    | -    | -    | -    | -    | 0.67 | 0.73 | 0.77 | 0.77     | 0.7      |
| 24190207 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.83 | 0.67 | 0.77     | -        |
| 24190208 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.77 | 0.6  | 0.67     | -        |
| 2300015  | 0.80 | 0.60 | 0.60 | 0.80 | 0.73 | 0.33 | 0.33 | 0.33 | 0.50 | 0.93 | 0.42     | 0.93     |
| 23070301 | 0.80 | 0.67 | 0.67 | 0.73 | 0.67 | 0.67 | 0.33 | 1.00 | 0.42 | 0.93 | 0.50     | 0.56     |
| 23040302 | 0.80 | 0.67 | 0.80 | 0.80 | 0.73 | 0.67 | 0.33 | 0.33 | 0.42 | 0.93 | 0.53     | 0.44     |
| 23040301 | 0.80 | 0.80 | 0.73 | 0.73 | 0.73 | 0.33 | 0.67 | 0.67 | 0.42 | 0.93 | 0.47     | 0.33     |
| 23040303 | 0.80 | 0.68 | 0.70 | 0.77 | 0.72 | 0.50 | 0.42 | 0.58 | 0.44 | 0.93 | 0.48     | 0.57     |
| 23000018 | 0.80 | 0.73 | 0.73 | 0.80 | 0.73 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.47     | 0.33     |



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|                                     |              |              |              |              |              |             |              |              |              |              |              |              |
|-------------------------------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|--------------|--------------|
| 23000018                            | 0.8          | 0.68         | 0.693<br>33  | 0.773<br>33  | 0.72         | 0.466<br>67 | 0.533<br>33  | 0.6          | 0.433<br>33  | 0.933<br>33  | 0.466<br>67  | 0.64         |
| 23040401                            | 0.306<br>67  | 0.281<br>11  | 0.281<br>11  | 0.306<br>67  | 0.281<br>11  | 0.255<br>56 | 0.297<br>72  | 0.127<br>78  | 0.255<br>56  | 0.255<br>56  | 0.178<br>89  | 0.127<br>78  |
| 23040402                            | 0.24         | 0.22         | 0.22         | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.28         | 0.14         |
| 23040403                            | 0.26         | 0.2          | 0.22         | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.14         | 0.1          |
| 23070401                            | 0.26         | 0.2          | 0.24         | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.14         | 0.14         |
| 23040501                            | 0.26         | 0.2          | 0.22         | 0.26         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.14         | 0.16         |
| 23040502                            | 0.933<br>33  | 0.666<br>67  | 0.733<br>33  | 0.8          | 0.733<br>33  | 0.666<br>67 | 0.776<br>67  | 0.333<br>33  | 0.666<br>67  | 0.666<br>67  | 0.466<br>67  | 0.333<br>33  |
| 23040503                            | 0.26         | 0.2          | 0.22         | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.16         | 0.14         |
| 23040504                            | 0.866<br>67  | 0.666<br>67  | 0.733<br>33  | 0.8          | 0.733<br>33  | 0.666<br>67 | 0.776<br>67  | 0.333<br>33  | 0.666<br>67  | 0.666<br>67  | 0.466<br>67  | 0.333<br>33  |
| 23040506                            | 0.26         | 0.2          | 0.22         | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.1          | 0.14         |
| 23040601                            | 0.24         | 0.2          | 0.2          | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.14         | 0.1          |
| 23040602                            | 0.664<br>44  | 0.511<br>11  | 0.511<br>11  | 0.664<br>44  | 0.562<br>22  | 0.511<br>11 | 0.595<br>44  | 0.255<br>56  | 0.511<br>11  | 0.511<br>11  | 0.255<br>56  | 0.357<br>78  |
| 23040603                            | 0.664<br>44  | 0.511<br>11  | 0.511<br>11  | 0.664<br>44  | 0.562<br>22  | 0.511<br>11 | 0.595<br>44  | 0.255<br>56  | 0.511<br>11  | 0.511<br>11  | 0.255<br>56  | 0.357<br>78  |
| 23040604                            | 0.26         | 0.2          | 0.2          | 0.26         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.14         | 0.1          |
| 23040606                            | 0.24         | 0.2          | 0.2          | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.14         | 0.1          |
| 23040701                            | 0.093<br>91  | 0.078<br>26  | 0.078<br>26  | 0.093<br>91  | 0.086<br>09  | 0.078<br>26 | 0.091<br>17  | 0.039<br>13  | 0.078<br>26  | 0.078<br>26  | 0.076<br>7   | 0.027<br>95  |
| 23040702                            | 0.26         | 0.2          | 0.22         | 0.24         | 0.22         | 0.2         | 0.233        | 0.1          | 0.2          | 0.2          | 0.1          | 0.14         |
| 23040802                            | 0.16         | 0.133<br>33  | 0.133<br>33  | 0.16         | 0.146<br>67  | 0.133<br>33 | 0.155<br>33  | 0.066<br>67  | 0.133<br>33  | 0.133<br>33  | 0.066<br>67  | 0.093<br>33  |
| <b>TOTAL PO<br/>ATTAINM<br/>ENT</b> | <b>19.85</b> | <b>15.53</b> | <b>16.36</b> | <b>14.22</b> | <b>14.32</b> | <b>9.29</b> | <b>13.61</b> | <b>19.53</b> | <b>20.88</b> | <b>21.73</b> | <b>19.69</b> | <b>13.95</b> |
| <b>COUNT</b>                        | <b>36</b>    | <b>36</b>    | <b>35</b>    | <b>32</b>    | <b>32</b>    | <b>28</b>   | <b>28</b>    | <b>34</b>    | <b>34</b>    | <b>34</b>    | <b>36</b>    | <b>34</b>    |
| <b>AVERAGE<br/>ATTAINM<br/>ENT</b>  | <b>0.55</b>  | <b>0.43</b>  | <b>0.47</b>  | <b>0.44</b>  | <b>0.45</b>  | <b>0.33</b> | <b>0.49</b>  | <b>0.57</b>  | <b>0.61</b>  | <b>0.64</b>  | <b>0.55</b>  | <b>0.41</b>  |



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**Swarnnim institute of Technology**

**Program: Computer Engineering**

**Year: 1st to 4th**

**ATTAINMENT LEVELS FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2         | PO3         | PO4         | PO5         | PO6         | PO7         | PO8         | PO9         | PO1<br>0    | PO1<br>1    | PO1<br>2    |
|----------|------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 23000001 | 0.85 | 0.85        | 0.85        | -           | -           | -           | -           | -           | -           | -           | -           | -           |
| 23000004 | 0.75 | 0.75        | 0.66        | -           | -           | -           | -           | -           | -           | -           | -           | -           |
| 23000012 | 1.76 | 0.77        | 0.77        | -           | -           | -           | -           | -           | -           | -           | -           | -           |
| 23000003 | 0.13 | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        | 0.13        |
| 12300001 | 0.26 | 0.26        | 0.26        | 0.3         | 0.2         | -           | -           | -           | -           | -           | 0.2         | 0.2         |
| 23000006 | 0.2  | 0.2         | -           | -           | 0.2         | 0.2         | -           | -           | -           | -           | 0.2         | 0.2         |
| 23000029 | 2.1  | 1.05        | 1.05        | 0.7         | 2.1         | 1.61        | 0.7         | 1.61        | 0.7         | 0.7         | 1.75        | 0.7         |
| 23000002 | 1.75 | 1.05        | 1.93        | 1.58        | 1.75        | -           | -           | -           | -           | -           | -           | -           |
| 23000005 | 0.75 | 0.45        | 0.83        | 0.68        | 0.75        | -           | -           | -           | -           | -           | -           | -           |
| 23000008 | -    | -           | -           | -           | -           | -           | 0           | 0           | 0           | 0           | -           | -           |
| 23000009 | 0.6  | 0.69        | 0.54        | 0.39        | 0.45        | 0.39        | 0.69        | 0.39        | 0.54        | 0.3         | 0.69        | 0.69        |
| 23000010 | 1.17 | 1.39        | 0.85        | 0.96        | 0.96        | -           | -           | -           | -           | -           | -           | -           |
| 23000011 | -    | -           | -           | -           | -           | -           | -           | 1.17        | 1.17        | 1.07        | 1.07        | 0.96        |
| 12300002 | 0.6  | 0.6         | 0.6         | 0.6         | -           | -           | -           | -           | -           | -           | -           | -           |
| 23000030 | -    | -           | -           | -           | -           | -           | -           | 0.5         | 0.34        | 0.5         | 0.34        | 0.34        |
| 23020216 | 0.3  | 0.45        | 0.6         | 0.6         | 0.3         | 0.6         | -           | -           | -           | -           | 0.6         | 0.45        |
| 24190203 | -    | -           | -           | -           | -           | -           | 2.6         | 2.4         | 2.4         | 2.4         | -           | -           |
| 24190204 | -    | -           | -           | -           | -           | -           | 2.4         | 2.4         | 2.4         | 1.9         | 2.3         | -           |
| 24190205 | -    | -           | -           | -           | -           | -           | -           | 1.8         | 1.6         | 1.8         | 2.2         | 2           |
| 24190206 | -    | -           | -           | -           | -           | -           | -           | 2           | 2.2         | 2.3         | 2.3         | 2.1         |
| 24190207 | -    | -           | -           | -           | -           | -           | -           | 1.4         | 1.54        | 1.61        | 1.61        | 1.47        |
| 24190208 | -    | -           | -           | -           | -           | -           | -           | 1.75        | 1.75        | 1.4         | 1.61        | -           |
| 2300015  | 0.24 | 0.2         | 0.2         | 0.24        | 0.22        | 0.1         | 0.3         | 0.2         | 0.125       | 0.28        | 0.125       | 0.28        |
| 23070301 | 0.24 | 0.18        | 0.18        | 0.24        | 0.22        | 0.1         | 0.1         | 0.1         | 0.15        | 0.28        | 0.125       | 0.28        |
| 23040301 | 0.8  | 0.666<br>67 | 0.8         | 0.8         | 0.733<br>33 | 0.666<br>67 | 0.333<br>33 | 0.333<br>33 | 0.416<br>67 | 0.933<br>33 | 0.533<br>33 | 0.443<br>33 |
| 23040302 | 0.16 | 0.133<br>33 | 0.133<br>33 | 0.146<br>67 | 0.133<br>33 | 0.133<br>33 | 0.066<br>67 | 0.2         | 0.083<br>33 | 0.186<br>67 | 0.1         | 0.111<br>33 |
| 23040303 | 0.16 | 0.16        | 0.146<br>67 | 0.146<br>67 | 0.146<br>67 | 0.066<br>67 | 0.133<br>33 | 0.133<br>33 | 0.083<br>33 | 0.186<br>67 | 0.093<br>33 | 0.066<br>67 |





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|------------------------------------------------------------------|---------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|----------------------|---------------------|---------------------|
| 23040401                                                         | 0.80                | 0.73                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.93                | 0.47                |
| 23040402                                                         | 0.87                | 0.67                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.33                |
| 23040403                                                         | 0.87                | 0.67                 | 0.80                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.47                |
| 23070401                                                         | 0.87                | 0.67                 | 0.73                 | 0.87                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.53                |
| 23040501                                                         | 0.93                | 0.67                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.33                |
| 23040502                                                         | 0.87                | 0.67                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.53                | 0.47                |
| 23040503                                                         | 0.87                | 0.67                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.33                |
| 23040504                                                         | 0.87                | 0.67                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.33                | 0.47                |
| 23040506                                                         | 0.80                | 0.67                 | 0.67                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.33                |
| 23040601                                                         | 0.87                | 0.67                 | 0.67                 | 0.87                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.33                | 0.47                |
| 23040602                                                         | 0.87                | 0.67                 | 0.67                 | 0.87                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.33                | 0.47                |
| 23040603                                                         | 0.87                | 0.67                 | 0.67                 | 0.87                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.33                |
| 23040604                                                         | 0.80                | 0.67                 | 0.67                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.33                |
| 23040606                                                         | 0.87                | 0.80                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.47                | 0.47                |
| 23040701                                                         | 0.87                | 0.67                 | 0.73                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.33                | 0.47                |
| 23040702                                                         | 0.80                | 0.67                 | 0.67                 | 0.80                 | 0.73                 | 0.67                 | 0.78                 | 0.33                | 0.67                 | 0.67                 | 0.33                | 0.47                |
| 23040802                                                         | 0.76                | 0.63                 | 0.66                 | 0.71                 | 0.66                 | 0.59                 | 0.67                 | 0.50                | 0.62                 | 0.69                 | 0.52                | 0.47                |
| SUM OF<br>PO                                                     | 26.47               | 22.04                | 22.33                | 24.18                | 22.45                | 17.61                | 21.46                | 19.64               | 24.09                | 26.18                | 19.26               | 15.83               |
| COUNT<br>OF PO                                                   | 35                  | 35                   | 34                   | 34                   | 34                   | 30                   | 32                   | 39                  | 39                   | 38                   | 37                  | 34                  |
| DIRECT<br>TARGET<br>(AVG)                                        | <b>0.756<br/>39</b> | <b>0.629<br/>616</b> | <b>0.6567<br/>77</b> | <b>0.711<br/>224</b> | <b>0.660<br/>327</b> | <b>0.587<br/>023</b> | <b>0.670<br/>538</b> | <b>0.503<br/>52</b> | <b>0.617<br/>643</b> | <b>0.688<br/>926</b> | <b>0.520<br/>46</b> | <b>0.465<br/>46</b> |
| ATTAINM<br>ENT OF<br>PO<br>DIRECT<br>(Average<br>value<br>found) | <b>0.55</b>         | <b>0.43</b>          | <b>0.47</b>          | <b>0.44</b>          | <b>0.45</b>          | <b>0.33</b>          | <b>0.49</b>          | <b>0.57</b>         | <b>0.61</b>          | <b>0.64</b>          | <b>0.55</b>         | <b>0.41</b>         |
| 80% OF<br>DIRECT<br>ATT                                          | 0.44                | 0.35                 | 0.37                 | 0.36                 | 0.36                 | 0.27                 | 0.39                 | 0.46                | 0.49                 | 0.51                 | 0.44                | 0.33                |
| 20% OF<br>INDIREC<br>T<br>ATTAINM<br>ENT                         | 0.077<br>82         | 0.083<br>649         | 0.0704<br>79         | 0.075<br>758         | 0.080<br>013         | 0.075<br>916         | 0.067<br>168         | 0.065<br>894        | 0.072<br>884         | 0.075<br>916         | 0.069<br>74         | 0.084<br>78         |
| TOTAL                                                            | 0.52                | 0.43                 | 0.44                 | 0.43                 | 0.44                 | 0.34                 | 0.46                 | 0.53                | 0.56                 | 0.59                 | 0.51                | 0.41                |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- B.TECH IN ELECTRICAL ENGINEERING**

**ACADEMIC YEAR 2023 -2024**

**SEMESTER I - VIII**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

## **CORRELATION OF COS WITH POS (ALL COURSES)**

### **CO PO MATRIX ALL COURSES**

| SUBJECT  | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO10 | PO11 | PO12 | OVERALL PO AVG |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| 23000001 | 2.33 | 1.67 | 2.33 | 2.33 | 1.83 | -    | -    | -    | -    | -    | -    | -    | 2.10           |
| 23000004 | 2.50 | 2.50 | 2.17 | 2.50 | 2.50 | -    | -    | 2.00 | 2.00 | 3.00 | -    | -    | 2.40           |
| 23000012 | 2.33 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.83 | 1.18           |
| 23000003 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40 | -    | -    | 2.45           |
| 12300001 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00           |
| 23000006 | 1.33 | 1.33 | 1.33 | 1.50 | 1.00 | -    | -    | -    | -    | -    | 1.00 | 1.00 | 1.21           |
| 23000002 | 3.00 | 1.50 | 1.50 | 1.00 | 3.00 | 2.25 | 1.00 | 2.25 | 1.00 | 1.00 | 2.50 | 1.00 | 1.75           |
| 23000005 | 2.29 | 1.86 | 2.71 | 2.14 | 2.43 | -    | -    | -    | -    | -    | -    | -    | 2.29           |
| 23000008 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40 | -    | -    | 2.45           |
| 23000009 | 2.00 | 2.25 | 1.75 | 1.25 | 1.50 | 1.25 | 2.25 | 1.25 | 1.75 | 1.00 | 2.25 | 2.25 | 1.73           |
| 23000010 | 2.17 | 2.50 | 1.83 | 2.00 | 1.67 | -    | -    | -    | -    | -    | -    | -    | 2.03           |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 2.17 | 2.17 | 2.00 | 2.00 | 1.83 | 2.03           |
| 12300002 | 2.00 | 2.00 | 2.00 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.00           |
| 23000015 | 1.00 | -    | -    | -    | -    | 2.00 | -    | -    | -    | -    | 1.00 | 1.00 | 1.25           |
| 23050302 | 2.44 | 2.67 | 1.89 | 1.67 | 1.89 | 2.44 | 2.67 | 1.67 | 1.89 | 1.89 | 1.89 | 1.89 | 2.07           |
| 23070301 | 2.50 | 2.50 | 2.00 | 1.83 | 1.67 | 2.50 | 2.50 | 1.83 | 1.67 | 2.00 | 2.00 | 2.00 | 2.08           |
| 23050303 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13           |
| 23050301 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13           |
| 12300003 | 2.00 | 2.40 | 2.20 | 2.40 | 2.20 | -    | -    | -    | -    | -    | -    | -    | 2.24           |
| 23050401 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13           |
| 23050402 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03           |



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|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23050403 | 2.17 | 2.50 | 1.83 | 2.00 | 1.67 | 2.17 | 2.50 | 2.00 | 1.67 | 1.83 | 1.83 | 1.83 | 2.00 |
| 23050404 | 2.17 | 2.50 | 1.83 | 2.00 | 1.67 | 2.17 | 2.50 | 2.00 | 1.67 | 1.17 | 1.83 | 1.83 | 1.94 |
| 23070402 | 2.17 | 2.50 | 1.83 | 2.00 | 1.67 | 2.17 | 2.50 | 2.00 | 1.67 | 1.83 | 1.83 | 1.83 | 2.00 |
| 12300004 | 2.50 | 1.75 | 2.50 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.19 |
| 23050501 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050502 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050503 | 2.50 | 2.50 | 1.83 | 1.83 | 1.67 | 2.50 | 2.50 | 1.83 | 1.67 | 1.83 | 1.83 | 1.83 | 2.03 |
| 23050504 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13 |
| 23050505 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 12300005 | 2.33 | 2.33 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | -    | 2.22 |
| 23050601 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050602 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050603 | 2.33 | 2.67 | 2.00 | 2.00 | 2.00 | 2.33 | 2.67 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.17 |
| 23050604 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13 |
| 23050605 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050607 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13 |
| 12300006 | 2.00 | 2.33 | 2.00 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.08 |
| 23050701 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050702 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050703 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13 |
| 23050704 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13 |
| 23000023 | 3.00 | 2.00 | 2.00 | 2.00 | 3.00 | 1.00 | 1.00 | 1.00 | 3.00 | 3.00 | 1.00 | 1.00 | 1.92 |
| 12300007 | 2.00 | 2.33 | 2.00 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.06 |
| 23050801 | 2.50 | 2.67 | 1.67 | 1.83 | 2.00 | 2.50 | 2.67 | 1.83 | 2.00 | 1.67 | 1.67 | 1.67 | 2.06 |
| 23050802 | 2.50 | 2.50 | 2.00 | 2.00 | 1.75 | 2.50 | 2.50 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.13 |
| 23050803 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23050803 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 2.40 | 2.60 | 1.80 | 1.80 | 1.80 | 1.80 | 1.80 | 2.03 |
| 23000025 | 3.00 | 1.80 | 2.20 | 2.20 | 3.00 | 3.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 3.00 | 1.93 |
| 12300008 | 2.25 | 1.75 | 2.50 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.13 |
| AVERAGE  | 2.4  | 2.5  | 1.9  | 1.9  | 1.9  | 2.4  | 2.5  | 1.8  | 1.8  | 1.9  | 1.8  | 1.9  | 2.1  |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- B.TECH IN ELECTRICAL ENGINEERING**

**SEMESTER I - VIII**

**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023 -2024  
FOR I SEMESTER TO VIII SEMESTER**

| TARGET LEVEL | INTERNAL MARKS |          | EXTERNAL MARKS | TARGET LEVEL | ENTREPRENUIRSHIP SUBJECTS |          |          |
|--------------|----------------|----------|----------------|--------------|---------------------------|----------|----------|
|              | MID SEM        | CEC      | EXT            |              | INT                       | EXT      |          |
| 1            | ≤18            | ≤30      | ≤42            | 1            | ≤30                       | ≤30      |          |
| 2            | 19 to 24       | 31 to 40 | 43 to 56       | 2            | 31 to 40                  | 31 to 40 | 31 to 40 |
| 3            | ≥25            | ≥41      | ≥57            | 3            | ≥40                       | ≥40      | ≥40      |

| Course Name                                         | Course Code | Marks   |     |     | Level   |     |     | 30% Int | 70% Ext | Target |
|-----------------------------------------------------|-------------|---------|-----|-----|---------|-----|-----|---------|---------|--------|
|                                                     |             | Mid Sem | CEC | Ext | Mid Sem | CEC | Ext |         |         |        |
| SEMESTER - I                                        |             |         |     |     |         |     |     |         |         |        |
| Maths-I                                             | 23000001    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Fundamentals of Computer Programming                | 23000004    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Elements of Electrical Engineering                  | 23000012    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Elements of Mechanical Engineering                  | 23000003    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Orientation Program in Startuo and Entreprenuirship | 12300001    | 18      | -   | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Environmental Studies                               | 23000006    | 30      | -   | 30  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Electronic Workshop                                 | 23000002    | -       | -   | 60  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| SEMESTER - II                                       |             |         |     |     |         |     |     |         |         |        |
| Engineering Physics                                 | 23000005    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Communication Skills                                | 23000008    | 18      | -   | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Basic Electronics                                   | 23000009    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |
| Maths-II                                            | 23000010    | 18      | 30  | 42  | 1       | 1   | 1   | 0.3     | 0.7     | 1      |



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|                                                                |          |    |    |    |   |   |   |     |     |   |
|----------------------------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Engineering Graphics                                           | 23000011 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Basic Program In Entrepreneurship                              | 12300002 | 30 | -  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| SEMESTER - III                                                 |          |    |    |    |   |   |   |     |     |   |
| Maths-III                                                      | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Circuits and Networks                                          | 23050302 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Digital Electronics                                            | 23070301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| DC Machines and Transformer                                    | 23050303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electrical Measurement and Measuring Instruments               | 23050301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Foundation Program in Enterprenurship                          | 12300003 | 30 | -  | 30 | 1 | - | 1 | 0.3 | 0.7 | 1 |
| SEMESTER - IV                                                  |          |    |    |    |   |   |   |     |     |   |
| Analog Electronics                                             | 23050401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| AC Machines                                                    | 23050402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electrical Power Generation                                    | 23050403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electromagnetics                                               | 23050404 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Signal and System                                              | 23070402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intermediate Program in Enterprenurship                        | 12300004 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| SEMESTER - V                                                   |          |    |    |    |   |   |   |     |     |   |
| Power Electronics                                              | 23050501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electrical Power System - I                                    | 23050502 | 18 | -  | 42 | 1 | - | 1 | 0.3 | 0.7 | 1 |
| Control System Engineering                                     | 23050503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Elements of Electrical Design                                  | 23050504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Microprocessor and Microcontroller Architechture & Interfacing | 23050505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intellectual property rights                                   | 12300005 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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| SEMESTER - VI                                      |          |    |    |    |   |   |   |     |     |   |
|----------------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Indutrial Automation                               | 23050601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electrical Power System - II                       | 23050602 | 18 | -  | 42 | 1 | - | 1 | 0.3 | 0.7 | 1 |
| Design of DC Machines and Transformer              | 23050603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| High Voltage Engineering                           | 23050604 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Utilization of Electrical Energy and Traction      | 23050605 | 18 | 30 | -  | 1 | - | 1 | 0.3 | 0.7 | 1 |
| Control of Electrical Drives                       | 23050607 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Expert Program In Entrepreneurship                 | 12300006 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| SEMESTER - VII                                     |          |    |    |    |   |   |   |     |     |   |
| Inter Connected Power System                       | 23050701 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Switch Gear and Protection                         | 23050702 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Design of AC Machines                              | 23050703 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Advance Power Electronics                          | 23050704 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Project-I                                          | 23000023 | -  | -  | 90 | 1 | 1 | 1 | 0   | 1   | 1 |
| Startup Project-I                                  | 12300007 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| SEMESTER - VIII                                    |          |    |    |    |   |   |   |     |     |   |
| Power System Planning and Design                   | 23050801 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Testing and Commissioning of Electrical Equipments | 23050802 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Power System Operation and Control                 | 23050803 | 18 | -  | 42 | 1 | - | 1 | 0.3 | 0.7 | 1 |
| Energy Conservation and Audit                      | 23050804 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Project-II                                         | 23000025 | -  | -  | 60 | 1 | 1 | 1 | 0   | 1   | 1 |
| Startup Project-II                                 | 12300008 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- B.TECH IN ELECTRICAL ENGINEERING**

**SEMESTER I - VIII**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | PERCENTAGE |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                               | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score |   | Course Outcome attainment |
|--------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---|---------------------------|
| SEMESTER - I OF ACEDMIC YEAR 2023-24 |             |      |                          |                                                                                     |                                  |                  |                |   |                           |
| Maths-I                              | 23000001    | INT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |
|                                      |             | CEC  | -                        | -                                                                                   | -                                | -                |                |   |                           |
|                                      |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | - |                           |
| Fundamentals of Computer Programming | 23000004    | INT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |
|                                      |             | CEC  | -                        | -                                                                                   | -                                | -                |                |   |                           |
|                                      |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | - |                           |
| Elements of Electrical Engineering   | 23000012    | INT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |
|                                      |             | CEC  | -                        | -                                                                                   | -                                | -                |                |   |                           |
|                                      |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | - |                           |
| Elements of Mechanical Engineering   | 23000003    | INT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |
|                                      |             | CEC  | -                        | -                                                                                   | -                                | -                |                |   |                           |
|                                      |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | - |                           |
| Orientation Program in Startuo and   | 12300001    | INT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |
|                                      |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | - |                           |
| Environmental Studies                | 23000006    | INT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |
|                                      |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | - |                           |
| Electronic Workshop                  | 23000002    | EXT  | -                        | -                                                                                   | -                                | -                | -              | - | -                         |



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| SEMESTER - II OF ACEDEMIC YEAR 2023-24                 |          |     |   |   |        |   |   |     |     |
|--------------------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Engineering Physics                                    | 23000005 | INT | - | - | -      | - | - | -   | -   |
|                                                        |          | CEC | - | - | -      | - |   |     |     |
|                                                        |          | EXT | - | - | -      | - |   |     |     |
| Communication Skills                                   | 23000008 | INT | - | - | -      | - | - | -   | -   |
|                                                        |          | EXT | - | - | -      | - | - |     |     |
| Basic Electronics                                      | 23000009 | INT | - | - | -      | - | - | -   | -   |
|                                                        |          | CEC | - | - | -      | - |   |     |     |
|                                                        |          | EXT | - | - | -      | - |   |     |     |
| Maths-II                                               | 23000010 | INT | - | - | -      | - | - | -   | -   |
|                                                        |          | CEC | - | - | -      | - |   |     |     |
|                                                        |          | EXT | - | - | -      | - |   |     |     |
| Engineering Graphics                                   | 23000011 | INT | - | - | -      | - | - | -   | -   |
|                                                        |          | CEC |   |   |        |   |   |     |     |
|                                                        |          | EXT | - | - | -      | - | - | -   |     |
| Basic Program In<br>Entreprenureship                   | 12300002 | INT | - | - | -      | - | - | -   | -   |
|                                                        |          | EXT | - | - | -      | - | - | -   |     |
| SEMESTER - III OF ACEDEMIC YEAR 2023-24                |          |     |   |   |        |   |   |     |     |
| Maths-3                                                | 23000015 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                                        |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                        |          | EXT | 7 | 2 | 28.57  | 0 |   |     |     |
| Circuits and Networks                                  | 23050302 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                                        |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                        |          | EXT | 7 | 4 | 57.14  | 1 |   |     |     |
| Digital Electronics                                    | 23070301 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                                        |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                        |          | EXT | 7 | 6 | 85.71  | 3 |   |     |     |
| DC Machines and<br>Transformer                         | 23050303 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.6 | 2.7 |
|                                                        |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                        |          | EXT | 7 | 6 | 85.71  | 3 |   |     |     |
| Electrical Measurement<br>and Measuring<br>Instruments | 23050301 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.6 | 1.4 |
|                                                        |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                        |          | EXT | 7 | 4 | 57.14  | 1 |   |     |     |
| Foundation Program in<br>Entrepreneurship              | 12300003 | INT | 7 | 3 | 42.86  | 0 | 0 | 0   | 2.1 |
|                                                        |          | EXT | 7 | 6 | 85.71  | 3 | 3 | 2.1 |     |





| IV SEMESTER OF ACEDMIC YEAR 2023-24                            |          |     |   |   |        |   |     |      |      |
|----------------------------------------------------------------|----------|-----|---|---|--------|---|-----|------|------|
| Analog Electronics                                             | 23050401 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                                                |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 5 | 4 | 80.00  | 3 |     |      |      |
| AC Machines                                                    | 23050402 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                                                |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 5 | 4 | 80.00  | 3 |     |      |      |
| Electrical Power Generation                                    | 23050403 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                                                |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 5 | 5 | 100.00 | 3 |     |      |      |
| Electromagnetics                                               | 23050404 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                                                |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 5 | 5 | 100.00 | 3 |     |      |      |
| Signal and System                                              | 23070402 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 1.6  |
|                                                                |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 5 | 3 | 60.00  | 1 |     |      |      |
| Intermediate Program in Enterprenurship                        | 12300004 | INT | 5 | 4 | 80.00  | 3 | 3   | 0.9  | 1.6  |
|                                                                |          | EXT | 5 | 3 | 60.00  | 1 |     |      |      |
| V SEMESTER OF ACEDMIC YEAR 2023-24                             |          |     |   |   |        |   |     |      |      |
| Power Electronics                                              | 23050501 | INT | 7 | 5 | 71.43  | 2 | 2.5 | 0.75 | 0.75 |
|                                                                |          | CEC | 7 | 6 | 85.71  | 3 |     |      |      |
|                                                                |          | EXT | 7 | 1 | 14.29  | 0 |     |      |      |
| Electrical Power System - I                                    | 23050502 | INT | 7 | 6 | 85.71  | 3 | 3   | 0.9  | 0.9  |
|                                                                |          | EXT | 7 | 3 | 42.86  | 0 |     |      |      |
| Control System Engineering                                     | 23050503 | INT | 7 | 5 | 71.43  | 2 | 2.5 | 0.75 | 0.75 |
|                                                                |          | CEC | 7 | 7 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 7 | 1 | 14.29  | 0 |     |      |      |
| Elements of Electrical Design                                  | 23050504 | INT | 7 | 5 | 71.43  | 2 | 2.5 | 0.75 | 0.75 |
|                                                                |          | CEC | 7 | 7 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 7 | 2 | 28.57  | 0 |     |      |      |
| Microprocessor and Microcontroller Architechture & Interfacing | 23050505 | INT | 7 | 7 | 100.00 | 3 | 3   | 0.9  | 0.9  |
|                                                                |          | CEC | 7 | 7 | 100.00 | 3 |     |      |      |
|                                                                |          | EXT | 7 | 2 | 28.57  | 0 |     |      |      |
| Intellectual property rights                                   | 12300005 | INT | 7 | 1 | 14.29  | 0 |     | 0    | 0.7  |
|                                                                |          | EXT | 7 | 4 | 57.14  | 1 |     |      |      |





| VI SEMESTER OF ACEDMIC YEAR 2023-24              |          |     |   |   |        |   |   |     |     |
|--------------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Indutrial Automation                             | 23050601 | INT | 7 | 1 | 14.29  | 0 | 0 | 0   | 0   |
|                                                  |          | CEC | 7 | 1 | 14.29  | 0 |   |     |     |
|                                                  |          | EXT | 7 | 2 | 28.57  | 0 |   |     |     |
| Electrical Power System<br>- II                  | 23050602 | INT | 7 | 1 | 14.29  | 3 | 3 | 0.9 | 1.6 |
|                                                  |          | EXT | 7 | 4 | 57.14  | 1 |   | 0.7 |     |
| Design of DC Machines<br>and Transformer         | 23050603 | INT | 7 | 1 | 14.29  | 0 | 0 | 0   | 1.4 |
|                                                  |          | CEC | 7 | 1 | 14.29  | 0 |   |     |     |
|                                                  |          | EXT | 7 | 5 | 71.43  | 2 |   |     |     |
| High Voltage<br>Engineering                      | 23050604 | INT | 7 | 1 | 14.29  | 0 | 0 | 0   | 1.4 |
|                                                  |          | CEC | 7 | 1 | 14.29  | 0 |   |     |     |
|                                                  |          | EXT | 7 | 5 | 71.43  | 2 |   |     |     |
| Utilization of Electrical<br>Energy and Traction | 23050605 | INT | 7 | 1 | 14.29  | 0 | 0 | 0   | 1.4 |
|                                                  |          | EXT | 7 | 5 | 71.43  | 2 |   | 1.4 |     |
| Control of Electrical<br>Drives                  | 23050607 | INT | 7 | 1 | 14.29  | 0 | 0 | 0   | 0.7 |
|                                                  |          | CEC | 7 | 1 | 14.29  | 0 |   |     |     |
|                                                  |          | EXT | 7 | 4 | 57.14  | 1 |   |     |     |
| Expert Program In<br>Enterpreneurship            | 12300006 | INT | 7 | 1 | 14.29  | 0 | 0 | 0   | 0.7 |
|                                                  |          | EXT | 7 | 4 | 57.14  | 1 | 1 | 0.7 |     |
| VII SEMESTER OF ACEDMIC YEAR 2023-24             |          |     |   |   |        |   |   |     |     |
| Inter Connected Power<br>System                  | 23050701 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 0.9 |
|                                                  |          | CEC | 7 | 6 | 85.71  | 3 |   |     |     |
|                                                  |          | EXT | 7 | 2 | 28.57  | 0 |   |     |     |
| Switch Gear and<br>Protection                    | 23050702 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 0.9 |
|                                                  |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                  |          | EXT | 7 | 1 | 14.29  | 0 |   |     |     |
| Design of AC Machines                            | 23050703 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 0.9 |
|                                                  |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                                  |          | EXT | 7 | 3 | 42.86  | 0 |   |     |     |
| Advance Power<br>Electronics                     | 23050704 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 0.9 |
|                                                  |          | CEC | 7 | 6 | 85.71  | 3 |   |     |     |
|                                                  |          | EXT | 7 | 3 | 42.86  | 0 |   |     |     |
| Project-I                                        | 23000023 | EXT | 7 | 7 | 100.00 | 3 | 3 | 3   | 3   |
| Startup Project-I                                | 12300007 | INT | 7 | 7 | 100.00 | 3 | 0 | 0.9 | 3   |
|                                                  |          | EXT | 7 | 7 | 100.00 | 3 | 1 | 2.1 |     |







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| VIII SEMESTER OF ACEDMIC YEAR 2023-24              |          |     |   |   |        |   |   |     |     |
|----------------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Power System Planning and Design                   | 23050801 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 0.9 |
|                                                    |          | CEC | 7 | 6 | 85.71  | 3 |   |     |     |
|                                                    |          | EXT | 7 | 3 | 42.86  | 0 |   |     |     |
| Testing and Commissioning of Electrical Equipments | 23050802 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 2.3 |
|                                                    |          | CEC | 7 | 6 | 85.71  | 3 |   |     |     |
|                                                    |          | EXT | 7 | 5 | 71.43  | 2 |   |     |     |
| Power System Operation and Control                 | 23050803 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 1.6 |
|                                                    |          | EXT | 7 | 4 | 57.14  | 1 | 2 | 0.7 |     |
| Energy Conservation and Audit                      | 23050804 | INT | 7 | 6 | 85.71  | 3 | 3 | 0.9 | 2.3 |
|                                                    |          | CEC | 7 | 6 | 85.71  | 3 |   |     |     |
|                                                    |          | EXT | 7 | 5 | 71.43  | 2 | 2 | 1.4 |     |
| Project-II                                         | 23000025 | EXT | 7 | 7 | 100.00 | 3 | 3 | 3   | 3   |
| Startup Project-II                                 | 12300008 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                                    |          | EXT | 7 | 7 | 100.00 | 3 | 3 | 2.1 |     |



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**PROGRAM NAME :- B.TECH IN ELECTRICAL ENGINEERING**  
**SEMESTER I - VIII**  
**FINAL DIRECT ATTAINMENT LEVELS FOR PO'S (ALL COURSES)**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000004 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000012 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 12300001 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000006 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000002 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000005 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000009 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000010 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 12300002 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000015 | 0.10 | -    | -    | -    | -    | 0.20 | -    | -    | -    | -    | 0.10 | 0.10 |
| 23050302 | 0.43 | 0.47 | 0.34 | 0.30 | 0.34 | 0.43 | 0.47 | 0.30 | 0.34 | 0.34 | 0.34 | 0.34 |
| 23070301 | 0.83 | 0.83 | 0.67 | 0.61 | 0.56 | 0.83 | 0.83 | 0.61 | 0.56 | 0.67 | 0.67 | 0.67 |
| 23050303 | 0.75 | 0.75 | 0.60 | 0.60 | 0.53 | 0.75 | 0.75 | 0.60 | 0.53 | 0.60 | 0.60 | 0.60 |
| 23050301 | 0.39 | 0.39 | 0.31 | 0.31 | 0.27 | 0.39 | 0.39 | 0.31 | 0.27 | 0.31 | 0.31 | 0.31 |
| 12300003 | 0.47 | 0.56 | 0.51 | 0.56 | 0.51 | -    | -    | -    | -    | -    | -    | -    |
| 23050401 | 0.83 | 0.83 | 0.67 | 0.67 | 0.58 | 0.83 | 0.83 | 0.67 | 0.58 | 0.67 | 0.67 | 0.67 |
| 23050402 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| 23050403 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.72 | 0.83 | 0.67 | 0.56 | 0.61 | 0.61 | 0.61 |
| 23050404 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.72 | 0.83 | 0.67 | 0.56 | 0.39 | 0.61 | 0.61 |
| 23070402 | 0.39 | 0.44 | 0.33 | 0.36 | 0.30 | 0.39 | 0.44 | 0.36 | 0.30 | 0.33 | 0.33 | 0.33 |
| 12300004 | 0.44 | 0.31 | 0.44 | 0.36 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23050501 | 0.20 | 0.22 | 0.15 | 0.15 | 0.15 | 0.20 | 0.22 | 0.15 | 0.15 | 0.15 | 0.15 | 0.15 |



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|---------------------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|------|-------|
| 23050502            | 0.24  | 0.26  | 0.18  | 0.18  | 0.18  | 0.24  | 0.26  | 0.18 | 0.18 | 0.18  | 0.18 | 0.18  |
| 23050503            | 0.21  | 0.21  | 0.15  | 0.15  | 0.14  | 0.21  | 0.21  | 0.15 | 0.14 | 0.15  | 0.15 | 0.15  |
| 23050504            | 0.21  | 0.21  | 0.17  | 0.17  | 0.15  | 0.21  | 0.21  | 0.17 | 0.15 | 0.17  | 0.17 | 0.17  |
| 23050505            | 0.24  | 0.26  | 0.18  | 0.18  | 0.18  | 0.24  | 0.26  | 0.18 | 0.18 | 0.18  | 0.18 | 0.18  |
| 12300005            | 0.18  | 0.18  | 0.16  | -     | -     | -     | -     | -    | -    | -     | -    | -     |
| 23050601            | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00 | 0.00 | 0.00  | 0.00 | 0.00  |
| 23050602            | 0.43  | 0.46  | 0.32  | 0.32  | 0.32  | 0.43  | 0.46  | 0.32 | 0.32 | 0.32  | 0.32 | 0.32  |
| 23050603            | 0.36  | 0.41  | 0.31  | 0.31  | 0.31  | 0.36  | 0.41  | 0.31 | 0.31 | 0.31  | 0.31 | 0.31  |
| 23050604            | 0.39  | 0.39  | 0.31  | 0.31  | 0.27  | 0.39  | 0.39  | 0.31 | 0.27 | 0.31  | 0.31 | 0.31  |
| 23050605            | 0.37  | 0.40  | 0.28  | 0.28  | 0.28  | 0.37  | 0.40  | 0.28 | 0.28 | 0.28  | 0.28 | 0.28  |
| 23050607            | 0.19  | 0.19  | 0.16  | 0.16  | 0.14  | 0.19  | 0.19  | 0.16 | 0.14 | 0.16  | 0.16 | 0.16  |
| 12300006            | 0.16  | 0.18  | 0.16  | 0.16  | -     | -     | -     | -    | -    | -     | -    | -     |
| 23050701            | 0.24  | 0.26  | 0.18  | 0.18  | 0.18  | 0.24  | 0.26  | 0.18 | 0.18 | 0.18  | 0.18 | 0.18  |
| 23050702            | 0.24  | 0.26  | 0.18  | 0.18  | 0.18  | 0.24  | 0.26  | 0.18 | 0.18 | 0.18  | 0.18 | 0.18  |
| 23050703            | 0.25  | 0.25  | 0.20  | 0.20  | 0.18  | 0.25  | 0.25  | 0.20 | 0.18 | 0.20  | 0.20 | 0.20  |
| 23050704            | 0.25  | 0.25  | 0.20  | 0.20  | 0.18  | 0.25  | 0.25  | 0.20 | 0.18 | 0.20  | 0.20 | 0.20  |
| 23000023            | 1.00  | 0.67  | 0.67  | 0.67  | 1.00  | 0.33  | 0.33  | 0.33 | 1.00 | 1.00  | 0.33 | 0.33  |
| 12300007            | 0.67  | 0.78  | 0.67  | 0.67  | -     | -     | -     | -    | -    | -     | -    | -     |
| 23050801            | 0.25  | 0.27  | 0.17  | 0.18  | 0.20  | 0.25  | 0.27  | 0.18 | 0.20 | 0.17  | 0.17 | 0.17  |
| 23050802            | 0.64  | 0.64  | 0.51  | 0.51  | 0.45  | 0.64  | 0.64  | 0.51 | 0.45 | 0.51  | 0.51 | 0.51  |
| 23050803            | 0.43  | 0.46  | 0.32  | 0.32  | 0.32  | 0.43  | 0.46  | 0.32 | 0.32 | 0.32  | 0.32 | 0.32  |
| 23050803            | 0.61  | 0.66  | 0.46  | 0.46  | 0.46  | 0.61  | 0.66  | 0.46 | 0.46 | 0.46  | 0.46 | 0.46  |
| 23000025            | 1.00  | 0.60  | 0.73  | 0.73  | 1.00  | 1.00  | 0.33  | 0.33 | 0.33 | 0.33  | 0.33 | 1.00  |
| 12300008            | 0.75  | 0.58  | 0.83  | 0.67  | -     | -     | -     | -    | -    | -     | -    | -     |
| TOTAL PO ATTAINMENT | 16.39 | 16.19 | 13.32 | 13.02 | 11.04 | 13.15 | 12.99 | 9.88 | 9.86 | 10.26 | 9.92 | 10.59 |
| COUNT               | 36    | 35    | 35    | 34    | 30    | 30    | 29    | 29   | 29   | 29    | 30   | 30    |
| AVERAGE ATTAINMENT  | 0.46  | 0.46  | 0.38  | 0.38  | 0.37  | 0.44  | 0.45  | 0.34 | 0.34 | 0.35  | 0.33 | 0.35  |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- B.TECH IN ELECTRICAL ENGINEERING**

**TARGET LEVEL FOR POS THROUGH ALL COURSES**

**SEMESTER I - VIII**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.78 | 0.56 | 0.78 | 0.78 | 0.61 | -    | -    | -    | -    | -    | -    | -    |
| 23000004 | 0.83 | 0.83 | 0.72 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1.00 | -    | -    |
| 23000012 | 0.78 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.61 |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000006 | 0.44 | 0.44 | 0.44 | 0.50 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000002 | 1.00 | 0.50 | 0.50 | 0.33 | 1.00 | 0.75 | 0.33 | 0.75 | 0.33 | 0.33 | 0.83 | 0.33 |
| 23000005 | 0.76 | 0.62 | 0.90 | 0.71 | 0.81 | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 23000009 | 0.67 | 0.75 | 0.58 | 0.42 | 0.50 | 0.42 | 0.75 | 0.42 | 0.58 | 0.33 | 0.75 | 0.75 |
| 23000010 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | -    | -    | -    | -    | -    | -    | -    |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.72 | 0.72 | 0.67 | 0.67 | 0.61 |
| 12300002 | 0.67 | 0.67 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000015 | 0.33 | -    | -    | -    | -    | 0.67 | -    | -    | -    | -    | 0.33 | 0.33 |
| 23050302 | 0.81 | 0.89 | 0.63 | 0.56 | 0.63 | 0.81 | 0.89 | 0.56 | 0.63 | 0.63 | 0.63 | 0.63 |
| 23070301 | 0.83 | 0.83 | 0.67 | 0.61 | 0.56 | 0.83 | 0.83 | 0.61 | 0.56 | 0.67 | 0.67 | 0.67 |
| 23050303 | 0.83 | 0.83 | 0.67 | 0.67 | 0.58 | 0.83 | 0.83 | 0.67 | 0.58 | 0.67 | 0.67 | 0.67 |
| 23050301 | 0.83 | 0.83 | 0.67 | 0.67 | 0.58 | 0.83 | 0.83 | 0.67 | 0.58 | 0.67 | 0.67 | 0.67 |
| 12300003 | 0.67 | 0.80 | 0.73 | 0.80 | 0.73 | -    | -    | -    | -    | -    | -    | -    |
| 23050401 | 0.83 | 0.83 | 0.67 | 0.67 | 0.58 | 0.83 | 0.83 | 0.67 | 0.58 | 0.67 | 0.67 | 0.67 |
| 23050402 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| 23050403 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.72 | 0.83 | 0.67 | 0.56 | 0.61 | 0.61 | 0.61 |
| 23050404 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.72 | 0.83 | 0.67 | 0.56 | 0.39 | 0.61 | 0.61 |
| 23070402 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.72 | 0.83 | 0.67 | 0.56 | 0.61 | 0.61 | 0.61 |
| 12300004 | 0.83 | 0.58 | 0.83 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23050501 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| 23050502 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| 23050503 | 0.83 | 0.83 | 0.61 | 0.61 | 0.56 | 0.83 | 0.83 | 0.61 | 0.56 | 0.61 | 0.61 | 0.61 |
| 23050504 | 0.83 | 0.83 | 0.67 | 0.67 | 0.58 | 0.83 | 0.83 | 0.67 | 0.58 | 0.67 | 0.67 | 0.67 |
| 23050505 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |
| 12300005 | 0.78 | 0.78 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23050601 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.80 | 0.87 | 0.60 | 0.60 | 0.60 | 0.60 | 0.60 |



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|                                               |             |          |          |          |          |          |          |          |          |          |          |           |
|-----------------------------------------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|
| 23050602                                      | 0.80        | 0.87     | 0.60     | 0.60     | 0.60     | 0.80     | 0.87     | 0.60     | 0.60     | 0.60     | 0.60     | 0.60      |
| 23050603                                      | 0.78        | 0.89     | 0.67     | 0.67     | 0.67     | 0.78     | 0.89     | 0.67     | 0.67     | 0.67     | 0.67     | 0.67      |
| 23050604                                      | 0.83        | 0.83     | 0.67     | 0.67     | 0.58     | 0.83     | 0.83     | 0.67     | 0.58     | 0.67     | 0.67     | 0.67      |
| 23050605                                      | 0.80        | 0.87     | 0.60     | 0.60     | 0.60     | 0.80     | 0.87     | 0.60     | 0.60     | 0.60     | 0.60     | 0.60      |
| 23050607                                      | 0.83        | 0.83     | 0.67     | 0.67     | 0.58     | 0.83     | 0.83     | 0.67     | 0.58     | 0.67     | 0.67     | 0.67      |
| 12300006                                      | 0.67        | 0.78     | 0.67     | 0.67     | -        | -        | -        | -        | -        | -        | -        | -         |
| 23050701                                      | 0.80        | 0.87     | 0.60     | 0.60     | 0.60     | 0.80     | 0.87     | 0.60     | 0.60     | 0.60     | 0.60     | 0.60      |
| 23050702                                      | 0.80        | 0.87     | 0.60     | 0.60     | 0.60     | 0.80     | 0.87     | 0.60     | 0.60     | 0.60     | 0.60     | 0.60      |
| 23050703                                      | 0.83        | 0.83     | 0.67     | 0.67     | 0.58     | 0.83     | 0.83     | 0.67     | 0.58     | 0.67     | 0.67     | 0.67      |
| 23050704                                      | 0.83        | 0.83     | 0.67     | 0.67     | 0.58     | 0.83     | 0.83     | 0.67     | 0.58     | 0.67     | 0.67     | 0.67      |
| 23000023                                      | 1.00        | 0.67     | 0.67     | 0.67     | 1.00     | 0.33     | 0.33     | 0.33     | 1.00     | 1.00     | 0.33     | 0.33      |
| 12300007                                      | 0.67        | 0.78     | 0.67     | 0.67     | -        | -        | -        | -        | -        | -        | -        | -         |
| 23050801                                      | 0.83        | 0.89     | 0.56     | 0.61     | 0.67     | 0.83     | 0.89     | 0.61     | 0.67     | 0.56     | 0.56     | 0.56      |
| 23050802                                      | 0.83        | 0.83     | 0.67     | 0.67     | 0.58     | 0.83     | 0.83     | 0.67     | 0.58     | 0.67     | 0.67     | 0.67      |
| 23050803                                      | 0.80        | 0.87     | 0.60     | 0.60     | 0.60     | 0.80     | 0.87     | 0.60     | 0.60     | 0.60     | 0.60     | 0.60      |
| 23050803                                      | 0.80        | 0.87     | 0.60     | 0.60     | 0.60     | 0.80     | 0.87     | 0.60     | 0.60     | 0.60     | 0.60     | 0.60      |
| 23000025                                      | 1.00        | 0.60     | 0.73     | 0.73     | 1.00     | 1.00     | 0.33     | 0.33     | 0.33     | 0.33     | 0.33     | 1.00      |
| 12300008                                      | 0.75        | 0.58     | 0.83     | 0.67     | -        | -        | -        | -        | -        | -        | -        | -         |
| SUM OF PO                                     | 29.25       | 29.43    | 23.36    | 22.52    | 19.32    | 24.56    | 24.53    | 18.32    | 17.92    | 18.67    | 18.56    | 19.23     |
| COUNT OF PO                                   | 37          | 36       | 36       | 35       | 31       | 31       | 30       | 30       | 30       | 30       | 31       | 31        |
| DIRECT TARGET (AVG)                           | 0.790640641 | 0.817593 | 0.648971 | 0.643492 | 0.623357 | 0.792234 | 0.817778 | 0.610741 | 0.597469 | 0.622469 | 0.598805 | 0.6203106 |
| ATTAINMENT OF PO DIRECT (Average value found) | 0.46        | 0.46     | 0.38     | 0.38     | 0.37     | 0.44     | 0.45     | 0.34     | 0.34     | 0.35     | 0.33     | 0.35      |
| 80% OF DIRECT ATT                             | 0.36        | 0.37     | 0.30     | 0.31     | 0.29     | 0.35     | 0.36     | 0.27     | 0.27     | 0.28     | 0.26     | 0.28      |
| 20% OF INDIRECT ATTAINMENT                    | 0.48        | 0.51     | 0.46     | 0.52     | 0.47     | 0.49     | 0.50     | 0.50     | 0.50     | 0.52     | 0.49     | 0.52      |
| TOTAL                                         | 0.84        | 0.88     | 0.77     | 0.83     | 0.76     | 0.84     | 0.86     | 0.77     | 0.77     | 0.81     | 0.76     | 0.80      |





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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING**

**ACADEMIC YEAR 2023 -2024**

**SEMESTER III - VIII**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

### **CO PO MATRIX ALL COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | OVERALL<br>PO AVG |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------|
| 24010301 | 2.33 | 2.67 | 2.00 | 2.00 | 2.00 | 2.33 | 2.67 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.17              |
| 24000001 | 2.60 | 2.80 | 1.60 | 2.00 | 2.40 | 2.60 | 2.80 | 1.60 | 1.40 | 1.60 | 1.00 | 1.00 | 1.95              |
| 24000002 | 2.80 | 2.80 | 1.60 | 2.00 | 1.40 | 2.60 | 2.80 | 1.60 | 1.40 | 1.60 | 1.00 | 1.00 | 1.88              |
| 24000003 | 2.75 | 2.75 | 1.75 | 2.00 | 1.50 | 2.50 | 2.75 | 1.50 | 1.50 | 1.75 | 1.00 | 1.00 | 1.90              |
| 24010401 | 2.50 | 2.75 | 1.75 | 2.00 | 2.25 | 2.50 | 2.75 | 2.00 | 2.25 | 1.75 | 1.75 | 1.75 | 2.17              |
| 24000006 | 2.60 | 2.80 | 1.60 | 2.00 | 2.40 | 2.60 | 2.80 | 1.60 | 1.40 | 1.60 | 1.00 | 1.00 | 1.95              |
| 24000004 | 2.75 | 2.75 | 1.75 | 2.00 | 1.50 | 2.50 | 2.75 | 1.50 | 1.50 | 1.75 | 1.00 | 1.00 | 1.90              |
| 24000005 | 3.00 | 2.67 | 2.00 | 2.00 | 1.00 | 2.33 | 2.67 | 1.33 | 1.00 | 2.00 | 1.00 | 1.00 | 1.83              |
| AVERAGE  | 2.7  | 2.7  | 1.8  | 2.0  | 1.8  | 2.5  | 2.7  | 1.6  | 1.6  | 1.8  | 1.2  | 1.2  | 2.0               |

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**PROGRAM NAME :- M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING**  
**SEMESTER III - VIII**  
**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023 -2024**  
**FOR SEMESTER III - IV**

| TARGET<br>LEVEL | INTERNAL |       | EXTERNAL<br>MARKS |
|-----------------|----------|-------|-------------------|
|                 | MID      | CEC   |                   |
| 1               | ≤18      | ≤30   | ≤42               |
| 2               | 19 TO    | 31 TO | 43 TO 56          |
| 3               | ≥25      | ≥41   | ≥57               |

| Course Name                                                           | Course Code | Marks |      |     | Level |     |          | 30% Internal | 70% External | Target |
|-----------------------------------------------------------------------|-------------|-------|------|-----|-------|-----|----------|--------------|--------------|--------|
|                                                                       |             | Mid   | CE C | Ext | Mid   | CEC | External |              |              |        |
| SEMESTER - III                                                        |             |       |      |     |       |     |          |              |              |        |
| Power Quality issues and their mitigation Techniques in power systems | 24010301    | 18    | 30   | 42  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| Seminar - I                                                           | 24000001    | -     | -    | 30  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| Internal Review                                                       | 24000002    | -     | -    | 60  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| Dissertation Phase - I                                                | 24000003    | -     | -    | 60  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| SEMESTER - IV                                                         |             |       |      |     |       |     |          |              |              |        |
| Smart Grid Technology and Applications                                | 24010401    | 18    | 30   | 42  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| Seminar - II                                                          | 24000006    | -     | -    | 30  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| External Mid Sem Review                                               | 24000004    | -     | -    | 60  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |
| Dissertation Phase - II                                               | 24000005    | -     | -    | 60  | 1     | 1   | 1        | 0.3          | 0.7          | 1      |



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**PROGRAM NAME :- M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING**  
**SEMESTER III - IV**  
**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | PERCENTAGE |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                                       | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |
|----------------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|
| <b>III SEMESTER OF ACADEMIC YEAR 2023-24</b> |             |      |                          |                                                                                     |                                  |                  |                |                           |

|                                                                       |          |     |   |   |        |   |   |     |     |
|-----------------------------------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Power Quality issues and their mitigation Techniques in power systems | 24010301 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                                                       |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                                                                       |          | EXT | 1 | 0 | 0.00   | 0 | 0 | 0   |     |
| Seminar - I                                                           | 24000001 | EXT | 1 | 1 | 100.00 | 3 | 3 | 3   | 3   |
| Internal Review                                                       | 24000002 | EXT | 1 | 1 | 100.00 | 3 | 3 | 3   | 3   |
| Dissertation Phase - I                                                | 24000003 | EXT | 1 | 1 | 100.00 | 3 | 3 | 3   | 3   |
| <b>IV SEMESTER OF ACADEMIC YEAR 2023-24</b>                           |          |     |   |   |        |   |   |     |     |
| Smart Grid Technology and Applications                                | 24010401 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                                                       |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                                                                       |          | EXT | 1 | 0 | 0.00   | 0 | 0 | 0   |     |
| Seminar - II                                                          | 24000006 | EXT | 1 | 1 | 100.00 | 3 | 3 | 3   | 3   |
| External Mid Sem Review                                               | 24000004 | EXT | 1 | 1 | 100.00 | 3 | 3 | 3   | 3   |
| Dissertation Phase - II                                               | 24000005 | EXT | 1 | 1 | 100.00 | 3 | 3 | 3   | 3   |

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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING**

**SEMESTER III - VIII**

**FINAL DIRECT ATTAINMENT LEVELS FOR PO'S (ALL COURSES)**

| SUBJECT             | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 24010301            | 0.23 | 0.27 | 0.20 | 0.20 | 0.20 | 0.23 | 0.27 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 |
| 24000001            | 0.87 | 0.93 | 0.53 | 0.67 | 0.80 | 0.87 | 0.93 | 0.53 | 0.47 | 0.53 | 0.33 | 0.33 |
| 24000002            | 0.93 | 0.93 | 0.53 | 0.67 | 0.47 | 0.87 | 0.93 | 0.53 | 0.47 | 0.53 | 0.33 | 0.33 |
| 24000003            | 0.92 | 0.92 | 0.58 | 0.67 | 0.50 | 0.83 | 0.92 | 0.50 | 0.50 | 0.58 | 0.33 | 0.33 |
| 24010401            | 0.25 | 0.28 | 0.18 | 0.20 | 0.23 | 0.25 | 0.28 | 0.20 | 0.23 | 0.18 | 0.18 | 0.18 |
| 24000006            | 0.87 | 0.93 | 0.53 | 0.67 | 0.80 | 0.87 | 0.93 | 0.53 | 0.47 | 0.53 | 0.33 | 0.33 |
| 24000004            | 0.92 | 0.92 | 0.58 | 0.67 | 0.50 | 0.83 | 0.92 | 0.50 | 0.50 | 0.58 | 0.33 | 0.33 |
| 24000005            | 1.00 | 0.89 | 0.67 | 0.67 | 0.33 | 0.78 | 0.89 | 0.44 | 0.33 | 0.67 | 0.33 | 0.33 |
| TOTAL PO ATTAINMENT | 5.98 | 6.06 | 3.81 | 4.40 | 3.83 | 5.53 | 6.06 | 3.44 | 3.16 | 3.81 | 2.38 | 2.38 |
| COUNT               | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| AVERAGE ATTAINMENT  | 0.75 | 0.76 | 0.48 | 0.55 | 0.48 | 0.69 | 0.76 | 0.43 | 0.39 | 0.48 | 0.30 | 0.30 |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME :- M.TECH IN ELECTRICAL POWER SYSTEM ENGINEERING**

**TARGET LEVEL FOR POS THROUGH ALL COURSES**

**SEMESTER III - VIII**

| SUBJECT                                       | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 24010301                                      | 0.78 | 0.89 | 0.67 | 0.67 | 0.67 | 0.78 | 0.89 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| 24000001                                      | 0.87 | 0.93 | 0.53 | 0.67 | 0.80 | 0.87 | 0.93 | 0.53 | 0.47 | 0.53 | 0.33 | 0.33 |
| 24000002                                      | 0.93 | 0.93 | 0.53 | 0.67 | 0.47 | 0.87 | 0.93 | 0.53 | 0.47 | 0.53 | 0.33 | 0.33 |
| 24000003                                      | 0.92 | 0.92 | 0.58 | 0.67 | 0.50 | 0.83 | 0.92 | 0.50 | 0.50 | 0.58 | 0.33 | 0.33 |
| 24010401                                      | 0.83 | 0.92 | 0.58 | 0.67 | 0.75 | 0.83 | 0.92 | 0.67 | 0.75 | 0.58 | 0.58 | 0.58 |
| 24000006                                      | 0.87 | 0.93 | 0.53 | 0.67 | 0.80 | 0.87 | 0.93 | 0.53 | 0.47 | 0.53 | 0.33 | 0.33 |
| 24000004                                      | 0.92 | 0.92 | 0.58 | 0.67 | 0.50 | 0.83 | 0.92 | 0.50 | 0.50 | 0.58 | 0.33 | 0.33 |
| 24000005                                      | 1.00 | 0.89 | 0.67 | 0.67 | 0.33 | 0.78 | 0.89 | 0.44 | 0.33 | 0.67 | 0.33 | 0.33 |
| SUM OF PO                                     | 7.11 | 7.33 | 4.68 | 5.33 | 4.82 | 6.66 | 7.33 | 4.38 | 4.15 | 4.68 | 3.25 | 3.25 |
| COUNT OF PO                                   | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    | 8    |
| DIRECT TARGET (AVG)                           | 0.89 | 0.92 | 0.59 | 0.67 | 0.60 | 0.83 | 0.92 | 0.55 | 0.52 | 0.59 | 0.41 | 0.41 |
| ATTAINMENT OF PO DIRECT (Average value found) | 0.75 | 0.76 | 0.48 | 0.55 | 0.48 | 0.69 | 0.76 | 0.43 | 0.39 | 0.48 | 0.30 | 0.30 |
| 80% OF DIRECT ATT                             | 0.60 | 0.61 | 0.38 | 0.44 | 0.38 | 0.55 | 0.61 | 0.34 | 0.32 | 0.38 | 0.24 | 0.24 |
| 20% OF INDIRECT ATTAINMENT                    | 0.53 | 0.53 | 0.33 | 0.60 | 0.27 | 0.47 | 0.53 | 0.47 | 0.40 | 0.53 | 0.40 | 0.60 |
| TOTAL                                         | 1.13 | 1.14 | 0.71 | 1.04 | 0.65 | 1.02 | 1.14 | 0.81 | 0.72 | 0.91 | 0.64 | 0.84 |



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PROGRAM NAME: INFORMATION TECHNOLOGY  
YEAR :-1ST TO 4TH /FINAL YEAR

THIS DATA IS COMPILED FROM CRITERIA 1.1.1

CO PO MATRIX ALL COURSES

| SUBJECT  | PO1 | PO2 | PO3  | PO4  | PO5 | PO6 | PO7  | PO8 | PO9  | PO10 | PO11 | PO12 | OVERALL<br>CO AVG |
|----------|-----|-----|------|------|-----|-----|------|-----|------|------|------|------|-------------------|
| 23000001 | 1   | 1   | 1    | 1    | 1   | 1   | 1    | 1   | 1    | 1    | 1    | 1    | 1                 |
| 23000004 | 2.5 | 2.5 | 2.2  | 2.5  | 2.5 | -   | -    | 2   | 2    | 3    | -    | -    | 2.4               |
| 23000012 | 2.3 | 1   | 1    | 1    | 1   | 1   | 1    | 1   | 1    | -    | -    | -    | 1.1               |
| 23000003 | -   | -   | -    | -    | -   | -   | 2.6  | 2.4 | 2.4  | 2.4  | -    | -    | 2.5               |
| 12300001 | 1   | 1   | 1    | 1    | 1   | 1   | 1    | 1   | 1    | 1    | 1    | 1    | 1                 |
| 23000006 | 1.3 | 1.3 | 1.3  | 1.5  | 1   | -   | -    | -   | -    | -    | 1    | 1    | 1.2               |
| 23000029 | 1   | 1   | -    | -    | 1   | 1   | -    | -   | -    | -    | 1    | 1    | 1                 |
| 23000005 | 2.5 | 1.5 | 2.75 | 2.25 | 2.5 | -   | -    | -   | -    | -    | -    | -    | 2.3               |
| 23000008 | -   | -   | -    | -    | -   | -   | 2.6  | 2.4 | 2.4  | 2.4  | -    | -    | 2.5               |
| 23000009 | 2   | 2.3 | 1.8  | 1.3  | 1.5 | 1.3 | 2.3  | 1.3 | 1.8  | 1    | 2.3  | 2.3  | 1.8               |
| 23000010 | 2.2 | 2.6 | 1.6  | 1.8  | 1.8 | -   | -    | -   | -    | -    | -    | -    | 2                 |
| 23000011 | -   | -   | -    | -    | -   | -   | -    | 2.2 | 2.2  | 2    | 2    | 1.8  | 2                 |
| 12300002 | 2   | 2   | 2    | 2    | -   | -   | -    | -   | -    | -    | -    | -    | 2                 |
| 23000030 | -   | -   | -    | -    | -   | -   | -    | 2.5 | 1.7  | 2.5  | 1.7  | 1.7  | 2                 |
| 23020216 | 1   | 1.5 | 2    | 2    | 1   | 2   | -    | -   | -    | -    | 2    | 1.5  | 1.6               |
| 24190203 | -   | -   | -    | -    | -   | -   | 2.6  | 2.4 | 2.4  | 2.4  | -    | -    | 2.5               |
| 24190204 | -   | -   | -    | -    | -   | -   | 2.4  | 2.4 | 2.4  | 1.9  | 2.3  | -    | 2.3               |
| 24190205 | -   | -   | -    | -    | -   | -   | -    | 1.8 | 1.6  | 1.8  | 2.2  | 2    | 1.9               |
| 24190206 | -   | -   | -    | -    | -   | -   | -    | 2   | 2.2  | 2.3  | 2.3  | 2.1  | 1.9               |
| 24190207 | -   | -   | -    | -    | -   | -   | -    | 2.5 | 2.5  | 2    | 2.3  | -    | 2.3               |
| 24190208 | -   | -   | -    | -    | -   | -   | -    | 2.5 | 2.3  | 1.8  | 2    | -    | 2.4               |
| 23000015 | -   | -   | -    | -    | -   | -   | -    | 1.8 | 1.6  | 1.8  | 2.2  | 2    | 1.88              |
| 23070301 | -   | -   | -    | -    | -   | -   | -    | 2   | 3    | 3    | 2    | 1    | 2.20              |
| 23040302 | 2   | 2.4 | 2.3  | 2    | 1   | 1   | 2.3  | 2.5 | 2.3  | 2.1  | 1    | 2    | 1.91              |
| 23040301 | 1   | 1   | 1    | 1    | 1   | 1   | 1    | 2.5 | 1.5  | 1.5  | 1.5  | 1    | 1.25              |
| 23040303 | 2.4 | 2.4 | 2.2  | 2.2  | 2.2 | 1   | 2    | 2   | 1.25 | 2.8  | 1.33 | 2.67 | 2.04              |
| 23000016 | 2.6 | 2   | 2.2  | 2.6  | 2.2 | 2   | 2.33 | 1   | 2    | 2    | 1.5  | 2    | 2.04              |
| 23040401 | 2.6 | 2.6 | 2.8  | 1.8  | 2.5 | 2   | 2.33 | 1   | 2    | 2    | 1.33 | 2    | 2.08              |
| 23040402 | 2.6 | 2.6 | 2.8  | 1.8  | 2.5 | 2   | 2.33 | 1   | 2    | 2    | 1.67 | 1.33 | 2.05              |
| 23070401 | 2.6 | 2   | 2.2  | 2.4  | 2.2 | 2   | 2.33 | 1   | 2    | 2    | 1.67 | 1    | 1.95              |
| 23080401 | 2.6 | 2   | 2.4  | 2.4  | 2.2 | 2   | 2.33 | 1   | 2    | 2    | 1.67 | 1    | 1.97              |

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|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23040501 | 2.6  | 2    | 2.2  | 2.6  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1.33 | 2    | 2.02 |
| 23040506 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1    | 2    | 2.05 |
| 23040503 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1.33 | 1.67 | 1.98 |
| 23080501 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 2    | 1.33 | 2.01 |
| 23040507 | 2.6  | 2.2  | 2    | 2.6  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1.33 | 2    | 2.02 |
| 23080601 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 2    | 2.67 | 2.19 |
| 23040602 | 2.6  | 2    | 2    | 2.6  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.33 | 1.96 |
| 23040603 | 2.6  | 2    | 2    | 2.6  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 2    | 2.02 |
| 23040604 | 2.6  | 2    | 2    | 2.6  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 2    | 2.67 | 2.12 |
| 23040606 | 2.4  | 2    | 2    | 2.4  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1    | 1    | 1.86 |
| 23040701 | 2.6  | 2.4  | 2.2  | 2.4  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 1.33 | 1.33 | 1.98 |
| 23040702 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1    | 1    | 1.97 |
| 23040802 | 2.4  | 2    | 2    | 2.4  | 2.2  | 2    | 2.33 | 1    | 2    | 2    | 2    | 2    | 2.03 |
| AVERAGE  | 2.21 | 1.97 | 2.06 | 2.03 | 1.92 | 1.71 | 2.16 | 1.53 | 1.96 | 2.02 | 1.62 | 1.65 | 1.94 |



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PROGRAM NAME: INFORMATION TECHNOLOGY

TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-2024  
FOR 1<sup>ST</sup> TO 4<sup>TH</sup> YEAR

| TARGET LEVEL                                        | INTERNAL MARKS | TARGET LEVEL |     | EXTERNAL MARKS |         | TARGET LEVEL | CEC      |              |              |        |
|-----------------------------------------------------|----------------|--------------|-----|----------------|---------|--------------|----------|--------------|--------------|--------|
| 1                                                   | ≤18            | 1            |     | ≤42            |         | 1            | ≤30      |              |              |        |
| 2                                                   | 19 to 24       | 2            |     | 43 to 56       |         | 2            | 31 to 40 |              |              |        |
| 3                                                   | ≥25            | 3            |     | ≥57            |         | 3            | ≥41      |              |              |        |
| Course Name                                         | Course Code    | Marks        |     |                | Level   |              |          | 30% Internal | 70% External | Target |
|                                                     |                | Mid Sem      | CEC | External       | Mid sem | CEC          | External |              |              |        |
| 1ST SEM                                             |                |              |     |                |         |              |          |              |              |        |
| Maths-I                                             | 23000001       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| Fundamentals of Computer Programming                | 23000004       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| Elements of Electrical Engineering                  | 23000012       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| Elements of Mechanical Engineering                  | 23000003       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| Environmental Studies                               | 23000006       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| Orientation Program in Startuo and Entrepreneurship | 12300001       | 30           |     | 30             | 1       |              | 1        | 0.3          | 0.7          | 1      |
| Workshop                                            | 23000029       | -            |     | 60             | -       | -            | 1        |              | 1            | 1      |
| Electronic Workshop                                 | 23000002       | -            |     | 60             | -       | -            | 1        |              | 1            | 1      |
| 2ND SEM                                             |                |              |     |                |         |              |          |              |              |        |
| ENGINEERING PHYSICS                                 | 23000005       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| COMMUNICATION SKILLS                                | 23000008       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| BASIC ELECTRONICS                                   | 23000009       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| MATHS-II                                            | 23000010       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |
| ENGINEEERING GRAPHICS                               | 23000011       | 18           | 30  | 42             | 1       | 1            | 1        | 0.3          | 0.7          | 1      |

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|                                      |          |    |    |    |   |   |   |     |     |   |
|--------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| ELEMENTS OF CIVIL ENGINEERING        | 23000030 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| CHEMISTRY                            | 23020216 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Personality Development              | 24190203 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Web Technology                       | 24190204 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Introduction to Cloud Technology     | 24190205 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Graphics & Design        | 24190206 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mentoring and Counselling            | 24190207 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Open Project / MOOC                  | 24190208 | 60 |    | 60 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| BASIC PROGRAM IN ENTREPRENEURSHIP    | 12300002 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Digital Electronics                  | 23070301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| 3RD SEM                              |          |    |    |    |   |   |   |     |     |   |
| Maths-III                            | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Digital Electronics                  | 23070301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Data Structure And Algorithm         | 23040302 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Database Management System           | 23040301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Computer Network                     | 23040303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| 4TH SEM                              |          |    |    |    |   |   |   |     |     |   |
| Maths-IV                             | 23000016 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Operating System                     | 23040401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Object Oriented Programming with C++ | 23040402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |





|                                          |          |    |    |    |   |   |   |     |     |   |
|------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Computer Organization and MicroProcessor | 23070401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Web Technology                           | 23080401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>5TH SEM</b>                           |          |    |    |    |   |   |   |     |     |   |
| Object Oriented Programming with JAVA    | 23040501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Computer Graphics and Visualization      | 23040506 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Information Network & Cyber Security     | 23040503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IT Industry Management with ERP          | 23080501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Image Processing                         | 23040507 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>6TH SEM</b>                           |          |    |    |    |   |   |   |     |     |   |
| Advance Web Technology                   | 23080601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Data Mining and Warehousing              | 23040604 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Cloud Computing                          | 23040603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Software Engineering                     | 23080603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Advance JAVA                             | 23040606 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>7TH SEM</b>                           |          |    |    |    |   |   |   |     |     |   |
| Artificial Intelligence                  | 23040701 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Python Programming                       | 23040702 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>8TH SEM</b>                           |          |    |    |    |   |   |   |     |     |   |
| Programming with XML & JSON              | 23040802 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |





SWARNIM INSTITUTE OF TECHNOLOGY  
PROGRAM NAME: INFORMATION TECHNOLOGY  
YEAR:-1<sup>ST</sup> TO 4<sup>TH</sup> /FINAL YEAR  
COURSE OUTCOME ATTAINMENT FOR 2023-2024

| TARGET SET                                   | PERCENTAGE  |      |                          |                                                                                   |                                  |                  |                |                           |
|----------------------------------------------|-------------|------|--------------------------|-----------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|
| Level 1                                      | 55-64       |      |                          |                                                                                   |                                  |                  |                |                           |
| Level 2                                      | 65-74       |      |                          |                                                                                   |                                  |                  |                |                           |
| Level 3                                      | ≥75         |      |                          |                                                                                   |                                  |                  |                |                           |
| Course                                       | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks<br>(in internal & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |
| <b>1 ST SEMESTER OF ACEDMIC YEAR 2023-24</b> |             |      |                          |                                                                                   |                                  |                  |                |                           |
| Maths-I                                      | 23000001    | INT  | 74                       | 73                                                                                | 98.65                            | 3                | 1.5            | 0.45                      |
|                                              |             | CEC  | 74                       | 37                                                                                | 50                               | 0                |                |                           |
|                                              |             | EXT  | 74                       | 56                                                                                | 75.68                            | 3                | 3              | 2.1                       |
| Fundamentals of Computer Programming         | 23000004    | INT  | 74                       | 73                                                                                | 98.65                            | 3                | 3              | 0.9                       |
|                                              |             | CEC  | 74                       | 54                                                                                | 72.97                            | 3                |                |                           |
|                                              |             | EXT  | 72                       | 11                                                                                | 15.28                            | 0                | 0              | 0                         |
| Elements of Electrical Engineering           | 23000012    | INT  | 74                       | 65                                                                                | 87.84                            | 3                | 3              | 0.9                       |
|                                              |             | CEC  | 74                       | 74                                                                                | 100                              | 3                |                |                           |
|                                              |             | EXT  | 73                       | 50                                                                                | 68.49                            | 2                | 3              | 1.4                       |
| Elements of Mechanical Engineering           | 23000003    | INT  | 74                       | 49                                                                                | 66.22                            | 2                | 0              | 0.4                       |
|                                              |             | CEC  | 74                       | 48                                                                                | 64.86                            | 1                |                |                           |
|                                              |             | EXT  | 74                       | 25                                                                                | 33.78                            | 0                | 3              | 0                         |
| Environmental Studies                        | 23000006    | INT  | 74                       | 70                                                                                | 94.59                            | 3                | 3              | 0.6                       |
|                                              |             | EXT  | 74                       | 16                                                                                | 21.62                            | 0                | 0              | 0                         |







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|-----------------------------------------------------|----------|-----|----|----|-------|---|-----|------|
| Orientation Program in Startuo and Entrepreneurship | 12300001 | INT | 74 | 74 | 100   | 3 | 3   | 0.6  |
|                                                     |          | EXT | 74 | 4  | 5.41  | 0 | 0   | 0    |
| Workshop                                            | 23000029 | EXT | 12 | 12 | 100   | 3 | 3   | 2.1  |
| Electronic Workshop                                 | 23000002 | EXT | 62 | 62 | 100   | 3 | 3   | 2.1  |
| <b>2ND SEMESTER OF ACEDEMIC YEAR 2023-24</b>        |          |     |    |    |       |   |     |      |
| ENGINEERING PHYSICS                                 | 23000005 | INT | 67 | 65 | 97.01 | 3 | 3   | 0.9  |
|                                                     |          | CEC | 67 | 64 | 95.52 | 3 |     |      |
|                                                     |          | EXT | 67 | 51 | 76.12 | 3 |     |      |
| COMMUNICATION SKILLS                                | 23000008 | INT | 72 | 38 | 52.78 | 0 | 0   | 0    |
|                                                     |          | EXT | 72 | 24 | 33.33 | 0 |     | 0    |
| BASIC ELECTRONICS                                   | 23000009 | INT | 59 | 59 | 100   | 3 | 3   | 0.9  |
|                                                     |          | CEC | 59 | 59 | 100   | 3 |     |      |
|                                                     |          | EXT | 57 | 11 | 19.3  | 0 | 0   | 0    |
| MATHS-II                                            | 23000010 | INT | 76 | 76 | 100   | 3 | 3   | 0.9  |
|                                                     |          | CEC | 76 | 60 | 78.95 | 3 |     |      |
|                                                     |          | EXT | 72 | 41 | 56.94 | 1 | 1   | 0.7  |
| ENGINEERING GRAPHICS                                | 23000011 | INT | 67 | 48 | 71.64 | 2 | 2.5 | 0.75 |
|                                                     |          | CEC | 67 | 66 | 98.51 | 3 |     |      |
|                                                     |          | EXT | 64 | 36 | 56.25 | 1 | 1   | 0.7  |
| ELEMENTS OF CIVIL ENGINEERING                       | 23000030 | INT | 7  | 7  | 100   | 3 | 3   | 0.9  |
|                                                     |          | CEC | 7  | 7  | 100   | 3 |     |      |
|                                                     |          | EXT | 7  | 1  | 14.29 | 0 | 0   | 0    |
| BASIC PROGRAM IN ENTREPRENURESHIP                   | 12300002 | INT | 76 | 45 | 59.21 | 2 | 2   | 0.6  |
|                                                     |          | EXT | 74 | 2  | 2.7   | 0 |     | 0    |
| Chemistry                                           | 23020216 | INT | 8  | 8  | 100   | 3 | 3   | 0.9  |
|                                                     |          | CEC | 8  | 8  | 100   | 3 |     |      |
|                                                     |          | EXT | 8  | 3  | 37.5  | 0 | 0   | 0    |
| Personality Development                             | 24190203 | INT | 4  | 4  | 100   | 3 | 3   | 0.9  |
|                                                     |          | EXT | 4  | 4  | 100   | 3 | 3   | 2.1  |



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|                                       |          |     |    |    |        |   |   |     |
|---------------------------------------|----------|-----|----|----|--------|---|---|-----|
| Web Technology                        | 24190204 | INT | 3  | 3  | 100    | 3 | 3 | 0.9 |
|                                       |          | CEC | 3  | 3  | 100    | 3 |   |     |
|                                       |          | EXT | 3  | 3  | 100    | 3 |   | 2.1 |
| Introduction to Cloud Technology      | 24190205 | INT | 4  | 4  | 100    | 3 | 3 | 0.9 |
|                                       |          | EXT | 4  | 4  | 100    | 3 |   | 2.1 |
| Engineering Graphics & Design         | 24190206 | INT | 4  | 4  | 100    | 3 | 3 | 0.9 |
|                                       |          | CEC | 4  | 4  | 100    | 3 |   |     |
|                                       |          | EXT | 4  | 4  | 100    | 3 |   | 2.1 |
| Mentoring and Counselling             | 24190207 | EXT | 4  | 4  | 100    | 3 |   | 2.1 |
| Open Project / MOOC                   | 24190208 | EXT | 4  | 4  | 100    | 3 | 3 | 2.1 |
| 3rd SEMESTER OF ACEDEMIC YEAR 2023-24 |          |     |    |    |        |   |   |     |
| Maths-III                             | 23000015 | INT | 18 | 18 | 100.00 | 3 | 3 | 1.6 |
|                                       |          | CEC | 18 | 18 | 100.00 | 3 |   |     |
|                                       |          | EXT | 18 | 11 | 61     | 1 | 1 |     |
| Digital Electronics                   | 23070301 | INT | 18 | 18 | 100    | 3 | 3 | 1.6 |
|                                       |          | CEC | 18 | 18 | 100    | 3 |   |     |
|                                       |          | EXT | 18 | 11 | 61     | 1 | 1 |     |
| Data Structure And Algorithm          | 23040302 | INT | 18 | 18 | 100    | 3 | 3 | 1.6 |
|                                       |          | CEC | 18 | 18 | 100    | 3 |   |     |
|                                       |          | EXT | 18 | 0  | 0      | 1 | 1 |     |
| Database Management System            | 23040301 | INT | 18 | 18 | 100    | 3 | 3 | 1.6 |
|                                       |          | CEC | 18 | 18 | 100    | 3 |   |     |
|                                       |          | EXT | 18 | 14 | 78     | 3 | 1 |     |
| Computer Network                      | 23040303 | INT | 18 | 18 | 100    | 3 | 3 | 1.6 |
|                                       |          | CEC | 18 | 18 | 100    | 3 |   |     |
|                                       |          | EXT | 18 | 0  | 0      | 1 | 1 |     |
| 4th SEMESTER OF ACEDEMIC YEAR 2023-24 |          |     |    |    |        |   |   |     |
| Maths-IV                              | 23000016 | INT | 16 | 16 | 100.00 | 3 | 3 | 1.6 |
|                                       |          | CEC | 16 | 16 | 100.00 | 3 |   |     |
|                                       |          | EXT | 16 | 8  | 50.00  | 0 | 1 |     |
| Operating System                      | 23040401 | INT | 16 | 16 | 100.00 | 3 | 3 | 3   |
|                                       |          | CEC | 16 | 16 | 100.00 | 3 |   |     |
|                                       |          | EXT | 16 | 15 | 93.75  | 3 | 3 |     |
| Object Oriented Programming with C++  | 23040402 | INT | 16 | 16 | 100.00 | 3 | 3 | 2.3 |
|                                       |          | CEC | 16 | 16 | 100.00 | 3 |   |     |
|                                       |          | EXT | 16 | 11 | 68.75  | 2 | 2 |     |





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|------------------------------------------|----------|-----|----|----|--------|---|---|-----|
| Computer Organization and MicroProcessor | 23070401 | INT | 16 | 16 | 100.00 | 3 | 3 | 2.3 |
|                                          |          | CEC | 16 | 16 | 100.00 | 3 |   |     |
|                                          |          | EXT | 16 | 11 | 68.75  | 2 | 2 |     |
| Web Technology                           | 23080401 | INT | 16 | 16 | 100.00 | 3 | 3 | 2.3 |
|                                          |          | CEC | 16 | 16 | 100.00 | 3 |   |     |
|                                          |          | EXT | 16 | 11 | 68.75  | 2 | 2 |     |
| 5th SEMESTER OF ACEDMIC YEAR 2023-24     |          |     |    |    |        |   |   |     |
| Object Oriented Programming with JAVA    | 23040501 | INT | 29 | 29 | 100.00 | 3 | 3 | 1.6 |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 6  | 20.69  | 1 | 1 |     |
| Computer Graphics and Visualization      | 23040506 | INT | 29 | 29 | 100.00 | 3 | 3 | 2.3 |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 19 | 65.52  | 2 | 2 |     |
| Information Network & Cyber Security     | 23040503 | INT | 29 | 29 | 100.00 | 3 | 3 | 0.9 |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 7  | 24.14  | 0 | 0 |     |
| IT Industry Management with ERP          | 23080501 | INT | 29 | 29 | 100.00 | 3 | 3 | 0.9 |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 11 | 37.93  | 0 | 0 |     |
| Image Processing                         | 23040507 | INT | 29 | 29 | 100.00 | 3 | 3 | 0.9 |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 8  | 27.59  | 0 | 0 |     |
| 6th SEMESTER OF ACEDMIC YEAR 2023-24     |          |     |    |    |        |   |   |     |
| Advance Web Technology                   | 23080601 | INT | 29 | 29 | 100.00 | 3 | 3 | 3   |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 27 | 93.10  | 3 | 3 |     |
| Data Mining and Warehousing              | 23040604 | INT | 29 | 29 | 100.00 | 3 | 3 | 3   |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 29 | 100.00 | 3 | 3 |     |
| Cloud Computing                          | 23040603 | INT | 29 | 29 | 100.00 | 3 | 3 | 3   |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 28 | 96.55  | 3 | 3 |     |
| Software Engineering                     | 23080603 | INT | 29 | 29 | 100.00 | 3 | 3 | 3   |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 28 | 96.55  | 3 | 3 |     |
| Advance JAVA                             | 23040606 | INT | 29 | 29 | 100.00 | 3 | 3 | 3   |
|                                          |          | CEC | 29 | 29 | 100.00 | 3 |   |     |
|                                          |          | EXT | 29 | 25 | 86.21  | 3 | 3 |     |



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| 7th SEMESTER OF ACEDEMIC YEAR 2023-24 |          |     |    |    |        |   |   |     |
|---------------------------------------|----------|-----|----|----|--------|---|---|-----|
| Artificial Intelligence               | 23040701 | INT | 44 | 44 | 100.00 | 3 | 3 | 1.6 |
|                                       |          | CEC | 44 | 44 | 100.00 | 3 |   |     |
|                                       |          | EXT | 44 | 28 | 63.64  | 1 | 1 |     |
| Python Programming                    | 23040702 | INT | 44 | 44 | 100.00 | 3 | 3 | 2.3 |
|                                       |          | CEC | 44 | 44 | 100.00 | 3 |   |     |
|                                       |          | EXT | 44 | 30 | 68.18  | 2 | 2 |     |
| 8th SEMESTER OF ACEDEMIC YEAR 2023-24 |          |     |    |    |        |   |   |     |
| Programming with XML & JSON           | 23040802 | INT | 45 | 45 | 100.00 | 3 | 3 | 0.9 |
|                                       |          | CEC | 45 | 45 | 100.00 | 3 |   |     |
|                                       |          | EXT | 45 | 23 | 51.11  | 0 | 0 |     |



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**PROGRAM NAME: INFORMATION TECHNOLOGY**  
**YEAR:-1<sup>ST</sup> -4<sup>TH</sup> /FINAL YEAR**

**FINAL DIRECT ATTAINMENT LEVEL FOR PO'S (ALL COURSES)**

| SUBJECT  | PO1 | PO2 | PO3  | PO4  | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 |
|----------|-----|-----|------|------|-----|-----|-----|-----|-----|------|------|------|
| 23000001 | 1   | 1   | 1    | 1    | 1   | 1   | 1   | 1   | 1   | 1    | 1    | 1    |
| 23000004 | 2.5 | 2.5 | 2.2  | 2.5  | 2.5 | -   | -   | 2   | 2   | 3    | -    | -    |
| 23000012 | 2.3 | 1   | 1    | 1    | 1   | 1   | 1   | 1   | 1   | -    | -    | -    |
| 23000003 | -   | -   | -    | -    | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    |
| 12300001 | 1   | 1   | 1    | 1    | 1   | 1   | 1   | 1   | 1   | 1    | 1    | 1    |
| 23000006 | 1.3 | 1.3 | 1.3  | 1.5  | 1   | -   | -   | -   | -   | -    | 1    | 1    |
| 23000029 | 1   | 1   | -    | -    | 1   | 1   | -   | -   | -   | -    | 1    | 1    |
| 23000005 | 2.5 | 1.5 | 2.75 | 2.25 | 2.5 | -   | -   | -   | -   | -    | -    | -    |
| 23000008 | -   | -   | -    | -    | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    |
| 23000009 | 2   | 2.3 | 1.8  | 1.3  | 1.5 | 1.3 | 2.3 | 1.3 | 1.8 | 1    | 2.3  | 2.3  |
| 23000010 | 2.2 | 2.6 | 1.6  | 1.8  | 1.8 | -   | -   | -   | -   | -    | -    | -    |
| 23000011 | -   | -   | -    | -    | -   | -   | -   | 2.2 | 2.2 | 2    | 2    | 1.8  |
| 12300002 | 2   | 2   | 2    | 2    | -   | -   | -   | -   | -   | -    | -    | -    |
| 23000030 | -   | -   | -    | -    | -   | -   | -   | 2.5 | 1.7 | 2.5  | 1.7  | 1.7  |
| 23020216 | 1   | 1.5 | 2    | 2    | 1   | 2   | -   | -   | -   | -    | 2    | 1.5  |
| 24190203 | -   | -   | -    | -    | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    |
| 24190204 | -   | -   | -    | -    | -   | -   | 2.4 | 2.4 | 2.4 | 1.9  | 2.3  | -    |
| 24190205 | -   | -   | -    | -    | -   | -   | -   | 1.8 | 1.6 | 1.8  | 2.2  | 2    |
| 24190206 | -   | -   | -    | -    | -   | -   | -   | 2   | 2.2 | 2.3  | 2.3  | 2.1  |
| 24190207 | -   | -   | -    | -    | -   | -   | -   | 2.5 | 2.5 | 2    | 2.3  | -    |
| 24190208 | -   | -   | -    | -    | -   | -   | -   | 2.5 | 2.3 | 1.8  | 2    | -    |
| 23000015 | -   | -   | -    | -    | -   | -   | -   | 1.8 | 1.6 | 1.8  | 2.2  | 2    |

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|                                    |      |      |       |       |      |      |       |      |       |      |       |      |
|------------------------------------|------|------|-------|-------|------|------|-------|------|-------|------|-------|------|
| 23070301                           | -    | -    | -     | -     | -    | -    | -     | 2    | 3     | 3    | 2     | 1    |
| 23040302                           | 2    | 2.4  | 2.3   | 2     | 1    | 1    | 2.3   | 2.5  | 2.3   | 2.1  | 1     | 2    |
| 23040301                           | 1    | 1    | 1     | 1     | 1    | 1    | 1     | 2.5  | 1.5   | 1.5  | 1.5   | 1    |
| 23040303                           | 2.4  | 2.4  | 2.2   | 2.2   | 2.2  | 1    | 2     | 2    | 1.25  | 2.8  | 1.33  | 2.67 |
| 23000016                           | 2.6  | 2    | 2.2   | 2.6   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.5   | 2    |
| 23040401                           | 2.6  | 2.6  | 2.8   | 1.8   | 2.5  | 2    | 2.33  | 1    | 2     | 2    | 1.33  | 2    |
| 23040402                           | 2.6  | 2.6  | 2.8   | 1.8   | 2.5  | 2    | 2.33  | 1    | 2     | 2    | 1.67  | 1.33 |
| 23070401                           | 2.6  | 2    | 2.2   | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.67  | 1    |
| 23080401                           | 2.6  | 2    | 2.4   | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.67  | 1    |
| 23040501                           | 2.6  | 2    | 2.2   | 2.6   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.33  | 2    |
| 23040506                           | 2.6  | 2.6  | 2.8   | 1.8   | 2.5  | 2    | 2.33  | 1    | 2     | 2    | 1     | 2    |
| 23040503                           | 2.6  | 2    | 2.2   | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.33  | 1.67 |
| 23080501                           | 2.6  | 2    | 2.2   | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 2     | 1.33 |
| 23040507                           | 2.6  | 2.2  | 2     | 2.6   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.33  | 2    |
| 23080601                           | 2.6  | 2.6  | 2.8   | 1.8   | 2.5  | 2    | 2.33  | 1    | 2     | 2    | 2     | 2.67 |
| 23040602                           | 2.6  | 2    | 2     | 2.6   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.5   | 1.33 |
| 23040603                           | 2.6  | 2    | 2     | 2.6   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.5   | 2    |
| 23040604                           | 2.6  | 2    | 2     | 2.6   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 2     | 2.67 |
| 23040606                           | 2.4  | 2    | 2     | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1     | 1    |
| 23040701                           | 2.6  | 2.4  | 2.2   | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 1.33  | 1.33 |
| 23040702                           | 2.6  | 2.6  | 2.8   | 1.8   | 2.5  | 2    | 2.33  | 1    | 2     | 2    | 1     | 1    |
| 23040802                           | 2.4  | 2    | 2     | 2.4   | 2.2  | 2    | 2.33  | 1    | 2     | 2    | 2     | 2    |
| <b>SUM OF PO DIRECT ATTAINMENT</b> | 70.6 | 63.1 | 63.75 | 62.95 | 59.6 | 46.3 | 62.74 | 58.2 | 74.55 | 74.7 | 58.29 | 54.4 |
| <b>COUNT</b>                       | 32   | 32   | 31    | 31    | 31   | 27   | 29    | 38   | 38    | 37   | 36    | 33   |
| <b>AVERAGE</b>                     | 2.21 | 1.97 | 2.06  | 2.03  | 1.92 | 1.71 | 2.16  | 1.53 | 1.96  | 2.02 | 1.62  | 1.65 |

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**PROGRAM NAME: INFORMATION TECHNOLOGY**

**YEAR:-1<sup>ST</sup> -4<sup>TH</sup> /FINAL YEAR**

**TARGET LEVEL FOR PO'S(ALL COURSES)**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1    | -    | -    |
| 23000012 | 0.77 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000006 | 0.43 | 0.43 | 0.43 | 0.5  | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000029 | 0.33 | 0.33 | -    | -    | 0.33 | 0.33 | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000005 | 1    | 0.5  | 0.5  | 0.33 | 1    | 0.77 | 0.33 | 0.77 | 0.33 | 0.33 | 0.83 | 0.33 |
| 23000008 | 0.83 | 0.5  | 0.92 | 0.75 | 0.83 | -    | -    | -    | -    | -    | -    | -    |
| 23000009 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 23000010 | 0.67 | 0.77 | 0.6  | 0.43 | 0.5  | 0.43 | 0.77 | 0.43 | 0.6  | 0.33 | 0.77 | 0.77 |
| 23000011 | 0.73 | 0.87 | 0.53 | 0.6  | 0.6  | -    | -    | -    | -    | -    | -    | -    |
| 12300002 | -    | -    | -    | -    | -    | -    | -    | 0.73 | 0.73 | 0.67 | 0.67 | 0.6  |
| 23000030 | 0.67 | 0.67 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23020216 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.57 | 0.83 | 0.57 | 0.57 |
| 24190203 | 0.33 | 0.5  | 0.67 | 0.67 | 0.33 | 0.67 | -    | -    | -    | -    | 0.67 | 0.5  |
| 24190204 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 24190205 | -    | -    | -    | -    | -    | -    | 0.8  | 0.8  | 0.8  | 0.63 | 0.77 | -    |
| 24190206 | -    | -    | -    | -    | -    | -    | -    | 0.6  | 0.53 | 0.6  | 0.73 | 0.67 |
| 24190207 | -    | -    | -    | -    | -    | -    | -    | 0.67 | 0.73 | 0.77 | 0.77 | 0.7  |
| 24190208 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.83 | 0.67 | 0.77 | -    |
| 23000015 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.77 | 0.6  | 0.67 | -    |
| 23070301 | 0.80 | 0.60 | 0.60 | 0.80 | 0.73 | 0.33 | 0.33 | 0.33 | 0.50 | 0.93 | 0.42 | 0.33 |
| 23040302 | 0.80 | 0.67 | 0.67 | 0.73 | 0.67 | 0.67 | 0.33 | 1.00 | 0.42 | 0.93 | 0.67 | 0.50 |
| 23040301 | 0.80 | 0.67 | 0.80 | 0.80 | 0.73 | 0.67 | 0.33 | 0.33 | 0.42 | 0.93 | 0.44 | 0.44 |
| 23040303 | 0.80 | 0.80 | 0.73 | 0.73 | 0.73 | 0.33 | 0.67 | 0.67 | 0.42 | 0.93 | 0.44 | 0.89 |
| 23000016 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.44 | 0.67 |
| 23040401 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.56 | 0.44 |
| 23040402 | 0.87 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.56 | 0.33 |
| 23070401 | 0.87 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.56 | 0.33 |
| 23080401 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.33 | 0.67 |
| 23040501 | 0.87 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.44 | 0.56 |
| 23040506 | 0.87 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.78 | 0.33 | 0.78 | 0.78 | 0.67 | 0.44 |

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|                                               |       |       |       |       |       |       |       |       |       |       |       |       |
|-----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 23040503                                      | 0.87  | 0.73  | 0.67  | 0.87  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.44  | 0.67  |
| 23080501                                      | 0.87  | 0.87  | 0.93  | 0.60  | 0.83  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.67  | 0.89  |
| 23040507                                      | 0.87  | 0.67  | 0.67  | 0.87  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.50  | 0.44  |
| 23080601                                      | 0.87  | 0.67  | 0.67  | 0.87  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.50  | 0.67  |
| 23040602                                      | 0.87  | 0.67  | 0.67  | 0.87  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.67  | 0.89  |
| 23040603                                      | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.33  | 0.33  |
| 23040604                                      | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.33  | 0.33  |
| 23040606                                      | 0.80  | 0.80  | 0.73  | 0.73  | 0.73  | 0.33  | 0.67  | 0.67  | 0.42  | 0.93  | 0.44  | 1.00  |
| 23040701                                      | 0.87  | 0.80  | 0.73  | 0.80  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.44  | 0.44  |
| 23040702                                      | 0.87  | 0.87  | 0.93  | 0.60  | 0.83  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.33  | 0.33  |
| 23040802                                      | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.67  | 0.78  | 0.33  | 0.67  | 0.67  | 0.67  | 0.67  |
| SUM OF PO                                     | 25.78 | 22.46 | 22.57 | 22.44 | 22.31 | 16.86 | 21.04 | 19.22 | 23.56 | 25.60 | 19.40 | 17.74 |
| COUNT OF PO                                   | 34    | 34    | 33    | 33    | 33    | 29    | 31    | 38    | 38    | 37    | 36    | 33    |
| DIRECT TARGET (AVG)                           | 0.76  | 0.66  | 0.68  | 0.68  | 0.68  | 0.58  | 0.68  | 0.51  | 0.62  | 0.69  | 0.54  | 0.54  |
| ATTAINMENT OF PO DIRECT (Average value found) | 1.51  | 1.31  | 1.36  | 1.35  | 1.34  | 1.15  | 1.35  | 1.00  | 1.23  | 1.37  | 1.07  | 1.06  |
| 80% OF DIRECT ATT                             | 1.21  | 1.05  | 1.09  | 1.08  | 1.07  | 0.92  | 1.08  | 0.80  | 0.99  | 1.10  | 0.85  | 0.85  |
| 20% OF INDIRECT ATTAINMENT                    | 0.54  | 0.54  | 0.54  | 0.54  | 0.50  | 0.53  | 0.54  | 0.52  | 0.54  | 0.52  | 0.52  | 0.54  |
| TOTAL                                         | 1.75  | 1.59  | 1.62  | 1.62  | 1.57  | 1.45  | 1.62  | 1.32  | 1.53  | 1.62  | 1.38  | 1.39  |

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## Swarnnim Institute of Technology

Program: Mechanical Engineering

Year: 1st To 4th

THIS DATA IS COMPILED FROM CRITERIA 1.1.1

### CORRELATION OF COS WITH POS (ALL COURSES)

| SUBJECT  | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO1 0 | PO1 1 | PO1 2 | OVERALL CO AVG |
|----------|------|------|------|------|------|------|------|------|------|-------|-------|-------|----------------|
| 23000001 | 2.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1.091667       |
| 23000004 | 2.50 | 2.50 | 2.20 | 2.50 | 2.50 | -    | -    | 2.00 | 2.00 | 3.00  | -     | -     | 2.4            |
| 23000012 | 2.30 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | -     | -     | -     | 1.144444       |
| 23000003 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40  | -     | -     | 2.45           |
| 12300001 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1              |
| 23000006 | 1.30 | 1.30 | 1.30 | 1.50 | 1.00 | -    | -    | -    | -    | -     | 1.00  | 1.00  | 1.2            |
| 23000029 | 1.00 | 1.00 | -    | -    | 1.00 | 1.00 | -    | -    | -    | -     | 1.00  | 1.00  | 1              |
| 23000005 | 2.50 | 1.50 | 2.80 | 2.30 | 2.50 | -    | -    | -    | -    | -     | -     | -     | 2.32           |
| 23000008 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40  | -     | -     | 2.45           |
| 23000010 | 2.20 | 2.60 | 1.60 | 1.80 | 1.80 | -    | -    | -    | -    | -     | -     | -     | 2              |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 2.20 | 2.20 | 2.00  | 2.00  | 1.80  | 2.04           |
| 12300002 | 2.00 | 2.00 | 2.00 | 2.00 | -    | -    | -    | -    | -    | -     | -     | -     | 2              |
| 23000030 | -    | -    | -    | -    | -    | -    | -    | 2.50 | 1.70 | 2.50  | 1.70  | 1.70  | 2.02           |
| 23020216 | 2.10 | 2.30 | 1.80 | 1.90 | 1.80 | -    | -    | -    | -    | -     | 1.85  | 1.75  | 1.928571       |
| 24190203 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40  | -     | -     | 2.45           |
| 23000015 | 1.00 | 1.50 | 1.75 | 1.50 | 1.00 | 1.50 | 2.60 | 2.00 | 1.80 | 1.80  | 1.60  | 1.80  | 1.654167       |
| 23080301 | 1.00 | 1.50 | 2.50 | 2.00 | 1.00 | 1.00 | 2.00 | 1.75 | 1.75 | 2.00  | 2.00  | 1.50  | 1.666667       |
| 23080303 | 1.00 | 1.33 | 2.33 | 1.50 | 1.50 | 1.40 | 2.20 | 2.00 | 2.00 | 1.80  | 1.40  | 1.33  | 1.65           |



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|----------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| 23110304 | 1.00 | 1.50 | 2.50 | 2.00 | 1.00 | 1.60 | 2.00 | 1.60 | 2.00 | 1.60 | 1.50 | 1.33 | 1.636111 |
| 23080304 | 2.67 | 2.00 | 2.00 | 2.40 | 2.20 | 1.67 | 1.80 | 2.00 | 1.80 | 2.60 | 2.20 | 1.20 | 2.044444 |
| 23080305 | 2.00 | 2.50 | 2.50 | 2.25 | 2.00 | 2.00 | 2.50 | 1.50 | 1.50 | 1.75 | 1.50 | 2.00 | 2        |
| 23000014 | 2.00 | 2.50 | 2.50 | 2.25 | 2.00 | 2.00 | 2.25 | 1.50 | 1.50 | 2.25 | 1.75 | 2.00 | 2.041667 |
| 23000018 | 2.29 | 2.14 | 2.71 | 2.29 | 2.43 | -    | -    | -    | -    | -    | -    | -    | 2.371429 |
| 23110401 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.25 | 2.25 | 2.00 | 2.00 | 1.00 | 1.50 | 1.625    |
| 23090401 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.20 | 1.67 | 1.40 | 1.50 | 1.80 | 1.50 | 1.547222 |
| 23000017 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.20 | 1.67 | 1.40 | 1.50 | 1.80 | 1.50 | 1.547222 |
| 23090402 | 1.00 | 1.50 | 2.00 | 2.00 | 1.50 | -    | -    | -    | -    | -    | 1.50 | 1.25 | 1.535714 |
| 23090404 | 2.40 | 1.60 | 2.50 | 2.00 | 1.00 | 1.50 | 2.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 1.708333 |
| 23090501 | 1.67 | 1.50 | 2.00 | 1.60 | 2.00 | 1.83 | 2.00 | 2.00 | 2.33 | 1.00 | 2.00 | 1.00 | 1.744444 |
| 23090502 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 2.40 | 2.00 | 2.00 | 1.40 | 2.40 | 1.20 | 1.658333 |
| 23090503 | 2.00 | 1.60 | 2.00 | 1.60 | 1.40 | 1.60 | 1.00 | 1.50 | 2.00 | 1.33 | 2.00 | 1.00 | 1.586111 |
| 23090504 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 2.00 | 2.40 | 2.00 | 2.00 | 2.20 | 2.00 | 2.00 | 1.841667 |
| 23090505 | 2.00 | 2.33 | 2.00 | 2.00 | 1.00 | 2.40 | 2.20 | 2.40 | 1.80 | 2.60 | 1.60 | 2.00 | 2.027778 |
| 23000027 | 1.75 | 1.80 | 1.75 | 2.00 | 2.00 | 2.00 | 1.50 | 2.25 | 1.50 | 2.00 | 1.75 | 2.00 | 1.858333 |
| 12300005 | 2.00 | 2.33 | 2.00 | 2.00 | 1.50 | 1.75 | 2.00 | 1.67 | 1.75 | 1.75 | 1.50 | 1.50 | 1.8125   |
| 23090601 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.60 | 2.00 | 2.00 | 2.40 | 2.25 | 2.40 | 1.33 | 1.790278 |
| 23090602 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 2.00 | 2.60 | 2.25 | 2.00 | 2.00 | 2.00 | 1.779167 |
| 23090603 | 1.33 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 1.80 | 2.00 | 2.00 | 1.67 | 2.33 | 1.50 | 1.677778 |
| 23090604 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.75 | 1.75 | 2.50 | 1.75 | 1.33 | 2.00 | 1.00 | 1.631944 |
| 23090605 | 1.00 | 1.75 | 2.50 | 2.00 | 3.00 | 2.00 | 2.50 | 2.67 | 2.67 | 2.00 | 3.00 | 1.00 | 2.173611 |
| 23000026 | 1.50 | 1.60 | 2.00 | 1.80 | 1.33 | 1.50 | 1.50 | 1.00 | 1.50 | 2.00 | 1.67 | 2.00 | 1.616667 |
| 12300006 | 2.25 | 1.75 | 2.50 | 2.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.33 | 2.00 | 2.00 | 1.819444 |
| 23090701 | 2.20 | 1.80 | 2.20 | 1.80 | 1.00 | 1.33 | 1.00 | 2.50 | 2.33 | 2.67 | 2.00 | 2.00 | 1.902778 |



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|-----------------|--------------|-------------|------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|---------------|---------------|-----------------|
| <b>23090702</b> | 2.20         | 1.60        | 2.40       | 1.80         | 1.00         | 1.00         | 1.33         | 2.00         | 1.67        | 2.33         | 2.00          | 1.50          | <b>1.736111</b> |
| <b>23090703</b> | 2.00         | 1.80        | 2.20       | 2.00         | 1.00         | 1.33         | 1.00         | 1.50         | 1.67        | 2.25         | 1.50          | 2.00          | <b>1.6875</b>   |
| <b>23090704</b> | 2.00         | 1.60        | 2.40       | 1.80         | 1.50         | 1.00         | 1.33         | 1.33         | 2.00        | 2.50         | 2.00          | 2.00          | <b>1.788889</b> |
| <b>23090712</b> | 2.00         | 1.80        | 2.20       | 2.00         | 1.67         | 1.33         | 1.33         | 1.50         | 2.00        | 2.00         | 2.00          | 2.00          | <b>1.819444</b> |
| <b>12300007</b> | 2.25         | 1.75        | 2.50       | 2.00         | 1.00         | 1.00         | 1.00         | 2.00         | 2.00        | 2.33         | 2.00          | 2.00          | <b>1.819444</b> |
| <b>23000023</b> | 2.00         | 1.80        | 2.20       | 1.80         | 1.33         | 1.50         | 1.25         | 2.25         | 1.50        | 2.20         | 1.25          | 2.00          | <b>1.756944</b> |
| <b>23000025</b> | 2.00         | 2.00        | 2.50       | 2.00         | 1.25         | 1.40         | 1.00         | 2.33         | 1.67        | 2.50         | 1.67          | 1.50          | <b>1.818056</b> |
| <b>23000028</b> | 2.00         | 1.75        | 2.00       | 2.00         | 1.00         | 1.33         | 1.00         | 2.00         | 2.00        | 2.33         | 1.50          | 2.00          | <b>1.743056</b> |
| <b>23090805</b> | 2.00         | 2.00        | 2.50       | 2.00         | 1.25         | 1.40         | 1.00         | 2.33         | 1.67        | 2.50         | 1.67          | 1.50          | <b>1.818056</b> |
| <b>12300008</b> | 2.00         | 1.75        | 2.00       | 2.00         | 1.00         | 1.33         | 1.00         | 2.00         | 2.00        | 2.33         | 1.50          | 2.00          | <b>1.743056</b> |
| <b>AVERAGE</b>  | <b>1.662</b> | <b>1.74</b> | <b>2.2</b> | <b>1.916</b> | <b>1.402</b> | <b>1.445</b> | <b>1.706</b> | <b>1.936</b> | <b>1.88</b> | <b>2.009</b> | <b>1.8245</b> | <b>1.6153</b> | <b>1.801011</b> |



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**Swarnnim Institute of Technology**

**Program: Mechanical Engineering**

**Year: 1st To 4th**

**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24**

| Target Level | Internal Marks | CE C     | External |
|--------------|----------------|----------|----------|
| 1            | ≤18            | ≤30      | ≤42      |
| 2            | 19 to 24       | 31 to 40 | 43 to 56 |
| 3            | ≥26            | ≥41      | ≥57      |

| IE           |                |              |          |
|--------------|----------------|--------------|----------|
| Target Level | Internal Marks | Target Level | External |
| 1            | ≤30            | 1            | ≤30      |
| 2            | 31 to 40       | 2            | 31 to 40 |
| 3            | ≥40            | 3            | ≥40      |

| Course Name                          | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|--------------------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
|                                      |             | Mid sem | CEC | External | Mid sem | CEC | External |              |              |        |
| I SEM                                |             |         |     |          |         |     |          |              |              |        |
| Maths-I                              | 23000001    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Fundamentals of Computer Programming | 23000004    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Electrical Engineering   | 23000012    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |



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|                                                     |           |    |    |    |   |   |   |     |     |   |
|-----------------------------------------------------|-----------|----|----|----|---|---|---|-----|-----|---|
| Elements of Mechanical Engineering                  | 23000003  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Orientation Program in Startuo and Entrepreneurship | 12300001  | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Environmental Studies                               | 23000006  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Workshop                                            | 23000029  | 60 |    |    | 1 |   |   | 1   |     | 1 |
| II SEM                                              |           |    |    |    |   |   |   |     |     |   |
| Engineering Physics                                 | 23000005  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Communication Skills                                | 23000008  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-II                                            | 23000010  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Graphics                                | 23000011  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Basic Program In Entrepreneureship                  | 12300002  | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Elements of Civil Engineering                       | 230000030 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Chemistry                                           | 23020216  | 18 |    | 42 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Personality Development                             | 24190203  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| III SEM                                             |           |    |    |    |   |   |   |     |     |   |
| Maths-3                                             | 23000015  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mechanics of Solids                                 | 23080301  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Material Science and Metallurgy                     | 23080304  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |



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|                                          |          |    |    |    |   |   |   |     |     |   |
|------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Manufacturing Process I                  | 23080303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Kinematics of Machines                   | 23080304 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electriacal Technology                   | 23080305 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Foundation Program in Entrepreneurship   | 12300003 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| IV SEM                                   |          |    |    |    |   |   |   |     |     |   |
| Maths-4                                  | 23000018 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mechanical Measurement & Metrology       | 23090402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Manufacturing Process-II                 | 23090404 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Thermodynamics               | 23090401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Machine Design and Industrial Drafting   | 23090403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intermediate Program In Enterprenuarship | 12300004 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| V SEM                                    |          |    |    |    |   |   |   |     |     |   |
| Fluid Mechanics                          | 23090501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Design of Machine Elements               | 23090502 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Heat Transfer                            | 23090503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Theory of Machine                        | 23090504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Control Engineering                      | 23090505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |





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|                                       |              |    |    |    |   |   |   |     |     |   |
|---------------------------------------|--------------|----|----|----|---|---|---|-----|-----|---|
| Case Study                            | 2300002<br>7 | 30 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intellectual Property Rights          | 1230000<br>5 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VI SEM                                |              |    |    |    |   |   |   |     |     |   |
| Dynamics of Machinery                 | 2309060<br>1 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Fluid Power Engineering               | 2309060<br>2 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Production Technology                 | 2309060<br>3 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Refrigeration air Conditioning        | 2309060<br>4 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Industrial Engineering                | 2309060<br>5 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Seminar                               | 2300002<br>6 | 30 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Expert Program In Enterprenuarship    | 1230000<br>6 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| VII SEM                               |              |    |    |    |   |   |   |     |     |   |
| Computer Aided Design & Manufacturing | 2309070<br>1 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Power Plant Engineering               | 2309070<br>2 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Operation Research                    | 2309070<br>3 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Machine Design                        | 2309070<br>4 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Metal Forming Analysis                | 2309071<br>2 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Startup Projects                      | 1230000<br>7 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Project-1                             | 2300002<br>3 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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| VIII SEM                           |              |     |    |     |   |   |   |     |     |   |
|------------------------------------|--------------|-----|----|-----|---|---|---|-----|-----|---|
| Project- 2                         | 2300002<br>5 | 30  |    | 30  | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Industrial Training                | 2300002<br>8 | 180 |    | 300 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Energy Conservation and Management | 2309080<br>5 | 18  | 30 | 42  | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Start-Up Project Part-II           | 1230000<br>8 | 30  |    | 30  | 1 |   | 1 | 0.3 | 0.7 | 1 |



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**Swarnnim Institute of Technology**

**Program: Mechanical Engineering**

**Year: 1st To 4th**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | Percentage |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                               | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score |      | Course Outcome attainment |
|--------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|------|---------------------------|
| I-SEMESTER OF ACEDEMIC YEAR 2023-24  |             |      |                          |                                                                                     |                                  |                  |                |      |                           |
| Maths-I                              | 23000001    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 1.5            | 0.45 | 2.55                      |
|                                      |             | CEC  | 74                       | 37                                                                                  | 50                               | 0                |                |      |                           |
|                                      |             | EXT  | 74                       | 56                                                                                  | 75.68                            | 3                | 3              | 2.1  |                           |
| Fundamentals of Computer Programming | 23000004    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 3              | 0.9  | 0.9                       |
|                                      |             | CEC  | 74                       | 54                                                                                  | 72.97                            | 3                |                |      |                           |
|                                      |             | EXT  | 72                       | 11                                                                                  | 15.28                            | 0                | 0              | 0    |                           |
| Elements of Electrical Engineering   | 23000012    | INT  | 74                       | 65                                                                                  | 87.84                            | 3                | 3              | 0.9  | 2.3                       |
|                                      |             | CEC  | 74                       | 74                                                                                  | 100                              | 3                |                |      |                           |
|                                      |             | EXT  | 73                       | 50                                                                                  | 68.49                            | 2                | 3              | 1.4  |                           |





|                                                     |          |     |    |    |       |   |     |      |          |
|-----------------------------------------------------|----------|-----|----|----|-------|---|-----|------|----------|
| Elements of Mechanical Engineering                  | 23000003 | INT | 74 | 49 | 66.22 | 2 | 0   | 0.4  | 0.4      |
|                                                     |          | CEC | 74 | 48 | 64.86 | 1 |     |      |          |
|                                                     |          | EXT | 74 | 25 | 33.78 | 0 | 3   | 0    |          |
| Environmental Studies                               | 23000006 | INT | 74 | 70 | 94.59 | 3 | 3   | 0.6  | 0.6      |
|                                                     |          | EXT | 74 | 16 | 21.62 | 0 | 0   | 0    |          |
| Orientation Program in Startuo and Entrepreneurship | 12300001 | INT | 74 | 74 | 100   | 3 | 3   | 0.6  | 0.6      |
|                                                     |          | EXT | 74 | 4  | 5.41  | 0 | 0   | 0    |          |
| Workshop                                            | 23000029 | EXT | 12 | 12 | 100   | 3 | 3   | 2.1  | 2.1      |
| <b>II-SEMESTER OF ACEDEMIC YEAR 2023-24</b>         |          |     |    |    |       |   |     |      |          |
| Engineering Physics                                 | 23000005 | INT | 67 | 65 | 97.01 | 3 | 3   | 0.9  | 0.9      |
|                                                     |          | CEC | 67 | 64 | 95.52 | 3 |     |      |          |
|                                                     |          | EXT | 67 | 51 | 76.12 | 3 |     |      |          |
| Communication Skills                                | 23000008 | INT | 72 | 38 | 52.78 | 0 | 0   | 0    | 0        |
|                                                     |          | EXT | 72 | 24 | 33.33 | 0 |     | 0    |          |
| Maths-II                                            | 23000010 | INT | 76 | 76 | 100   | 3 | 3   | 0.9  | 1.6      |
|                                                     |          | CEC | 76 | 60 | 78.95 | 3 |     |      |          |
|                                                     |          | EXT | 72 | 41 | 56.94 | 1 | 1   | 0.7  |          |
| Engineering Graphics                                | 23000011 | INT | 67 | 48 | 71.64 | 2 | 2.5 | 0.75 | 1.4<br>5 |
|                                                     |          | CEC | 67 | 66 | 98.51 | 3 |     |      |          |
|                                                     |          | EXT | 64 | 36 | 56.25 | 1 | 1   | 0.7  |          |
| Elements of Civil Engineering                       | 23000030 | INT | 7  | 7  | 100   | 3 | 3   | 0.9  | 0.9      |
|                                                     |          | CEC | 7  | 7  | 100   | 3 |     |      |          |
|                                                     |          | EXT | 7  | 1  | 14.29 | 0 | 0   | 0    |          |
| Basic Program in Enterprenuership                   | 12300002 | INT | 76 | 45 | 59.21 | 2 | 2   | 0.6  | 0.6      |
|                                                     |          | EXT | 74 | 2  | 2.7   | 0 |     | 0    |          |
| Chemistry                                           | 23020216 | INT | 8  | 8  | 100   | 3 | 3   | 0.9  | 0.9      |
|                                                     |          | CEC | 8  | 8  | 100   | 3 |     |      |          |
|                                                     |          | EXT | 8  | 3  | 37.5  | 0 | 0   | 0    |          |
| Personality Development                             | 24190203 | INT | 4  | 4  | 100   | 3 | 3   | 0.9  | 3        |





|                                        |          |     |   |   |        |   |     |      |      |
|----------------------------------------|----------|-----|---|---|--------|---|-----|------|------|
|                                        |          | EXT | 4 | 4 | 100    | 3 | 3   | 2.1  |      |
| III-SEMESTER OF ACEDMIC YEAR 2023-24   |          |     |   |   |        |   |     |      |      |
| Maths-3                                | 23000015 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 1.6  |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 3 | 60.00  | 1 |     | 0.7  |      |
| Mechanics of solids                    | 23080301 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 0.9  |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 2 | 40.00  | 0 |     | 0    |      |
| Material Science and Metallurgy        | 23080303 | INT | 5 | 2 | 40.00  | 0 | 1.5 | 0.45 | 2.55 |
|                                        |          | CEC | 5 | 2 | 40.00  | 3 |     |      |      |
|                                        |          | EXT | 5 | 3 | 60.00  | 3 |     | 2.1  |      |
| Manufacturing Process I                | 23080303 | INT | 5 | 5 | 100.00 | 3 | 1   | 0.6  | 1.3  |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 3 | 60.00  | 1 |     | 0.7  |      |
| Kinematics of Machines                 | 23080304 | INT | 5 | 1 | 20.00  | 0 | 0   | 0    | 0    |
|                                        |          | CEC | 5 | 2 | 40.00  | 0 |     | 0    |      |
|                                        |          | EXT | 5 | 1 | 20.00  | 0 |     | 0    |      |
| Electriacal Technology                 | 23080305 | INT | 5 | 2 | 40.00  | 0 |     | 0    | 2.1  |
|                                        |          | EXT | 5 | 3 | 60.00  | 3 |     | 2.1  |      |
| Foundation Program in Entrepreneurship | 1230003  | INT | 3 | 1 | 33.33  | 0 |     |      | 0    |
|                                        |          | EXT | 3 | 1 | 33.33  | 0 |     |      |      |
| IV-SEMESTER OF ACEDMIC YEAR 2023-24    |          |     |   |   |        |   |     |      |      |
| Maths-4                                | 23000018 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 1 | 20.00  | 3 |     | 2.1  |      |
| Machine Design & Industrial Drafting   | 23090403 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 0.   |





|                                          |          |     |   |   |        |   |   |     |     |
|------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
|                                          |          | CEC | 5 | 5 | 100.00 | 3 |   |     | 9   |
|                                          |          | EXT | 5 | 1 | 20.00  | 0 |   | 0   |     |
| Mechanical Measurement and Metrology     | 23090402 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 5 | 4 | 80.00  | 3 |   |     |     |
| Manufacturing Process-II                 | 23090404 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Engineering Thermodynamics               | 23090401 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Intermediate Program in Entrepreneurship | 12300004 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | EXT | 2 | 0 | 0.00   | 0 |   |     |     |

**V-SEMESTER OF ACADEMIC YEAR 2023-24**

|                            |          |     |    |    |        |   |     |      |      |
|----------------------------|----------|-----|----|----|--------|---|-----|------|------|
| Fluid Mechanics            | 23090501 | INT | 14 | 3  | 21.43  | 0 | 1.5 | 0.45 | 0.45 |
|                            |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 4  | 28.57  | 0 |     |      |      |
| Design of Machine Elements | 23090502 | INT | 14 | 12 | 85.71  | 3 | 3   | 0.9  | 3    |
|                            |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 5  | 35.71  | 3 |     |      |      |
| Heat Transfer              | 23090503 | INT | 14 | 6  | 42.86  | 0 | 1.5 | 0.45 | 0.45 |
|                            |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 4  | 28.57  | 0 |     |      |      |
| Theory of Machine          | 23090504 | INT | 14 | 13 | 92.86  | 3 | 3   | 0.9  | 3    |
|                            |          | CEC | 13 | 13 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 1  | 7.14   | 3 |     |      |      |
| Control Engineering        | 23090505 | INT | 14 | 5  | 35.71  | 3 |     | 0.9  | 3    |





|                              |          |     |    |    |        |   |  |     |   |
|------------------------------|----------|-----|----|----|--------|---|--|-----|---|
|                              |          | CEC | 14 | 14 | 100.00 |   |  |     |   |
|                              |          | EXT | 14 | 1  | 7.14   | 3 |  | 2.1 |   |
| Case Study                   | 23000027 | CEC | 14 | 5  | 35.71  | 3 |  | 0.9 | 3 |
|                              |          | EXT | 14 | 1  | 7.14   | 3 |  | 2.1 |   |
| Intellectual Property Rights | 12300005 | INT | 14 | 5  | 35.71  | 3 |  | 0.9 | 3 |
|                              |          | EXT | 14 | 1  | 7.14   | 3 |  | 2.1 |   |

**VI-SEMESTER OF ACEDMIC YEAR 2023-24**

|                                    |          |     |    |    |        |   |   |     |     |
|------------------------------------|----------|-----|----|----|--------|---|---|-----|-----|
| Dynamics of Machinery              | 23090601 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 6  | 42.86  | 0 |   |     |     |
| Fluid Power Engineering            | 23090602 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 14 | 100.00 | 3 |   |     |     |
| Production Technology              | 23090603 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 6  | 42.86  | 0 |   |     |     |
| Refrigeration air Conditioning     | 23090604 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 2  | 14.29  | 0 |   |     |     |
| Industrial Engineering             | 23090605 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                    |          | CEC | 14 | 14 | 100.00 |   |   |     |     |
|                                    |          | EXT | 14 | 9  | 64.29  | 3 |   |     |     |
| Seminar                            | 23000026 | CEC | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                    |          | EXT | 14 | 9  | 64.29  | 3 |   |     |     |
| Expert Program in Enterprenuership | 1230006  | INT | 14 | 3  | 21.43  | 3 | 3 | 0.9 | 3   |
|                                    |          | EXT | 14 | 3  | 21.43  | 3 |   |     |     |

**VII-SEMESTER OF ACEDMIC YEAR 2023-24**







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|                                       |           |     |    |    |        |   |   |     |     |
|---------------------------------------|-----------|-----|----|----|--------|---|---|-----|-----|
| Computer Aided Design & Manufacturing | 23090701  | INT | 21 | 20 | 95.24  | 3 | 3 | 0.9 | 0.9 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 7  | 33.33  | 0 |   |     |     |
| Power Plant Engineering               | 23090702  | INT | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 11 | 52.38  | 0 |   |     |     |
| Operation Research                    | 23090703  | INT | 21 | 20 | 95.24  | 3 | 3 | 0.9 | 1.6 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 12 | 57.14  | 1 |   |     |     |
| Machine Design                        | 23090704  | INT | 21 | 20 | 95.24  | 3 | 3 | 0.9 | 0.9 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 12 | 57.14  | 0 |   |     |     |
| Metal Forming Analysis                | 23090712  | INT | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 2.3 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 15 | 71.43  | 2 | 3 | 1.4 |     |
| Project-i                             | 23000023  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Start-Up Project Part-I               | 123000007 | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| VIII-SEMESTER OF ACEDMIC YEAR 2023-24 |           |     |    |    |        |   |   |     |     |
| Project-II                            | 23000025  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Industrial Training                   | 23000028  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Energy Conservation and Management    | 23090805  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Start-Up Project Part-II              | 12300008  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |



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## Swarnnim Institute of Technology

Program: Mechanical Engineering

Year: 1st To 4th

### ATTAINMENT LEVELS FOR POS THROUGH COURSES

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.28 | 0.38 | 0.66 | 0.43 | 0.43 | 0.40 | 0.62 | 0.57 | 0.57 | 0.51 | 0.40 | 0.38 |
| 23000004 | 0.25 | 0.25 | 0.22 | 0.25 | 0.25 | 0.00 | -    | 0.20 | 0.20 | -    | -    | -    |
| 23000012 | 0.59 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.12 | 0.11 | 0.11 | 0.11 | -    | -    |
| 12300001 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| 23000006 | 0.09 | 0.09 | 0.09 | 0.10 | 0.07 | -    | -    | -    | -    | -    | 0.07 | 0.07 |
| 23000029 | 0.23 | 0.23 | -    | -    | 0.23 | 0.23 | -    | -    | -    | -    | 0.23 | 0.23 |
| 23000005 | 0.25 | 0.15 | 0.28 | 0.23 | 0.25 | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.00 | 0.00 | 0.00 | 0.00 | -    | -    |
| 23000010 | 0.39 | 0.46 | 0.28 | 0.32 | 0.32 | -    | -    | -    | -    | -    | -    | 0.39 |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.35 | 0.35 | 0.32 | 0.32 | 0.29 |
| 12300002 | 0.20 | 0.20 | 0.20 | 0.20 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000030 | -    | -    | -    | -    | -    | -    | -    | 0.17 | 0.11 | 0.17 | 0.11 | 0.11 |
| 23020216 | 0.21 | 0.23 | 0.18 | 0.19 | 0.18 | -    | -    | -    | -    | -    | 0.19 | 0.18 |
| 24190203 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 23000015 | 0.18 | 0.27 | 0.31 | 0.27 | 0.18 | 0.27 | 0.46 | 0.36 | 0.32 | 0.32 | 0.28 | 0.32 |
| 23080301 | 0.10 | 0.15 | 0.25 | 0.20 | 0.10 | 0.10 | 0.20 | 0.18 | 0.18 | 0.20 | 0.20 | 0.15 |
| 23080303 | 0.28 | 0.38 | 0.66 | 0.43 | 0.43 | 0.40 | 0.62 | 0.57 | 0.57 | 0.51 | 0.40 | 0.38 |
| 23110304 | 0.14 | 0.22 | 0.36 | 0.29 | 0.14 | 0.23 | 0.29 | 0.23 | 0.29 | 0.23 | 0.22 | 0.19 |
| 23080304 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23080305 | 0.23 | 0.35 | 0.58 | 0.47 | 0.23 | 0.37 | 0.47 | 0.37 | 0.47 | 0.37 | 0.35 | 0.31 |
| 23000014 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |





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|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000018 | 0.76 | 0.71 | 0.90 | 0.76 | 0.81 | -    | -    | -    | -    | -    | -    | -    |
| 23110401 | 0.10 | 0.15 | 0.20 | 0.20 | 0.10 | 0.10 | 0.23 | 0.23 | 0.20 | 0.20 | 0.10 | 0.15 |
| 23090401 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.73 | 0.56 | 0.47 | 0.50 | 0.60 | 0.50 |
| 23000017 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.73 | 0.56 | 0.47 | 0.50 | 0.60 | 0.50 |
| 23090402 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | -    | -    | -    | -    | -    | 0.50 | 0.42 |
| 23090404 | 0.24 | 0.16 | 0.25 | 0.20 | 0.10 | 0.15 | 0.20 | 0.15 | 0.20 | 0.15 | 0.15 | 0.10 |
| 23090501 | 0.08 | 0.08 | 0.10 | 0.08 | 0.10 | 0.09 | 0.10 | 0.10 | 0.12 | 0.05 | 0.10 | 0.05 |
| 23090502 | 0.33 | 0.50 | 0.67 | 0.50 | 0.50 | 0.33 | 0.80 | 0.67 | 0.67 | 0.47 | 0.80 | 0.40 |
| 23090503 | 0.10 | 0.08 | 0.10 | 0.08 | 0.07 | 0.08 | 0.05 | 0.08 | 0.10 | 0.07 | 0.10 | 0.05 |
| 23090504 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.67 | 0.80 | 0.67 | 0.67 | 0.73 | 0.67 | 0.67 |
| 23090505 | 0.67 | 0.78 | 0.67 | 0.67 | 0.33 | 0.80 | 0.73 | 0.80 | 0.60 | 0.87 | 0.53 | 0.67 |
| 23000027 | 0.58 | 0.60 | 0.58 | 0.67 | 0.67 | 0.67 | 0.50 | 0.75 | 0.50 | 0.67 | 0.58 | 0.67 |
| 12300005 | 1.17 | 0.93 | 0.58 | 0.67 | 0.67 | 0.80 | 0.46 | 0.90 | 0.45 | 0.79 | 0.47 | 0.67 |
| 23090601 | 0.10 | 0.15 | 0.20 | 0.20 | 0.10 | 0.16 | 0.20 | 0.20 | 0.24 | 0.23 | 0.24 | 0.13 |
| 23090602 | 0.33 | 0.50 | 0.67 | 0.50 | 0.50 | 0.33 | 0.67 | 0.87 | 0.75 | 0.67 | 0.67 | 0.67 |
| 23090603 | 0.03 | 0.08 | 0.23 | 0.15 | 0.08 | 0.07 | 0.29 | 0.19 | 0.40 | 0.19 | 0.34 | 0.13 |
| 23090604 | 0.10 | 0.15 | 0.20 | 0.15 | 0.15 | 0.18 | 0.18 | 0.25 | 0.18 | 0.13 | 0.20 | 0.10 |
| 23090605 | 0.33 | 0.58 | 0.83 | 0.67 | 1.00 | 0.67 | 0.83 | 0.89 | 0.89 | 0.67 | 1.00 | 0.33 |
| 23000026 | 0.50 | 0.53 | 0.67 | 0.60 | 0.44 | 0.50 | 0.50 | 0.33 | 0.50 | 0.67 | 0.56 | 0.67 |
| 12300006 | 0.75 | 0.58 | 0.83 | 0.67 | 0.33 | 0.33 | 0.33 | 0.67 | 0.67 | 0.78 | 0.67 | 0.67 |
| 23090701 | 0.22 | 0.18 | 0.22 | 0.18 | 0.10 | 0.13 | 0.10 | 0.25 | 0.23 | 0.27 | 0.20 | 0.20 |
| 23090702 | 0.22 | 0.16 | 0.24 | 0.18 | 0.10 | 0.10 | 0.13 | 0.20 | 0.17 | 0.23 | 0.20 | 0.15 |
| 23090703 | 0.36 | 0.32 | 0.39 | 0.36 | 0.18 | 0.24 | 0.18 | 0.27 | 0.30 | 0.40 | 0.27 | 0.36 |
| 23090704 | 0.20 | 0.16 | 0.24 | 0.18 | 0.15 | 0.10 | 0.13 | 0.13 | 0.20 | 0.25 | 0.20 | 0.20 |
| 23090712 | 0.51 | 0.46 | 0.56 | 0.51 | 0.43 | 0.34 | 0.34 | 0.38 | 0.51 | 0.51 | 0.51 | 0.51 |
| 12300007 | 0.23 | 0.18 | 0.25 | 0.20 | 0.10 | 0.10 | 0.10 | 0.20 | 0.20 | 0.23 | 0.20 | 0.20 |
| 23000023 | 0.20 | 0.18 | 0.22 | 0.18 | 0.13 | 0.15 | 0.13 | 0.23 | 0.15 | 0.22 | 0.13 | 0.20 |
| 23000025 | 0.20 | 0.20 | 0.25 | 0.20 | 0.13 | 0.14 | 0.10 | 0.23 | 0.17 | 0.25 | 0.17 | 0.15 |
| 23000028 | 0.20 | 0.18 | 0.20 | 0.20 | 0.10 | 0.13 | 0.10 | 0.20 | 0.20 | 0.23 | 0.15 | 0.20 |
| 23090805 | 0.20 | 0.20 | 0.25 | 0.20 | 0.13 | 0.14 | 0.10 | 0.23 | 0.17 | 0.25 | 0.17 | 0.15 |



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|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 12300008               | 0.67  | 0.58  | 0.67  | 0.67  | 0.33  | 0.44  | 0.33  | 0.67  | 0.67  | 0.78  | 0.50  | 0.67  |
| TOTAL PO<br>ATTAINMENT | 14.21 | 15.04 | 18.24 | 16.16 | 12.45 | 10.93 | 14.04 | 16.05 | 15.29 | 15.55 | 14.39 | 13.58 |
| COUNT                  | 46    | 46    | 45    | 45    | 45    | 38    | 39    | 42    | 42    | 40    | 42    | 43    |
| AVERAGE<br>ATTAINMENT  | 0.31  | 0.33  | 0.41  | 0.36  | 0.28  | 0.29  | 0.36  | 0.38  | 0.36  | 0.39  | 0.34  | 0.32  |



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## Swarnnim Institute of Technology

Program: Mechanical Engineering

Year: 1st To 4th

### TARGET LEVEL FOR POS THROUGH COURSES

| SUBJECT  | PO1  | PO2          | PO3  | PO4          | PO5  | PO6              | PO7  | PO8          | PO9  | PO10         | PO 11 | PO 12       |
|----------|------|--------------|------|--------------|------|------------------|------|--------------|------|--------------|-------|-------------|
| 23000001 | 0.70 | 0.333<br>333 | 0.33 | 0.333<br>333 | 0.33 | 0.3333<br>33     | 0.33 | 0.3333<br>33 | 0.33 | 0.3333<br>33 | 0.33  | 0.33<br>333 |
| 23000004 | 0.83 | 0.833<br>333 | 0.73 | 0.833<br>333 | 0.83 | -<br>0.3333<br>3 | -    | 0.6666<br>67 | 0.67 | -            | -     | -           |
| 23000012 | 0.77 | 0.333<br>333 | 0.33 | 0.333<br>333 | 0.33 | 0.3333<br>33     | 0.33 | 0.3333<br>33 | 0.33 | -            | -     | -           |
| 23000003 | -    | -            | -    | -            | -    | -                | 0.87 | 0.8          | 0.80 | 0.8          | -     | -           |
| 12300001 | 0.33 | 0.333<br>333 | 0.33 | 0.333<br>333 | 0.33 | 0.3333<br>33     | 0.33 | 0.3333<br>33 | 0.33 | 0.3333<br>33 | 0.33  | 0.33<br>333 |
| 23000006 | 0.43 | 0.433<br>333 | 0.43 | 0.5          | 0.33 | -                | -    | -            | -    | -            | 0.33  | 0.33<br>333 |
| 23000029 | 0.33 | 0.333<br>333 | -    | -            | 0.33 | 0.3333<br>33     | -    | -            | -    | -            | 0.33  | 0.33<br>333 |
| 23000005 | 0.83 | 0.5          | 0.93 | 0.766<br>667 | 0.83 | -                | -    | -            | -    | -            | -     | -           |
| 23000008 | -    | -            | -    | -            | -    | -                | 0.87 | 0.8          | 0.80 | 0.8          | -     | -           |
| 23000010 | 0.73 | 0.866<br>667 | 0.53 | 0.6          | 0.60 | -                | -    | -            | -    | -            | -     | 0.73<br>333 |
| 23000011 | -    | -            | -    | -            | -    | -                | -    | 0.7333<br>33 | 0.73 | 0.6666<br>67 | 0.67  | 0.6         |
| 12300002 | 0.67 | 0.666<br>667 | 0.67 | 0.666<br>667 | -    | -                | -    | -            | -    | -            | -     | -           |
| 23000030 | -    | -            | -    | -            | -    | -                | -    | 0.8333<br>33 | 0.57 | 0.8333<br>33 | 0.57  | 0.56<br>667 |



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|----------|------|--------------|------|--------------|------|-----------------|-----------------|-----------------|-----------------|-----------------|------|--------------|
| 23020216 | 0.70 | 0.766<br>667 | 0.60 | 0.633<br>333 | 0.60 | -               | -               | -               | -               | -               | 0.62 | 0.58<br>333  |
| 24190203 | -    | -            | -    | -            | -    | -               | 0.87            | 0.80            | 0.80            | 0.80            | -    | -            |
| 23000015 | 0.33 | 0.50         | 0.58 | 0.50         | 0.33 | 0.50            | 0.87            | 0.67            | 0.60            | 0.60            | 0.53 | 0.60         |
| 23080301 | 0.33 | 0.50         | 0.83 | 0.67         | 0.33 | 0.33333<br>3333 | 0.6666<br>66667 | 0.58333<br>3333 | 0.58            | 0.67            | 0.67 | 0.50         |
| 23080303 | 0.33 | 0.44         | 0.78 | 0.50         | 0.50 | 0.47            | 0.73            | 0.67            | 0.67            | 0.60            | 0.47 | 0.44         |
| 23110304 | 0.33 | 0.50         | 0.83 | 0.67         | 0.33 | 0.53333<br>3333 | 0.6666<br>66667 | 0.53333<br>3333 | 0.66666<br>6667 | 0.53333<br>3333 | 0.50 | 0.44         |
| 23080304 | 0.33 | 0.56         | 0.89 | 0.89         | 0.22 | 0.38            | 0.61            | 0.47            | 0.58            | 0.59            | 0.71 | 0.50         |
| 23080305 | 0.33 | 0.50         | 0.83 | 0.67         | 0.33 | 0.33            | 0.67            | 0.58            | 0.58            | 0.67            | 0.67 | 0.50         |
| 23000014 | 0.33 | 0.44         | 0.78 | 0.50         | 0.50 | 0.47            | 0.73            | 0.67            | 0.67            | 0.60            | 0.47 | 0.44         |
| 23000018 | 0.76 | 0.71         | 0.90 | 0.76         | 0.81 | -               | -               | -               | -               | -               | -    | 0.44         |
| 23110401 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.33            | 0.75            | 0.75            | 0.67            | 0.67            | 0.33 | 0.5          |
| 23090401 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.33            | 0.73            | 0.56            | 0.47            | 0.50            | 0.60 | 0.5          |
| 23000017 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.33            | 0.73            | 0.56            | 0.47            | 0.50            | 0.60 | 0.5          |
| 23090402 | 0.33 | 0.50         | 0.67 | 0.67         | 0.50 | -               | -               | -               | -               | -               | 0.50 | 0.41<br>6667 |
| 23090404 | 0.80 | 0.53         | 0.83 | 0.67         | 0.33 | 0.50            | 0.67            | 0.50            | 0.67            | 0.50            | 0.50 | 0.33<br>3333 |
| 23090501 | 0.56 | 0.50         | 0.67 | 0.53         | 0.67 | 0.61            | 0.67            | 0.67            | 0.78            | 0.33            | 0.67 | 0.33<br>3333 |
| 23090502 | 0.33 | 0.50         | 0.67 | 0.50         | 0.50 | 0.33            | 0.80            | 0.67            | 0.67            | 0.47            | 0.80 | 0.4          |
| 23090503 | 0.67 | 0.53         | 0.67 | 0.53         | 0.47 | 0.53            | 0.33            | 0.50            | 0.67            | 0.44            | 0.67 | 0.33<br>3333 |
| 23090504 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.67            | 0.80            | 0.67            | 0.67            | 0.73            | 0.67 | 0.66<br>6667 |
| 23090505 | 0.67 | 0.78         | 0.67 | 0.67         | 0.33 | 0.80            | 0.73            | 0.80            | 0.60            | 0.87            | 0.53 | 0.66<br>6667 |
| 23000027 | 0.58 | 0.60         | 0.58 | 0.67         | 0.67 | 0.67            | 0.50            | 0.75            | 0.50            | 0.67            | 0.58 | 0.66<br>6667 |
| 12300005 | 0.67 | 0.78         | 0.67 | 0.67         | 0.50 | 0.58            | 0.67            | 0.56            | 0.58            | 0.58            | 0.50 | 0.5          |
| 23090601 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.53            | 0.67            | 0.67            | 0.80            | 0.75            | 0.80 | 0.44<br>4444 |



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|------------------------------------|---------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| 23090602                           | 0.33                | 0.50                 | 0.67                 | 0.50                 | 0.50                 | 0.33                | 0.67                 | 0.87                 | 0.75                 | 0.67                 | 0.67                | 0.66<br>6667        |
| 23090603                           | 0.44                | 0.50                 | 0.67                 | 0.50                 | 0.50                 | 0.33                | 0.60                 | 0.67                 | 0.67                 | 0.56                 | 0.78                | 0.5                 |
| 23090604                           | 0.33                | 0.50                 | 0.67                 | 0.50                 | 0.50                 | 0.58                | 0.58                 | 0.83                 | 0.58                 | 0.44                 | 0.67                | 0.33<br>3333        |
| 23090605                           | 0.33                | 0.58                 | 0.83                 | 0.67                 | 1.00                 | 0.67                | 0.83                 | 0.89                 | 0.89                 | 0.67                 | 1.00                | 0.33<br>3333        |
| 23000026                           | 0.50                | 0.53                 | 0.67                 | 0.60                 | 0.44                 | 0.50                | 0.50                 | 0.33                 | 0.50                 | 0.67                 | 0.56                | 0.66<br>6667        |
| 12300006                           | 0.75                | 0.58                 | 0.83                 | 0.67                 | 0.33                 | 0.33                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.67                | 0.66<br>6667        |
| 23090701                           | 0.73                | 0.60                 | 0.73                 | 0.60                 | 0.33                 | 0.44                | 0.33                 | 0.83                 | 0.78                 | 0.89                 | 0.67                | 0.66<br>6667        |
| 23090702                           | 0.73                | 0.53                 | 0.80                 | 0.60                 | 0.33                 | 0.33                | 0.44                 | 0.67                 | 0.56                 | 0.78                 | 0.67                | 0.5                 |
| 23090703                           | 0.67                | 0.60                 | 0.73                 | 0.67                 | 0.33                 | 0.44                | 0.33                 | 0.50                 | 0.56                 | 0.75                 | 0.50                | 0.66<br>6667        |
| 23090704                           | 0.67                | 0.53                 | 0.80                 | 0.60                 | 0.50                 | 0.33                | 0.44                 | 0.44                 | 0.67                 | 0.83                 | 0.67                | 0.66<br>6667        |
| 23090712                           | 0.67                | 0.60                 | 0.73                 | 0.67                 | 0.56                 | 0.44                | 0.44                 | 0.50                 | 0.67                 | 0.67                 | 0.67                | 0.66<br>6667        |
| 12300007                           | 0.75                | 0.58                 | 0.83                 | 0.67                 | 0.33                 | 0.33                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.67                | 0.67                |
| 23000023                           | 0.67                | 0.60                 | 0.73                 | 0.60                 | 0.44                 | 0.50                | 0.42                 | 0.75                 | 0.50                 | 0.73                 | 0.42                | 0.66<br>6667        |
| 23000025                           | 0.67                | 0.67                 | 0.83                 | 0.67                 | 0.42                 | 0.47                | 0.33                 | 0.78                 | 0.56                 | 0.83                 | 0.56                | 0.5                 |
| 23000028                           | 0.67                | 0.58                 | 0.67                 | 0.67                 | 0.33                 | 0.44                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.50                | 0.66<br>6667        |
| 23090805                           | 0.67                | 0.67                 | 0.83                 | 0.67                 | 0.42                 | 0.47                | 0.33                 | 0.78                 | 0.56                 | 0.83                 | 0.56                | 0.5                 |
| 12300008                           | 0.67                | 0.58                 | 0.67                 | 0.67                 | 0.33                 | 0.44                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.50                | 0.67                |
| SUM OF<br>PO                       | 25.95               | 26.54                | 32.79                | 28.88                | 21.14                | 17.65               | 24.19                | 28.94                | 28.13                | 28.26                | 25.6<br>4           | 23.9<br>6           |
| COUNT<br>OF PO                     | 48                  | 48                   | 47                   | 47                   | 47                   | 40                  | 42                   | 45                   | 45                   | 43                   | 44                  | 46                  |
| <b>DIRECT<br/>TARGET<br/>(AVG)</b> | <b>0.540<br/>53</b> | <b>0.552<br/>873</b> | <b>0.697<br/>585</b> | <b>0.614<br/>556</b> | <b>0.449<br/>848</b> | <b>0.4411<br/>9</b> | <b>0.575<br/>938</b> | <b>0.6430<br/>86</b> | <b>0.6251<br/>85</b> | <b>0.6573<br/>21</b> | <b>0.58<br/>277</b> | <b>0.52<br/>077</b> |



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|                                               |      |      |      |      |      |      |      |      |      |      |      |          |
|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|----------|
| ATTAINMENT OF PO DIRECT (Average value found) | 0.31 | 0.33 | 0.41 | 0.36 | 0.28 | 0.29 | 0.36 | 0.38 | 0.36 | 0.39 | 0.34 | 0.315861 |
| 80% OF DIRECT ATT                             | 0.25 | 0.26 | 0.32 | 0.29 | 0.22 | 0.23 | 0.29 | 0.31 | 0.29 | 0.31 | 0.27 | 0.25     |
| 20% OF INDIRECT ATTAINMENT                    | 0.54 | 0.53 | 0.54 | 0.52 | 0.52 | 0.51 | 0.56 | 0.54 | 0.51 | 0.52 | 0.53 | 0.528    |
| TOTAL                                         | 0.78 | 0.79 | 0.86 | 0.81 | 0.74 | 2.66 | 2.00 | 2.66 | 0.80 | 0.83 | 0.80 | 0.78     |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: B.TECH.-CIVIL ENGINEERING**

**YEAR-1ST TO 8TH SEMESTER**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**CO PO MATRIX ALL COURSES**

| SUBJECT CODE | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | OVERALL PO AVG |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| 23000001     | 2.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00           |
| 23000004     | 2.50 | 2.50 | 2.20 | 2.50 | 2.50 | -    | -    | 2.00 | 2.00 | 3.00 | -    | -    | 2.40           |
| 23000012     | 2.30 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | -    | -    | -    | 1.10           |
| 23000003     | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40 | -    | -    | 2.50           |
| 12300001     | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00           |
| 23000006     | 1.30 | 1.30 | 1.30 | 1.50 | 1.00 | -    | -    | -    | -    | -    | 1.00 | 1.00 | 1.20           |
| 23000005     | 2.50 | 1.50 | 2.80 | 2.30 | 2.50 | -    | -    | -    | -    | -    | -    | -    | 2.30           |
| 23000008     | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40 | -    | -    | 2.50           |
| 23000010     | 2.20 | 2.60 | 1.60 | 1.80 | 1.80 | -    | -    | -    | -    | -    | -    | -    | 2.00           |
| 23000011     | -    | -    | -    | -    | -    | -    | -    | 2.20 | 2.20 | 2.00 | 2.00 | 1.80 | 2.00           |
| 12300002     | 2.00 | 2.00 | 2.00 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.00           |
| 23000015     | -    | -    | -    | -    | -    | -    | -    | 2.50 | 1.70 | 2.50 | 1.70 | 1.70 | 2.00           |
| 23030304     | 2.17 | 2.50 | 1.83 | 2.00 | 1.67 | 2.17 | 2.50 | 1.83 | 2.00 | 1.67 | 2.50 | 1.67 | 2.04           |
| 23030305     | 2.60 | 2.40 | 2.00 | 1.80 | 2.20 | 2.40 | 2.60 | 2.00 | 1.80 | 1.80 | 2.60 | 1.80 | 2.17           |
| 23030301     | 2.43 | 2.43 | 2.00 | 1.86 | 2.00 | 2.14 | 2.43 | 2.29 | 1.71 | 1.57 | 2.57 | 1.86 | 2.11           |
| 23030302     | 2.22 | 2.44 | 2.22 | 1.89 | 1.78 | 1.78 | 2.33 | 2.33 | 1.89 | 1.56 | 2.33 | 1.67 | 2.04           |
| 23030303     | 3.00 | 2.00 | 2.67 | 1.33 | 2.67 | 1.67 | 2.67 | 2.67 | 2.00 | 2.33 | 1.67 | 2.67 | 2.28           |
| 23000015     | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | -    | -    | -    | -    | -    | -    | -    | 2.20           |
| 12300003     | 2.00 | 2.40 | 2.20 | 2.40 | 2.20 | -    | -    | -    | -    | -    | -    | -    | 2.24           |
| 23030401     | 2.00 | 2.67 | 1.67 | 1.67 | 2.17 | 2.33 | 2.00 | 2.83 | 1.50 | 1.33 | 2.33 | 2.33 | 2.07           |
| 23030402     | 2.40 | 2.40 | 2.20 | 1.40 | 2.60 | 2.00 | 2.60 | 2.60 | 1.80 | 2.20 | 2.40 | 2.40 | 2.25           |
| 23030403     | 1.89 | 2.33 | 2.11 | 2.11 | 1.78 | 1.67 | 2.56 | 2.56 | 2.11 | 1.56 | 2.33 | 1.44 | 2.04           |
| 23030404     | 2.25 | 2.75 | 1.50 | 1.75 | 2.00 | 2.00 | 2.25 | 2.50 | 2.00 | 1.75 | 2.50 | 2.25 | 2.13           |
| 23030406     | 1.86 | 2.00 | 2.29 | 2.14 | 1.43 | 1.71 | 2.71 | 2.86 | 2.29 | 2.00 | 2.00 | 1.57 | 2.07           |
| 23000018     | 2.29 | 2.14 | 2.71 | 2.29 | 2.43 | -    | -    | -    | -    | -    | -    | -    | 2.37           |
| 12300004     | 2.50 | 1.75 | 2.50 | 2.00 | -    | -    | -    | -    | -    | -    | -    | -    | 2.19           |





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|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 23030501       | 2.40       | 2.70       | 1.40       | 1.70       | 2.20       | 2.10       | 2.50       | 2.00       | 1.80       | 1.80       | 2.60       | 2.00       | 2.10       |
| 23030502       | 2.00       | 2.17       | 1.67       | 2.17       | 1.67       | 2.17       | 2.33       | 1.67       | 2.00       | 1.67       | 2.50       | 1.50       | 1.96       |
| 23030503       | 1.33       | 3.00       | 1.33       | 2.33       | 1.67       | 2.00       | 2.00       | 1.33       | 2.00       | 1.67       | 2.00       | 2.33       | 1.92       |
| 23030504       | 2.00       | 2.25       | 2.00       | 2.25       | 1.50       | 2.25       | 2.50       | 1.75       | 2.25       | 1.50       | 2.50       | 1.75       | 2.04       |
| 23030505       | 2.40       | 2.50       | 1.60       | 2.00       | 2.40       | 1.80       | 2.20       | 2.60       | 1.70       | 1.30       | 2.50       | 2.30       | 2.11       |
| 12300005       | 2.33       | 2.33       | 2.00       | -          | -          | -          | -          | -          | -          | -          | -          | -          | 2.22       |
| 23030601       | 3.00       | 2.50       | 2.00       | 2.50       | 2.50       | 1.50       | 3.00       | 3.00       | 1.00       | 1.00       | 3.00       | 2.50       | 2.29       |
| 23030602       | 1.83       | 2.17       | 1.83       | 2.00       | 1.67       | 2.17       | 2.17       | 2.00       | 1.50       | 1.83       | 2.00       | 1.67       | 1.90       |
| 23030603       | 2.17       | 1.83       | 1.83       | 1.67       | 1.83       | 2.50       | 2.00       | 2.00       | 1.50       | 1.83       | 2.00       | 1.83       | 1.92       |
| 23030604       | 2.20       | 1.80       | 2.80       | 2.20       | 1.60       | 1.80       | 2.20       | 2.20       | 2.40       | 1.80       | 1.80       | 1.60       | 2.03       |
| 23030605       | 1.50       | 3.00       | 2.00       | 2.50       | 2.50       | 1.50       | 1.50       | 3.00       | 1.00       | 1.00       | 2.50       | 3.00       | 2.08       |
| 12300006       | 2.00       | 2.33       | 2.00       | 2.00       | -          | -          | -          | -          | -          | -          | -          | -          | 2.08       |
| 23030701       | 1.25       | 1.25       | 1.25       | 1.50       | 1.25       | 1.50       | 1.50       | 1.00       | 1.25       | 1.25       | 1.25       | 1.50       | 1.31       |
| 23030702       | 1.60       | 1.00       | 1.60       | 1.60       | 1.40       | 1.40       | 1.60       | 1.40       | 1.60       | 1.40       | 1.40       | 1.20       | 1.43       |
| 23030703       | 1.00       | 1.00       | 1.33       | 1.00       | 1.67       | 1.33       | 1.00       | 1.33       | 1.33       | 1.33       | 1.33       | 1.33       | 1.25       |
| 23030704       | 1.50       | 1.75       | 1.75       | 1.25       | 1.75       | 1.50       | 1.50       | 2.00       | 1.25       | 1.25       | 1.50       | 1.50       | 1.54       |
| 12300007       | 2.00       | 2.33       | 2.00       | 2.00       | -          | -          | -          | -          | -          | -          | -          | -          | 2.08       |
| 23030801       | 1.50       | 1.50       | 2.00       | 1.00       | 1.50       | 1.50       | 1.50       | 1.50       | 1.00       | 1.50       | 1.00       | 1.50       | 1.42       |
| 23030802       | 1.25       | 1.25       | 1.25       | 1.50       | 1.25       | 1.25       | 1.25       | 1.25       | 1.25       | 1.50       | 1.50       | 1.50       | 1.33       |
| 23030803       | 1.25       | 1.50       | 1.50       | 1.50       | 1.00       | 1.00       | 1.25       | 1.50       | 1.25       | 1.25       | 1.50       | 1.00       | 1.29       |
| 12300008       | 2.25       | 1.75       | 2.50       | 2.00       | -          | -          | -          | -          | -          | -          | -          | -          | 2.13       |
| <b>AVERAGE</b> | <b>2.0</b> | <b>2.1</b> | <b>1.9</b> | <b>1.9</b> | <b>1.9</b> | <b>1.8</b> | <b>2.1</b> | <b>2.1</b> | <b>1.7</b> | <b>1.6</b> | <b>2.1</b> | <b>1.8</b> | <b>2.0</b> |

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SWARNIM INSTITUTE OF TECHNOLOGY  
PROGRAM NAME: B.TECH.-CIVIL ENGINEERING

SEMESTER:-1ST to 8TH SEMESTER

TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-2024

FOR 1ST TO 8TH SEMESTER

| B.TECH.3rd to 8th Sem ALL Subject Except<br>12300002,23000006,12300003,12300004,12300005,12300006,12300007,12300008 |                |  |              |                |  |              |          |
|---------------------------------------------------------------------------------------------------------------------|----------------|--|--------------|----------------|--|--------------|----------|
| Target level                                                                                                        | internal marks |  | Target level | external marks |  | Target level | CEC      |
| 1                                                                                                                   | ≤18            |  | 1            | ≤42            |  | 1            | ≤30      |
| 2                                                                                                                   | 19 to 24       |  | 2            | 43 to 56       |  | 2            | 31 to 40 |
| 3                                                                                                                   | ≥25            |  | 3            | ≥57            |  | 3            | ≥41      |

| IE SUBJECT   |                         |
|--------------|-------------------------|
| Target level | Internal/external marks |
| 1            | ≤30                     |
| 2            | 31 to 40                |
| 3            | ≥40                     |

| Course Name                                         | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|-----------------------------------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
|                                                     |             | Mid Sem | CEC | External | Mid sem | CEC | External |              |              |        |
| 1ST SEM                                             |             |         |     |          |         |     |          |              |              |        |
| Maths-I                                             | 23000001    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Fundamentals of Computer Programming                | 23000004    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Electrical Engineering                  | 23000012    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Mechanical Engineering                  | 23000003    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Orientation Program in Startuo and Entrepreneurship | 12300001    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Environmental Studies                               | 23000006    | 30      |     | 30       | 1       |     | 1        | 0.3          | 0.7          | 1      |

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| 2ND SEM                           |          |    |    |    |   |   |   |     |     |   |
|-----------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Engineering Physics               | 23000005 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Communication Skills              | 23000008 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-II                          | 23000010 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Graphics              | 23000011 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Basic Program In Entrepreneurship | 12300002 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Elements of Civil Engineering     | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| 3RD SEM                           |          |    |    |    |   |   |   |     |     |   |
| Strength of Material              | 23030304 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Fluid Mechanics                   | 23030305 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Surveying                         | 23030301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Building Construction             | 23030302 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Concrete Technology               | 23030303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-3                           | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                                | 12300003 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| 4TH SEM                           |          |    |    |    |   |   |   |     |     |   |
| Theory of Structure-I             | 23030401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Applied Fluid Mechanics           | 23030402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Geotechnics and Applied Geology   | 23030403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Building and Town Planning        | 23030404 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Advanced Surveying                | 23030406 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-4                           | 23000018 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                                | 12300004 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
|                                   |          |    |    |    |   |   |   |     |     |   |





| 5TH SEM                                  |          |    |    |    |   |   |   |     |     |   |
|------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Highway Engineering                      | 23030501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Environmental Engineering                | 23030502 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Theory of Structure-II                   | 23030503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Geotechnical Engineering                 | 23030504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Hydrology and Water Resource Engineering | 23030505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                                       | 12300005 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| 6TH SEM                                  |          |    |    |    |   |   |   |     |     |   |
| Water and Waste water Engineering        | 23030601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Design of Reinforced Concrete Structure  | 23030602 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Railway Bridge and Tunnel Engineering    | 23030603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Advanced Construction Equipment          | 23030604 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Professional Practice and Valuation      | 23030605 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                                       | 12300006 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| 7TH SEM                                  |          |    |    |    |   |   |   |     |     |   |
| Design of Steel Structure                | 23030701 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Irrigation Engineering                   | 23030702 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Urban Transportation Engineering         | 23030703 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Ground Improvement Technique             | 23030704 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Startup Project-1                        | 12300007 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |

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| 8TH SEM                         |          |    |    |    |   |   |   |     |     |   |
|---------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Construction Project Management | 23030801 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Prestressed Concrete            | 23030802 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Foundation Engineering          | 23030803 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                              | 12300008 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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**SWARNIM INSTITUTE OF TECHNOLOGY**  
**PROGRAM NAME:-B.TECH.-CIVIL ENGINEERING**  
**YEAR:-1st to 8th Semester**  
**COURSE OUTCOME ATTAINMENT FOR 2023-2024**

| TARGET SET                                          |             |      | PERCENTAGE               |                                                                                     |                                  |                  |                |      |                           |
|-----------------------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|------|---------------------------|
| Level 1                                             |             |      | 55-64                    |                                                                                     |                                  |                  |                |      |                           |
| Level 2                                             |             |      | 65-74                    |                                                                                     |                                  |                  |                |      |                           |
| Level 3                                             |             |      | ≥75                      |                                                                                     |                                  |                  |                |      |                           |
| Course                                              | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score |      | Course Outcome attainment |
| I SEMESTER OF ACEDMIC YEAR 2023-24                  |             |      |                          |                                                                                     |                                  |                  |                |      |                           |
| Maths-I                                             | 23000001    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 1.5            | 0.45 | 2.55                      |
|                                                     |             | CEC  | 74                       | 37                                                                                  | 50                               | 0                |                |      |                           |
|                                                     |             | EXT  | 74                       | 56                                                                                  | 75.68                            | 3                | 3              | 2.1  |                           |
| Fundamentals of Computer Programming                | 23000004    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 3              | 0.9  | 0.9                       |
|                                                     |             | CEC  | 74                       | 54                                                                                  | 72.97                            | 3                |                |      |                           |
|                                                     |             | EXT  | 72                       | 11                                                                                  | 15.28                            | 0                | 0              | 0    |                           |
| Elements of Electrical Engineering                  | 23000012    | INT  | 74                       | 65                                                                                  | 87.84                            | 3                | 3              | 0.9  | 2.3                       |
|                                                     |             | CEC  | 74                       | 74                                                                                  | 100                              | 3                |                |      |                           |
|                                                     |             | EXT  | 73                       | 50                                                                                  | 68.49                            | 2                | 3              | 1.4  |                           |
| Elements of Mechanical Engineering                  | 23000003    | INT  | 74                       | 49                                                                                  | 66.22                            | 2                | 0              | 0.4  | 0.4                       |
|                                                     |             | CEC  | 74                       | 48                                                                                  | 64.86                            | 1                |                |      |                           |
|                                                     |             | EXT  | 74                       | 25                                                                                  | 33.78                            | 0                | 3              | 0    |                           |
| Orientation Program in Startuo and Entreprenuirship | 12300001    | INT  | 74                       | 74                                                                                  | 100                              | 3                | 3              | 0.6  | 0.6                       |
|                                                     |             | EXT  | 74                       | 4                                                                                   | 5.41                             | 0                | 0              | 0    |                           |
| Environmental Studies                               | 23000006    | INT  | 74                       | 70                                                                                  | 94.59                            | 3                | 3              | 0.6  | 0.6                       |
|                                                     |             | EXT  | 74                       | 16                                                                                  | 21.62                            | 0                | 0              | 0    |                           |







| II SEMESTER OF ACEDMIC YEAR 2023-24  |          |     |    |    |        |   |     |      |      |
|--------------------------------------|----------|-----|----|----|--------|---|-----|------|------|
| ENGINEERING PHYSICS                  | 23000005 | INT | 67 | 65 | 97.01  | 3 | 3   | 0.9  | 0.9  |
|                                      |          | CEC | 67 | 64 | 95.52  | 3 |     |      |      |
|                                      |          | EXT | 67 | 51 | 76.12  | 3 |     |      |      |
| COMMUNICATION SKILLS                 | 23000008 | INT | 72 | 38 | 52.78  | 0 | 0   | 0    | 0    |
|                                      |          | EXT | 72 | 24 | 33.33  | 0 |     | 0    |      |
| MATHS-II                             | 23000010 | INT | 76 | 76 | 100    | 3 | 3   | 0.9  | 1.6  |
|                                      |          | CEC | 76 | 60 | 78.95  | 3 |     |      |      |
|                                      |          | EXT | 72 | 41 | 56.94  | 1 |     |      |      |
| ENGINEEERING GRAPHICS                | 23000011 | INT | 67 | 48 | 71.64  | 2 | 2.5 | 0.75 | 1.45 |
|                                      |          | CEC | 67 | 66 | 98.51  | 3 |     |      |      |
|                                      |          | EXT | 64 | 36 | 56.25  | 1 |     |      |      |
| BASIC PROGRAM IN ENTREPRENURESHIP    | 12300002 | INT | 76 | 45 | 59.21  | 2 | 2   | 0.6  | 0.6  |
|                                      |          | EXT | 74 | 2  | 2.7    | 0 |     | 0    |      |
| ELEMENTS OF CIVIL ENGINEERING        | 23000015 | INT | 7  | 7  | 100    | 3 | 3   | 0.9  | 0.9  |
|                                      |          | CEC | 7  | 7  | 100    | 3 |     |      |      |
|                                      |          | EXT | 7  | 1  | 14.29  | 0 |     |      |      |
| III SEMESTER OF ACEDMIC YEAR 2023-24 |          |     |    |    |        |   |     |      |      |
| Maths-3                              | 23000015 | INT | 9  | 9  | 100.00 | 3 | 3   | 0.9  | 3    |
|                                      |          | CEC | 9  | 9  | 100.00 | 3 |     |      |      |
|                                      |          | EXT | 9  | 9  | 100.00 | 3 |     |      |      |
| Strength of Material                 | 23030304 | INT | 9  | 5  | 55.56  | 1 | 2   | 0.6  | 2.7  |
|                                      |          | CEC | 9  | 9  | 100.00 | 3 |     |      |      |
|                                      |          | EXT | 9  | 9  | 100.00 | 3 |     |      |      |
| Fluid Mechanics                      | 23030305 | INT | 7  | 1  | 14.29  | 0 | 1.5 | 0.45 | 1.85 |
|                                      |          | CEC | 7  | 7  | 100.00 | 3 |     |      |      |
|                                      |          | EXT | 7  | 5  | 71.43  | 2 |     |      |      |

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|                                          |          |     |   |   |        |   |     |      |      |
|------------------------------------------|----------|-----|---|---|--------|---|-----|------|------|
| Surveying                                | 23030301 | INT | 7 | 2 | 28.57  | 0 | 1.5 | 0.45 | 1.85 |
|                                          |          | CEC | 7 | 7 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 7 | 5 | 71.43  | 2 |     | 1.4  |      |
| Building Construction                    | 23030302 | INT | 8 | 2 | 25.00  | 0 | 1.5 | 0.45 | 1.15 |
|                                          |          | CEC | 8 | 8 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 8 | 5 | 62.50  | 1 |     | 0.7  |      |
| Concrete Technology                      | 23030303 | INT | 7 | 2 | 28.57  | 0 | 1.5 | 0.45 | 1.15 |
|                                          |          | CEC | 7 | 7 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 7 | 4 | 57.14  | 1 |     | 0.7  |      |
| Foundation Program in Entrepreneurship   | 12300003 | INT | 9 | 7 | 77.78  | 2 |     | 0.6  | 2.7  |
|                                          |          | EXT | 9 | 9 | 100.00 | 3 |     | 2.1  |      |
| IV SEMESTER OF ACEDMIC YEAR 2023-24      |          |     |   |   |        |   |     |      |      |
| Maths-4                                  | 23000018 | INT | 9 | 9 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                          |          | CEC | 9 | 9 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 9 | 8 | 88.89  | 3 |     | 2.1  |      |
| Theory of Structure-I                    | 23030401 | INT | 9 | 3 | 33.33  | 0 | 1.5 | 0.45 | 0.45 |
|                                          |          | CEC | 9 | 9 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 9 | 4 | 44.44  | 0 |     | 0    |      |
| Applied Fluid Mechanics                  | 23030402 | INT | 9 | 4 | 44.44  | 3 | 3   | 0.9  | 1.6  |
|                                          |          | CEC | 9 | 9 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 9 | 5 | 55.56  | 1 |     | 0.7  |      |
| Geotechnics and Applied Geology          | 23030403 | INT | 9 | 5 | 55.56  | 1 | 2   | 0.6  | 1.3  |
|                                          |          | CEC | 9 | 9 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 9 | 5 | 55.56  | 1 |     | 0.7  |      |
| Building and Town Planning               | 23030404 | INT | 9 | 3 | 33.33  | 0 | 1.5 | 0.45 | 1.85 |
|                                          |          | CEC | 9 | 9 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 9 | 6 | 66.67  | 2 |     | 1.4  |      |
| Advanced Surveying                       | 23030406 | INT | 9 | 5 | 55.56  | 1 | 2   | 0.6  | 2    |
|                                          |          | CEC | 9 | 9 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 9 | 6 | 66.67  | 2 |     | 1.4  |      |
| INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP | 12300004 | INT | 9 | 4 | 44.44  | 0 |     | 0    | 0.7  |
|                                          |          | EXT | 7 | 4 | 57.14  | 1 |     | 0.7  |      |





**V SEMESTER OF ACEDMIC YEAR 2023-24**

|                                          |          |     |    |    |        |   |     |      |      |
|------------------------------------------|----------|-----|----|----|--------|---|-----|------|------|
| Highway Engineering                      | 23030501 | INT | 12 | 2  | 16.67  | 0 | 1.5 | 0.45 | 0.45 |
|                                          |          | CEC | 12 | 12 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 12 | 1  | 8.33   | 0 |     | 0    |      |
| Environmental Engineering                | 23030502 | INT | 12 | 4  | 33.33  | 0 | 1.5 | 0.45 | 1.85 |
|                                          |          | CEC | 12 | 12 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 12 | 8  | 66.67  | 2 |     | 1.4  |      |
| Theory of Structure-II                   | 23030503 | INT | 12 | 4  | 33.33  | 0 | 1.5 | 0.45 | 1.15 |
|                                          |          | CEC | 12 | 12 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 12 | 7  | 58.33  | 1 |     | 0.7  |      |
| Geotechnical Engineering                 | 23030504 | INT | 12 | 3  | 25.00  | 0 | 1.5 | 0.45 | 0.45 |
|                                          |          | CEC | 12 | 12 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 12 | 5  | 41.67  | 0 |     | 0    |      |
| Hydrology and Water Resource Engineering | 23030505 | INT | 12 | 1  | 8.33   | 0 | 1.5 | 0.45 | 1.85 |
|                                          |          | CEC | 12 | 12 | 100.00 | 3 |     |      |      |
|                                          |          | EXT | 12 | 8  | 66.67  | 2 |     | 1.4  |      |
| INTELLECTUAL PROPERTY RIGHTS             | 12300005 | INT | 12 | 10 | 83.33  | 3 |     | 0.9  | 1.6  |
|                                          |          | EXT | 12 | 7  | 58.33  | 1 |     | 0.7  |      |

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**VI SEMESTER OF ACEDMIC YEAR 2023-24**

|                                         |          |     |    |    |        |   |     |      |      |
|-----------------------------------------|----------|-----|----|----|--------|---|-----|------|------|
| Water and Waste water Engineering       | 23030501 | INT | 14 | 4  | 28.57  | 0 | 1.5 | 0.45 | 0.45 |
|                                         |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 14 | 3  | 21.43  | 0 |     | 0    |      |
| Design of Reinforced Concrete Structure | 23030502 | INT | 14 | 2  | 14.29  | 0 | 1.5 | 0.45 | 0.45 |
|                                         |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 14 | 2  | 14.29  | 0 |     | 0    |      |
| Railway Bridge and Tunnel Engineering   | 23030503 | INT | 14 | 3  | 21.43  | 0 | 1.5 | 0.45 | 0.45 |
|                                         |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 14 | 7  | 50.00  | 0 |     | 0    |      |
| Advanced Construction Equipment         | 23030504 | INT | 14 | 3  | 21.43  | 0 | 1.5 | 0.45 | 1.85 |
|                                         |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 14 | 9  | 64.29  | 2 |     | 1.4  |      |
| Professional Practice and Valuation     | 23030505 | INT | 14 | 3  | 21.43  | 0 | 1.5 | 0.45 | 1.15 |
|                                         |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 14 | 8  | 57.14  | 1 |     | 0.7  |      |
| Expert Program in Entrepreneurship      | 12300006 | INT | 14 | 3  | 21.43  | 0 |     | 0    | 0.7  |
|                                         |          | EXT | 14 | 8  | 57.14  | 1 |     | 0.7  |      |

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| VII SEMESTER OF ACEDEMIC YEAR 2023-24  |           |     |    |    |        |   |     |      |      |
|----------------------------------------|-----------|-----|----|----|--------|---|-----|------|------|
| Design of Steel Structure              | 23030701  | INT | 15 | 2  | 13.33  | 1 | 2   | 0.6  | 2    |
|                                        |           | CEC | 15 | 15 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 15 | 10 | 66.67  | 2 |     | 1.4  |      |
| Irrigation Engineering                 | 23030702  | INT | 15 | 4  | 26.67  | 0 | 1.5 | 0.45 | 1.85 |
|                                        |           | CEC | 15 | 15 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 15 | 10 | 66.67  | 2 |     | 1.4  |      |
| Urban Trasporation Engineering         | 23030703  | INT | 15 | 5  | 33.33  | 0 | 1.5 | 0.45 | 2.55 |
|                                        |           | CEC | 15 | 15 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 15 | 12 | 80.00  | 3 |     | 2.1  |      |
| Ground Improvement Techniques          | 23030704  | INT | 15 | 6  | 40.00  | 3 | 3   | 0.9  | 3    |
|                                        |           | CEC | 15 | 15 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 15 | 13 | 86.67  | 3 |     | 2.1  |      |
| Startup Project-I                      | 123000007 | INT | 15 | 15 | 100.00 | 3 |     | 0.9  | 3    |
|                                        |           | EXT | 15 | 12 | 80.00  | 3 |     | 2.1  |      |
| VIII SEMESTER OF ACEDEMIC YEAR 2023-24 |           |     |    |    |        |   |     |      |      |
| Construction Project Management        | 23030801  | INT | 16 | 7  | 43.75  | 0 | 1.5 | 0.45 | 2.55 |
|                                        |           | CEC | 16 | 16 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 16 | 16 | 100.00 | 3 |     | 2.1  |      |
| Prestressed Concrete                   | 23030802  | INT | 16 | 1  | 6.25   | 0 | 1.5 | 0.45 | 1.15 |
|                                        |           | CEC | 16 | 16 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 16 | 9  | 56.25  | 1 |     | 0.7  |      |
| Foundation Engineering                 | 23030803  | INT | 16 | 2  | 12.50  | 0 | 1.5 | 0.45 | 1.85 |
|                                        |           | CEC | 16 | 16 | 100.00 | 3 |     |      |      |
|                                        |           | EXT | 16 | 11 | 68.75  | 2 |     | 1.4  |      |
| Start-Up Project Part-II               | 123000008 | INT | 16 | 3  | 3      | 3 | 3   | 0.9  | 3    |
|                                        |           | EXT | 16 | 3  | 3      | 3 | 3   | 2.1  |      |







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**SWARNIM INSTITUTE OF TECHNOLOGY**  
**PROGRAM NAME-B.TECH-CIVIL ENGINEERING**  
**SEMESTER:-1ST TO 8TH SEMESTER**

**FINAL DIRECT ATTAINMENT LEVELS FOR PO'S (ALL COURSES)**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.85 | 0.85 | 0.85 | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000004 | 0.75 | 0.75 | 0.66 | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000012 | 1.76 | 0.77 | 0.77 | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000003 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 |
| 12300001 | 0.26 | 0.26 | 0.26 | 0.3  | 0.2  | -    | -    | -    | -    | -    | 0.2  | 0.2  |
| 23000006 | 0.2  | 0.2  | -    | -    | 0.2  | 0.2  | -    | -    | -    | -    | 0.2  | 0.2  |
| 23000005 | 0.75 | 0.45 | 0.83 | 0.68 | 0.75 | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | 0    | 0    | 0    | 0    | -    | -    |
| 23000010 | 1.17 | 1.39 | 0.85 | 0.96 | 0.96 | -    | -    | -    | -    | -    | -    | -    |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 1.17 | 1.17 | 1.07 | 1.07 | 0.96 |
| 12300002 | 0.6  | 0.6  | 0.6  | 0.6  | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000015 | -    | -    | -    | -    | -    | -    | -    | 0.5  | 0.34 | 0.5  | 0.34 | 0.34 |
| 23030304 | 0.65 | 0.75 | 0.55 | 0.60 | 0.50 | 0.65 | 0.75 | 0.55 | 0.60 | 0.50 | 0.75 | 0.50 |
| 23030305 | 0.55 | 0.51 | 0.42 | 0.38 | 0.46 | 0.51 | 0.55 | 0.42 | 0.38 | 0.38 | 0.55 | 0.38 |
| 23030301 | 0.51 | 0.51 | 0.42 | 0.39 | 0.42 | 0.45 | 0.51 | 0.48 | 0.36 | 0.33 | 0.54 | 0.39 |
| 23030302 | 0.32 | 0.32 | 0.27 | 0.25 | 0.27 | 0.29 | 0.32 | 0.30 | 0.23 | 0.21 | 0.34 | 0.25 |
| 23030303 | 0.40 | 0.27 | 0.36 | 0.18 | 0.36 | 0.22 | 0.36 | 0.36 | 0.27 | 0.31 | 0.22 | 0.36 |
| 23000015 | 0.80 | 0.67 | 0.67 | 0.80 | 0.73 | -    | -    | -    | -    | -    | -    | -    |
| 12300003 | 0.60 | 0.72 | 0.66 | 0.72 | 0.66 | -    | -    | -    | -    | -    | -    | -    |
| 23030401 | 0.11 | 0.15 | 0.09 | 0.09 | 0.12 | 0.13 | 0.11 | 0.16 | 0.08 | 0.07 | 0.13 | 0.13 |
| 23030402 | 0.43 | 0.43 | 0.39 | 0.25 | 0.46 | 0.36 | 0.46 | 0.46 | 0.32 | 0.39 | 0.43 | 0.43 |
| 23030403 | 0.27 | 0.34 | 0.30 | 0.30 | 0.26 | 0.24 | 0.37 | 0.37 | 0.30 | 0.22 | 0.34 | 0.21 |
| 23030404 | 0.48 | 0.58 | 0.32 | 0.37 | 0.42 | 0.42 | 0.48 | 0.53 | 0.42 | 0.37 | 0.53 | 0.48 |
| 23030406 | 0.41 | 0.44 | 0.51 | 0.48 | 0.32 | 0.38 | 0.60 | 0.63 | 0.51 | 0.44 | 0.44 | 0.35 |
| 23000018 | 0.76 | 0.71 | 0.90 | 0.76 | 0.81 | -    | -    | -    | -    | -    | -    | -    |
| 12300004 | 0.19 | 0.14 | 0.19 | 0.16 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23030501 | 0.13 | 0.15 | 0.08 | 0.09 | 0.12 | 0.12 | 0.14 | 0.11 | 0.10 | 0.10 | 0.14 | 0.11 |





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|                        |       |       |       |       |       |      |      |       |      |      |       |       |
|------------------------|-------|-------|-------|-------|-------|------|------|-------|------|------|-------|-------|
| 23030502               | 0.40  | 0.43  | 0.33  | 0.43  | 0.33  | 0.43 | 0.47 | 0.33  | 0.40 | 0.33 | 0.50  | 0.30  |
| 23030503               | 0.18  | 0.40  | 0.18  | 0.31  | 0.22  | 0.27 | 0.27 | 0.18  | 0.27 | 0.22 | 0.27  | 0.31  |
| 23030504               | 0.11  | 0.13  | 0.11  | 0.13  | 0.08  | 0.13 | 0.14 | 0.10  | 0.13 | 0.08 | 0.14  | 0.10  |
| 23030505               | 0.51  | 0.53  | 0.34  | 0.42  | 0.51  | 0.38 | 0.46 | 0.55  | 0.36 | 0.27 | 0.53  | 0.49  |
| 12300005               | 0.41  | 0.41  | 0.36  | -     | -     | -    | -    | -     | -    | -    | -     | -     |
| 23030601               | 0.17  | 0.14  | 0.11  | 0.14  | 0.14  | 0.08 | 0.17 | 0.17  | 0.06 | 0.06 | 0.17  | 0.44  |
| 23030602               | 0.10  | 0.12  | 0.10  | 0.11  | 0.09  | 0.12 | 0.12 | 0.11  | 0.08 | 0.10 | 0.11  | 0.30  |
| 23030603               | 0.12  | 0.10  | 0.10  | 0.09  | 0.10  | 0.14 | 0.11 | 0.11  | 0.08 | 0.10 | 0.11  | 0.33  |
| 23030604               | 0.46  | 0.38  | 0.59  | 0.46  | 0.34  | 0.38 | 0.46 | 0.46  | 0.51 | 0.38 | 0.38  | 0.34  |
| 23030605               | 0.20  | 0.40  | 0.27  | 0.33  | 0.33  | 0.20 | 0.20 | 0.40  | 0.13 | 0.13 | 0.33  | 0.40  |
| 12300006               | 0.16  | 0.18  | 0.16  | 0.16  | -     | -    | -    | -     | -    | -    | -     | -     |
| 23030701               | 0.28  | 0.28  | 0.28  | 0.33  | 0.28  | 0.33 | 0.33 | 0.22  | 0.28 | 0.28 | 0.28  | 0.33  |
| 23030702               | 0.34  | 0.21  | 0.34  | 0.34  | 0.30  | 0.30 | 0.34 | 0.30  | 0.34 | 0.30 | 0.30  | 0.25  |
| 23030703               | 0.29  | 0.29  | 0.39  | 0.29  | 0.48  | 0.39 | 0.29 | 0.39  | 0.39 | 0.39 | 0.39  | 0.39  |
| 23030704               | 0.50  | 0.58  | 0.58  | 0.42  | 0.58  | 0.50 | 0.50 | 0.67  | 0.42 | 0.42 | 0.50  | 0.50  |
| 12300007               | 0.67  | 0.78  | 0.67  | 0.67  | -     | -    | -    | -     | -    | -    | -     | -     |
| 23030801               | 0.43  | 0.43  | 0.58  | 0.29  | 0.43  | 0.43 | 0.43 | 0.43  | 0.29 | 0.43 | 0.29  | 0.43  |
| 23030802               | 0.17  | 0.17  | 0.17  | 0.20  | 0.17  | 0.17 | 0.17 | 0.17  | 0.17 | 0.20 | 0.20  | 0.20  |
| 23030803               | 0.26  | 0.32  | 0.32  | 0.32  | 0.21  | 0.21 | 0.26 | 0.32  | 0.26 | 0.26 | 0.32  | 0.21  |
| 12300008               | 0.75  | 0.58  | 0.83  | 0.67  | -     | -    | -    | -     | -    | -    | -     | -     |
| TOTAL PO<br>ATTAINMENT | 19.60 | 18.95 | 17.87 | 14.59 | 12.75 | 8.55 | 9.50 | 11.07 | 9.37 | 8.99 | 11.16 | 10.72 |
| COUNT                  | 44    | 44    | 43    | 39    | 35    | 29   | 28   | 30    | 30   | 30   | 32    | 32    |
| AVERAGE<br>ATTAINMENT  | 0.45  | 0.43  | 0.42  | 0.37  | 0.36  | 0.29 | 0.34 | 0.37  | 0.31 | 0.30 | 0.35  | 0.34  |

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**SWARNIM INSTITUTE OF TECHNOLOGY**  
**PROGRAM NAME-B.TECH-CIVIL ENGINEERING**  
**SEMESTER-1st to 8th SEMESTER**  
**TARGET LEVEL FOR PO'S(ALL COURSES)**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1    | -    | -    |
| 23000012 | 0.77 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000006 | 0.43 | 0.43 | 0.43 | 0.5  | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000005 | 0.83 | 0.5  | 0.92 | 0.75 | 0.83 | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 23000010 | 0.73 | 0.87 | 0.53 | 0.6  | 0.6  | -    | -    | -    | -    | -    | -    | -    |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.73 | 0.73 | 0.67 | 0.67 | 0.6  |
| 12300002 | 0.67 | 0.67 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000015 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.57 | 0.83 | 0.57 | 0.57 |
| 23030304 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.72 | 0.83 | 0.61 | 0.67 | 0.56 | 0.83 | 0.56 |
| 23030305 | 0.87 | 0.80 | 0.67 | 0.60 | 0.73 | 0.80 | 0.87 | 0.67 | 0.60 | 0.60 | 0.87 | 0.60 |
| 23030301 | 0.81 | 0.81 | 0.67 | 0.62 | 0.67 | 0.71 | 0.81 | 0.76 | 0.57 | 0.52 | 0.86 | 0.62 |
| 23030302 | 0.74 | 0.81 | 0.74 | 0.63 | 0.59 | 0.59 | 0.78 | 0.78 | 0.63 | 0.52 | 0.78 | 0.56 |
| 23030303 | 1.00 | 0.67 | 0.89 | 0.44 | 0.89 | 0.56 | 0.89 | 0.89 | 0.67 | 0.78 | 0.56 | 0.89 |
| 23000015 | 0.80 | 0.67 | 0.67 | 0.80 | 0.73 | -    | -    | -    | -    | -    | -    | -    |
| 12300003 | 0.67 | 0.80 | 0.73 | 0.80 | 0.73 | -    | -    | -    | -    | -    | -    | -    |
| 23030401 | 0.67 | 0.89 | 0.56 | 0.56 | 0.72 | 0.78 | 0.67 | 0.94 | 0.50 | 0.44 | 0.78 | 0.78 |
| 23030402 | 0.80 | 0.80 | 0.73 | 0.47 | 0.87 | 0.67 | 0.87 | 0.87 | 0.60 | 0.73 | 0.80 | 0.80 |
| 23030403 | 0.63 | 0.78 | 0.70 | 0.70 | 0.59 | 0.56 | 0.85 | 0.85 | 0.70 | 0.52 | 0.78 | 0.48 |
| 23030404 | 0.75 | 0.92 | 0.50 | 0.58 | 0.67 | 0.67 | 0.75 | 0.83 | 0.67 | 0.58 | 0.83 | 0.75 |
| 23030406 | 0.62 | 0.67 | 0.76 | 0.71 | 0.48 | 0.57 | 0.90 | 0.95 | 0.76 | 0.67 | 0.67 | 0.52 |
| 23000018 | 0.76 | 0.71 | 0.90 | 0.76 | 0.81 | -    | -    | -    | -    | -    | -    | -    |
| 12300004 | 0.83 | 0.58 | 0.83 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23030501 | 0.80 | 0.90 | 0.47 | 0.57 | 0.73 | 0.70 | 0.83 | 0.67 | 0.60 | 0.60 | 0.87 | 0.67 |
| 23030502 | 0.67 | 0.72 | 0.56 | 0.72 | 0.56 | 0.72 | 0.78 | 0.56 | 0.67 | 0.56 | 0.83 | 0.50 |
| 23030503 | 0.44 | 1.00 | 0.44 | 0.78 | 0.56 | 0.67 | 0.67 | 0.44 | 0.67 | 0.56 | 0.67 | 0.78 |

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|-------------------------------------------------------------------------------|-------------|--------------|--------------|--------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|--------------|
| 23030504                                                                      | 0.67        | 0.75         | 0.67         | 0.75         | 0.50        | 0.75         | 0.83         | 0.58         | 0.75         | 0.50        | 0.83        | 0.58         |
| 23030505                                                                      | 0.80        | 0.83         | 0.53         | 0.67         | 0.80        | 0.60         | 0.73         | 0.87         | 0.57         | 0.43        | 0.83        | 0.77         |
| 12300005                                                                      | 0.78        | 0.78         | 0.67         | -            | -           | -            | -            | -            | -            | -           | -           | -            |
| 23030601                                                                      | 1.00        | 0.83         | 0.67         | 0.83         | 0.83        | 0.50         | 1.00         | 1.00         | 0.33         | 0.33        | 1.00        | 0.83         |
| 23030602                                                                      | 0.61        | 0.72         | 0.61         | 0.67         | 0.56        | 0.72         | 0.72         | 0.67         | 0.50         | 0.61        | 0.67        | 0.56         |
| 23030603                                                                      | 0.72        | 0.61         | 0.61         | 0.56         | 0.61        | 0.83         | 0.67         | 0.67         | 0.50         | 0.61        | 0.67        | 0.61         |
| 23030604                                                                      | 0.73        | 0.60         | 0.93         | 0.73         | 0.53        | 0.60         | 0.73         | 0.73         | 0.80         | 0.60        | 0.60        | 0.53         |
| 23030605                                                                      | 0.50        | 1.00         | 0.67         | 0.83         | 0.83        | 0.50         | 0.50         | 1.00         | 0.33         | 0.33        | 0.83        | 1.00         |
| 12300006                                                                      | 0.67        | 0.78         | 0.67         | 0.67         | -           | -            | -            | -            | -            | -           | -           | -            |
| 23030701                                                                      | 0.42        | 0.42         | 0.42         | 0.50         | 0.42        | 0.50         | 0.50         | 0.33         | 0.42         | 0.42        | 0.42        | 0.50         |
| 23030702                                                                      | 0.53        | 0.33         | 0.53         | 0.53         | 0.47        | 0.47         | 0.53         | 0.47         | 0.53         | 0.47        | 0.47        | 0.40         |
| 23030703                                                                      | 0.33        | 0.33         | 0.44         | 0.33         | 0.56        | 0.44         | 0.33         | 0.44         | 0.44         | 0.44        | 0.44        | 0.44         |
| 23030704                                                                      | 0.50        | 0.58         | 0.58         | 0.42         | 0.58        | 0.50         | 0.50         | 0.67         | 0.42         | 0.42        | 0.50        | 0.50         |
| 12300007                                                                      | 0.67        | 0.78         | 0.67         | 0.67         | -           | -            | -            | -            | -            | -           | -           | -            |
| 23030801                                                                      | 0.50        | 0.50         | 0.67         | 0.33         | 0.50        | 0.50         | 0.50         | 0.50         | 0.33         | 0.50        | 0.33        | 0.50         |
| 23030802                                                                      | 0.42        | 0.42         | 0.42         | 0.50         | 0.42        | 0.42         | 0.42         | 0.42         | 0.42         | 0.50        | 0.50        | 0.50         |
| 23030803                                                                      | 0.42        | 0.50         | 0.50         | 0.50         | 0.33        | 0.33         | 0.42         | 0.50         | 0.42         | 0.42        | 0.50        | 0.33         |
| 12300008                                                                      | 0.75        | 0.58         | 0.83         | 0.67         | -           | -            | -            | -            | -            | -           | -           | -            |
| <b>DIRECT<br/>TARGET<br/>(AVG)</b>                                            | <b>0.66</b> | <b>0.67</b>  | <b>0.62</b>  | <b>0.61</b>  | <b>0.61</b> | <b>0.58</b>  | <b>0.68</b>  | <b>0.67</b>  | <b>0.56</b>  | <b>0.56</b> | <b>0.65</b> | <b>0.58</b>  |
| <b>ATTAIN<br/>MENT OF<br/>PO<br/>DIRECT<br/>(Average<br/>value<br/>found)</b> | 0.45        | 0.43         | 0.42         | 0.37         | 0.36        | 0.29         | 0.34         | 0.37         | 0.31         | 0.30        | 0.35        | 0.34         |
| <b>80% OF<br/>DIRECT<br/>ATT</b>                                              | 0.36        | 0.34         | 0.33         | 0.30         | 0.29        | 0.24         | 0.27         | 0.30         | 0.25         | 0.24        | 0.28        | 0.27         |
| <b>20% OF<br/>INDIRECT<br/>ATTAIN<br/>MENT</b>                                | 0.546<br>71 | 0.529<br>643 | 0.523<br>786 | 0.527<br>619 | 0.529<br>81 | 0.524<br>905 | 0.529<br>048 | 0.532<br>238 | 0.546<br>571 | 0.526<br>81 | 0.512<br>57 | 0.210<br>729 |
| <b>TOTAL</b>                                                                  | <b>0.90</b> | <b>0.87</b>  | <b>0.86</b>  | <b>0.83</b>  | <b>0.82</b> | <b>0.76</b>  | <b>0.80</b>  | <b>0.83</b>  | <b>0.80</b>  | <b>0.77</b> | <b>0.79</b> | <b>0.48</b>  |

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**SWARNIM INSTITUTE OF TECHNOLOGY**  
**PROGRAM NAME: MTECH IN STRUCTURAL ENGINEERING**

**YEAR: 1ST TO 2ND YEAR**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**CO PO MATRIX ALL COURSE**

| SUBJECT CODE   | PO1        | PO2        | PO3        | PO4        | PO5        | PO6        | PO7        | PO8        | PO9        | PO10       | PO11       | OVERALL<br>PO AVG |
|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------------|
| 26080101       | 2.00       | 3.00       | 2.25       | 2.00       | 2.00       | 2.00       | 2.75       | 2.25       | 2.25       | 2.25       | 2.25       | 2.27              |
| 26080102       | 2.17       | 2.17       | 1.67       | 2.00       | 1.83       | 2.17       | 2.50       | 1.67       | 1.50       | 2.50       | 2.50       | 2.06              |
| 26080103       | 2.00       | 2.75       | 2.00       | 2.50       | 1.75       | 2.25       | 3.00       | 1.50       | 2.75       | 1.75       | 2.50       | 2.25              |
| 26080104       | 2.33       | 2.33       | 2.33       | 2.00       | 2.00       | 2.33       | 2.67       | 2.00       | 2.00       | 2.00       | 2.67       | 2.24              |
| 26080107       | 2.50       | 2.50       | 1.50       | 2.00       | 2.00       | 2.50       | 2.50       | 1.75       | 1.50       | 2.00       | 1.75       | 2.05              |
| 26080110       | 2.75       | 3.00       | 2.50       | 1.50       | 2.50       | 2.25       | 3.00       | 1.75       | 1.50       | 2.25       | 1.00       | 2.18              |
| 26080105       | 2.75       | 2.75       | 2.00       | 1.75       | 3.00       | 2.00       | 2.75       | 2.00       | 2.25       | 2.50       | 2.25       | 2.36              |
| 26080201       | 2.33       | 2.17       | 1.33       | 2.17       | 2.33       | 1.67       | 2.00       | 2.50       | 1.33       | 1.83       | 2.00       | 1.97              |
| 26080202       | 2.00       | 1.80       | 1.60       | 2.40       | 2.00       | 1.80       | 2.00       | 2.40       | 1.60       | 2.00       | 2.20       | 1.98              |
| 26080203       | 2.25       | 2.50       | 1.75       | 1.50       | 2.50       | 2.00       | 2.75       | 1.75       | 1.75       | 2.25       | 1.75       | 2.07              |
| 26080206       | 2.20       | 2.40       | 1.20       | 2.40       | 2.40       | 1.60       | 1.80       | 2.60       | 1.40       | 1.80       | 2.20       | 2.00              |
| 26080209       | 2.00       | 1.80       | 1.60       | 2.40       | 2.00       | 1.80       | 2.00       | 2.40       | 1.60       | 2.00       | 2.20       | 1.98              |
| 26080301       | 2.75       | 2.75       | 2.00       | 1.75       | 3.00       | 2.00       | 2.75       | 2.00       | 2.25       | 2.50       | 2.25       | 2.36              |
| 26080305       | 2.00       | 3.00       | 2.40       | 1.80       | 2.20       | 2.20       | 2.80       | 2.20       | 2.40       | 2.20       | 2.20       | 2.31              |
| <b>AVERAGE</b> | <b>2.3</b> | <b>2.5</b> | <b>1.9</b> | <b>2.0</b> | <b>2.3</b> | <b>2.0</b> | <b>2.5</b> | <b>2.1</b> | <b>1.9</b> | <b>2.1</b> | <b>2.1</b> | <b>2.1</b>        |

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**SWARNIM INSTITUTE OF TECHNOLOGY**  
**PROGRAM NAME: MTECH IN STRUCTURAL ENGINEERING**  
**YEAR: 1ST & 2ND YEAR**  
**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24**

**FOR 1ST TO 4TH SEMESTER**

| FOR ALL SUBJECT EXCEPT 26080101,<br>26080105, 26080102, 26080203 |                |          |                | 26080101<br>26080105 |                | 26080102<br>26080203 |          |
|------------------------------------------------------------------|----------------|----------|----------------|----------------------|----------------|----------------------|----------|
| Target Level                                                     | Internal Marks | CEC      | External Marks | Target Level         | Internal Marks | Target Level         | CEC      |
| 1                                                                | ≤18            | ≤30      | ≤42            | 1                    | ≤30            | 1                    | ≤60      |
| 2                                                                | 19 to 24       | 31 to 40 | 43 to 56       | 2                    | 31 to 40       | 2                    | 61 to 80 |
| 3                                                                | ≥25            | ≥41      | ≥57            | 3                    | ≥40            | 3                    | ≥81      |

| M.TECH STRUCTURAL ENGINEERING      |             |         |     |          |         |     |          |              |              |        |
|------------------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
| Course Name                        | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|                                    |             | Mid Sem | CEC | External | Mid sem | CEC | External |              |              |        |
| 1st SEM                            |             |         |     |          |         |     |          |              |              |        |
| English for Research Paper Writing | 26080101    | 30      |     |          | 1       |     |          | 1            |              | 1      |
| Research Methodology and IPR       | 26080102    | 60      |     |          | 1       |     |          | 1            |              | 1      |
| Advanced Structural Analysis       | 26080103    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |



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|----------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Advanced Concrete Design of Structures       | 26080104 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Theory and applications of Cement Composites | 26080107 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Advanced Solid Mechanics                     | 26080110 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>2nd SEM</b>                               |          |    |    |    |   |   |   |     |     |   |
| Disaster Management                          | 26080105 | 30 |    |    | 1 |   |   | 1   |     | 1 |
| Advanced Steel Design                        | 26080201 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Structural Dynamics                          | 26080202 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Structural Design Project                    | 26080203 | 60 |    |    | 1 |   |   | 1   |     | 1 |
| Design of High Rise Structures               | 26080206 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Soil Structure Interaction                   | 26080209 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| <b>3rd SEM</b>                               |          |    |    |    |   |   |   |     |     |   |
| Industrial Safety                            | 23030601 | 18 |    | 42 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Earthquake Resistant Design of Structures    | 23030602 | 18 |    | 42 | 1 |   | 1 | 0.3 | 0.7 | 1 |

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**PROGRAM NAME: MTECH IN STRUCTURAL ENGINEERING**  
**YEAR: 1ST & 2ND YEAR**  
**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | PERCENTAGE |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                                       | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42/60 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |
|----------------------------------------------|-------------|------|--------------------------|----------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|
| <b>I ST SEMESTER OF ACEDMIC YEAR 2023-24</b> |             |      |                          |                                                                                        |                                  |                  |                |                           |
| English for Research Paper Writing           | 26080101    | EXT  | 2                        | 1                                                                                      | 50.00                            | 0                | 0              | 0                         |
| Research Methodology and IPR                 | 26080102    | CEC  | 2                        | 2                                                                                      | 100.00                           | 3                | 3              | 3                         |
| Advanced Structural Analysis                 | 26080103    | INT  | 2                        | 2                                                                                      | 100.00                           | 3                | 0.9            | 0.9                       |
|                                              |             | CEC  | 2                        | 2                                                                                      | 100.00                           | 3                |                |                           |
|                                              |             | EXT  | 2                        | 0                                                                                      | 0.00                             | 0                | 0              |                           |
| Advanced Concrete Design of Structures       | 26080104    | INT  | 2                        | 2                                                                                      | 100.00                           | 3                | 0.9            | 0.9                       |
|                                              |             | CEC  | 2                        | 2                                                                                      | 100.00                           | 3                |                |                           |
|                                              |             | EXT  | 2                        | 1                                                                                      | 50.00                            | 0                | 0              |                           |
| Theory and applications of Cement Composites | 26080107    | INT  | 2                        | 2                                                                                      | 100.00                           | 3                | 0.9            | 0.9                       |
|                                              |             | CEC  | 2                        | 2                                                                                      | 100.00                           | 3                |                |                           |
|                                              |             | EXT  | 2                        | 0                                                                                      | 0.00                             | 0                | 0              |                           |



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|-------------------------------------------|----------|-----|---|---|--------|---|-----|-----|
| Advanced Solid Mechanics                  | 26080110 | INT | 2 | 2 | 100.00 | 3 | 0.9 | 0.9 |
|                                           |          | CEC | 2 | 2 | 100.00 | 3 |     |     |
|                                           |          | EXT | 2 | 1 | 50.00  | 0 | 0   |     |
| II ND SEMESTER OF ACEDEMIC YEAR 2023-24   |          |     |   |   |        |   |     |     |
| Disaster Management                       | 26080105 | CEC | 1 | 1 | 100.00 | 3 | 3   | 3   |
| Advanced Steel Design                     | 26080201 | INT | 2 | 2 | 100.00 | 3 | 0.9 | 3   |
|                                           |          | CEC | 2 | 2 | 100.00 | 3 |     |     |
|                                           |          | EXT | 1 | 1 | 100.00 | 3 | 2.1 |     |
| Structural Dynamics                       | 26080202 | INT | 2 | 2 | 100.00 | 3 | 0.9 | 0.9 |
|                                           |          | CEC | 2 | 2 | 100.00 | 3 |     |     |
|                                           |          | EXT | 1 | 0 | 0.00   | 0 | 0   |     |
| Structural Design Project                 | 26080203 | INT | 2 | 2 | 100.00 | 3 | 0.9 | 0.9 |
|                                           |          | CEC | 2 | 2 | 100.00 | 3 |     |     |
|                                           |          | EXT | 1 | 0 | 0.00   | 0 | 0   |     |
| Design of High Rise Structures            | 26080206 | INT | 2 | 2 | 100.00 | 3 | 0.9 | 0.9 |
|                                           |          | CEC | 2 | 2 | 100.00 | 3 |     |     |
|                                           |          | EXT | 1 | 0 | 0.00   | 0 | 0   |     |
| Soil Structure Interaction                | 26080209 | INT | 2 | 2 | 100.00 | 3 | 0.9 | 0.9 |
|                                           |          | CEC | 2 | 2 | 100.00 | 3 |     |     |
|                                           |          | EXT | 1 | 0 | 0.00   | 0 | 0   |     |
| III RD SEMESTER OF ACEDEMIC YEAR 2023-24  |          |     |   |   |        |   |     |     |
| Industrial Safety                         | 23030601 | INT | 1 | 0 | 0.00   | 0 | 0   | 2.1 |
|                                           |          | EXT | 1 | 1 | 100.00 | 3 | 2.1 |     |
| Earthquake Resistant Design of Structures | 23030602 | INT | 1 | 0 | 0.00   | 0 | 0   | 2.1 |
|                                           |          | EXT | 1 | 1 | 100.00 | 3 | 2.1 |     |

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**PROGRAM NAME: MTECH IN STRUCTURAL ENGINEERING**

**YEAR: 1ST & 2ND YEAR**

**FINALE DIRECT ATTAINMENT LEVELS FOR PO'S (ALL COURSES)**

| SUBJECT                    | PO1         | PO2         | PO3         | PO4         | PO5         | PO6         | PO7         | PO8         | PO9         | PO10        | PO11        |
|----------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 26080101                   | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        | 0.00        |
| 26080102                   | 0.72        | 0.72        | 0.56        | 0.67        | 0.61        | 0.72        | 0.83        | 0.56        | 0.50        | 0.83        | 0.83        |
| 26080103                   | 0.20        | 0.28        | 0.20        | 0.25        | 0.18        | 0.23        | 0.30        | 0.15        | 0.28        | 0.18        | 0.25        |
| 26080104                   | 0.23        | 0.23        | 0.23        | 0.20        | 0.20        | 0.23        | 0.27        | 0.20        | 0.20        | 0.20        | 0.27        |
| 26080107                   | 0.25        | 0.25        | 0.15        | 0.20        | 0.20        | 0.25        | 0.25        | 0.18        | 0.15        | 0.20        | 0.18        |
| 26080110                   | 0.28        | 0.30        | 0.25        | 0.15        | 0.25        | 0.23        | 0.30        | 0.18        | 0.15        | 0.23        | 0.10        |
| 26080105                   | 0.92        | 0.92        | 0.67        | 0.58        | 1.00        | 0.67        | 0.92        | 0.67        | 0.75        | 0.83        | 0.75        |
| 26080201                   | 0.78        | 0.72        | 0.44        | 0.72        | 0.78        | 0.56        | 0.67        | 0.83        | 0.44        | 0.61        | 0.67        |
| 26080202                   | 0.20        | 0.18        | 0.16        | 0.24        | 0.20        | 0.18        | 0.20        | 0.24        | 0.16        | 0.20        | 0.22        |
| 26080203                   | 0.23        | 0.25        | 0.18        | 0.15        | 0.25        | 0.20        | 0.28        | 0.18        | 0.18        | 0.23        | 0.18        |
| 26080206                   | 0.22        | 0.24        | 0.12        | 0.24        | 0.24        | 0.16        | 0.18        | 0.26        | 0.14        | 0.18        | 0.22        |
| 26080209                   | 0.20        | 0.18        | 0.16        | 0.24        | 0.20        | 0.18        | 0.20        | 0.24        | 0.16        | 0.20        | 0.22        |
| 26080301                   | 0.64        | 0.64        | 0.47        | 0.41        | 0.70        | 0.47        | 0.64        | 0.47        | 0.53        | 0.58        | 0.53        |
| 26080305                   | 0.47        | 0.70        | 0.56        | 0.42        | 0.51        | 0.51        | 0.65        | 0.51        | 0.56        | 0.51        | 0.51        |
| <b>TOTAL PO ATTAINMENT</b> | <b>5.33</b> | <b>5.61</b> | <b>4.14</b> | <b>4.47</b> | <b>5.32</b> | <b>4.58</b> | <b>5.68</b> | <b>4.65</b> | <b>4.19</b> | <b>4.98</b> | <b>4.92</b> |
| <b>COUNT</b>               | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   | <b>13</b>   |
| <b>AVERAGE ATTAINMENT</b>  | <b>0.41</b> | <b>0.43</b> | <b>0.32</b> | <b>0.34</b> | <b>0.41</b> | <b>0.35</b> | <b>0.44</b> | <b>0.36</b> | <b>0.32</b> | <b>0.38</b> | <b>0.38</b> |



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**SWARNIM INSTITUTE OF TECHNOLOGY**  
**PROGRAM NAME: MTECH IN STRUCTURAL ENGINEERING**  
**YEAR: 1ST & 2ND YEAR**  
**TARGET LEVEL FOR PO'S (ALL COURSES)**

| SUBJECT                                                   | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 |
|-----------------------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|
| 26080101                                                  | 0.67 | 1.00 | 0.75 | 0.67 | 0.67 | 0.67 | 0.92 | 0.75 | 0.75 | 0.75 | 0.75 |
| 26080102                                                  | 0.72 | 0.72 | 0.56 | 0.67 | 0.61 | 0.72 | 0.83 | 0.56 | 0.50 | 0.83 | 0.83 |
| 26080103                                                  | 0.67 | 0.92 | 0.67 | 0.83 | 0.58 | 0.75 | 1.00 | 0.50 | 0.92 | 0.58 | 0.83 |
| 26080104                                                  | 0.78 | 0.78 | 0.78 | 0.67 | 0.67 | 0.78 | 0.89 | 0.67 | 0.67 | 0.67 | 0.89 |
| 26080107                                                  | 0.83 | 0.83 | 0.50 | 0.67 | 0.67 | 0.83 | 0.83 | 0.58 | 0.50 | 0.67 | 0.58 |
| 26080110                                                  | 0.92 | 1.00 | 0.83 | 0.50 | 0.83 | 0.75 | 1.00 | 0.58 | 0.50 | 0.75 | 0.33 |
| 26080105                                                  | 0.92 | 0.92 | 0.67 | 0.58 | 1.00 | 0.67 | 0.92 | 0.67 | 0.75 | 0.83 | 0.75 |
| 26080201                                                  | 0.78 | 0.72 | 0.44 | 0.72 | 0.78 | 0.56 | 0.67 | 0.83 | 0.44 | 0.61 | 0.67 |
| 26080202                                                  | 0.67 | 0.60 | 0.53 | 0.80 | 0.67 | 0.60 | 0.67 | 0.80 | 0.53 | 0.67 | 0.73 |
| 26080203                                                  | 0.75 | 0.83 | 0.58 | 0.50 | 0.83 | 0.67 | 0.92 | 0.58 | 0.58 | 0.75 | 0.58 |
| 26080206                                                  | 0.73 | 0.80 | 0.40 | 0.80 | 0.80 | 0.53 | 0.60 | 0.87 | 0.47 | 0.60 | 0.73 |
| 26080209                                                  | 0.67 | 0.60 | 0.53 | 0.80 | 0.67 | 0.60 | 0.67 | 0.80 | 0.53 | 0.67 | 0.73 |
| 26080301                                                  | 0.92 | 0.92 | 0.67 | 0.58 | 1.00 | 0.67 | 0.92 | 0.67 | 0.75 | 0.83 | 0.75 |
| 26080305                                                  | 0.67 | 1.00 | 0.80 | 0.60 | 0.73 | 0.73 | 0.93 | 0.73 | 0.80 | 0.73 | 0.73 |
| DIRECT<br>TARGET<br>(AVG)                                 | 0.76 | 0.83 | 0.62 | 0.67 | 0.75 | 0.68 | 0.84 | 0.68 | 0.62 | 0.71 | 0.71 |
| ATTAINMENT<br>OF PO<br>DIRECT<br>(Average value<br>found) | 0.41 | 0.43 | 0.32 | 0.34 | 0.41 | 0.35 | 0.44 | 0.36 | 0.32 | 0.38 | 0.38 |
| 80% OF<br>DIRECT ATT                                      | 0.33 | 0.35 | 0.25 | 0.28 | 0.33 | 0.28 | 0.35 | 0.29 | 0.26 | 0.31 | 0.30 |
| 20% OF<br>INDIRECT<br>ATTAINMENT                          | 0.50 | 0.47 | 0.40 | 0.47 | 0.53 | 0.47 | 0.47 | 0.40 | 0.47 | 0.60 | 0.50 |
| TOTAL                                                     | 0.83 | 0.81 | 0.65 | 0.74 | 0.86 | 0.75 | 0.82 | 0.69 | 0.72 | 0.91 | 0.80 |



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**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**B.TECH ENVIRONMENTAL ENGG- 2023-24 Sem 3rd-8th**

**CO-PO MATRIX ALL COURSES**

| SUBJECT   | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | OVERALL CO AVG |
|-----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|----------------|
| 23110301  | 1   | 1.5 | 2   | 2   | 1   | -   | -   | -   | 1   | 1    | 1    | 1    | 1.28           |
| 23110301  | 1.0 | 1.5 | 2.5 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 1.0  | 1.0  | 1.43           |
| 23110303  | 1.0 | 1.5 | 2.5 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 1.0  | 1.0  | 1.43           |
| 23110304  | 1.0 | 1.5 | 2.5 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 1.0  | 1.0  | 1.5            |
| 23000015  | 2.4 | 2.0 | 2.0 | 2.4 | 2.2 | -   | -   | -   | -   | -    | -    | -    | 2.2            |
| 12300003  | 2.0 | 2.4 | 2.2 | 2.4 | 2.2 | -   | -   | -   | -   | -    | -    | -    | 2.2            |
| 23000018  | 2.3 | 2.1 | 2.7 | 2.3 | 2.4 | -   | -   | -   | -   | -    | -    | -    | 2.4            |
| 23110401  | 1.0 | -   | -   | 2.0 | -   | -   | -   | -   | -   | -    | 1.0  | 3.0  | 1.3            |
| 23110402  | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 1.0  | 3.0  | 1.4            |
| 23110403  | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 2.0  | 1.0  | 1.6            |
| 23110404  | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 2.0  | 1.0  | 1.6            |
| 12300004  | 2.5 | 1.8 | 2.5 | 2.0 | -   | -   | -   | -   | -   | -    | -    | -    | 2.2            |
| 24100701  | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 2.0  | 1.0  | 1.6            |
| 24100702  | 1.0 | 1.5 | 2.0 | 1.5 | 1.5 | -   | -   | -   | -   | -    | 2.0  | 1.0  | 1.6            |
| 24100703  | 1.0 | -   | 2.0 | -   | -   | -   | -   | -   | -   | -    | -    | 1.0  | 1.5            |
| 24100704  | 1.0 | 1.5 | 2.0 | -   | -   | -   | -   | -   | -   | -    | -    | 1.0  | 1.5            |
| 123000007 | 2.0 | -   | 2.0 | -   | -   | -   | -   | -   | -   | -    | -    | -    | 2.0            |
| 24100801  | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | -   | -   | -   | -   | -    | 2.0  | 1.0  | 1.6            |
| 24100802  | 1.0 | -   | 2.0 | 1.3 | -   | -   | -   | -   | -   | -    | -    | 1.0  | 1.4            |
| 24100803  | 1.0 | -   | 2.0 | -   | -   | -   | -   | -   | -   | -    | -    | 1.0  | 1.5            |

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|----------|-----|-----|-----|-----|-----|---|---|---|-----|-----|-----|-----|-----|
| 24100805 | 1.0 | -   | 2.0 | -   | -   | - | - | - | -   | -   | -   | 1.0 | 1.5 |
| 12300008 | 2.3 | 1.8 | 2.5 | -   | -   | - | - | - | -   | -   | -   | -   | 2.2 |
| AVERAGE  | 1.3 | 1.7 | 2.2 | 2.0 | 1.3 | - | - | - | 1.0 | 1.0 | 1.5 | 1.3 | 1.7 |



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|---------------------------------------------------------------------------------------------|----------------|--|--------------|----------|--|--------------|----------|--|----------------|--|--------------|----------|
| SWARNNIM INSTITUTE OF TECHNOLOGY                                                            |                |  |              |          |  |              |          |  |                |  |              |          |
| B.TECH ENVIRONMENTAL ENGGINEERING                                                           |                |  |              |          |  |              |          |  |                |  |              |          |
| TARGET MARKS AND LEVEL FOR ACADEMIC YEAR-2023-24 FOR SEM 3 <sup>RD</sup> TO 8 <sup>TH</sup> |                |  |              |          |  |              |          |  |                |  |              |          |
|                                                                                             |                |  |              |          |  |              |          |  | IE             |  |              |          |
| TARGET LEVEL                                                                                | INTERNAL MARKS |  | TARGET LEVEL | EXTERNAL |  | TARGET LEVEL | CEC      |  | INTERNAL MARKS |  | TARGET LEVEL | EXTERNAL |
| 1                                                                                           | ≤18            |  | 1            | ≤42      |  | 1            | ≤30      |  | 1              |  | 1            | ≤30      |
| 2                                                                                           | 19 to 24       |  | 2            | 43 to 56 |  | 2            | 31 to 40 |  | 31 to 40       |  | 2            | 31 to 40 |
| 3                                                                                           | ≥26            |  | 3            | ≥57      |  | 3            | ≥41      |  | ≥40            |  | 3            | ≥40      |

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| COURSE NAME                                 | COURSE CODE | MARKS   |      |           | LEVEL   |      |           | 30% INTER NAL | 70% EXTE RNAL | TAR GET |
|---------------------------------------------|-------------|---------|------|-----------|---------|------|-----------|---------------|---------------|---------|
|                                             |             | MID SEM | CE C | EXTE RNAL | MID SEM | CE C | EXTE RNAL |               |               |         |
| III SEM                                     |             |         |      |           |         |      |           |               |               |         |
| MATHS-3                                     | 23000015    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| ENVIRONMENTAL CHEMISTRY                     | 23110301    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| MECHANICS OF SOLIDS                         | 23110302    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| OCCUPATIONAL HEALTH & SAFETY                | 23110303    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| UNIT OPERATIONS                             | 23110304    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| FOUNDATION PROGRAM IN ENTREPRENEURSHIP      | 12300003    | 30      | 0    | 30        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| IV SEM                                      |             |         |      |           |         |      |           |               |               |         |
| MATHS-4                                     | 23000018    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| ENVIRONMENTAL MICROBIOLOGY & BIOREMEDIATION | 23110401    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| BASICS OF HYDRAULICS                        | 23110402    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| FUNDAMENTS OF WATER QUALITY                 | 23110402    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| ELEMENTS OF CHEMICAL ENGINEERING            | 23110404    | 18      | 30   | 42        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |
| INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP    | 12300004    | 30      | 0    | 30        | 1       | 1    | 1         | 0.3           | 0.7           | 1       |

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| VII SEM                                      |           |    |    |    |   |   |   |     |     |   |
|----------------------------------------------|-----------|----|----|----|---|---|---|-----|-----|---|
| ADVANCED WASTEWATER TREATMENT TECHNOLOGIES   | 24100701  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| DESIGN OF AIR POLLUTION CONTROL EQUIPMENT    | 24100702  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT | 24100703  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| RESOURCES AND ENERGY RECOVERY FROM WASTE     | 24100704  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| START UP PROJECT-I                           | 123000007 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VII SEM                                      |           |    |    |    |   |   |   |     |     |   |
| ENVIRONMENTAL IMPACT ASSESSMENT              | 24100801  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ANAEROBIC BIOLOGICAL TREATMENT TECHNOLOGIES  | 24100802  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| INDUSTRIAL WASTEWATER POLLUTION AND CONTROL  | 24100803  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ENVIRONMENTAL LEGISLATION AND AUDIT          | 24100805  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| START-UP PROJECT PART-II                     | 123000008 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |

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**B.TECH ENVIRONMENTAL ENGG- 2023-24**

**COURSE OUTCOME ATTAINMENT**

| Target Set:                            | PERCENTAGE  |      |                          |                                                                               |                                  |                  |                |                           |      |  |
|----------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|------|--|
| Level 1                                | 55-64       |      |                          |                                                                               |                                  |                  |                |                           |      |  |
| Level 2                                | 65-74       |      |                          |                                                                               |                                  |                  |                |                           |      |  |
| Level 3                                | ≥75         |      |                          |                                                                               |                                  |                  |                |                           |      |  |
| Course                                 | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |      |  |
| III SEMESTER OF ACEDMIC YEAR 2023-24   |             |      |                          |                                                                               |                                  |                  |                |                           |      |  |
|                                        |             |      |                          |                                                                               |                                  |                  | AVG            |                           |      |  |
| MATHS-3                                | 23000015    | INT  | 2                        | 2                                                                             | 100.00                           | 3                | 1.5            | 0.45                      | 2.55 |  |
|                                        |             | CEC  | 2                        | 1                                                                             | 50.00                            | 0                |                |                           |      |  |
|                                        |             | EXT  | 2                        | 2                                                                             | 100.00                           | 3                |                |                           |      |  |
| ENVIRONMENTAL CHEMISTRY                | 23110301    | INT  | 2                        | 1                                                                             | 50.00                            | 0                | 1.5            | 0.45                      | 2.55 |  |
|                                        |             | CEC  | 2                        | 2                                                                             | 100.00                           | 3                |                |                           |      |  |
|                                        |             | EXT  | 2                        | 2                                                                             | 100.00                           | 3                |                |                           |      |  |
| MECHANICS OF SOLIDS                    | 23110302    | INT  | 2                        | 1                                                                             | 50.00                            | 0                | 1.5            | 0.45                      | 2.55 |  |
|                                        |             | CEC  | 2                        | 2                                                                             | 100.00                           | 3                |                |                           |      |  |
|                                        |             | EXT  | 2                        | 2                                                                             | 100.00                           | 3                |                |                           |      |  |
| OCCUPATIONAL HEALTH & SAFETY           | 23110303    | INT  | 2                        | 1                                                                             | 50.00                            | 0                | 0              | 0                         | 2.1  |  |
|                                        |             | CEC  | 2                        | 1                                                                             | 50.00                            | 0                |                |                           |      |  |
|                                        |             | EXT  | 2                        | 2                                                                             | 100.00                           | 3                |                |                           |      |  |
| UNIT OPERATIONS                        | 23110304    | INT  | 2                        | 1                                                                             | 50.00                            | 0                |                | 0                         | 0    |  |
|                                        |             | CEC  | 2                        | 1                                                                             | 50.00                            | 0                |                | 0                         |      |  |
|                                        |             | EXT  | 2                        | 1                                                                             | 50.00                            | 0                |                | 0                         |      |  |
| FOUNDATION PROGRAM IN ENTREPRENEURSHIP | 12300003    | INT  | 2                        | 1                                                                             | 50.00                            | 0                |                | 0                         | 2.1  |  |
|                                        |             | EXT  | 2                        | 2                                                                             | 100.00                           | 3                |                | 2.1                       |      |  |

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| IV SEMESTER OF ACEDMIC YEAR 2023-24          |           |     |   |   |        |   |   |     |     |
|----------------------------------------------|-----------|-----|---|---|--------|---|---|-----|-----|
| Maths-4                                      | 23000018  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |     |
| Environmental Microbiology & Bioremediation  | 23110401  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                              |           | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 2 | 1 | 50.00  | 0 |   |     |     |
| BASICS OF HYDRAULICS                         | 23110402  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                              |           | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 2 | 0 | 0.00   | 0 |   |     |     |
| FUNDAMENTS OF WATER QUALITY                  | 23110403  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |     |
| ELEMENTS OF CHEMICAL ENGINEERING             | 23110404  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |     |
| INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP     | 12300004  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                              |           | EXT | 2 | 0 | 0.00   | 0 |   |     |     |
| VII SEMESTER OF ACEDMIC YEAR 2023-24         |           |     |   |   |        |   |   |     |     |
| ADVANCED WASTEWATER TREATMENT TECHNOLOGIES   | 24100701  | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |
| DESIGN OF AIR POLLUTION CONTROL EQUIPMENT    | 24100702  | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |
| ENVIRONMENTAL RISK ASSESSMENT AND MANAGEMENT | 24100703  | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |
| RESOURCES AND ENERGY RECOVERY FROM WASTE     | 24100704  | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                              |           | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                              |           | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |
| START UP PROJECT-I                           | 123000007 | INT | 3 | 3 | 100.00 | 3 |   | 0.9 | 3   |





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|                                                      |          |     |   |   |        |   |   |     |   |
|------------------------------------------------------|----------|-----|---|---|--------|---|---|-----|---|
|                                                      |          | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |   |
| <b>VIII SEMESTER OF ACADEMIC YEAR 2023-24</b>        |          |     |   |   |        |   |   |     |   |
| ENVIRONMENTAL<br>IMPACT<br>ASSESSMENT                | 24100801 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                      |          | CEC | 3 | 3 | 100.00 | 3 |   | 2.1 |   |
|                                                      |          | EXT | 3 | 3 | 100.00 | 3 |   |     |   |
| ANAEROBIC<br>BIOLOGICAL<br>TREATMENT<br>TECHNOLOGIES | 24100802 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                      |          | CEC | 3 | 3 | 100.00 | 3 |   | 2.1 |   |
|                                                      |          | EXT | 3 | 3 | 100.00 | 3 |   |     |   |
| INDUSTRIAL<br>WASTEWATER<br>POLLUTION AND<br>CONTROL | 24100803 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                      |          | CEC | 3 | 3 | 100.00 | 3 |   | 2.1 |   |
|                                                      |          | EXT | 3 | 3 | 100.00 | 3 |   |     |   |
| ENVIRONMENTAL<br>LEGISLATION AND<br>AUDIT            | 24100805 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                      |          | CEC | 3 | 3 | 100.00 | 3 |   | 2.1 |   |
|                                                      |          | EXT | 3 | 3 | 100.00 | 3 |   |     |   |
| START-UP PROJECT<br>PART-II                          | 12300008 | INT | 3 | 3 | 3      | 3 | 3 | 0.9 | 3 |
|                                                      |          | EXT | 3 | 3 | 3      | 3 | 3 | 2.1 |   |

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**B.TECH ENVIRONMENTAL ENGG- 2023-24**

**FINAL DIRECT ATTAINMENT LEVEL FOR PO'S (ALL COURSES)**

| SUBJECT                    | PO1         | PO2         | PO3          | PO4         | PO5         | PO6         | PO7         | PO8         | PO9         | PO10        | PO11        | PO12        |
|----------------------------|-------------|-------------|--------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 23000015                   | 0.68        | 0.57        | 0.57         | 0.68        | 0.62        | -           | -           | -           | -           | -           | -           | -           |
| 23110301                   | 0.28        | 0.43        | 0.57         | 0.57        | 0.28        | -           | -           | -           | 0.28        | 0.28        | 0.28        | 0.28        |
| 23110302                   | 0.28        | 0.43        | 0.71         | 0.57        | 0.28        | -           | -           | -           | -           | -           | 0.28        | 0.28        |
| 23110303                   | 0.23        | 0.35        | 0.58         | 0.47        | 0.23        | -           | -           | -           | -           | -           | -           | -           |
| 23110304                   | -           | -           | -            | -           | -           | -           | -           | -           | -           | -           | -           | -           |
| 12300003                   | 0.23        | 0.35        | 0.58         | 0.47        | 0.23        | -           | -           | -           | -           | -           | -           | -           |
| 23000018                   | 0.76        | 0.71        | 0.90         | 0.76        | 0.81        | -           | -           | -           | -           | -           | -           | -           |
| 23110401                   | 0.10        | -           | -            | 0.20        | -           | -           | -           | -           | -           | -           | 0.10        | 0.30        |
| 23110402                   | 0.10        | 0.15        | 0.20         | 0.20        | 0.10        | -           | -           | -           | -           | -           | 0.10        | 0.30        |
| 23110403                   | 0.33        | 0.50        | 0.67         | 0.67        | 0.33        | -           | -           | -           | -           | -           | 0.67        | 0.33        |
| 23110404                   | 0.33        | 0.50        | 0.67         | 0.67        | 0.33        | -           | -           | -           | -           | -           | 0.67        | 0.33        |
| 12300004                   | 0.10        | 0.15        | 0.20         | 0.20        | -           | -           | -           | -           | -           | -           | -           | -           |
| 24100701                   | 0.33        | 0.50        | 0.67         | 0.67        | 0.33        | -           | -           | -           | -           | -           | 0.67        | 0.33        |
| 24100702                   | 0.33        | 0.50        | 0.67         | 0.50        | 0.50        | -           | -           | -           | -           | -           | 0.67        | 0.33        |
| 24100703                   | 0.33        | -           | 0.67         | -           | -           | -           | -           | -           | -           | -           | -           | 0.33        |
| 24100704                   | 0.33        | 0.50        | 0.67         | -           | -           | -           | -           | -           | -           | -           | -           | 0.33        |
| 123000007                  | 0.67        | -           | 0.67         | -           | -           | -           | -           | -           | -           | -           | -           | -           |
| 24100801                   | 0.33        | 0.50        | 0.67         | 0.67        | 0.33        | -           | -           | -           | -           | -           | 0.67        | 0.33        |
| 24100802                   | 0.33        | -           | 0.67         | 0.44        | -           | -           | -           | -           | -           | -           | -           | 0.33        |
| 24100803                   | 0.33        | -           | 0.67         | -           | -           | -           | -           | -           | -           | -           | -           | 0.33        |
| 24100805                   | 0.33        | -           | 0.67         | -           | -           | -           | -           | -           | -           | -           | -           | 0.33        |
| 12300008                   | 0.75        | 0.58        | 0.83         | -           | -           | -           | -           | -           | -           | -           | -           | -           |
| <b>TOTAL PO ATTAINMENT</b> | <b>6.78</b> | <b>6.13</b> | <b>11.65</b> | <b>7.72</b> | <b>4.40</b> | <b>0.00</b> | <b>0.00</b> | <b>0.00</b> | <b>0.28</b> | <b>0.28</b> | <b>4.10</b> | <b>4.50</b> |
| <b>COUNT</b>               | <b>20</b>   | <b>14</b>   | <b>19</b>    | <b>15</b>   | <b>12</b>   | <b>0</b>    | <b>0</b>    | <b>0</b>    | <b>1</b>    | <b>1</b>    | <b>9</b>    | <b>14</b>   |
| <b>AVERAGE ATTAINMENT</b>  | <b>0.34</b> | <b>0.44</b> | <b>0.61</b>  | <b>0.51</b> | <b>0.37</b> | <b>-</b>    | <b>-</b>    | <b>-</b>    | <b>0.28</b> | <b>0.28</b> | <b>0.46</b> | <b>0.32</b> |

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**B.TECH ENVIRONMENTAL ENGG- 2023-24**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT     | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000015    | 0.80 | 0.67 | 0.67 | 0.80 | 0.73 | -    | -    | -    | -    | -    | -    | -    |
| 23110301    | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | -    | -    | -    | 0.33 | 0.33 | 0.33 | 0.33 |
| 23110302    | 0.33 | 0.50 | 0.83 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23110303    | 0.33 | 0.50 | 0.83 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23110304    | 0.33 | 0.50 | 0.83 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 12300003    | 0.33 | 0.50 | 0.83 | 0.67 | 0.33 | -    | -    | -    | -    | -    | -    | -    |
| 23000018    | 0.76 | 0.71 | 0.90 | 0.76 | 0.81 | -    | -    | -    | -    | -    | -    | -    |
| 23110401    | 0.33 | -    | -    | 0.67 | -    | -    | -    | -    | -    | -    | 0.33 | 1    |
| 23110402    | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 1    |
| 23110403    | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.67 | 0.33 |
| 23110404    | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.67 | 0.33 |
| 12300004    | 0.33 | 0.50 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | 0.33 |
| 24100701    | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.67 | 0.33 |
| 24100702    | 0.33 | 0.50 | 0.67 | 0.50 | 0.50 | -    | -    | -    | -    | -    | 0.67 | 0.33 |
| 24100703    | 0.33 | -    | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    | 0.33 |
| 24100704    | 0.33 | 0.50 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    | 0.33 |
| 123000007   | 0.67 | -    | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24100801    | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | -    | -    | -    | -    | -    | 0.67 | 0.33 |
| 24100802    | 0.33 | -    | 0.67 | 0.44 | -    | -    | -    | -    | -    | -    | -    | 0.33 |
| 24100803    | 0.33 | -    | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    | 0.33 |
| 24100805    | 0.33 | -    | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    | 0.33 |
| 12300008    | 0.75 | 0.58 | 0.83 | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| SUM OF PO   | 8.98 | 8.46 | 15.1 | 10.5 | 5.38 | 0.00 | 0.00 | 0.00 | 0.33 | 0.33 | 5.33 | 6.67 |
| COUNT OF PO | 22   | 16   | 21   | 16   | 13   | 0    | 0    | 0    | 1    | 1    | 11   | 16   |

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|------------------------------------------------------|-------|------|------|------|------|------|------|------|------|------|------|--------------|
| <b>DIRECT TARGET (AVG)</b>                           | 0.408 | 0.52 | 0.71 | 0.65 | 0.41 | -    | -    | -    | -    | 0.33 | 0.44 | 0.41         |
| <b>ATTAINMENT OF PO DIRECT (Average value found)</b> | 0.34  | 0.44 | 0.61 | 0.51 | 0.37 | -    | -    | -    | 0.28 | 0.28 | 0.46 | 0.32         |
| <b>80% OF DIRECT ATT</b>                             | 0.27  | 0.35 | 0.49 | 0.41 | 0.29 | -    | -    | -    | 0.23 | 0.23 | 0.36 | 0.26         |
| <b>20% OF INDIRECT ATTAINMENT</b>                    | 0.52  | 0.56 | 0.54 | 0.49 | 0.48 | 0.54 | 0.49 | 0.52 | 0.53 | 0.49 | 0.54 | 0.483<br>333 |
| <b>TOTAL</b>                                         | 0.79  | 0.91 | 1.03 | 0.91 | 0.78 | 2.66 | 2.00 | 2.66 | 0.76 | 0.72 | 0.90 | 0.74         |



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**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**M.TECH ENVIRONMENTAL ENGG- 2023-24 Sem 1<sup>st</sup> to 4<sup>th</sup>**

| SUBJECT        | PO1        | PO2        | PO3        | PO4        | OVERALL<br>CO AVG |
|----------------|------------|------------|------------|------------|-------------------|
| 26020101       | 1          | -          | 1          | 2          | 1.3               |
| 26020102       | 1.0        | 1.5        | 1.0        | 2.0        | 1.38              |
| 26020103       | 1.0        | 2.0        | 2.0        | 1.5        | 1.63              |
| 26020104       | 1.0        | 1.5        | 1.0        | 2.0        | 1.4               |
| 24020201       | 1.5        | 1.0        | 2.0        | 1.0        | 1.4               |
| 24020202       | 1.5        | 1.0        | 2.0        | 2.0        | 1.6               |
| 24020203       | 1.5        | 2.0        | 1.5        | 1.5        | 1.6               |
| 24020204       | 1.5        | 1.5        | 1.5        | 1.0        | 1.4               |
| 24020302       | 1.7        | 1.7        | 1.3        | 1.5        | 1.5               |
| 24020401       | 1.0        | 1.0        | 1.5        | 1.0        | 1.1               |
| <b>AVERAGE</b> | <b>1.3</b> | <b>1.5</b> | <b>1.5</b> | <b>1.6</b> | <b>1.4</b>        |



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M.TECH ENVIRONMENTAL ENGINEERING  
COURSE OUTCOME ATTAINMENT FOR 2023-24**

**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR-2023-24 FOR SEM 1<sup>ST</sup> TO 4<sup>TH</sup>**

| Target Set: | Percentage |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |
|--------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|
|--------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|

**I SEMESTER OF ACADEMIC YEAR 2023-24**

|                                                               |          |     |   |   |        |   |     |     |
|---------------------------------------------------------------|----------|-----|---|---|--------|---|-----|-----|
| APPLICATION BASED SYSTEMS FOR TRANSPORT OF WATER & WASTEWATER | 26020101 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 2.3 |
|                                                               |          | CEC | 6 | 6 | 100.00 | 3 |     |     |
|                                                               |          | EXT | 6 | 4 | 66.67  | 2 | 1.4 |     |
| ENVIRONMENTAL CHEMISTRY & MICROBIOLOGY                        | 26020102 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3   |
|                                                               |          | CEC | 6 | 5 | 83.33  | 3 |     |     |
|                                                               |          | EXT | 6 | 6 | 100.00 | 3 | 2.1 |     |
| ENVIRONMENTAL                                                 | 26020103 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3   |





|                                 |          |     |   |   |        |   |     |   |
|---------------------------------|----------|-----|---|---|--------|---|-----|---|
| IMPACT ASSESSMENT               |          | CEC | 6 | 5 | 83.33  | 3 |     |   |
|                                 |          | EXT | 6 | 5 | 83.33  | 3 | 2.1 |   |
| WATER & WASTEWATER TECHNOLOGIES | 26020104 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3 |
|                                 |          | CEC | 6 | 6 | 100.00 | 3 |     |   |
|                                 |          | EXT | 6 | 5 | 83.33  | 3 |     |   |

## II SEMESTER OF ACEDMIC YEAR 2023-24

|                                         |          |     |   |   |        |   |     |   |
|-----------------------------------------|----------|-----|---|---|--------|---|-----|---|
| INDUSTRIAL WATER & WASTEWATER TREATMENT | 24020201 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3 |
|                                         |          | CEC | 6 | 6 | 100.00 | 3 |     |   |
|                                         |          | EXT | 6 | 6 | 100.00 | 3 |     |   |
| AIR & NOISE POLLUTION CONTROL           | 24020202 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3 |
|                                         |          | CEC | 6 | 6 | 100.00 | 3 |     |   |
|                                         |          | EXT | 6 | 5 | 83.33  | 3 |     |   |
| INDUSTRIAL HYGIENE AND SAFETY           | 24020203 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3 |
|                                         |          | CEC | 6 | 6 | 100.00 | 3 |     |   |
|                                         |          | EXT | 6 | 5 | 83.33  | 3 |     |   |
| SOLID AND HAZARDOUS WASTE MANAGEMENT    | 24020204 | INT | 6 | 6 | 100.00 | 3 | 0.9 | 3 |
|                                         |          | CEC | 6 | 6 | 100.00 | 3 |     |   |
|                                         |          | EXT | 6 | 5 | 83.33  | 3 |     |   |

## III SEMESTER OF ACEDMIC YEAR 2023-24

|                                 |          |     |   |   |        |   |     |   |
|---------------------------------|----------|-----|---|---|--------|---|-----|---|
| AIR POLLUTION CONTROL EQUIPMENT | 24020302 | INT | 4 | 4 | 100.00 | 3 | 0.9 | 3 |
|                                 |          | CEC | 4 | 4 | 100.00 | 3 |     |   |
|                                 |          | EXT | 4 | 3 | 75.00  | 3 |     |   |

## VI SEMESTER OF ACEDMIC YEAR 2023-24

|                                         |          |     |   |   |        |   |     |   |
|-----------------------------------------|----------|-----|---|---|--------|---|-----|---|
| ENVIRONMENTAL LEGISLATIONS & MANAGEMENT | 24020401 | INT | 4 | 4 | 100.00 | 3 | 0.9 | 3 |
|                                         |          | CEC | 4 | 3 | 75.00  | 3 |     |   |
|                                         |          | EXT | 4 | 3 | 75.00  | 3 |     |   |







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**FINAL DIRECT ATTAINMENT LEVEL FOR PO'S (ALL COURSES)**

| SUBJECT                    | PO1         | PO2         | PO3         | PO4         | CO ATTAINMENT |
|----------------------------|-------------|-------------|-------------|-------------|---------------|
| 26020101                   | 0.26        | -           | 0.26        | 0.51        | 2.30          |
| 26020102                   | 0.33        | 0.50        | 0.33        | 0.67        | 3.00          |
| 26020103                   | 0.33        | 0.67        | 0.67        | 0.50        | 3.00          |
| 26020104                   | 0.33        | 0.50        | 0.33        | 0.67        | 3.00          |
| 24020201                   | 0.50        | 0.33        | 0.67        | 0.33        | 3.00          |
| 24020202                   | 0.50        | 0.33        | 0.67        | 0.67        | 3.00          |
| 24020203                   | 0.75        | 0.22        | 1.33        | 0.33        | 3.00          |
| 24020204                   | 0.17        | 0.22        | 0.17        | 0.17        | 3.00          |
| 24020302                   | 0.56        | 0.56        | 0.44        | 0.50        | 3.00          |
| 24020401                   | 0.19        | 0.19        | 0.15        | 0.17        | 3.00          |
| <b>TOTAL PO ATTAINMENT</b> | <b>3.91</b> | <b>3.52</b> | <b>5.01</b> | <b>4.51</b> | <b>29.30</b>  |
| <b>COUNT</b>               | <b>10</b>   | <b>9</b>    | <b>10</b>   | <b>10</b>   | <b>10</b>     |
| <b>AVERAGE ATTAINMENT</b>  | <b>0.39</b> | <b>0.39</b> | <b>0.50</b> | <b>0.45</b> | <b>2.93</b>   |



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**M.TECH ENVIRONMENTAL ENGG- 2023-24 Sem 1<sup>st</sup> to 4<sup>th</sup>**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT                                              | PO1         | PO2         | PO3         | PO4         |
|------------------------------------------------------|-------------|-------------|-------------|-------------|
| 26020101                                             | 0.33        | -           | 0.33        | 0.67        |
| 26020102                                             | 0.33        | 0.50        | 0.33        | 0.67        |
| 26020103                                             | 0.33        | 0.67        | 0.67        | 0.50        |
| 26020104                                             | 0.33        | 0.50        | 0.33        | 0.67        |
| 24020201                                             | 0.50        | 0.33        | 0.67        | 0.33        |
| 24020202                                             | 0.50        | 0.33        | 0.67        | 0.67        |
| 24020203                                             | 0.50        | 0.67        | 0.50        | 0.50        |
| 24020204                                             | 0.17        | 0.22        | 0.17        | 0.17        |
| 24020302                                             | 0.56        | 0.56        | 0.44        | 0.50        |
| 24020401                                             | 0.19        | 0.19        | 0.15        | 0.17        |
| <b>SUM OF PO</b>                                     | <b>3.74</b> | <b>3.96</b> | <b>4.26</b> | <b>4.83</b> |
| <b>COUNT OF PO</b>                                   | <b>10</b>   | <b>9</b>    | <b>10</b>   | <b>10</b>   |
| <b>DIRECT TARGET (AVG)</b>                           | <b>0.4</b>  | <b>0.4</b>  | <b>0.4</b>  | <b>0.5</b>  |
| <b>ATTAINMENT OF PO DIRECT (Average value found)</b> | <b>0.39</b> | <b>0.39</b> | <b>0.50</b> | <b>0.45</b> |
| <b>80% OF DIRECT ATT</b>                             | <b>0.31</b> | <b>0.31</b> | <b>0.40</b> | <b>0.36</b> |
| <b>20% OF INDIRECT ATTAINMENT</b>                    | <b>0.52</b> | <b>0.56</b> | <b>0.54</b> | <b>0.49</b> |
| <b>TOTAL</b>                                         | <b>0.83</b> | <b>0.87</b> | <b>0.95</b> | <b>0.86</b> |



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| <b>CHEMICAL ENGINEERING -B.TECH</b>                |
| <b>ACADEMIC YEAR 23-24</b>                         |

### **CORRELATION OF COS WITH POS (ALL COURSES)**

| SUBJECT  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6 | PO7 | PO8 | PO9 | PO10 | PO11 | PO12 | OVERALL CO AVG |
|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|----------------|
| 23000001 | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1    | 1    | 1    | 1              |
| 23000004 | 2.5 | 2.5 | 2.2 | 2.5 | 2.5 | -   | -   | 2   | 2   | 3    | -    | -    | 2.4            |
| 23000012 | 2.3 | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | -    | -    | -    | 1.144444444    |
| 23000003 | -   | -   | -   | -   | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    | 2.45           |
| 12300001 | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1   | 1    | 1    | 1    | 1              |
| 23000006 | 1.3 | 1.3 | 1.3 | 1.5 | 1   | -   | -   | -   | -   | -    | 1    | 1    | 1.2            |
| 23000029 | 1   | 1   | -   | -   | 1   | 1   | -   | -   | -   | -    | 1    | 1    | 1              |
| 23000008 | -   | -   | -   | -   | -   | -   | 2.6 | 2.4 | 2.4 | 2.4  | -    | -    | 2.45           |
| 23000010 | 2.2 | 2.6 | 1.6 | 1.8 | 1.8 | -   | -   | -   | -   | -    | -    | -    | 2              |
| 23000011 | -   | -   | -   | -   | -   | -   | -   | 2.2 | 2.2 | 2    | 2    | 1.8  | 2.04           |
| 12300002 | 2   | 2   | 2   | 2   | -   | -   | -   | -   | -   | -    | -    | -    | 2              |
| 23000030 | -   | -   | -   | -   | -   | -   | -   | 2.5 | 1.7 | 2.5  | 1.7  | 1.7  | 2.02           |
| 23020216 | 1   | 1.5 | 2   | 2   | 1   | 2   | -   | -   | -   | -    | 2    | 1.5  | 1.625          |
| 23020301 | 1   | -   | -   | -   | -   | 2   | -   | -   | -   | -    | 1    | 1    | 1.25           |



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|----------|-----|-----|-----|-----|-----|-----|---|---|---|---|-----|-----|-------------|
| 23020302 | 1.0 | 1.5 | 2.0 | 2.0 | 2.0 | 2.0 | - | - | - | - | 1.0 | 1.5 | 1.625       |
| 23020303 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | -   | 1.5 | 1.642857143 |
| 23020304 | 1.0 | 1.5 | 2.0 | -   | -   | 3.0 | - | - | - | - | 2.0 | 1.5 | 1.833333333 |
| 23000015 | 2.4 | 2   | 2   | 2.4 | 2.2 | -   | - | - | - | - | -   | -   | 2.2         |
| 12300003 | 2.0 | 2.4 | 2.2 | 2.4 | 2.2 | -   | - | - | - | - | -   | -   | 2.24        |
| 23020401 | 1   | 1.5 | 2   | 2   | 1.5 | 3   | - | - | - | - | 1   | 1.5 | 1.6875      |
| 23020402 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 2.0 | 1.75        |
| 23020403 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 23020404 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 2.0 | 1.75        |
| 23000018 | 2.3 | 2.1 | 2.7 | 2.3 | 2.4 | -   | - | - | - | - | -   | -   | 2.371428571 |
| 12300004 | 2.5 | 1.8 | 2.5 | 2.0 | -   | -   | - | - | - | - | -   | -   | 2.1875      |
| 23020501 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | - | - | - | - | 2.0 | 1.0 | 1.5         |
| 23020502 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 1.0 | 2.0 | 1.625       |
| 23020503 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 23020504 | 1.0 | 1.5 | 2.0 | 1.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.5625      |
| 23020505 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | - | - | - | - | 2.0 | 1.5 | 1.5625      |
| 12300005 | 2.3 | 2.3 | 2.0 | -   | -   | -   | - | - | - | - | -   | -   | 2.222222222 |
| 23020601 | 1.0 | 1.5 | 2.0 | 2.0 | 2.0 | 3.0 | - | - | - | - | 1.0 | 2.0 | 1.8125      |
| 23020602 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 1.0 | 1.5 | 1.5625      |
| 23020603 | 1.0 | 1.5 | 2.0 | 2.0 | 1.0 | 1.0 | - | - | - | - | 2.0 | 1.5 | 1.5         |
| 23020604 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | - | - | - | - | 2.0 | 1.0 | 1.5         |
| 23020605 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 23020606 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 12300006 | 2.0 | 2.3 | 2.0 | 2.0 | -   | -   | - | - | - | - | -   | -   | 2.083333333 |
| 24020701 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 24020702 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 1.0 | 1.5 | 1.5625      |
| 24020703 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 2.0 | 1.75        |
| 24020704 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 2.0 | 1.75        |



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|----------|-----|-----|-----|-----|-----|-----|---|---|---|---|-----|-----|-------------|
| 24020706 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 12300007 | 2.0 | 2.3 | 2.0 | 2.0 | -   | -   | - | - | - | - | -   | -   | 2.083333333 |
| 24020801 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 24020802 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 1.5 | 1.6875      |
| 24020803 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 1.0 | - | - | - | - | 2.0 | 2.0 | 1.625       |
| 24020804 | 1.0 | 1.5 | 2.0 | 2.0 | 1.5 | 2.0 | - | - | - | - | 2.0 | 2.0 | 1.75        |
| 12300008 | 2.3 | 1.8 | 2.5 | 2.0 | -   | -   | - | - | - | - | -   | -   | 2.125       |
| AVERAGE  | 1.3 | 1.6 | 2.1 | 2.0 | 1.6 | 1.9 | - | - | - | - | 1.7 | 1.6 | 1.8         |



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| ACADEMIC YEAR 23-24                      |

| TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-2024 |                           |                         |                       |                         |                |                    |                              |                         |                       |
|----------------------------------------------------|---------------------------|-------------------------|-----------------------|-------------------------|----------------|--------------------|------------------------------|-------------------------|-----------------------|
| targ<br>et<br>leve<br>l                            | inter<br>nal<br>mark<br>s | targ<br>et<br>leve<br>l | exter<br>nal<br>marks | targ<br>et<br>leve<br>l | CE<br>C        | targ<br>et<br>levE | Inter<br>nal<br>Mark<br>s IE | targ<br>et<br>leve<br>l | exter<br>nal<br>marks |
| 1                                                  | ≤18                       | 1                       | ≤42                   | 1                       | ≤30            | 1                  | ≤30                          | 1                       | ≤30                   |
| 2                                                  | 19 to<br>24               | 2                       | 43 to<br>56           | 2                       | 31<br>to<br>40 | 2                  | 31 to<br>40                  | 2                       | 31 to<br>40           |
| 3                                                  | ≥25                       | 3                       | ≥57                   | 3                       | ≥41            | 3                  | ≥40                          | 3                       | ≥40                   |



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| Course Name                                         | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|-----------------------------------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
|                                                     |             | Mid Sem | CEC | External | Mid sem | CEC | External |              |              |        |
| 1ST YEAR                                            |             |         |     |          |         |     |          |              |              |        |
| Maths-I                                             | 23000001    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Fundamentals of Computer Programming                | 23000004    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Electrical Engineering                  | 23000012    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Mechanical Engineering                  | 23000003    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Environmental Studies                               | 12300001    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Orientation Program in Startup and Entrepreneurship | 23000006    | 3030    |     |          | 1       |     | 1        | 0.3          | 0.7          | 1      |
| Workshop                                            | 23000029    | 60      |     |          |         |     | 1        |              | 1            | 1      |

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| 2ND SEM                                |          |    |    |    |   |   |   |     |     |   |
|----------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| COMMUNICATION SKILLS                   | 23000008 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| MATHS-II                               | 23000010 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ENGINEERING GRAPHICS                   | 23000011 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ELEMENTS OF CIVIL ENGINEERING          | 23000030 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| BASIC PROGRAM IN ENTREPRENURESHIP      | 12300002 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| CHEMISTRY                              | 23020216 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| 3RD SEM                                |          |    |    |    |   |   |   |     |     |   |
| Process Calculation                    | 23020301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Chemical Process Industries-1          | 23020302 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Organic Chemistry and Unit Processes   | 23020303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Fluid Flow Operation                   | 23020304 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-3                                | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Foundation Program in Entrepreneurship | 12300003 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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| 4TH SEM                                            |          |    |    |    |   |   |   |     |     |   |
|----------------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Chemical Engineering Thermodynamic-1               | 23020401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Chemical Process Industries-II                     | 23020402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Physical and Inorganic Chemistry                   | 23020403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Process Heat Transfer                              | 23020404 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-4                                            | 23000018 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intermediate Program in Enterprenurship            | 12300004 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| 5TH SEM                                            |          |    |    |    |   |   |   |     |     |   |
| Chemical Engineering Thermodymics- 2               | 23020501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mass Transfer Operation 1                          | 23020502 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Instrumentation And Process Calculation            | 23020503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mechanical Operation                               | 23020504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Fundamental Of Chemical Engineering Unit Operation | 23020505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                                                 | 12300005 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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| 6TH SEM                               |          |    |    |    |   |   |   |     |     |   |
|---------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| PROCESS EQUIPMENT DESIGN-I            | 23020601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mass Transfer Operation-II            | 23020602 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| BIOCHEMICAL ENGINEERING               | 23020603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| POLLUTION CONTROL & SAFETY MANAGEMENT | 23020604 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| CHEMICAL REACTION ENGINEERING-I       | 23020605 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ADVANCED SEPARATION TECHNIQUES        | 23020606 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IE                                    | 12300006 | 30 | 30 |    | 1 | 1 |   | 0.3 | 0.7 | 1 |

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| 7TH SEM                              |          |    |    |    |   |   |   |     |     |   |
|--------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Process Equipment Design-II          | 24020701 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Chemical Reaction Engineering-II     | 24020702 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Energy Technology                    | 24020703 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Computer Aided Process Synthesis     | 24020704 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Plant Design and Project Engineering | 24020706 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Startup Project-1                    | 12300007 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| 8TH SEM                              |          |    |    |    |   |   |   |     |     |   |
| Chemical System Modeling             | 24020801 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Petroleum Refining & Petrochemicals  | 24020802 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Process Simulation & Optimization    | 24020803 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Fertilizer Technology                | 24020804 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Start-Up Project Part-II             | 12300008 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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| <b>CHEMICAL ENGINEERING -B.TECH</b>                |
| <b>ACADEMIC YEAR 23-24</b>                         |

|                    |              |
|--------------------|--------------|
| <b>Target Set:</b> |              |
| <b>Level 1</b>     | <b>55-64</b> |
| <b>Level 2</b>     | <b>65-74</b> |
| <b>Level 3</b>     | <b>≥75</b>   |

| Course                                | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |      |
|---------------------------------------|-------------|------|--------------------------|--------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|------|
| 1ST SEMESTER OF ACEDEMIC YEAR 2023-24 |             |      |                          |                                                                                |                                  |                  |                |                           |      |
| Maths-I                               | 23000001    | IN T | 74                       | 73                                                                             | 98.65                            | 3                | 1.5            | 0.45                      | 2.55 |
|                                       |             | CE C | 74                       | 37                                                                             | 50.00                            | 0                |                |                           |      |



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|-----------------------------------------|----------|---------|----|----|------------|---|---|-----|-----|
|                                         |          | EX<br>T | 74 | 56 | 75.6<br>8  | 3 | 3 | 2.1 |     |
| Fundamentals of<br>Computer Programming | 23000004 | IN<br>T | 74 | 73 | 98.6<br>5  | 3 | 3 | 0.9 | 0.9 |
|                                         |          | CE<br>C | 74 | 54 | 72.9<br>7  | 3 |   |     |     |
|                                         |          | EX<br>T | 72 | 11 | 15.2<br>8  | 0 | 0 | 0   |     |
| Elements of Electrical<br>Engineering   | 23000012 | IN<br>T | 74 | 65 | 87.8<br>4  | 3 | 3 | 0.9 | 2.3 |
|                                         |          | CE<br>C | 74 | 74 | 100.<br>00 | 3 |   |     |     |
|                                         |          | EX<br>T | 73 | 50 | 68.4<br>9  | 2 | 3 | 1.4 |     |
| Elements of Mechanical<br>Engineering   | 23000003 | IN<br>T | 74 | 49 | 66.2<br>2  | 2 | 0 | 0.4 | 0.4 |
|                                         |          | CE<br>C | 74 | 48 | 64.8<br>6  | 1 |   |     |     |
|                                         |          | EX<br>T | 74 | 25 | 33.7<br>8  | 0 | 3 | 0   |     |

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|-----------------------------------------------------------|----------|---------|----|----|------------|---|---|-----|-----|
| Environmental Studies                                     | 23000006 | IN<br>T | 74 | 70 | 94.5<br>9  | 3 | 3 | 0.6 | 0.6 |
|                                                           |          | EX<br>T | 74 | 16 | 21.6<br>2  | 0 | 0 | 0   |     |
| Orientation Program in<br>Startuo and<br>Entreprenuirship | 12300001 | IN<br>T | 74 | 74 | 100.<br>00 | 3 | 3 | 0.6 | 0.6 |
|                                                           |          | EX<br>T | 74 | 4  | 5.41       | 0 | 0 | 0   |     |
| Workshop                                                  | 23000029 | EX<br>T | 12 | 12 | 100.<br>00 | 3 | 3 | 2.1 | 2.1 |

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|--------------------------------------|----------|-----|--------|----|------------|---|-----|------|------|
| COMMUNICATION SKILLS                 | 23000008 | INT | 7<br>2 | 38 | 52.7<br>8  | 0 | 0   | 0    | 0    |
|                                      |          | EXT | 7<br>2 | 24 | 33.3<br>3  | 0 |     | 0    |      |
| MATHS-II                             | 23000010 | INT | 7<br>6 | 76 | 100.<br>00 | 3 | 3   | 0.9  | 1.6  |
|                                      |          | CEC | 7<br>6 | 60 | 78.9<br>5  | 3 |     |      |      |
|                                      |          | EXT | 7<br>2 | 41 | 56.9<br>4  | 1 | 1   | 0.7  |      |
| ENGINEERING GRAPHICS                 | 23000011 | INT | 6<br>7 | 48 | 71.6<br>4  | 2 | 2.5 | 0.75 | 1.45 |
|                                      |          | CEC | 6<br>7 | 66 | 98.5<br>1  | 3 |     |      |      |
|                                      |          | EXT | 6<br>4 | 36 | 56.2<br>5  | 1 | 1   | 0.7  |      |

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|-----------------------------------|----------|-----|----|----|--------|---|---|-----|-----|
| ELEMENTS OF CIVIL ENGINEERING     | 23000030 | INT | 7  | 7  | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                   |          | CEC | 7  | 7  | 100.00 | 3 |   |     |     |
|                                   |          | EXT | 7  | 1  | 14.29  | 0 | 0 | 0   |     |
| Chemistry                         | 23020216 | INT | 8  | 8  | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                   |          | CEC | 8  | 8  | 100.00 | 3 |   |     |     |
|                                   |          | EXT | 8  | 3  | 37.50  | 0 | 0 | 0   |     |
| BASIC PROGRAM IN ENTREPRENURESHIP | 12300002 | INT | 76 | 45 | 59.21  | 2 | 2 | 0.6 | 0.6 |
|                                   |          | EXT | 74 | 2  | 2.70   | 0 |   | 0   |     |



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|---------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Process Calculation                   | 23020301 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 7 | 6 | 85.71  | 3 | 3 | 2.1 |     |
| Chemical Process Industries-1         | 23020302 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 2.3 |
|                                       |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 7 | 5 | 71.43  | 2 | 2 | 1.4 |     |
| Organic Chemistry and Unit Processes  | 23020303 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 7 | 7 | 100.00 | 3 | 3 | 2.1 |     |
| Fluid Flow Operation                  | 23020304 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                       |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 7 | 1 | 14.29  | 1 | 1 | 0.7 |     |
| Maths-3                               | 23000015 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                       |          | CEC | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 7 | 4 | 57.14  | 1 | 1 | 0.7 |     |
| Foundation Program in Enterprenurship | 12300003 | INT | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | EXT | 7 | 7 | 100.00 | 3 | 3 | 2.1 |     |

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| 4th SEMESTER OF ACADEMIC YEAR 2023-24 |          |      |   |   |        |   |   |     |     |
|---------------------------------------|----------|------|---|---|--------|---|---|-----|-----|
| Chemical Engineering Thermodynamic-1  | 23020401 | IN T | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CE C | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 7 | 1 | 14.29  | 0 |   |     |     |
| Chemical Process Industries-II        | 23020402 | IN T | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CE C | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 7 | 2 | 28.57  | 0 |   |     |     |
| Physical and Inorganic Chemistry      | 23020403 | IN T | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                       |          | CE C | 7 | 7 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 7 | 4 | 57.14  | 1 |   |     |     |
| Process Heat Transfer                 | 23020404 | IN T | 7 | 7 | 100.00 | 3 | 3 | 0.9 | 0.9 |

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|--------------------------------------------|----------|---------|---|---|------------|---|---|-----|-----|
|                                            |          | CE<br>C | 7 | 6 | 85.7<br>1  | 3 |   |     |     |
|                                            |          | EX<br>T | 7 | 1 | 14.2<br>9  | 0 | 0 | 0   |     |
| Maths-4                                    | 23000018 | IN<br>T | 7 | 7 | 100.<br>00 | 3 | 3 | 0.9 | 0.9 |
|                                            |          | CE<br>C | 7 | 7 | 100.<br>00 | 3 |   |     |     |
|                                            |          | EX<br>T | 7 | 3 | 42.8<br>6  | 0 | 0 | 0   |     |
| Intermediate Program in<br>Enterprenurship | 12300004 | IN<br>T | 7 | 5 | 71.4<br>3  | 2 | 2 | 0.6 | 0.6 |
|                                            |          | EX<br>T | 7 | 3 | 42.8<br>6  | 0 | 0 | 0   |     |

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|----------------------------------------------------|----------|------|----|----|--------|---|---|-----|-----|
| Chemical Engineering Thermodynamics- 2             | 23020501 | IN T | 13 | 13 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                                    |          | CE C | 13 | 13 | 100.00 | 3 |   |     |     |
|                                                    |          | EX T | 13 | 0  | 0.00   | 1 | 1 | 0.7 |     |
| Mass Transfer Operation 1                          | 23020502 | IN T | 13 | 13 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                                    |          | CE C | 13 | 13 | 100.00 | 3 |   |     |     |
|                                                    |          | EX T | 13 | 5  | 38.46  | 0 | 0 | 0   |     |
| Instrumentation And Process Calculation            | 23020503 | IN T | 13 | 13 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                                    |          | CE C | 13 | 13 | 100.00 | 3 |   |     |     |
|                                                    |          | EX T | 13 | 0  | 0.00   | 0 | 0 | 0   |     |
| Mechanical Operation                               | 23020504 | IN T | 13 | 13 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                                    |          | CE C | 13 | 13 | 100.00 | 3 |   |     |     |
|                                                    |          | EX T | 13 | 1  | 7.69   | 0 | 0 | 0   |     |
| Fundamental Of Chemical Engineering Unit Operation | 23020505 | IN T | 13 | 13 | 100.00 | 3 | 3 | 0.9 | 0.9 |



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|------------------------------|----------|---------|----|----|--------|---|---|-----|-----|
|                              |          | CE<br>C | 13 | 13 | 100.00 | 3 |   |     |     |
|                              |          | EX<br>T | 13 | 2  | 15.38  | 0 | 0 | 0   |     |
| Intellectual property rights | 12300005 | IN<br>T | 13 | 7  | 53.85  | 3 | 3 | 0.9 | 0.9 |
|                              |          | EX<br>T | 13 | 2  | 15.38  | 0 | 0 | 0   |     |

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|---------------------------------------|----------|------|----|----|--------|---|---|-----|-----|
| PROCESS EQUIPMENT DESIGN-I            | 23020601 | IN T | 12 | 12 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CE C | 12 | 12 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 12 | 2  | 16.67  | 0 |   |     |     |
| Mass Transfer Operation-II            | 23020602 | IN T | 12 | 12 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CE C | 12 | 12 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 12 | 0  | 0.00   | 0 |   |     |     |
| BIOCHEMICAL ENGINEERING               | 23020603 | IN T | 12 | 12 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CE C | 12 | 12 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 12 | 1  | 8.33   | 0 |   |     |     |
| POLLUTION CONTROL & SAFETY MANAGEMENT | 23020604 | IN T | 12 | 12 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CE C | 12 | 12 | 100.00 | 3 |   |     |     |
|                                       |          | EX T | 12 | 1  | 8.33   | 0 |   |     |     |
| CHEMICAL REACTION                     | 23020605 | IN T | 12 | 12 | 100.00 | 3 | 3 | 0.9 | 0.9 |



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|------------------------------------------|----------|---------|----|----|--------|---|---|-----|-----|
| ENGINEERING-I                            |          | CE<br>C | 12 | 12 | 100.00 | 3 |   |     |     |
|                                          |          | EX<br>T | 12 | 2  | 16.67  | 0 | 0 | 0   |     |
| ADVANCED<br>SEPARATION<br>TECHNIQUES     | 23020606 | IN<br>T | 12 | 12 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CE<br>C | 12 | 12 | 100.00 | 3 |   |     |     |
|                                          |          | EX<br>T | 12 | 0  | 0.00   | 0 | 0 | 0   |     |
| EXPERT PROGRAM<br>IN<br>ENTERPRENEURSHIP | 12300006 | IN<br>T | 12 | 3  | 25.00  | 0 | 0 | 0   | 0   |
|                                          |          | EX<br>T | 12 | 3  | 25.00  | 0 | 0 | 0   |     |

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|--------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Process Equipment Design-II          | 24020701 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 2 | 22.22  | 0 | 0 | 0   |     |
| Chemical Reaction Engineering-II     | 24020702 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          |     | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 1 | 11.11  | 0 | 0 | 0   |     |
| Energy Technology                    | 24020703 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 8 | 88.89  | 3 | 3 | 2.1 |     |
| Computer Aided Process Synthesis     | 24020704 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 4 | 44.44  | 0 | 0 | 0   |     |
| Plant Design and Project Engineering | 24020706 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 2 | 22.22  | 0 | 0 | 0   |     |
| Startup Project-1                    | 12300007 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                      |          | EXT | 9 | 9 | 100.00 | 3 | 3 | 2.1 |     |

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|--------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Chemical System Modeling             | 24020801 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.6 | 0.6 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 0 | 0.00   | 0 | 0 | 0   |     |
| Petroleum Refining & Petrochemicals  | 24020802 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.6 | 0.6 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 3 | 33.33  | 0 | 0 | 0   |     |
| Process Simulation & Optimization    | 24020803 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.6 | 1.4 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 5 | 55.56  | 1 | 1 | 0.8 |     |
| Fertilizer Technology                | 24020804 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.6 | 0.6 |
|                                      |          | CEC | 9 | 9 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 9 | 0 | 0.00   | 0 | 0 | 0   |     |
| Startup Project-1                    | 12300007 | INT | 9 | 9 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                      |          | EXT | 9 | 9 | 100.00 | 3 | 3 | 2.1 |     |

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| <b>CHEMICAL ENGINEERING -B.TECH</b>                |
| <b>ACADEMIC YEAR 23-24</b>                         |

| <b>ATTAINMENT LEVELS FOR POS THROUGH COURSES</b> |            |            |            |            |            |            |            |            |            |             |             |             |
|--------------------------------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| <b>SUBJECT</b>                                   | <b>PO1</b> | <b>PO2</b> | <b>PO3</b> | <b>PO4</b> | <b>PO5</b> | <b>PO6</b> | <b>PO7</b> | <b>PO8</b> | <b>PO9</b> | <b>PO10</b> | <b>PO11</b> | <b>PO12</b> |
| 23000001                                         | 0.28       | 0.28       | 0.28       | 0.28       | 0.28       | 0.28       | 0.28       | 0.28       | 0.28       | 0.28        | 0.28        | 0.28        |
| 23000004                                         | 0.25       | 0.25       | 0.22       | 0.25       | 0.25       | -          | -          | 0.20       | 0.20       | 0.30        | -           | -           |
| 23000012                                         | 0.59       | 0.26       | 0.26       | 0.26       | 0.26       | 0.26       | 0.26       | 0.26       | 0.26       | 0.00        | -           | -           |
| 23000003                                         | -          | -          | -          | -          | -          | -          | 0.12       | 0.11       | 0.11       | 0.11        | -           | -           |
| 12300001                                         | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       | 0.07       | 0.07        | 0.07        | 0.07        |
| 23000006                                         | 0.09       | 0.09       | 0.09       | 0.10       | 0.07       | 0.00       | -          | -          | -          | -           | 0.07        | 0.07        |
| 23000029                                         | 0.23       | 0.23       | -          | -          | 0.23       | 0.23       | -          | -          | -          | -           | 0.23        | 0.23        |
| 23000008                                         | -          | -          | -          | -          | -          | -          | -          | -          | -          | -           | -           | -           |
| 23000010                                         | 0.39       | 0.46       | 0.28       | 0.32       | 0.32       | -          | -          | -          | -          | -           | -           | -           |
| 23000011                                         | -          | -          | -          | -          | -          | -          | -          | 0.35       | 0.35       | 0.32        | 0.32        | 0.29        |
| 23000030                                         | 0.20       | 0.20       | 0.20       | 0.20       | -          | -          | -          | -          | -          | -           | -           | -           |
| 12300002                                         | -          | -          | -          | -          | -          | -          | -          | 0.25       | 0.17       | 0.25        | 0.17        | 0.17        |
| 23020216                                         | 0.07       | 0.10       | 0.13       | 0.13       | 0.07       | 0.13       | -          | -          | -          | -           | 0.13        | 0.10        |
| 23020301                                         | 0.33       | 0.00       | 0.00       | 0.00       | 0.00       | 0.67       | -          | -          | -          | -           | 0.33        | 0.33        |
| 23020302                                         | 0.26       | 0.38       | 0.51       | 0.51       | 0.51       | 0.51       | -          | -          | -          | -           | 0.26        | 0.38        |
| 23020303                                         | 0.33       | 0.50       | 0.67       | 0.67       | 0.50       | 0.67       | -          | -          | -          | -           | 0.00        | 0.50        |
| 23020304                                         | 0.18       | 0.27       | 0.36       | -          | -          | 0.53       | -          | -          | -          | -           | 0.36        | 0.27        |
| 23000015                                         | 0.43       | 0.36       | 0.36       | 0.43       | 0.39       | -          | -          | -          | -          | -           | -           | -           |
| 12300003                                         | 0.67       | 0.80       | 0.73       | 0.80       | 0.73       | -          | -          | -          | -          | -           | -           | -           |
| 23020401                                         | 0.10       | 0.15       | 0.20       | 0.20       | 0.15       | 0.30       | -          | -          | -          | -           | 0.10        | 0.15        |
| 23020402                                         | 0.10       | 0.15       | 0.20       | 0.20       | 0.15       | 0.20       | -          | -          | -          | -           | 0.20        | 0.20        |



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|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23020403                   | 0.18 | 0.27 | 0.36 | 0.36 | 0.27 | 0.36 | -    | -    | -    | -    | 0.36 | 0.27 |
| 23020404                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.20 |
| 23000018                   | 0.23 | 0.21 | 0.27 | 0.23 | 0.24 | 0.00 | -    | -    | -    | -    | 0.00 | 0.00 |
| 12300004                   | 0.17 | 0.12 | 0.17 | 0.13 | 0.00 | 0.00 | -    | -    | -    | -    | 0.00 | 0.00 |
| 23020501                   | 0.18 | 0.27 | 0.36 | 0.36 | 0.27 | 0.18 | -    | -    | -    | -    | 0.36 | 0.18 |
| 23020502                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.10 | 0.20 |
| 23020503                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.15 |
| 23020504                   | 0.10 | 0.15 | 0.20 | 0.10 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.15 |
| 23020505                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.10 | -    | -    | -    | -    | 0.20 | 0.15 |
| 12300005                   | 0.23 | 0.23 | 0.20 | 0.00 | 0.00 | 0.00 | -    | -    | -    | -    | -    | -    |
| 23020601                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.20 | 0.30 | -    | -    | -    | -    | 0.10 | 0.20 |
| 23020602                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.10 | 0.15 |
| 23020603                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.10 | 0.10 | -    | -    | -    | -    | 0.20 | 0.15 |
| 23020604                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.20 | 0.20 | -    | -    | -    | -    | 0.20 | 0.20 |
| 23020605                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.15 |
| 23020606                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.15 |
| 12300006                   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24020701                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.15 |
| 24020702                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.00 | 0.00 | -    | -    | -    | -    | -    | -    |
| 24020703                   | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | -    | -    | -    | -    | 0.67 | 0.67 |
| 24020704                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.20 |
| 24020706                   | 0.10 | 0.15 | 0.20 | 0.20 | 0.15 | 0.20 | -    | -    | -    | -    | 0.20 | 0.15 |
| 12300007                   | 0.67 | 0.78 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 24020801                   | 0.07 | 0.10 | 0.13 | 0.13 | 0.10 | 0.13 | -    | -    | -    | -    | 0.13 | 0.10 |
| 24020802                   | 0.07 | 0.10 | 0.13 | 0.13 | 0.10 | 0.13 | -    | -    | -    | -    | 0.13 | 0.10 |
| 24020803                   | 0.16 | 0.23 | 0.31 | 0.31 | 0.23 | 0.16 | -    | -    | -    | -    | 0.31 | 0.31 |
| 24020804                   | 0.07 | 0.10 | 0.13 | 0.13 | 0.10 | 0.13 | -    | -    | -    | -    | 0.13 | 0.13 |
| 12300008                   | 0.75 | 0.58 | 0.83 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| TOTAL PO<br>ATTAINM<br>ENT | 6.54 | 7.14 | 7.90 | 7.39 | 6.30 | 6.28 | 0.72 | 1.52 | 1.44 | 1.33 | 4.93 | 5.19 |
| COUNT                      | 44   | 43   | 42   | 40   | 36   | 32   | 4    | 7    | 7    | 6    | 33   | 34   |
| AVERAGE<br>ATTAINM<br>ENT  | 0.15 | 0.17 | 0.19 | 0.18 | 0.18 | 0.20 | 0.18 | 0.22 | 0.21 | 0.22 | 0.15 | 0.15 |



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**CHEMICAL ENGINEERING -B.TECH**

**ACADEMIC YEAR 23-24**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1.00 | -    | -    |
| 23000012 | 0.77 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000006 | 0.43 | 0.43 | 0.43 | 0.50 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000029 | 0.33 | 0.33 | -    | -    | 0.33 | 0.33 | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 23000010 | 0.73 | 0.87 | 0.53 | 0.60 | 0.60 | -    | -    | -    | -    | -    | -    | -    |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.73 | 0.73 | 0.67 | 0.67 | 0.60 |
| 23000030 | 0.67 | 0.67 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 12300002 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.57 | 0.83 | 0.57 | 0.57 |
| 23020216 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.67 | -    | -    | -    | -    | 0.67 | 0.50 |



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|----------|------|------|------|------|------|------|---|---|---|---|------|------|
| 23020301 | 0.33 | -    | -    | -    | -    | 0.67 | - | - | - | - | 0.33 | 0.33 |
| 23020302 | 0.33 | 0.50 | 0.67 | 0.67 | 0.67 | 0.67 | - | - | - | - | 0.33 | 0.50 |
| 23020303 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | -    | 0.50 |
| 23020304 | 0.33 | 0.50 | 0.67 | -    | -    | 1.00 | - | - | - | - | 0.67 | 0.50 |
| 23000015 | 0.80 | 0.67 | 0.67 | 0.80 | 0.73 | -    | - | - | - | - | -    | -    |
| 12300003 | 0.67 | 0.80 | 0.73 | 0.80 | 0.73 | -    | - | - | - | - | -    | -    |
| 23020401 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 1.00 | - | - | - | - | 0.33 | 0.50 |
| 23020402 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | 0.67 | 0.67 |
| 23020403 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | 0.67 | 0.50 |
| 23020404 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | 0.67 | 0.67 |
| 23000018 | 0.76 | 0.71 | 0.90 | 0.76 | 0.81 | -    | - | - | - | - | -    | -    |
| 12300004 | 0.83 | 0.58 | 0.83 | 0.67 | -    | -    | - | - | - | - | -    | -    |
| 23020501 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.33 | - | - | - | - | 0.67 | 0.33 |
| 23020502 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | 0.33 | 0.67 |
| 23020503 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | 0.67 | 0.50 |
| 23020504 | 0.33 | 0.50 | 0.67 | 0.33 | 0.50 | 0.67 | - | - | - | - | 0.67 | 0.50 |
| 23020505 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.33 | - | - | - | - | 0.67 | 0.50 |
| 12300005 | 0.78 | 0.78 | 0.67 | -    | -    | -    | - | - | - | - | -    | -    |
| 23020601 | 0.33 | 0.50 | 0.67 | 0.67 | 0.67 | 1.00 | - | - | - | - | 0.33 | 0.67 |
| 23020602 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | 0.67 | - | - | - | - | 0.33 | 0.50 |



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|----------------------------|-------------|-------------|----------|----------|-----------|----------|----------|----------|----------|----------|----------|---------|
| 23020603                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.33      | 0.33     | -        | -        | -        | -        | 0.67     | 0.50    |
| 23020604                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.67      | 0.67     | -        | -        | -        | -        | 0.67     | 0.67    |
| 23020605                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.50    |
| 23020606                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.50    |
| 12300006                   | 0.67        | 0.78        | 0.67     | 0.67     | -         | -        | -        | -        | -        | -        | -        | -       |
| 24020701                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.50    |
| 24020702                   | 0.33        | 0.50        | 0.67     | 0.67     | -         | -        | -        | -        | -        | -        | -        | -       |
| 24020703                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.67    |
| 24020704                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.67    |
| 24020706                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.50    |
| 12300007                   | 0.67        | 0.78        | 0.67     | 0.67     | -         | -        | -        | -        | -        | -        | -        | -       |
| 24020801                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.50    |
| 24020802                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.50    |
| 24020803                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.33     | -        | -        | -        | -        | 0.67     | 0.67    |
| 24020804                   | 0.33        | 0.50        | 0.67     | 0.67     | 0.50      | 0.67     | -        | -        | -        | -        | 0.67     | 0.67    |
| 12300008                   | 0.75        | 0.58        | 0.83     | 0.67     | -         | -        | -        | -        | -        | -        | -        | -       |
| <b>SUM OF PO</b>           | 20.02       | 23.81       | 28.00    | 26.30    | 18.54     | 19.67    | 2.73     | 4.83     | 4.57     | 4.77     | 18.57    | 17.67   |
| <b>COUNT OF PO</b>         | 45          | 44          | 43       | 41       | 36        | 32       | 5        | 8        | 8        | 7        | 33       | 34      |
| <b>DIRECT TARGET (AVG)</b> | 0.444955908 | 0.541233766 | 0.651274 | 0.641347 | 0.5150794 | 0.614583 | 0.546667 | 0.604167 | 0.570833 | 0.680952 | 0.562626 | 0.51961 |



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|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| ATTAINMENT OF PO DIRECT (Average value found) | 0.15 | 0.17 | 0.19 | 0.18 | 0.18 | 0.20 | 0.18 | 0.22 | 0.21 | 0.22 | 0.15 | 0.15 |
| 80% OF DIRECT ATT                             | 0.12 | 0.13 | 0.15 | 0.15 | 0.14 | 0.16 | 0.14 | 0.17 | 0.16 | 0.18 | 0.12 | 0.12 |
| 20% OF INDIRECT ATTAINMENT                    | 0.53 | 0.56 | 0.53 | 0.52 | 0.48 | 0.53 | 0.54 | 0.52 | 0.51 | 0.55 | 0.53 | 0.51 |
| TOTAL                                         | 0.65 | 0.69 | 0.68 | 0.67 | 0.62 | 0.68 | 0.69 | 0.70 | 0.67 | 0.73 | 0.65 | 0.63 |

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**PROGRAM NAME : BACHELOR IN TECHNOLOGY IN AUTOMOBILE ENGINEERING**

**ACADEMIC YEAR 2023-24**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**CO PO MATRIX ALL COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | OVERALL<br>CO AVG |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------|
| 23000001 | 2.1  | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1.09              |
| 23000004 | 2.5  | 2.5  | 2.2  | 2.5  | 2.5  | -    | -    | 2    | 2    | 3    | -    | -    | 2.40              |
| 23000012 | 2.3  | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | -    | -    | -    | 1.14              |
| 23000003 | -    | -    | -    | -    | -    | -    | 2.6  | 2.4  | 2.4  | 2.4  | -    | -    | 2.45              |
| 12300001 | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1.00              |
| 23000006 | 1.3  | 1.3  | 1.3  | 1.5  | 1    | -    | -    | -    | -    | -    | 1    | 1    | 1.20              |
| 23000029 | 1    | 1    | -    | -    | 1    | 1    | -    | -    | -    | -    | 1    | 1    | 1.00              |
| 23000005 | 2.5  | 1.5  | 2.8  | 2.3  | 2.5  | -    | -    | -    | -    | -    | -    | -    | 2.32              |
| 23000008 | -    | -    | -    | -    | -    | -    | 2.6  | 2.4  | 2.4  | 2.4  | -    | -    | 2.45              |
| 23000010 | 2.2  | 2.6  | 1.6  | 1.8  | 1.8  | -    | -    | -    | -    | -    | -    | -    | 2.00              |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 2.2  | 2.2  | 2    | 2    | 1.8  | 2.04              |
| 12300002 | 2    | 2    | 2    | 2    | -    | -    | -    | -    | -    | -    | -    | -    | 2.00              |
| 23000015 | -    | -    | -    | -    | -    | -    | -    | 2.5  | 1.7  | 2.5  | 1.7  | 1.7  | 2.02              |
| 23000015 | 1.00 | 1.50 | 1.75 | 1.50 | 1.00 | 1.50 | 2.60 | 2.00 | 1.80 | 1.80 | 1.60 | 1.80 | 1.65              |
| 23080301 | 1.00 | 1.50 | 2.67 | 2.00 | 1.00 | 1.00 | 2.20 | 1.80 | 1.80 | 2.00 | 2.00 | 1.60 | 1.71              |
| 23080302 | 1.00 | 1.33 | 2.33 | 1.50 | 1.50 | 1.40 | 2.20 | 2.00 | 2.00 | 1.80 | 1.40 | 1.33 | 1.65              |
| 23080303 | 1.00 | 1.50 | 2.50 | 2.00 | 1.00 | 1.60 | 2.00 | 1.60 | 2.00 | 1.60 | 1.50 | 1.33 | 1.64              |
| 23080304 | 2.67 | 2.00 | 2.00 | 2.40 | 2.20 | 1.67 | 1.80 | 2.00 | 1.80 | 2.60 | 2.20 | 1.20 | 2.04              |
| 23080305 | 2.00 | 2.50 | 2.50 | 2.25 | 2.00 | 2.00 | 2.50 | 1.50 | 1.50 | 1.75 | 1.50 | 2.00 | 2.00              |
| 12300003 | 1.00 | 2.50 | 2.50 | 2.25 | 1.75 | 2.00 | 2.75 | 1.25 | 2.00 | 2.25 | 1.75 | 2.00 | 2.00              |
| 23000018 | 2.33 | 2.00 | 2.83 | 2.17 | 2.50 | -    | -    | -    | -    | -    | -    | -    | 2.37              |
| 23010401 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.20 | 2.20 | 2.00 | 1.80 | 1.00 | 1.40 | 1.59              |
| 23010402 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.00 | 2.33 | 1.67 | 2.00 | 1.67 | 1.67 | 1.65              |
| 23090401 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.20 | 1.67 | 1.40 | 1.50 | 1.80 | 1.50 | 1.55              |
| 23090403 | 1.00 | 1.50 | 2.00 | 2.00 | 1.50 | -    | -    | -    | -    | -    | 1.50 | 1.25 | 1.54              |
| 12300004 | 2.40 | 1.60 | 2.50 | 2.00 | 1.00 | 1.50 | 2.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 1.71              |
| 23090501 | 1.60 | 1.20 | 2.00 | 1.75 | 2.00 | 2.00 | 2.00 | 2.00 | 2.33 | 1.00 | 2.00 | 1.00 | 1.74              |
| 23090503 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 2.40 | 2.00 | 2.00 | 1.40 | 2.40 | 1.20 | 1.66              |
| 23010503 | 2.00 | 1.60 | 2.00 | 1.60 | 1.40 | 1.60 | 1.00 | 1.50 | 2.00 | 1.33 | 2.00 | 1.00 | 1.59              |
| 23010504 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 2.00 | 2.40 | 2.00 | 2.00 | 2.20 | 2.00 | 2.00 | 1.84              |



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|---------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 23010505            | 2.00       | 2.33       | 2.00       | 2.00       | 1.00       | 2.40       | 2.20       | 2.40       | 1.80       | 2.60       | 1.60       | 2.00       | 2.03       |
| 23010506            | 1.75       | 1.20       | 1.25       | 1.75       | 1.50       | 1.75       | 1.75       | 2.25       | 1.50       | 1.75       | 1.75       | 1.50       | 1.64       |
| 12300005            | 2.00       | 2.33       | 2.00       | 2.00       | 1.50       | 1.75       | 2.00       | 1.67       | 1.75       | 1.75       | 1.50       | 1.50       | 1.81       |
| 23010601            | 1.00       | 1.50       | 2.00       | 2.00       | 1.00       | 1.60       | 2.00       | 1.60       | 1.80       | 2.00       | 2.40       | 1.33       | 1.69       |
| 23090601            | 2.00       | 1.50       | 1.67       | 1.50       | 2.00       | 1.00       | 1.60       | 2.60       | 1.75       | 1.80       | 2.00       | 2.00       | 1.78       |
| 23010603            | 2.00       | 1.00       | 2.00       | 1.50       | 1.50       | 2.00       | 1.80       | 2.00       | 2.00       | 1.67       | 2.33       | 1.50       | 1.78       |
| 23010604            | 1.50       | 2.50       | 2.00       | 1.50       | 1.50       | 1.75       | 1.75       | 2.50       | 1.75       | 1.33       | 2.00       | 1.00       | 1.76       |
| 23010605            | 1.00       | 1.75       | 2.50       | 2.00       | 3.00       | 2.00       | 2.50       | 2.67       | 2.67       | 2.00       | 3.00       | 1.00       | 2.17       |
| 23010606            | 2.00       | 1.80       | 2.00       | 1.80       | 1.67       | 1.50       | 1.75       | 1.50       | 2.00       | 2.00       | 2.00       | 2.00       | 1.83       |
| 12300006            | 2.25       | 1.75       | 2.50       | 2.00       | 1.00       | 1.00       | 1.00       | 2.00       | 2.00       | 2.33       | 2.00       | 2.00       | 1.82       |
| 23010701            | 2.20       | 1.80       | 2.20       | 1.80       | 1.00       | 1.33       | 1.00       | 2.50       | 2.33       | 2.67       | 2.00       | 2.00       | 1.90       |
| 23010708            | 2.20       | 1.60       | 2.40       | 1.80       | 1.00       | 1.00       | 1.33       | 2.00       | 1.67       | 2.33       | 2.00       | 1.50       | 1.74       |
| 23010703            | 2.00       | 1.80       | 2.20       | 2.00       | 1.00       | 1.33       | 1.00       | 1.50       | 1.67       | 2.25       | 1.50       | 2.00       | 1.69       |
| 23010704            | 2.00       | 1.60       | 2.40       | 1.80       | 1.50       | 1.00       | 1.33       | 1.33       | 2.00       | 2.50       | 2.00       | 2.00       | 1.79       |
| 23010707            | 2.00       | 2.00       | 2.00       | 1.80       | 1.67       | 1.33       | 1.33       | 1.33       | 2.00       | 2.00       | 1.00       | 1.50       | 1.66       |
| 12300007            | 2.25       | 1.75       | 2.50       | 2.00       | 1.00       | 1.00       | 1.00       | 2.00       | 2.00       | 2.33       | 2.00       | 2.00       | 1.82       |
| 23000023            | 2.00       | 1.80       | 2.20       | 1.80       | 1.33       | 1.50       | 1.25       | 2.25       | 1.50       | 2.20       | 1.25       | 2.00       | 1.76       |
| 23000025            | 2.00       | 2.00       | 2.50       | 2.00       | 1.25       | 1.40       | 1.00       | 2.33       | 1.67       | 2.50       | 1.67       | 1.50       | 1.82       |
| 23010802            | 2.00       | 1.75       | 2.00       | 2.00       | 1.00       | 1.33       | 1.00       | 2.00       | 2.00       | 2.33       | 1.50       | 2.00       | 1.74       |
| 23010801            | 2.00       | 1.60       | 2.00       | 1.80       | 1.25       | 1.25       | 1.25       | 2.25       | 2.00       | 2.25       | 2.50       | 2.50       | 1.89       |
| 12300008            | 1.50       | 1.50       | 2.00       | 1.75       | 1.00       | 1.00       | 2.00       | 1.50       | 1.67       | 2.00       | 2.00       | 1.00       | 1.58       |
| <b>AVERA<br/>GE</b> | <b>1.7</b> | <b>1.7</b> | <b>2.1</b> | <b>1.8</b> | <b>1.4</b> | <b>1.4</b> | <b>1.8</b> | <b>1.9</b> | <b>1.9</b> | <b>2.0</b> | <b>1.8</b> | <b>1.5</b> | <b>1.8</b> |

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|-----------------------------------------------------------------|-----------------|----------|-----------|--------------|------------------|---------------|-----------|--------------|--------------|---------|
| PROGRAM NAME : BACHELOR IN TECHNOLOGY IN AUTOMOBILE ENGINEERING |                 |          |           |              |                  |               |           |              |              |         |
| ACADEMIC YEAR 2023-24                                           |                 |          |           |              |                  |               |           |              |              |         |
| TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24                |                 |          |           |              |                  |               |           |              |              |         |
| Target level                                                    | Intern al marks | CE C     | Exter nal | IE           |                  | IE            |           |              |              |         |
|                                                                 |                 |          |           | target level | intern al mark s | targ et level | extern al |              |              |         |
| 1                                                               | ≤18             | ≤30      | ≤42       | 1            | ≤30              | 1             | ≤30       |              |              |         |
| 2                                                               | 19 to 24        | 31 to 40 | 43 to 56  | 2            | 31 to 40         | 2             | 31 to 40  |              |              |         |
| 3                                                               | ≥26             | ≥41      | ≥57       | 3            | ≥41              | 3             | ≥41       |              |              |         |
| Course Name                                                     | Course Code     | Marks    |           |              | Level            |               |           | 30% Internal | 70% External | Targ et |
|                                                                 |                 | Mid Se m | CEC       | Exter nal    | Mid sem          | CEC           | Extern al |              |              |         |
| B TECH SEMESTER 1                                               |                 |          |           |              |                  |               |           |              |              |         |
| Maths-I                                                         | 230000 01       | 18       | 30        | 42           | 1                | 1             | 1         | 0.3          | 0.7          | 1       |
| Fundamentals of Computer Programming                            | 230000 04       | 18       | 30        | 42           | 1                | 1             | 1         | 0.3          | 0.7          | 1       |
| Elements of Electrical Engineering                              | 230000 12       | 18       | 30        | 42           | 1                | 1             | 1         | 0.3          | 0.7          | 1       |
| Elements of Mechanical Engineering                              | 230000 03       | 18       | 30        | 42           | 1                | 1             | 1         | 0.3          | 0.7          | 1       |
| Environmental Studies                                           | 230000 06       | 18       | 30        | 42           | 1                | 1             | 1         | 0.3          | 0.7          | 1       |
| Orientation Program in Startuo and Entrepreneurship             | 123000 01       | 30       |           | 30           | 1                |               | 1         | 0.3          | 0.7          | 1       |
| Workshop                                                        | 230000 29       |          |           | 60           |                  |               | 1         |              | 1            | 1       |





| B TECH SEMESTER 2                      |          |    |    |    |   |   |   |     |     |   |
|----------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| ENGINEERING PHYSICS                    | 23000005 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| COMMUNICATION SKILLS                   | 23000008 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| MATHS-II                               | 23000010 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ENGINEERING GRAPHICS                   | 23000011 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ELEMENTS OF CIVIL ENGINEERING          | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| BASIC PROGRAM IN ENTREPRENEURSHIP      | 12300002 | 30 | 30 | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| B TECH SEMESTER 3                      |          |    |    |    |   |   |   |     |     |   |
| Maths-3                                | 23000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mechanics of Solids                    | 23080301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Material Science and Metallurgy        | 23080302 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Manufacturing Process I                | 23080303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Kinematics of Machines                 | 23080304 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electrical Technology                  | 23080305 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Foundation Program in Entrepreneurship | 12300003 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |







| B TECH SEMESTER 4                        |          |    |    |    |   |   |   |     |     |   |
|------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Maths-4                                  | 23000018 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Automobile MEASUREMENT & METROLOGY       | 23010401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| AUTOMOBILE MANUFACTURING PROCESSES       | 23010402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ENGINEERING THERMODYNAMICS               | 23090401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| MACHINE DESIGN & INDUSTRIAL DRAFTING     | 23090403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP | 12300004 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| B TECH SEMESTER 5                        |          |    |    |    |   |   |   |     |     |   |
| Fluid Mechanics                          | 23090501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Heat Transfer                            | 23090503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Automobile Systems                       | 23010503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Automobile Engines                       | 23010504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Automotive Electrical Systems            | 23010505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Automobile Chassis & Body Engineering    | 23010506 | 18 | 0  | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intellectual Property Rights             | 12300005 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |





| B TECH SEMESTER 6                     |          |    |    |    |   |   |   |     |     |   |
|---------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| MODERN QUALITY TECHNIQUES             | 23010601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| DYNAMICS OF MACHINERY                 | 23090601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| ALTERNATIVE FUEL AND POWER SYSTEMS    | 23010603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| HYBRID VEHICLE TECHNOLOGY             | 23010604 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VEHICLE MAINTENANCE & GARAGE PRACTICE | 23010606 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| SPECIAL PURPOSE VEHICLES              | 23010605 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| EXPERT PROGRAM IN ENTREPRENEURSHIP    | 12300006 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| B TECH SEMESTER 7                     |          |    |    |    |   |   |   |     |     |   |
| Vehicle Testing & Homologation        | 23010701 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Vehicle Dynamics                      | 23010708 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Automobile Component Design           | 23010703 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Two and Three Wheelers                | 23010704 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Noise Vibration Harshness and Safety  | 23010707 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Startup Project 1                     | 12300007 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |





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|--------------------------------|--------------|----|----|----|---|---|---|-----|-----|---|
| Project-1                      | 230000<br>23 | 30 | 0  | 60 | 1 | 0 | 1 | 0.3 | 0.7 | 1 |
| <b>B TECH SEMESTER 8</b>       |              |    |    |    |   |   |   |     |     |   |
| PROJECT 2                      | 230000<br>25 | 12 | 0  | 48 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| AUTOMOBILE<br>SYSTEM<br>DESIGN | 230108<br>01 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VEHICLE BODY<br>ENGINEERING    | 230108<br>02 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Start-Up Project<br>Part-II    | 123000<br>08 | 30 | 0  | 30 | 1 | 0 | 1 | 0.3 | 0.7 | 1 |



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|-----------------------------------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|-----------------------------------|--------------------|----------------|------|-----------------------------|
| PROGRAM NAME : BACHELOR IN TECHNOLOGY IN AUTOMOBILE ENGINEERING |             |      |                          |                                                                                     |                                   |                    |                |      |                             |
| ACADEMIC YEAR 2023-24                                           |             |      |                          |                                                                                     |                                   |                    |                |      |                             |
| COURSE OUTCOME ATTAINMENT FOR 2023-24                           |             |      |                          |                                                                                     |                                   |                    |                |      |                             |
| Target Set:<br>PERCENTAGE                                       |             |      |                          |                                                                                     | PERCENTAGE                        |                    |                |      |                             |
| Level 1<br>55-64                                                |             |      |                          |                                                                                     | 55-64                             |                    |                |      |                             |
| Level 2<br>65-74                                                |             |      |                          |                                                                                     | 65-74                             |                    |                |      |                             |
| Level 3<br>≥75                                                  |             |      |                          |                                                                                     | ≥75                               |                    |                |      |                             |
| Course                                                          | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % student s scoring defined marks | Attai nmen t level | Weighted Score |      | Course Outco me attain ment |
| I SEMESTER OF ACEDMIC YEAR 2023-24                              |             |      |                          |                                                                                     |                                   |                    |                |      |                             |
| Maths-I                                                         | 23000001    | INT  | 74                       | 73                                                                                  | 98.65                             | 3                  | 1.5            | 0.45 | 2.55                        |
|                                                                 |             | CEC  | 74                       | 37                                                                                  | 50                                | 0                  |                |      |                             |
|                                                                 |             | EXT  | 74                       | 56                                                                                  | 75.68                             | 3                  |                |      |                             |
| Fundamentals of Computer Programming                            | 23000004    | INT  | 74                       | 73                                                                                  | 98.65                             | 3                  | 3              | 0.9  | 0.9                         |
|                                                                 |             | CEC  | 74                       | 54                                                                                  | 72.97                             | 3                  |                |      |                             |
|                                                                 |             | EXT  | 72                       | 11                                                                                  | 15.28                             | 0                  |                |      |                             |
| Elements of Electrical Engineering                              | 23000012    | INT  | 74                       | 65                                                                                  | 87.84                             | 3                  | 3              | 0.9  | 2.3                         |
|                                                                 |             | CEC  | 74                       | 74                                                                                  | 100                               | 3                  |                |      |                             |
|                                                                 |             | EXT  | 73                       | 50                                                                                  | 68.49                             | 2                  |                |      |                             |
| Elements of Mechanical Engineering                              | 23000003    | INT  | 74                       | 49                                                                                  | 66.22                             | 2                  | 0              | 0.4  | 0.4                         |
|                                                                 |             | CEC  | 74                       | 48                                                                                  | 64.86                             | 1                  |                |      |                             |
|                                                                 |             | EXT  | 74                       | 25                                                                                  | 33.78                             | 0                  |                |      |                             |





|                                                     |          |     |    |    |       |   |   |     |     |
|-----------------------------------------------------|----------|-----|----|----|-------|---|---|-----|-----|
| Environmental Studies                               | 23000006 | INT | 74 | 70 | 94.59 | 3 | 3 | 0.6 | 0.6 |
|                                                     |          | EXT | 74 | 16 | 21.62 | 0 | 0 | 0   |     |
| Orientation Program in Startuo and Entrepreneurship | 12300001 | INT | 74 | 74 | 100   | 3 | 3 | 0.6 | 0.6 |
|                                                     |          | EXT | 74 | 4  | 5.41  | 0 | 0 | 0   |     |
| Workshop                                            | 23000029 | EXT | 12 | 12 | 100   | 3 | 3 | 2.1 | 2.1 |

## II SEMESTER OF ACEDEMIC YEAR 2023-24

|                                    |          |     |    |    |       |   |     |      |      |
|------------------------------------|----------|-----|----|----|-------|---|-----|------|------|
| ENGINEERING PHYSICS                | 23000005 | INT | 67 | 65 | 97.01 | 3 | 3   | 0.9  | 0.9  |
|                                    |          | CEC | 67 | 64 | 95.52 | 3 |     |      |      |
|                                    |          | EXT | 67 | 51 | 76.12 | 3 |     |      |      |
| COMMUNICATION SKILLS               | 23000008 | INT | 72 | 38 | 52.78 | 0 | 0   | 0    | 0    |
|                                    |          | EXT | 72 | 24 | 33.33 | 0 |     | 0    |      |
| MATHS-II                           | 23000010 | INT | 76 | 76 | 100   | 3 | 3   | 0.9  | 1.6  |
|                                    |          | CEC | 76 | 60 | 78.95 | 3 |     |      |      |
|                                    |          | EXT | 72 | 41 | 56.94 | 1 | 1   | 0.7  |      |
| ENGINEERING GRAPHICS               | 23000011 | INT | 67 | 48 | 71.64 | 2 | 2.5 | 0.75 | 1.45 |
|                                    |          | CEC | 67 | 66 | 98.51 | 3 |     |      |      |
|                                    |          | EXT | 64 | 36 | 56.25 | 1 | 1   | 0.7  |      |
| ELEMENTS OF CIVIL ENGINEERING      | 23000015 | INT | 7  | 7  | 100   | 3 | 3   | 0.9  | 0.9  |
|                                    |          | CEC | 7  | 7  | 100   | 3 |     |      |      |
|                                    |          | EXT | 7  | 1  | 14.29 | 0 | 0   | 0    |      |
| BASIC PROGRAM IN ENTREPRENEURS HIP | 12300002 | INT | 76 | 45 | 59.21 | 2 | 2   | 0.6  | 0.6  |
|                                    |          | EXT | 74 | 2  | 2.7   | 0 |     | 0    |      |

## III SEMESTER OF ACEDEMIC YEAR 2023-24

|                                 |          |     |   |   |        |   |   |     |     |
|---------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Maths-3                         | 23000015 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                 |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                 |          | EXT | 4 | 1 | 25.00  | 0 |   |     |     |
| Mechanics of solids             | 23080301 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                 |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                 |          | EXT | 4 | 3 | 75.00  | 1 |   |     |     |
| Material Science and Metallurgy | 23080302 | INT | 5 | 0 | 0.00   | 0 | 0 | 0   | 0   |
|                                 |          | CEC | 5 | 2 | 40.00  | 0 |   |     |     |
|                                 |          | EXT | 4 | 2 | 50.00  | 0 |   |     |     |
|                                 | 23080303 | INT | 5 | 5 | 100.00 | 3 | 1 | 0.6 | 1.3 |







|                                        |          |     |   |   |        |   |   |     |     |
|----------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Manufacturing Process I                |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                        |          | EXT | 4 | 3 | 75.00  | 1 |   | 0.7 |     |
| Kinematics of Machines                 | 23080304 | INT | 5 | 0 | 0.00   | 0 | 0 | 0   | 0   |
|                                        |          | CEC | 5 | 2 | 40.00  | 0 |   | 0   |     |
|                                        |          | EXT | 4 | 0 | 0.00   | 0 |   | 0   |     |
| Electrical Technology                  | 23080305 | INT | 5 | 0 | 0.00   | 3 | 3 | 0.6 | 2.7 |
|                                        |          | EXT | 4 | 4 | 100.00 | 3 |   | 2.1 |     |
| Foundation Program in Entrepreneurship | 1230003  | INT | 4 | 0 | 100.00 | 3 | 3 | 0.6 | 0.6 |
|                                        |          | EXT | 4 | 4 | 0.00   | 0 |   | 0   |     |
|                                        |          |     |   |   |        |   |   |     |     |

**IV SEMESTER OF ACADEMIC YEAR 2023-24**

|                                          |          |     |   |   |        |   |   |     |     |
|------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Maths-4                                  | 23000018 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 4 | 2 | 50.00  | 0 |   | 0   |     |
| AUTOMOBILE MEASUREMENT & METROLOGY       | 23010401 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 3 | 1 | 33.33  | 0 |   | 0   |     |
| AUTOMOBILE MANUFACTURING PROCESSES       | 23010402 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 3 | 0 | 0.00   | 0 |   | 0   |     |
| ENGINEERING THERMODYNAMICS               | 23090401 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 3 | 1 | 33.33  | 0 |   | 0   |     |
| MACHINE DESIGN & INDUSTRIAL DRAFTING     | 23090403 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 4 | 0 | 0.00   | 0 |   | 0   |     |
| INTERMEDIATE PROGRAM IN ENTREPRENEURSHIP | 12300004 | INT | 4 | 0 | 0.00   | 0 | 0 | 0   | 0   |
|                                          |          | EXT | 3 | 0 | 0.00   | 0 |   | 0   |     |





| V SEMESTER OF ACEDMIC YEAR 2023-24    |          |     |   |   |        |   |   |     |     |
|---------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Fluid Mechanics                       | 23090501 | INT | 4 | 0 | 0.00   | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 0 | 0.00   | 0 |   | 0   |     |
| Heat Transfer                         | 23090503 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 0 | 0.00   | 0 |   | 0   |     |
| Automobile Systems                    | 23010503 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 3 | 75.00  | 3 |   | 2.1 |     |
| Automobile Engines                    | 23010504 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 1 | 25.00  | 0 |   | 0   |     |
| Automotive Electrical Systems         | 23010505 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 3 | 75.00  | 3 |   | 2.1 |     |
| Automobile Chassis & Body Engineering | 23010506 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | EXT | 4 | 1 | 25.00  | 0 |   |     |     |
| Intellectual Property Rights          | 12300005 | INT | 4 | 1 | 25.00  | 0 | 0 | 0   | 2.1 |
|                                       |          | EXT | 4 | 4 | 100.00 | 3 |   | 2.1 |     |





| VI SEMESTER OF ACEDMIC YEAR 2023-24   |          |     |   |   |        |   |   |     |     |
|---------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| MODERN QUALITY TECHNIQUES             | 23010601 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 5 | 4 | 80.00  | 3 |   | 2.1 |     |
| DYNAMICS OF MACHINERY                 | 23090601 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 5 | 2 | 40.00  | 0 |   | 0   |     |
| ALTERNATIVE FUEL AND POWER SYSTEMS    | 23010603 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 5 | 2 | 40.00  | 0 |   | 0   |     |
| HYBRID VEHICLE TECHNOLOGY             | 23010604 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 1.6 |
|                                       |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 5 | 3 | 60.00  | 1 |   | 0.7 |     |
| VEHICLE MAINTENANCE & GARAGE PRACTICE | 23010606 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 5 | 2 | 40.00  | 0 |   | 0   |     |
| SPECIAL PURPOSE VEHICLES              | 23010605 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 5 | 4 | 80.00  | 3 |   | 2.1 |     |
| EXPERT PROGRAM IN ENTREPRENEUR SHIP   | 12300006 | INT | 5 | 4 | 80.00  | 3 | 3 | 0.9 | 3   |
|                                       |          | EXT | 5 | 3 | 60.00  | 3 |   | 2.1 |     |





**VII SEMESTER OF ACEDMIC YEAR 2023-24**

|                                      |          |     |   |   |        |   |   |     |     |
|--------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Vehicle Testing & Homologation       | 23010701 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                      |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 4 | 3 | 75.00  | 3 |   |     |     |
| Vehicle Dynamics                     | 23010708 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 4 | 2 | 50.00  | 0 |   |     |     |
| Automobile Component Design          | 23010703 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 4 | 2 | 50.00  | 0 |   |     |     |
| Two and Three Wheelers               | 23010704 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                      |          | EXT | 4 | 2 | 50.00  | 0 |   |     |     |
| Noise Vibration Harshness and Safety | 23010707 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                      |          | EXT | 4 | 0 | 0.00   | 0 |   |     |     |
| Startup Project 1                    | 12300007 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                      |          | EXT | 4 | 4 | 100.00 | 3 |   |     |     |
| Project-1                            | 23000023 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                      |          | EXT | 4 | 4 | 100.00 | 3 |   |     |     |





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| VIII SEMESTER OF ACEDMIC YEAR 2023-24 |          |     |   |   |        |   |   |     |     |
|---------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| PROJECT 2                             | 23000025 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | EXT | 4 | 4 | 100.00 | 0 |   | 0   |     |
| AUTOMOBILE<br>SYSTEM DESIGN           | 23010801 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 2 | 50.00  | 0 |   | 0   |     |
| VEHICLE BODY<br>ENGINEERING           | 23010802 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |          | CEC | 4 | 4 | 100.00 | 3 |   |     |     |
|                                       |          | EXT | 4 | 1 | 25.00  | 0 |   | 0   |     |
| Start-Up Project<br>Part-II           | 12300008 | INT | 4 | 4 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                       |          | EXT | 4 | 4 | 100.00 | 3 |   | 2.1 |     |
|                                       |          |     |   |   |        |   |   |     |     |



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**PROGRAM NAME : BACHELOR IN TECHNOLOGY IN AUTOMOBILE ENGINEERING**  
**ACADEMIC YEAR 2023-24**

### **3.3.3 ATTAINMENT LEVELS FOR POS THROUGH COURSES**

| <b>SUBJECT</b> | <b>PO1</b> | <b>PO2</b> | <b>PO3</b> | <b>PO4</b> | <b>PO5</b> | <b>PO6</b> | <b>PO7</b> | <b>PO8</b> | <b>PO9</b> | <b>PO10</b> | <b>PO11</b> | <b>PO12</b> |
|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|-------------|-------------|
| 23000001       | 0.85       | 0.85       | 0.85       | -          | -          | -          | -          | -          | -          | -           | -           | -           |
| 23000004       | 0.75       | 0.75       | 0.66       | -          | -          | -          | -          | -          | -          | -           | -           | -           |
| 23000012       | 1.76       | 0.77       | 0.77       | -          | -          | -          | -          | -          | -          | -           | -           | -           |
| 23000003       | 0.13       | 0.13       | 0.13       | 0.13       | 0.13       | 0.13       | 0.13       | 0.13       | 0.13       | 0.13        | 0.13        | 0.13        |
| 12300001       | 0.26       | 0.26       | 0.26       | 0.3        | 0.2        | -          | -          | -          | -          | -           | 0.2         | 0.2         |
| 23000006       | 0.2        | 0.2        | -          | -          | 0.2        | 0.2        | -          | -          | -          | -           | 0.2         | 0.2         |
| 23000029       | 2.1        | 1.05       | 1.05       | 0.7        | 2.1        | 1.61       | 0.7        | 1.61       | 0.7        | 0.7         | 1.75        | 0.7         |
| 23000005       | 0.75       | 0.45       | 0.83       | 0.68       | 0.75       | -          | -          | -          | -          | -           | -           | -           |
| 23000008       | -          | -          | -          | -          | -          | -          | 0          | 0          | 0          | 0           | -           | -           |
| 23000010       | 1.17       | 1.39       | 0.85       | 0.96       | 0.96       | -          | -          | -          | -          | -           | -           | -           |
| 23000011       | -          | -          | -          | -          | -          | -          | -          | 1.17       | 1.17       | 1.07        | 1.07        | 0.96        |
| 12300002       | 0.6        | 0.6        | 0.6        | 0.6        | -          | -          | -          | -          | -          | -           | -           | -           |
| 23000015       | -          | -          | -          | -          | -          | -          | -          | 0.5        | 0.34       | 0.5         | 0.34        | 0.34        |
| 23000015       | 0.10       | 0.15       | 0.18       | 0.15       | 0.10       | 0.15       | 0.26       | 0.20       | 0.18       | 0.18        | 0.16        | 0.18        |
| 23080301       | 0.18       | 0.27       | 0.47       | 0.36       | 0.18       | 0.18       | 0.39       | 0.32       | 0.32       | 0.36        | 0.36        | 0.28        |
| 23080302       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00        | 0.00        | 0.00        |
| 23080303       | 0.14       | 0.22       | 0.36       | 0.29       | 0.14       | 0.23       | 0.29       | 0.23       | 0.29       | 0.23        | 0.22        | 0.19        |
| 23080304       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00        | 0.00        | 0.00        |
| 23080305       | 0.60       | 0.75       | 0.75       | 0.68       | 0.60       | 0.60       | 0.75       | 0.45       | 0.45       | 0.53        | 0.45        | 0.60        |
| 12300003       | 0.13       | 0.17       | 0.17       | 0.15       | 0.13       | 0.13       | 0.17       | 0.10       | 0.10       | 0.12        | 0.10        | 0.13        |
| 23000018       | 0.10       | 0.25       | 0.25       | 0.23       | 0.18       | 0.20       | 0.28       | 0.13       | 0.20       | 0.23        | 0.18        | 0.20        |
| 23010401       | 0.23       | 0.20       | 0.28       | 0.22       | 0.25       |            |            |            |            |             |             |             |
| 23010402       | 0.10       | 0.15       | 0.20       | 0.20       | 0.10       | 0.10       | 0.22       | 0.22       | 0.20       | 0.18        | 0.10        | 0.14        |
| 23090401       | 0.10       | 0.15       | 0.20       | 0.20       | 0.10       | 0.10       | 0.20       | 0.23       | 0.17       | 0.20        | 0.17        | 0.17        |
| 23090403       | 0.10       | 0.15       | 0.20       | 0.20       | 0.10       | 0.10       | 0.22       | 0.17       | 0.14       | 0.15        | 0.18        | 0.15        |
| 12300004       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00       | 0.00        | 0.00        | 0.00        |
| 23090501       | 0.24       | 0.16       | 0.25       | 0.20       | 0.10       | 0.15       | 0.20       | 0.15       | 0.20       | 0.15        | 0.15        | 0.10        |
| 23090503       | 0.16       | 0.12       | 0.20       | 0.18       | 0.20       | 0.20       | 0.20       | 0.20       | 0.23       | 0.10        | 0.20        | 0.10        |





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|------------------------|-------|-------|-------|-------|------|------|-------|-------|-------|-------|-------|-------|
| 23010503               | 0.33  | 0.50  | 0.67  | 0.50  | 0.50 | 0.33 | 0.80  | 0.67  | 0.67  | 0.47  | 0.80  | 0.40  |
| 23010504               | 0.20  | 0.16  | 0.20  | 0.16  | 0.14 | 0.16 | 0.10  | 0.15  | 0.20  | 0.13  | 0.20  | 0.10  |
| 23010505               | 0.33  | 0.50  | 0.67  | 0.67  | 0.33 | 0.67 | 0.80  | 0.67  | 0.67  | 0.73  | 0.67  | 0.67  |
| 23010506               | 0.20  | 0.23  | 0.20  | 0.20  | 0.10 | 0.24 | 0.22  | 0.24  | 0.18  | 0.26  | 0.16  | 0.20  |
| 12300005               | 0.41  | 0.28  | 0.29  | 0.41  | 0.35 | 0.41 | 0.41  | 0.53  | 0.35  | 0.41  | 0.41  | 0.35  |
| 23010601               | 0.67  | 0.78  | 0.67  | 0.67  | 0.50 | 0.58 | 0.67  | 0.56  | 0.58  | 0.58  | 0.50  | 0.50  |
| 23090601               | 0.10  | 0.15  | 0.20  | 0.20  | 0.10 | 0.16 | 0.20  | 0.16  | 0.18  | 0.20  | 0.24  | 0.13  |
| 23010603               | 0.20  | 0.15  | 0.17  | 0.15  | 0.20 | 0.10 | 0.16  | 0.26  | 0.18  | 0.18  | 0.20  | 0.20  |
| 23010604               | 0.36  | 0.18  | 0.36  | 0.27  | 0.27 | 0.36 | 0.32  | 0.36  | 0.36  | 0.30  | 0.41  | 0.27  |
| 23010605               | 0.50  | 0.83  | 0.67  | 0.50  | 0.50 | 0.58 | 0.58  | 0.83  | 0.58  | 0.44  | 0.67  | 0.33  |
| 23010606               | 0.10  | 0.18  | 0.25  | 0.20  | 0.30 | 0.20 | 0.25  | 0.27  | 0.27  | 0.20  | 0.30  | 0.10  |
| 12300006               | 0.67  | 0.60  | 0.67  | 0.60  | 0.56 | 0.50 | 0.58  | 0.50  | 0.67  | 0.67  | 0.67  | 0.67  |
| 23010701               | 0.75  | 0.58  | 0.83  | 0.67  | 0.33 | 0.33 | 0.33  | 0.67  | 0.67  | 0.78  | 0.67  | 0.67  |
| 23010708               | 0.22  | 0.18  | 0.22  | 0.18  | 0.10 | 0.13 | 0.10  | 0.25  | 0.23  | 0.27  | 0.20  | 0.20  |
| 23010703               | 0.22  | 0.16  | 0.24  | 0.18  | 0.10 | 0.10 | 0.13  | 0.20  | 0.17  | 0.23  | 0.20  | 0.15  |
| 23010704               | 0.20  | 0.18  | 0.22  | 0.20  | 0.10 | 0.13 | 0.10  | 0.15  | 0.17  | 0.23  | 0.15  | 0.20  |
| 23010707               | 0.20  | 0.16  | 0.24  | 0.18  | 0.15 | 0.10 | 0.13  | 0.13  | 0.20  | 0.25  | 0.20  | 0.20  |
| 12300007               | 0.67  | 0.67  | 0.67  | 0.60  | 0.56 | 0.44 | 0.44  | 0.44  | 0.67  | 0.67  | 0.33  | 0.50  |
| 23000023               | 0.75  | 0.58  | 0.83  | 0.67  | 0.33 | 0.33 | 0.33  | 0.67  | 0.67  | 0.78  | 0.67  | 0.67  |
| 23000025               | 0.20  | 0.18  | 0.22  | 0.18  | 0.13 | 0.15 | 0.13  | 0.23  | 0.15  | 0.22  | 0.13  | 0.20  |
| 23010802               | 0.20  | 0.20  | 0.25  | 0.20  | 0.13 | 0.14 | 0.10  | 0.23  | 0.17  | 0.25  | 0.17  | 0.15  |
| 23010801               | 0.20  | 0.18  | 0.20  | 0.20  | 0.10 | 0.13 | 0.10  | 0.20  | 0.20  | 0.23  | 0.15  | 0.20  |
| 12300008               | 0.67  | 0.53  | 0.67  | 0.60  | 0.42 | 0.42 | 0.42  | 0.75  | 0.67  | 0.75  | 0.83  | 0.83  |
| TOTAL PO<br>ATTAINMENT | 10.53 | 10.87 | 13.10 | 11.41 | 8.47 | 8.85 | 10.58 | 11.50 | 11.30 | 11.64 | 11.17 | 10.13 |
| COUNT                  | 35    | 35    | 35    | 35    | 35   | 34   | 34    | 34    | 34    | 34    | 34    | 34    |
| AVERAGE<br>ATTAINMENT  | 0.30  | 0.31  | 0.37  | 0.33  | 0.24 | 0.26 | 0.31  | 0.34  | 0.33  | 0.34  | 0.33  | 0.30  |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME : BACHELOR IN TECHNOLOGY IN AUTOMOBILE ENGINEERING**

**ACADEMIC YEAR 2023-24**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1    | -    | -    |
| 2300012  | 0.77 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000006 | 0.43 | 0.43 | 0.43 | 0.5  | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000029 | 0.33 | 0.33 | -    | -    | 0.33 | 0.33 | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000005 | 0.83 | 0.5  | 0.92 | 0.75 | 0.83 | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.87 | 0.8  | 0.8  | 0.8  | -    | -    |
| 23000010 | 0.73 | 0.87 | 0.53 | 0.6  | 0.6  | -    | -    | -    | -    | -    | -    | -    |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.73 | 0.73 | 0.67 | 0.67 | 0.6  |
| 12300002 | 0.67 | 0.67 | 0.67 | 0.67 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000015 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.57 | 0.83 | 0.57 | 0.57 |
| 23000015 | 0.33 | 0.50 | 0.58 | 0.50 | 0.33 | 0.50 | 0.87 | 0.67 | 0.60 | 0.60 | 0.53 | 0.60 |
| 23080301 | 0.33 | 0.50 | 0.89 | 0.67 | 0.33 | 0.33 | 0.73 | 0.60 | 0.60 | 0.67 | 0.67 | 0.53 |
| 23080302 | 0.33 | 0.44 | 0.78 | 0.50 | 0.50 | 0.47 | 0.73 | 0.67 | 0.67 | 0.60 | 0.47 | 0.44 |
| 23080303 | 0.33 | 0.50 | 0.83 | 0.67 | 0.33 | 0.53 | 0.67 | 0.53 | 0.67 | 0.53 | 0.50 | 0.44 |
| 23080304 | 0.89 | 0.67 | 0.67 | 0.80 | 0.73 | 0.56 | 0.60 | 0.67 | 0.60 | 0.87 | 0.73 | 0.40 |
| 23080305 | 0.67 | 0.83 | 0.83 | 0.75 | 0.67 | 0.67 | 0.83 | 0.50 | 0.50 | 0.58 | 0.50 | 0.67 |
| 12300003 | 0.67 | 0.83 | 0.83 | 0.75 | 0.67 | 0.67 | 0.83 | 0.50 | 0.50 | 0.58 | 0.50 | 0.67 |
| 23000018 | 0.33 | 0.83 | 0.83 | 0.75 | 0.58 | 0.67 | 0.92 | 0.42 | 0.67 | 0.75 | 0.58 | 0.67 |
| 23010401 | 0.78 | 0.67 | 0.94 | 0.72 | 0.83 | -    | -    | -    | -    | -    | -    | -    |
| 23010402 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.73 | 0.73 | 0.67 | 0.60 | 0.33 | 0.47 |
| 23090401 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.67 | 0.78 | 0.56 | 0.67 | 0.56 | 0.56 |
| 23090403 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.73 | 0.56 | 0.47 | 0.50 | 0.60 | 0.50 |
| 12300004 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | -    | -    | -    | -    | -    | 0.50 | 0.42 |
| 23090501 | 0.80 | 0.53 | 0.83 | 0.67 | 0.33 | 0.50 | 0.67 | 0.50 | 0.67 | 0.50 | 0.50 | 0.33 |
| 23090503 | 0.53 | 0.40 | 0.67 | 0.58 | 0.67 | 0.67 | 0.67 | 0.67 | 0.78 | 0.33 | 0.67 | 0.33 |



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|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 23010503                       | 0.33  | 0.50  | 0.67  | 0.50  | 0.50  | 0.33  | 0.80  | 0.67  | 0.67  | 0.47  | 0.80  | 0.40  |
| 23010504                       | 0.67  | 0.53  | 0.67  | 0.53  | 0.47  | 0.53  | 0.33  | 0.50  | 0.67  | 0.44  | 0.67  | 0.33  |
| 23010505                       | 0.33  | 0.50  | 0.67  | 0.67  | 0.33  | 0.67  | 0.80  | 0.67  | 0.67  | 0.73  | 0.67  | 0.67  |
| 23010506                       | 0.67  | 0.78  | 0.67  | 0.67  | 0.33  | 0.80  | 0.73  | 0.80  | 0.60  | 0.87  | 0.53  | 0.67  |
| 12300005                       | 0.58  | 0.40  | 0.42  | 0.58  | 0.50  | 0.58  | 0.58  | 0.75  | 0.50  | 0.58  | 0.58  | 0.50  |
| 23010601                       | 0.67  | 0.78  | 0.67  | 0.67  | 0.50  | 0.58  | 0.67  | 0.56  | 0.58  | 0.58  | 0.50  | 0.50  |
| 23090601                       | 0.33  | 0.50  | 0.67  | 0.67  | 0.33  | 0.53  | 0.67  | 0.53  | 0.60  | 0.67  | 0.80  | 0.44  |
| 23010603                       | 0.67  | 0.50  | 0.56  | 0.50  | 0.67  | 0.33  | 0.53  | 0.87  | 0.58  | 0.60  | 0.67  | 0.67  |
| 23010604                       | 0.67  | 0.33  | 0.67  | 0.50  | 0.50  | 0.67  | 0.60  | 0.67  | 0.67  | 0.56  | 0.78  | 0.50  |
| 23010605                       | 0.50  | 0.83  | 0.67  | 0.50  | 0.50  | 0.58  | 0.58  | 0.83  | 0.58  | 0.44  | 0.67  | 0.33  |
| 23010606                       | 0.33  | 0.58  | 0.83  | 0.67  | 1.00  | 0.67  | 0.83  | 0.89  | 0.89  | 0.67  | 1.00  | 0.33  |
| 12300006                       | 0.67  | 0.60  | 0.67  | 0.60  | 0.56  | 0.50  | 0.58  | 0.50  | 0.67  | 0.67  | 0.67  | 0.67  |
| 23010701                       | 0.75  | 0.58  | 0.83  | 0.67  | 0.33  | 0.33  | 0.33  | 0.67  | 0.67  | 0.78  | 0.67  | 0.67  |
| 23010708                       | 0.73  | 0.60  | 0.73  | 0.60  | 0.33  | 0.44  | 0.33  | 0.83  | 0.78  | 0.89  | 0.67  | 0.67  |
| 23010703                       | 0.73  | 0.53  | 0.80  | 0.60  | 0.33  | 0.33  | 0.44  | 0.67  | 0.56  | 0.78  | 0.67  | 0.50  |
| 23010704                       | 0.67  | 0.60  | 0.73  | 0.67  | 0.33  | 0.44  | 0.33  | 0.50  | 0.56  | 0.75  | 0.50  | 0.67  |
| 23010707                       | 0.67  | 0.53  | 0.80  | 0.60  | 0.50  | 0.33  | 0.44  | 0.44  | 0.67  | 0.83  | 0.67  | 0.67  |
| 12300007                       | 0.67  | 0.67  | 0.67  | 0.60  | 0.56  | 0.44  | 0.44  | 0.44  | 0.67  | 0.67  | 0.33  | 0.50  |
| 23000023                       | 0.75  | 0.58  | 0.83  | 0.67  | 0.33  | 0.33  | 0.33  | 0.67  | 0.67  | 0.78  | 0.67  | 0.67  |
| 23000025                       | 0.67  | 0.60  | 0.73  | 0.60  | 0.44  | 0.50  | 0.42  | 0.75  | 0.50  | 0.73  | 0.42  | 0.67  |
| 23010802                       | 0.67  | 0.67  | 0.83  | 0.67  | 0.42  | 0.47  | 0.33  | 0.78  | 0.56  | 0.83  | 0.56  | 0.50  |
| 23010801                       | 0.67  | 0.58  | 0.67  | 0.67  | 0.33  | 0.44  | 0.33  | 0.67  | 0.67  | 0.78  | 0.50  | 0.67  |
| 12300008                       | 0.67  | 0.53  | 0.67  | 0.60  | 0.42  | 0.42  | 0.42  | 0.75  | 0.67  | 0.75  | 0.83  | 0.83  |
|                                |       |       |       |       |       |       |       |       |       |       |       |       |
| <b>SUM OF PO</b>               | 26.63 | 26.65 | 31.74 | 28.35 | 21.92 | 19.15 | 24.26 | 28.00 | 27.11 | 28.39 | 25.00 | 22.53 |
| <b>COUNT OF PO</b>             | 47.00 | 47.00 | 46.00 | 46.00 | 46.00 | 40.00 | 41.00 | 44.00 | 44.00 | 43.00 | 43.00 | 43.00 |
| <b>DIRECT TARGET (AVG)</b>     | 0.57  | 0.57  | 0.69  | 0.62  | 0.48  | 0.48  | 0.59  | 0.64  | 0.62  | 0.66  | 0.58  | 0.52  |
| <b>ATTAINMENT OF PO DIRECT</b> | 0.30  | 0.31  | 0.37  | 0.33  | 0.24  | 0.26  | 0.31  | 0.34  | 0.33  | 0.34  | 0.33  | 0.30  |



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| (Average value found)             |      |      |      |      |      |      |      |      |      |      |      |      |
|-----------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| <b>80% OF DIRECT ATT</b>          | 0.24 | 0.25 | 0.30 | 0.26 | 0.19 | 0.21 | 0.25 | 0.27 | 0.27 | 0.27 | 0.26 | 0.24 |
| <b>20% OF INDIRECT ATTAINMENT</b> | 0.55 | 0.53 | 0.53 | 0.56 | 0.52 | 0.55 | 0.54 | 0.54 | 0.54 | 0.52 | 0.52 | 0.54 |
| <b>TOTAL</b>                      | 0.79 | 0.78 | 0.83 | 0.82 | 0.71 | 0.76 | 0.79 | 0.81 | 0.81 | 0.79 | 0.78 | 0.78 |



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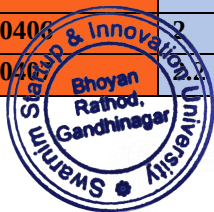
**PROGRAM NAME: ARTIFICIAL INTELLIGENCE**

**YEAR: - 1<sup>ST</sup> - 4<sup>TH</sup> YEAR**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**CO PO MATRIX ALL COURSES**

| SUBJECT  | PO1 | PO2 | PO3 | PO4 | PO5 | PO6  | PO7  | PO8 | PO9 | PO10 | PO11 | PO12 | OVERALL<br>CO AVG |
|----------|-----|-----|-----|-----|-----|------|------|-----|-----|------|------|------|-------------------|
| 23000001 | 1   | 1   | 1   | 1   | 1   | 1    | 1    | 1   | 1   | 1    | 1    | 1    | 1                 |
| 23000004 | 2.5 | 2.5 | 2.2 | 2.5 | 2.5 | -    | -    | 2   | 2   | 3    | -    | -    | 2.4               |
| 23000012 | 2.3 | 1   | 1   | 1   | 1   | 1    | 1    | 1   | 1   | -    | -    | -    | 1.1               |
| 23000003 | -   | -   | -   | -   | -   | -    | 2.6  | 2.4 | 2.4 | 2.4  | -    | -    | 2.5               |
| 12300001 | 1   | 1   | 1   | 1   | 1   | 1    | 1    | 1   | 1   | 1    | 1    | 1    | 1                 |
| 23000006 | 1.3 | 1.3 | 1.3 | 1.5 | 1   | -    | -    | -   | -   | -    | 1    | 1    | 1.2               |
| 23000029 | 1   | 1   | -   | -   | 1   | 1    | -    | -   | -   | -    | 1    | 1    | 1                 |
| 23000010 | 2.2 | 2.6 | 1.6 | 1.8 | 1.8 | -    | -    | -   | -   | -    | -    | -    | 2                 |
| 23020216 | 1   | 1.5 | 2   | 2   | 1   | 2    | -    | -   | -   | -    | 2    | 1.5  | 1.6               |
| 24190203 | -   | -   | -   | -   | -   | -    | 2.6  | 2.4 | 2.4 | 2.4  | -    | -    | 2.5               |
| 24190204 | -   | -   | -   | -   | -   | -    | 2.4  | 2.4 | 2.4 | 1.9  | 2.3  | -    | 2.3               |
| 24190206 | -   | -   | -   | -   | -   | -    | -    | 2   | 2.2 | 2.3  | 2.3  | 2.1  | 1.9               |
| 24190207 | -   | -   | -   | -   | -   | -    | -    | 2.5 | 2.5 | 2    | 2.3  | -    | 2.3               |
| 24190208 | -   | -   | -   | -   | -   | -    | -    | 2.5 | 2.3 | 1.8  | 2    | -    | 2.4               |
| 24170301 | 2.6 | 2   | 2.2 | 2.6 | 2.2 | 2    | 2    | 2   | 2   | 2    | 2    | 2    | 2.13              |
| 24170302 | 2.8 | 2   | 2.2 | 2.4 | 2.2 | 2    | 1.67 | 2.5 | 2   | 1.67 | 2.25 | 2    | 2.14              |
| 24170303 | 2.6 | 2   | 2.4 | 2.4 | 2.2 | 2    | 2    | 2   | 2   | 1.67 | 2.25 | 2    | 2.13              |
| 24170304 | 2.6 | 2   | 2.2 | 2.4 | 2.2 | 2    | 2    | 2   | 2   | 1.67 | 2.25 | 2    | 2.11              |
| 24170305 | 2.6 | 2   | 2.2 | 2.4 | 2.2 | 2.33 | 2    | 2.5 | 2.5 | 2.5  | 2.33 | 2.25 | 2.32              |
| 24170306 | 2.4 | 2   | 2   | 2.6 | 2.2 | 2    | 2    | 2   | 2   | 1.67 | 2.25 | 2    | 2.09              |
| 12300003 | 1.8 | 2   | 2.2 | 2.4 | 2.2 | 2    | 2    | 2   | 2   | 1.67 | 2.25 | 2    | 2.04              |
| 24170401 | 2.8 | 2   | 2.2 | 2.4 | 2.2 | 2    | 1.67 | 2.5 | 2   | 1.67 | 2.25 | 2    | 2.14              |
| 24170402 | 2.8 | 2   | 2.2 | 2.4 | 2.2 | 2    | 1.67 | 2.5 | 2   | 1.67 | 2.25 | 2    | 2.14              |
| 24170403 | 2.8 | 2   | 2.2 | 2.4 | 2.2 | 2    | 1.67 | 2.5 | 2   | 1.67 | 2.25 | 2    | 2.14              |
| 24170404 | 2.6 | 2   | 2.6 | 2.6 | 2.2 | 2.33 | 2    | 2.4 | 2.5 | 2.6  | 2.5  | 2    | 2.36              |
| 24170405 | 2.4 | 2.6 | 2   | 2.2 | 2.4 | 2.33 | 2    | 2.4 | 2.5 | 2.2  | 2.5  | 2.2  | 2.31              |
| 24170406 | 2   | 2.2 | 2   | 2.2 | 2.2 | 2.33 | 2    | 2.5 | 2.5 | 2.5  | 2.33 | 2.25 | 2.25              |
| 24170407 | 2   | 2.2 | 2.2 | 2.6 | 2   | 2    | 2    | 2.5 | 2.5 | 2.2  | 2    | 2.4  | 2.23              |





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|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 12300004 | 2.4  | 2.2  | 2.2  | 2.6  | 2    | 2    | 2    | 2.5  | 2.5  | 2.2  | 2    | 2.4  | 2.25 |
| 24170501 | 2.6  | 2    | 2.2  | 2.6  | 2.2  | 2    | 2    | 2    | 2    | 2    | 2    | 2    | 2.13 |
| 24170502 | 2.8  | 2    | 2.2  | 2.4  | 2.2  | 2    | 1.67 | 2.5  | 2    | 1.67 | 2.25 | 2    | 2.14 |
| 24170508 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2.5  | 1.67 | 2.2  | 2    | 2.33 | 2.33 | 2    | 2.2  |
| 24170505 | 2.17 | 1.83 | 2.33 | 2.5  | 2    | 2    | 1.67 | 2.5  | 2    | 1.67 | 2.25 | 2    | 2.08 |
| 24170503 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2.5  | 1.67 | 2.2  | 2    | 2.33 | 2.33 | 2    | 2.2  |
| 24170601 | 2.4  | 2    | 2    | 2.4  | 2.2  | 2.25 | 1.67 | 2    | 2.33 | 2    | 2    | 2    | 2.1  |
| 24170602 | 2.4  | 2    | 2    | 2.6  | 2.2  | 2    | 2    | 2    | 2    | 1.67 | 2.25 | 2    | 2.09 |
| 24170602 | 2.6  | 2    | 2.4  | 2.4  | 2.2  | 2    | 2    | 2    | 2    | 1.67 | 2.25 | 2    | 2.13 |
| 24170608 | 2.4  | 2    | 2.4  | 2    | 2.2  | 2.33 | 2    | 2.5  | 2.5  | 2.5  | 2.33 | 2.25 | 2.28 |
| 24170603 | 2    | 1.83 | 2    | 2.33 | 2.33 | 2    | 1.5  | 2.6  | 2.25 | 1.75 | 2.25 | 2    | 2.07 |
| 24170708 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2.33 | 2    | 2.5  | 2.5  | 2.5  | 2.33 | 2.25 | 2.32 |
| 24170710 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2    | 1.67 | 2.2  | 2.25 | 1.67 | 2.25 | 2    | 2.12 |
| 24170702 | 2.6  | 2.4  | 2.2  | 2.4  | 2.2  | 2    | 1.67 | 2.2  | 2.25 | 1.67 | 2.25 | 2    | 2.15 |
| 24170703 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2.33 | 2    | 2.5  | 2.5  | 2.5  | 2.33 | 2.25 | 2.32 |
| 24170707 | 2.6  | 2    | 2.2  | 2.4  | 2.2  | 2.33 | 2    | 2.5  | 2.5  | 2.5  | 2.33 | 2    | 2.3  |
| 24130801 | -    | -    | -    | -    | -    | 2.3  | 2    | 2.5  | 2.5  | 2.5  | 2.33 | 2    | 2.3  |
| 12300008 | -    | -    | -    | -    | -    | 2.3  | 2.25 | 2.25 | 2    | 2    | 2    | 2    | 2.11 |
| 24170802 | -    | -    | -    | -    |      | 2.3  | 2    | 1.75 | 1.75 | 1.8  | 1    | 1.25 | 1.69 |
| AVERAGE  | 2.2  | 1.8  | 2.0  | 2.2  | 1.9  | 1.9  | 1.9  | 2.2  | 2.1  | 2.0  | 2.0  | 1.9  | 2.0  |



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|                                                         |
|---------------------------------------------------------|
| <b>SWARNIM INSTITUTE OF TECHNOLOGY</b>                  |
| <b>PROGRAM NAME: ARTIFICIAL INTELLIGENCE</b>            |
| <b>YEAR: - 1<sup>ST</sup> - 4<sup>TH</sup> YEAR</b>     |
| <b>TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24</b> |

| Target level | Internal marks | Target level | External | Target level | CEC      |
|--------------|----------------|--------------|----------|--------------|----------|
| 1            | ≤18            | 1            | ≤42      | 1            | ≤30      |
| 2            | 19 to 24       | 2            | 43 to 56 | 2            | 31 to 40 |
| 3            | ≥26            | 3            | ≥57      | 3            | ≥41      |

| Course Name                                          | Course Code | Marks   |       |  |     |      | Level   |     |       | Target |
|------------------------------------------------------|-------------|---------|-------|--|-----|------|---------|-----|-------|--------|
|                                                      |             | Mid Sem | Final |  | CEC | Ext. | Mid Sem | CEC | Ext.. |        |
| 1ST SEM                                              |             |         |       |  |     |      |         |     |       |        |
| Maths-I                                              | 23000001    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Fundamentals of Computer Programming                 | 23000004    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Elements of Electrical Engineering                   | 23000012    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Elements of Mechanical Engineering                   | 23000003    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Environmental Studies                                | 23000006    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Orientation Program in Start-up and Entrepreneurship | 12300001    | 30      |       |  |     | 30   | 1       |     | 1     | 1      |
| Workshop                                             | 23000029    |         |       |  |     | 60   |         |     | 1     | 1      |
| Electronic Workshop                                  | 23000002    |         |       |  |     | 60   |         |     | 1     | 1      |
| 2ND SEM                                              |             |         |       |  |     |      |         |     |       |        |
| MATHS-II                                             | 23000010    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| CHEMISTRY                                            | 23020216    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Personality Development                              | 24190203    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Web Technology                                       | 24190204    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Introduction to Cloud Technology                     | 24190205    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |
| Engineering Graphics & Design                        | 24190206    | 18      |       |  | 30  | 42   | 1       | 1   | 1     | 1      |





# SWARNIM

## STARTUP & INNOVATION UNIVERSITY

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|                                          |          |    |    |    |    |    |   |     |     |   |
|------------------------------------------|----------|----|----|----|----|----|---|-----|-----|---|
| Mentoring and Counselling                | 24190207 | 30 |    |    |    | 30 | 1 |     | 1   | 1 |
| Open Project / MOOC                      | 24190208 | 60 |    |    |    | 60 | 1 |     | 1   | 1 |
| 3RD SEM                                  |          |    |    |    |    |    |   |     |     |   |
| Discrete Mathematics                     | 24170301 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Computer Organization and Architecture   | 24170302 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Operating Systems                        | 24170303 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Data Structures and Algorithm            | 24170304 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Object Oriented Programming using Java   | 24170305 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Probability and Statistics               | 24170306 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Foundation Program in Entrepreneurship   | 12300003 | 30 | 0  | 30 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| 4TH SEM                                  |          |    |    |    |    |    |   |     |     |   |
| Soft skills and Aptitude                 | 24170401 | 60 |    |    | 60 |    |   |     | 1   | 1 |
| Inferential Statistics                   | 24170402 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Database Management Systems              | 24170403 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Software Engineering                     | 24170404 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Python Programming                       | 24170405 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Computer Networks                        | 24170406 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Artificial Neural Networks               | 24170407 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Intermediate Program in Entrepreneurship | 12300004 | 30 | 0  | 30 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| 5TH SEM                                  |          |    |    |    |    |    |   |     |     |   |
| Digital Image Processing                 | 24170501 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Machine Learning                         | 24170502 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| NoSQL Databases                          | 24170508 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Fuzzy Logic and Applications             | 24170505 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Sensor Technology                        | 24170503 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| 6TH SEM                                  |          |    |    |    |    |    |   |     |     |   |
| Deep Learning                            | 24170601 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Advanced Machine Learning                | 24170602 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Computer Vision                          | 24170602 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Blockchain Fundamentals                  | 24170608 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Natural Language Processing              | 24170608 | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |



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| 7TH SEM                              |           |    |    |    |    |    |   |     |     |   |
|--------------------------------------|-----------|----|----|----|----|----|---|-----|-----|---|
| Infrastructure Containers            | 24170708  | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Environmental Science                | 24170710  | 30 | 0  | 30 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Machine Learning using Cloud Service | 24170702  | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 1 |
| Chat-Bot Development                 | 24170703  | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 2 |
| Information Security Fundamentals    | 24170707  | 18 | 30 | 42 | 1  | 1  | 1 | 0.3 | 0.7 | 3 |
| 8TH SEM                              |           |    |    |    |    |    |   |     |     |   |
| MAJOR PROJECT                        | 24130801  | 18 |    |    | 30 | 42 | 1 | 1   | 1   | 1 |
| Start-Up Project Part-II             | 12300008  | 18 |    |    | 30 | 42 | 1 | 1   | 1   | 1 |
| TECHNICAL SEMINAR                    | (24170802 | 18 |    |    | 30 | 42 | 1 | 1   | 1   | 1 |



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|                                                     |
|-----------------------------------------------------|
| <b>SWARNNIM INSTITUTE OF TECHNOLOGY</b>             |
| <b>PROGRAM NAME: ARTIFICIAL INTELLIGENCE</b>        |
| <b>YEAR: - 1<sup>ST</sup> - 4<sup>TH</sup> YEAR</b> |
| <b>COURSE OUTCOME ATTAINMENT FOR 2023-24</b>        |

| Target Set:                          |             |      |                          |                                                                                     |                                  |                  |                |                           |      |
|--------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|------|
| Level 1                              |             |      |                          |                                                                                     | 55-64                            |                  |                |                           |      |
| Level 2                              |             |      |                          |                                                                                     | 65-74                            |                  |                |                           |      |
| Level 3                              |             |      |                          |                                                                                     | ≥75                              |                  |                |                           |      |
| Course                               | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |      |
| Semester 1                           |             |      |                          |                                                                                     |                                  |                  |                |                           |      |
| Maths-I                              | 23000001    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 1.5            | 0.45                      | 2.55 |
|                                      |             | CEC  | 74                       | 37                                                                                  | 50                               | 0                |                |                           |      |
|                                      |             | EXT  | 74                       | 56                                                                                  | 75.68                            | 3                | 3              | 2.1                       |      |
| Fundamentals of Computer Programming | 23000004    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 3              | 0.9                       | 0.9  |
|                                      |             | CEC  | 74                       | 54                                                                                  | 72.97                            | 3                |                |                           |      |
|                                      |             | EXT  | 72                       | 11                                                                                  | 15.28                            | 0                | 0              | 0                         |      |
| Elements of Electrical Engineering   | 23000012    | INT  | 74                       | 65                                                                                  | 87.84                            | 3                | 3              | 0.9                       | 2.3  |
|                                      |             | CEC  | 74                       | 74                                                                                  | 100                              | 3                |                |                           |      |
|                                      |             | EXT  | 73                       | 50                                                                                  | 68.49                            | 2                | 3              | 1.4                       |      |





|                                                     |          |     |    |    |       |   |   |     |     |
|-----------------------------------------------------|----------|-----|----|----|-------|---|---|-----|-----|
| Elements of Mechanical Engineering                  | 23000003 | INT | 74 | 49 | 66.22 | 2 | 0 | 0.4 | 0.4 |
|                                                     |          | CEC | 74 | 48 | 64.86 | 1 |   |     |     |
|                                                     |          | EXT | 74 | 25 | 33.78 | 0 | 3 | 0   |     |
| Environmental Studies                               | 23000006 | INT | 74 | 70 | 94.59 | 3 | 3 | 0.6 | 0.6 |
|                                                     |          | EXT | 74 | 16 | 21.62 | 0 | 0 | 0   |     |
| Orientation Program in Startuo and Entreprenuirship | 12300001 | INT | 74 | 74 | 100   | 3 | 3 | 0.6 | 0.6 |
|                                                     |          | EXT | 74 | 4  | 5.41  | 0 | 0 | 0   |     |
| Workshop                                            | 23000029 | EXT | 12 | 12 | 100   | 3 | 3 | 2.1 | 2.1 |
| Electronic Workshop                                 | 23000002 | EXT | 62 | 62 | 100   | 3 | 3 | 2.1 | 2.1 |
| <b>Semester 2</b>                                   |          |     |    |    |       |   |   |     |     |
| MATHS-II                                            | 23000010 | INT | 76 | 76 | 100   | 3 | 3 | 0.9 | 1.6 |
|                                                     |          | CEC | 76 | 60 | 78.95 | 3 |   |     |     |
|                                                     |          | EXT | 72 | 41 | 56.94 | 1 | 1 | 0.7 |     |
| Chemistry                                           | 23020216 | INT | 8  | 8  | 100   | 3 | 3 | 0.9 | 0.9 |
|                                                     |          | CEC | 8  | 8  | 100   | 3 |   |     |     |
|                                                     |          | EXT | 8  | 3  | 37.5  | 0 | 0 | 0   |     |
| Web Technology                                      | 24190204 | INT | 3  | 3  | 100   | 3 | 3 | 0.9 | 3   |
|                                                     |          | CEC | 3  | 3  | 100   | 3 |   |     |     |
|                                                     |          | EXT | 3  | 3  | 100   | 3 |   | 2.1 |     |
| Introduction to Cloud Technology                    | 24190205 | INT | 4  | 4  | 100   | 3 | 3 | 0.9 | 3   |
|                                                     |          | EXT | 4  | 4  | 100   | 3 |   | 2.1 |     |
| Engineering Graphics & Design                       | 24190206 | INT | 4  | 4  | 100   | 3 | 3 | 0.9 | 3   |
|                                                     |          | CEC | 4  | 4  | 100   | 3 |   |     |     |
|                                                     |          | EXT | 4  | 4  | 100   | 3 |   | 2.1 |     |
| Mentoring and Counselling                           | 24190207 | EXT | 4  | 4  | 100   | 3 |   | 2.1 | 2.1 |
| Open Project / MOOC                                 | 24190208 | EXT | 4  | 4  | 100   | 3 | 3 | 2.1 | 2.1 |





| 3RD SEMESTER OF ACEDEMIC YEAR 2023-24  |          |     |   |   |        |   |     |     |     |
|----------------------------------------|----------|-----|---|---|--------|---|-----|-----|-----|
| Discrete Mathematics                   | 24170301 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Computer Organization and Architecture | 24170302 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Operating Systems                      | 24170303 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Data Structures and Algorithm          | 24170304 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | INT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Object Oriented Programming using Java | 24170305 | CEC | 2 | 2 | 100.00 | 3 | 1.5 | 0.9 | 3   |
|                                        |          | EXT | 2 | 1 | 50.00  | 0 |     |     |     |
|                                        |          | EXT | 2 | 1 | 50.00  | 0 |     | 2.1 |     |
| Probability and Statistics             | 24170306 | INT | 2 | 1 | 50.00  | 0 | 2   | 0.9 | 3   |
|                                        |          | CEC | 2 | 1 | 50.00  | 0 |     |     |     |
|                                        |          | EXT | 2 | 1 | 50.00  | 0 |     | 2.1 |     |
| Foundation Program in Entrepreneurship | 12300003 | INT | 2 | 1 | 50.00  | 0 | 2   | 0.9 | 3   |
|                                        |          | CEC | 2 | 1 | 50.00  | 0 |     |     |     |
|                                        |          | EXT | 2 | 1 | 50.00  | 0 |     | 2.1 |     |
| 4th SEMESTER OF ACEDEMIC YEAR 2023-24  |          |     |   |   |        |   |     |     |     |
| Soft skills and Aptitude               | 24170401 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Inferential Statistics                 | 24170402 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Database Management Systems            | 24170403 | INT | 2 | 2 | 100.00 | 3 | 3   | 0.9 | 3   |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |
| Software Engineering                   | 24170304 | INT | 2 | 2 | 100.00 | 3 | 0   | 0.6 | 2.7 |
|                                        |          | CEC | 2 | 2 | 100.00 | 3 |     |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 3 |     | 2.1 |     |





|                                          |          |     |   |   |        |   |   |     |     |
|------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Python Programming                       | 24170405 | INT | 2 | 2 | 100.00 | 3 |   | 0.6 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   | 0   |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.4 |     |
| Computer Networks                        | 24170406 | INT | 2 | 2 | 100.00 | 3 | 0 | 0.6 | 2.7 |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |     |
| Artificial Neural Networks               | 24170407 | INT | 2 | 2 | 100.00 | 3 |   | 0.6 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   | 0   |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.4 |     |
| Intermediate Program in Entrepreneurship | 12300004 | INT | 2 | 2 | 100.00 | 3 |   | 0.6 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   | 0   |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.4 |     |
| 5 SEMESTER OF ACEDEMIC YEAR 2023-24      |          |     |   |   |        |   |   |     |     |
| Digital Image Processing                 | 24170501 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Machine Learning                         | 24170502 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| NoSQL Databases                          | 24170508 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Fuzzy Logic and Applications             | 24170505 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.6 | 2.7 |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Sensor Technology                        | 24170503 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.6 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   | 0   |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.4 |     |
| 6 SEMESTER OF ACEDEMIC YEAR 2023-24      |          |     |   |   |        |   |   |     |     |
| Deep Learning                            | 24170601 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Advanced Machine Learning                | 24170602 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 0 |   |     |     |





|                                                                                               |          |     |   |   |        |   |   |     |   |
|-----------------------------------------------------------------------------------------------|----------|-----|---|---|--------|---|---|-----|---|
| Computer Vision                                                                               | 24170602 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |   |
| Blockchain Fundamentals                                                                       | 2417060  | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |   |
| Information Security Fundamentals                                                             | 24170608 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |   |
| Natural Language Processing                                                                   | 24170707 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 |   | 0.00   | 3 |   | 2.1 |   |
| 7 SEMESTER OF ACEDMIC YEAR 2023-24                                                            |          |     |   |   |        |   |   |     |   |
| Infrastructure Container                                                                      | 24170708 | INT | 6 | 6 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 6 | 6 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 6 | 6 | 100.00 | 3 |   | 2.1 |   |
| Environmental Science                                                                         | 24170710 | INT | 6 | 6 | 100.00 | 3 |   | 0.9 | 3 |
|                                                                                               |          | EXT | 6 | 6 | 100.00 | 3 |   | 2.1 |   |
| Meachine Learning using Cloud Service                                                         | 24170702 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |   |
| Chat-Bot Development                                                                          | 24170703 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 | 2 | 100.00 | 3 |   | 2.1 |   |
| Information Security Fundamentals                                                             | 24170707 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 2 | 2 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 2 |   | 0.00   | 3 |   | 2.1 |   |
| 8 SEMESTER OF ACEDMIC YEAR 2023-24                                                            |          |     |   |   |        |   |   |     |   |
| MAJOR PROJECT                                                                                 | 24130801 | INT | 6 | 6 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 6 | 6 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 6 | 6 | 100.00 | 3 |   | 2.1 |   |
| Start-Up Project Part-II                                                                      | 12300008 | INT | 6 | 6 | 100.00 | 3 |   | 0.9 | 3 |
|                                                                                               |          | EXT | 6 | 6 | 100.00 | 3 |   | 2.1 |   |
|  TECHNICAL | 24170802 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3 |
|                                                                                               |          | CEC | 6 | 6 | 100.00 | 3 |   |     |   |
|                                                                                               |          | EXT | 6 | 6 | 100.00 | 3 |   | 2.1 |   |



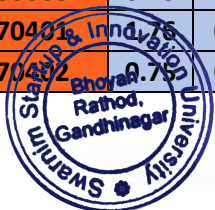




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| SWARNIM INSTITUTE OF TECHNOLOGY                                   |
|-------------------------------------------------------------------|
| PROGRAM NAME: ARTIFICIAL INTELLIGENCE                             |
| YEAR: - 1 <sup>ST</sup> - 4 <sup>TH</sup> YEAR                    |
| FINAL DIRECT ATTAINMENT LEVELS FOR POS THROUGH COURSES(2023-2024) |

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | CO ATTAINMENT |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|---------------|
| 23000001 | 0.85 | 0.85 | 0.85 | -    | -    | -    | -    | -    | -    | -    | -    | -    | 2.55          |
| 23000004 | 0.75 | 0.75 | 0.66 | -    | -    | -    | -    | -    | -    | -    | -    | -    | 0.9           |
| 23000012 | 1.76 | 0.77 | 0.77 | -    | -    | -    | -    | -    | -    | -    | -    | -    | 2.3           |
| 23000003 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.13 | 0.4           |
| 12300001 | 0.26 | 0.26 | 0.26 | 0.3  | 0.2  | -    | -    | -    | -    | -    | 0.2  | 0.2  | 0.6           |
| 23000006 | 0.2  | 0.2  | -    | -    | 0.2  | 0.2  | -    | -    | -    | -    | 0.2  | 0.2  | 0.6           |
| 23000029 | 2.1  | 1.05 | 1.05 | 0.7  | 2.1  | 1.61 | 0.7  | 1.61 | 0.7  | 0.7  | 1.75 | 0.7  | 2.1           |
| 23000010 | 1.17 | 1.39 | 0.85 | 0.96 | 0.96 | -    | -    | -    | -    | -    | -    | -    | 1.6           |
| 23020216 | 0.3  | 0.45 | 0.6  | 0.6  | 0.3  | 0.6  | -    | -    | -    | -    | 0.6  | 0.45 | 0.9           |
| 24190203 | -    | -    | -    | -    | -    | -    | 2.6  | 2.4  | 2.4  | 2.4  | -    | -    | 3             |
| 24190204 | -    | -    | -    | -    | -    | -    | 2.4  | 2.4  | 2.4  | 1.9  | 2.3  | -    | 3             |
| 24190206 | -    | -    | -    | -    | -    | -    | -    | 2    | 2.2  | 2.3  | 2.3  | 2.1  | 3             |
| 24190207 | -    | -    | -    | -    | -    | -    | -    | 1.4  | 1.54 | 1.61 | 1.61 | 1.47 | 2.1           |
| 24190208 | 1.76 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.00 | 0.00 | 0.00 | 7.92          |
| 24170301 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 2.40          |
| 24170302 | 0.75 | 0.75 | 0.66 | 0.75 | 0.75 | 0.85 | 0.00 | 0.75 | 0.60 | 0.90 | 0.40 | 0.00 | 7.16          |
| 24170303 | 1.76 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.00 | 0.00 | 0.00 | 7.92          |
| 24170304 | 0.75 | 0.75 | 0.66 | 0.75 | 0.75 | 0.85 | 0.00 | 0.75 | 0.60 | 0.90 | 0.40 | 0.00 | 7.16          |
| 24170305 | 0.70 | 0.70 | 0.00 | 0.00 | 0.70 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.70 | 0.70 | 3.50          |
| 24170306 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 0.20 | 2.40          |
| 12300003 | 0.73 | 0.45 | 0.87 | 0.20 | 0.67 | 0.67 | 0.83 | 0.83 | 0.73 | 0.67 | 0.80 | 0.03 | 7.48          |
| 24170401 | 0.75 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.77 | 0.00 | 0.00 | 0.00 | 7.92          |
| 24170402 | 0.75 | 0.75 | 0.66 | 0.75 | 0.75 | 0.00 | 0.00 | 0.60 | 0.60 | 0.90 | 0.00 | 0.00 | 5.76          |



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|----------------------------|-----------|-----------|-----------|-----------|-----------|-----------|------|-------|-------|-------|-------|-------|--------|
| 24170403                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.85      | 0.00 | 0.75  | 0.60  | 0.90  | 0.40  | 0.00  | 7.16   |
| 24170404                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.00      | 0.00 | 0.60  | 0.60  | 0.90  | 0.00  | 0.00  | 5.76   |
| 24170405                   | 1.76      | 0.77      | 0.77      | 0.77      | 0.77      | 0.77      | 0.77 | 0.77  | 0.77  | 0.00  | 0.00  | 0.00  | 7.92   |
| 24170406                   | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20 | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  | 2.40   |
| 24170407                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.85      | 0.00 | 0.75  | 0.60  | 0.90  | 0.40  | 0.00  | 7.16   |
| 12300004                   | 0.70      | 0.70      | 0.00      | 0.00      | 0.70      | 0.00      | 0.00 | 0.00  | 0.00  | 0.00  | 0.70  | 0.70  | 3.50   |
| 24170501                   | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20 | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  | 2.40   |
| 24170502                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.00      | 0.00 | 0.60  | 0.60  | 0.90  | 0.00  | 0.00  | 5.76   |
| 24170508                   | 1.76      | 0.77      | 0.77      | 0.77      | 0.77      | 0.77      | 0.77 | 0.77  | 0.77  | 0.00  | 0.00  | 0.00  | 7.92   |
| 24170505                   | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20 | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  | 2.40   |
| 24170503                   | 0.70      | 0.70      | 0.00      | 0.00      | 0.70      | 0.00      | 0.00 | 0.00  | 0.00  | 0.00  | 0.70  | 0.70  | 3.50   |
| 24170601                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.00      | 0.00 | 0.60  | 0.60  | 0.90  | 0.00  | 0.00  | 5.76   |
| 24170602                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.85      | 0.00 | 0.75  | 0.60  | 0.90  | 0.40  | 0.00  | 7.16   |
| 24170602                   | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20 | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  | 2.40   |
| 24170608                   | 1.76      | 0.77      | 0.77      | 0.77      | 0.77      | 0.77      | 0.77 | 0.77  | 0.77  | 0.00  | 0.00  | 0.00  | 7.92   |
| 24170603                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.00      | 0.00 | 0.60  | 0.60  | 0.90  | 0.00  | 0.00  | 5.76   |
| 24170708                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.85      | 0.00 | 0.75  | 0.60  | 0.90  | 0.40  | 0.00  | 7.16   |
| 24170710                   | 0.70      | 0.70      | 0.00      | 0.00      | 0.70      | 0.00      | 0.00 | 0.00  | 0.00  | 0.00  | 0.70  | 0.70  | 3.50   |
| 24170702                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.85      | 0.00 | 0.75  | 0.60  | 0.90  | 0.40  | 0.00  | 7.16   |
| 24170703                   | 0.70      | 0.70      | 0.80      | 0.00      | 0.70      | 0.70      | 0.75 | 0.35  | 0.60  | 0.00  | 0.70  | 0.70  | 6.70   |
| 24170707                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.00      | 0.00 | 0.60  | 0.60  | 0.90  | 0.00  | 0.00  | 5.76   |
| 24130801                   | 0.70      | 0.70      | 0.00      | 0.00      | 0.70      | 0.00      | 0.00 | 0.00  | 0.00  | 0.00  | 0.70  | 0.70  | 3.50   |
| 12300008                   | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20      | 0.20 | 0.20  | 0.20  | 0.20  | 0.20  | 0.20  | 2.40   |
| 24170802                   | 0.75      | 0.75      | 0.66      | 0.75      | 0.75      | 0.85      | 0.00 | 0.75  | 0.60  | 0.90  | 0.40  | 0.00  | 7.16   |
| TOTAL PO<br>ATTAINMEN<br>T | 31.1<br>6 | 24.2<br>6 | 19.4<br>3 | 18.9<br>8 | 24.9<br>5 | 16.6<br>0 | #### | 26.61 | 24.99 | 23.58 | 18.36 | 10.55 | 204.14 |
| COUNT                      | 38        | 38        | 32        | 31        | 38        | 26        | 18   | 34    | 34    | 27    | 28    | 19    | 42     |
| AVERAGE<br>ATTAINMEN<br>T  | 0.82      | 0.64      | 0.61      | 0.61      | 0.66      | 0.64      | 0.74 | 0.78  | 0.74  | 0.87  | 0.66  | 0.56  | 4.86   |



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**SWARRNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: ARTIFICIAL INTELLIGENCE**

**YEAR: - 1<sup>ST</sup> - 4<sup>TH</sup> YEAR**

**FINAL DIRECT ATTAINMENT LEVELS FOR PO'S (ALL COURSES)**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.70 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | -    | -    | 0.67 | 0.67 | 1.00 | -    | -    |
| 23000012 | 0.77 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000006 | 0.43 | 0.43 | 0.43 | 0.50 | 0.33 | -    | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000029 | 0.33 | 0.33 | -    | -    | 0.33 | 0.33 | -    | -    | -    | -    | 0.33 | 0.33 |
| 23000010 | 0.73 | 0.87 | 0.53 | 0.60 | 0.60 | -    | -    | -    | -    | -    | -    | -    |
| 23020216 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.67 | -    | -    | -    | -    | 0.67 | 0.50 |
| 24190203 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 24190204 | -    | -    | -    | -    | -    | -    | 0.80 | 0.80 | 0.80 | 0.63 | 0.77 | -    |
| 24190206 | -    | -    | -    | -    | -    | -    | -    | 0.67 | 0.73 | 0.77 | 0.77 | 0.70 |
| 24190207 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.83 | 0.67 | 0.77 | -    |
| 24190208 | -    | -    | -    | -    | -    | -    | -    | 0.83 | 0.77 | 0.60 | 0.67 | -    |
| 24170301 | 0.87 | 0.67 | 0.73 | 0.87 | 0.73 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 | 0.67 |
| 24170302 | 0.93 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.56 | 0.83 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170303 | 0.87 | 0.67 | 0.80 | 0.80 | 0.73 | 0.67 | 0.67 | 0.67 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170304 | 0.87 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.67 | 0.67 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170305 | 0.87 | 0.67 | 0.73 | 0.80 | 0.73 | 0.78 | 0.67 | 0.83 | 0.83 | 0.83 | 0.78 | 0.75 |
| 24170306 | 0.80 | 0.67 | 0.67 | 0.87 | 0.73 | 0.67 | 0.67 | 0.67 | 0.67 | 0.56 | 0.75 | 0.67 |
| 12300003 | 0.60 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.67 | 0.67 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170401 | 0.93 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.56 | 0.83 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170402 | 0.93 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.56 | 0.83 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170403 | 0.93 | 0.67 | 0.73 | 0.80 | 0.73 | 0.67 | 0.56 | 0.83 | 0.67 | 0.56 | 0.75 | 0.67 |
| 24170404 | 0.87 | 0.67 | 0.87 | 0.87 | 0.73 | 0.78 | 0.67 | 0.80 | 0.83 | 0.87 | 0.83 | 0.67 |
| 24170405 | 0.80 | 0.87 | 0.67 | 0.73 | 0.80 | 0.78 | 0.67 | 0.80 | 0.83 | 0.73 | 0.83 | 0.73 |
| 24170406 | 0.67 | 0.73 | 0.67 | 0.73 | 0.73 | 0.78 | 0.67 | 0.83 | 0.83 | 0.83 | 0.78 | 0.75 |
| 24170407 | 0.73 | 0.73 | 0.73 | 0.87 | 0.67 | 0.67 | 0.67 | 0.83 | 0.83 | 0.73 | 0.67 | 0.80 |



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|-----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 12300004                                      | 0.80  | 0.73  | 0.73  | 0.87  | 0.67  | 0.67  | 0.67  | 0.83  | 0.83  | 0.73  | 0.67  | 0.80   |
| 24170501                                      | 0.87  | 0.67  | 0.73  | 0.87  | 0.73  | 0.67  | 0.67  | 0.67  | 0.67  | 0.67  | 0.67  | 0.67   |
| 24170502                                      | 0.93  | 0.67  | 0.73  | 0.80  | 0.73  | 0.67  | 0.56  | 0.83  | 0.67  | 0.56  | 0.75  | 0.67   |
| 24170508                                      | 0.87  | 0.67  | 0.73  | 0.80  | 0.73  | 0.83  | 0.56  | 0.73  | 0.67  | 0.78  | 0.78  | 0.67   |
| 24170505                                      | 0.72  | 0.61  | 0.78  | 0.83  | 0.67  | 0.67  | 0.56  | 0.83  | 0.67  | 0.56  | 0.75  | 0.67   |
| 24170503                                      | 0.87  | 0.67  | 0.73  | 0.80  | 0.73  | 0.83  | 0.56  | 0.73  | 0.67  | 0.78  | 0.78  | 0.67   |
| 24170601                                      | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.75  | 0.56  | 0.67  | 0.78  | 0.67  | 0.67  | 0.67   |
| 24170602                                      | 0.80  | 0.67  | 0.67  | 0.87  | 0.73  | 0.67  | 0.67  | 0.67  | 0.67  | 0.56  | 0.75  | 0.67   |
| 24170602                                      | 0.87  | 0.67  | 0.80  | 0.80  | 0.73  | 0.67  | 0.67  | 0.67  | 0.67  | 0.56  | 0.75  | 0.67   |
| 24170608                                      | 0.80  | 0.67  | 0.80  | 0.67  | 0.73  | 0.78  | 0.67  | 0.83  | 0.83  | 0.83  | 0.78  | 0.75   |
| 24170603                                      | 0.67  | 0.61  | 0.67  | 0.78  | 0.78  | 0.67  | 0.50  | 0.87  | 0.75  | 0.58  | 0.75  | 0.67   |
| 24170708                                      | 0.87  | 0.67  | 0.73  | 0.80  | 0.73  | 0.78  | 0.67  | 0.83  | 0.83  | 0.83  | 0.78  | 0.75   |
| 24170710                                      | 0.87  | 0.67  | 0.73  | 0.80  | 0.73  | 0.67  | 0.56  | 0.73  | 0.75  | 0.56  | 0.75  | 0.67   |
| 24170702                                      | 0.87  | 0.80  | 0.73  | 0.80  | 0.73  | 0.67  | 0.56  | 0.73  | 0.75  | 0.56  | 0.75  | 0.67   |
| 24170703                                      | 0.87  | 0.67  | 0.73  | 0.80  | 0.73  | 0.78  | 0.67  | 0.83  | 0.83  | 1.12  | 0.69  | 0.00   |
| 24170707                                      | 0.87  | 0.67  | 0.73  | 0.80  | 0.73  | 0.78  | 0.67  | 0.83  | 0.83  | 1.12  | 0.69  | 0.00   |
| 24130801                                      | -     | -     | -     | -     | -     | 0.78  | -     | 0.83  | 0.83  | 0.78  | 0.67  | 0.77   |
| 12300008                                      | -     | -     | -     | -     | -     | 0.78  | 0.75  | 0.75  | 0.67  | 0.67  | 0.67  | 0.71   |
| 24170802                                      | -     | -     | -     | -     | -     | 0.67  | 0.67  | 0.67  | 0.67  | 0.67  | 0.67  | 0.67   |
| SUM OF PO                                     | 29.45 | 24.39 | 25.34 | 27.81 | 25.34 | 25.53 | 23.58 | 31.72 | 30.60 | 28.63 | 29.27 | 24.02  |
| COUNT OF PO                                   | 38    | 38    | 37    | 37    | 38    | 38    | 38    | 43    | 43    | 42    | 42    | 37     |
| DIRECT TARGET (AVG)                           | 0.775 | 0.642 | 0.685 | 0.75  | 0.67  | -     | -     | -     | -     | 0.682 | 0.697 | 0.649  |
| ATTAINMENT OF PO DIRECT (Average value found) | 0.34  | 0.44  | 0.61  | 0.51  | 0.37  | -     | -     | -     | 0.28  | 0.28  | 0.46  | 0.3214 |
| 80% OF DIRECT ATT                             | 0.27  | 0.35  | 0.49  | 0.41  | 0.29  | -     | -     | -     | 0.23  | 0.23  | 0.36  | 0.26   |
| 20% OF INDIRECT ATTAINMENT                    | 0.547 | 0.530 | 0.524 | 0.528 | 0.530 | 0.525 | 0.529 | 0.532 | 0.547 | 0.527 | 0.513 | 0.480  |
| TOTAL                                         | 0.82  | 0.88  | 1.01  | 0.94  | 0.82  | 2.66  | 2.00  | 2.66  | 0.77  | 0.75  | 0.88  | 0.74   |



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**PROGRAM NAME: CTIS**

**ACADEMIC YEAR: 2023-2024**

**YEAR: - 1ST - 4TH/FINAL YEAR**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**CO PO MATRIX ALL COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | OVERALL<br>CO AVG |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------|
| 23000001 | 1.93 | 1.87 | 1.91 | 1.87 | 1.82 | 1.8  | 1.82 | 1.8  | 1.76 | 1.84 | 1.87 | 1.78 | 1.84              |
| 23000004 | 2.5  | 2.5  | 2.2  | 2.5  | 2.5  | 2.5  | 2.2  | 2.5  | 2.5  | 2.2  | 2.5  | 1.5  | 2.34              |
| 23000012 | 2.3  | 1    | 2.2  | 2.5  | 2.5  | 2.5  | 2.2  | 2.5  | 2.5  | 2.2  | 2.5  | 1.8  | 2.2               |
| 23000003 | 2.6  | 2.2  | 2.6  | 2.6  | 2.2  | 2.6  | 2.6  | 2.4  | 2.4  | 2.4  | 2.3  | 2    | 2.41              |
| 12300001 | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1    | 1                 |
| 23000010 | 2.2  | 2.6  | 1.6  | 1.8  | 1.8  | 1.5  | 2.6  | 1.6  | 1.8  | 1.8  | 1.8  | 1.5  | 1.9               |
| 23020216 | 1    | 2.2  | 2    | 2    | 1.75 | 1.5  | 2.5  | 2    | 2    | 1.67 | 2    | 1.5  | 1.8               |
| 24190203 | 1    | 2.2  | 2    | 2    | 1.75 | 1.5  | 2.5  | 2    | 2    | 2.4  | 1.5  | 1    | 1.93              |
| 24190204 | 2.33 | 2.33 | 2.33 | 1.67 | 2.33 | 1.5  | 2.33 | 2.33 | 2.33 | 1.67 | 2.33 | 1    | 2.04              |
| 24190205 | 1.8  | 1.6  | 1.8  | 2.2  | 2    | 2.2  | 2    | 1.8  | 1.6  | 1.8  | 2.2  | 2    | 1.92              |
| 24190206 | 2    | 2.17 | 2.33 | 2.33 | 2.05 | 2    | 2.17 | 2    | 2.17 | 2.33 | 2.33 | 2.05 | 1.9               |
| 24190207 | 2.5  | 2.5  | 2    | 2.25 | 2.5  | 2    | 2.25 | 2.5  | 2.5  | 2    | 2.25 | 2.25 | 2.3               |
| 24130301 | 2.33 | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130302 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130303 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130304 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130305 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130306 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130401 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130402 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130403 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130404 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130405 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130406 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130407 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130501 | 2.6  | 2.6  | 2.8  | 1.8  | 2.5  | 2    | 2.33 | 1    | 2    | 2    | 1.5  | 1.75 | 2.34              |
| 24130502 | 2.2  | 2.0  | 1.4  | 2.0  | 2.4  | 2.0  | 2.3  | 1.0  | 2.0  | 2.0  | 1.5  | 1.8  | 1.93              |
| 24130503 | 2.2  | 2.0  | 1.4  | 2.0  | 2.4  | 2.0  | 2.3  | 1.0  | 2.0  | 2.0  | 1.8  | 1.8  | 1.93              |
| 24130505 | 2.2  | 2.0  | 1.4  | 2.0  | 2.4  | 2.0  | 2.3  | 1.0  | 2.0  | 2.0  | 1.8  | 1.8  | 1.9               |
| 24130506 | 2.27 | 2.3  | 2.32 | 1.93 | 2.29 | 1.95 | 2.27 | 1.43 | 2.02 | 1.98 | 1.74 | 1.69 | 2.08              |
| 24130508 | 2.29 | 2.18 | 1.86 | 1.95 | 2.4  | 1.99 | 2.32 | 1.09 | 2    | 2    | 1.65 | 1.74 | 2.01              |
| 24130601 | 2.23 | 2.1  | 1.68 | 1.98 | 2.38 | 1.99 | 2.32 | 1.1  | 2    | 2    | 1.68 | 1.74 | 1.98              |



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|----------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| 24130602       | 2.24       | 2.12       | 1.73       | 1.97       | 2.37       | 1.99       | 2.31       | 1.12       | 2          | 2          | 1.71       | 1.73       | 1.99       |
| 24130603       | 2.25       | 2.14       | 1.8        | 1.97       | 2.37       | 1.98       | 2.31       | 1.15       | 2          | 2          | 1.71       | 1.73       | 2          |
| 24130607       | 2.26       | 2.17       | 1.88       | 1.96       | 2.36       | 1.98       | 2.31       | 1.18       | 2          | 2          | 1.7        | 1.73       | 2.01       |
| 24130608       | 2.25       | 2.14       | 1.79       | 1.97       | 2.38       | 1.99       | 2.31       | 1.13       | 2          | 2          | 1.69       | 1.73       | 2          |
| 24130707       | 2.25       | 2.13       | 1.78       | 1.97       | 2.37       | 1.99       | 2.31       | 1.14       | 2          | 2          | 1.7        | 1.73       | 1.99       |
| 24130706       | 2.25       | 2.14       | 1.8        | 1.97       | 2.37       | 1.99       | 2.31       | 1.14       | 2          | 2          | 1.7        | 1.73       | 2          |
| 24130704       | 2.25       | 2.14       | 1.81       | 1.97       | 2.37       | 1.99       | 2.31       | 1.15       | 2          | 2          | 1.7        | 1.73       | 2          |
| 24130710       | 2.25       | 2.14       | 1.81       | 1.97       | 2.37       | 1.99       | 2.31       | 1.15       | 2          | 2          | 1.7        | 1.73       | 2          |
| 24130801       | 2.67       | 2.67       | 2.83       | 1.83       | 2.5        | 2          | 2.33       | 1          | 2.33       | 2.33       | 2.5        | 2          | 2.25       |
| 24130802       | 2.67       | 2.67       | 2.83       | 1.83       | 2.5        | 2          | 2.33       | 1          | 2.33       | 2.33       | 1.83       | 2.5        | 2.25       |
| 12300008       | 2.67       | 2.67       | 2.83       | 1.83       | 2.5        | 2          | 2.33       | 1          | 2.33       | 2.33       | 1.83       | 2.5        | 2.25       |
| <b>AVERAGE</b> | <b>2.3</b> | <b>2.2</b> | <b>1.8</b> | <b>2.0</b> | <b>2.4</b> | <b>2.0</b> | <b>2.3</b> | <b>1.1</b> | <b>2.0</b> | <b>2.0</b> | <b>1.7</b> | <b>1.7</b> | <b>2.0</b> |



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**PROGRAM NAME: CTIS**

**ACADEMIC YEAR: 2023-2024**

**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24**

| target level                                        | internal marks | target level | external |          | target level |     |          | CEC          |              |        |
|-----------------------------------------------------|----------------|--------------|----------|----------|--------------|-----|----------|--------------|--------------|--------|
| 1                                                   | ≤18            | 1            | ≤42      |          | 1            |     |          | ≤30          |              |        |
| 2                                                   | 19 to 24       | 2            | 43 to 56 |          | 2            |     |          | 31 to 40     |              |        |
| 3                                                   | ≥26            | 3            | ≥57      |          | 3            |     |          | ≥41          |              |        |
| Course Name                                         | Course Code    | Marks        |          |          | Level        |     |          | 30% Internal | 70% External | Target |
|                                                     |                | Mid sem      | CEC      | External | Mid sem      | CEC | External |              |              |        |
| I SEM                                               |                |              |          |          |              |     |          |              |              |        |
| Maths-I                                             | 23000001       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Fundamentals of Computer Programming                | 23000004       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Electrical Engineering                  | 23000012       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Mechanical Engineering                  | 23000003       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Orientation Program in Startuo and Entrepreneurship | 12300001       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| II SEM                                              |                |              |          |          |              |     |          |              |              |        |
| MATHS-II                                            | 23000010       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| CHEMISTRY                                           | 23020216       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Personality Development                             | 24190203       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Web Technology                                      | 24190204       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Introduction to Cloud Technology                    | 24190205       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Engineering Graphics & Design                       | 24190206       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Mentoring and Counselling                           | 24190207       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| III SEM                                             |                |              |          |          |              |     |          |              |              |        |
| Discrete Mathematics                                | 24130301       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Computer Organization and Architecture              | 24130302       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Operating Systems                                   | 24130303       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Data Structures and Algorithm                       | 24130304       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Object Oriented Programming using Java              | 24130305       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |
| Introduction to Information Security                | 24130306       | 18           | 30       | 42       | 1            | 1   | 1        | 0.3          | 0.7          | 1      |



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| IV SEM                                     |          |    |    |    |   |   |   |     |     |   |
|--------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Soft skills and Aptitude - I               | 24130401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Linux Administration                       | 24130402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Database Management Systems                | 24130403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Software Engineering                       | 24130404 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Python Programming                         | 24130405 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Computer Networks                          | 24130406 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Cryptography Fundamentals                  | 24130407 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| V SEM                                      |          |    |    |    |   |   |   |     |     |   |
| Soft skills and Aptitude-II                | 24130501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Design and Analysis of Algorithms          | 24130502 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Ethical Hacking                            | 24130503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Introduction to Cryptocurrency and Bitcoin | 24130505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Principles of Virtualization               | 24130506 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Network Security                           | 24130508 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VI SEM                                     |          |    |    |    |   |   |   |     |     |   |
| Personality Development Lab                | 24130601 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Cloud web services                         | 24130602 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Digital Forensic Investigation             | 24130603 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Linux Security and Forensics               | 24130607 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Storage and Data Centre                    | 24130608 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VII SEM                                    |          |    |    |    |   |   |   |     |     |   |
| Machine Learning                           | 24130707 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Block Chain                                | 24130706 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| IT Governance and Risk Management          | 24130704 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Environmental Science                      | 24130710 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VIII SEM                                   |          |    |    |    |   |   |   |     |     |   |
| Industrial Training/Major Project ( PT)    | 24130801 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Technical Seminar                          | 24130802 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Start-Up Project Part-II                   | 12300008 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |



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**SWARNNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: CTIS**

**ACADEMIC YEAR: 2023-2024**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set:                                         |             |      |                          |                                                                                     |                                  |                  |                |                           |   |
|-----------------------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|---------------------------|---|
| Level 1                                             |             |      |                          |                                                                                     | 55-64                            |                  |                |                           |   |
| Level 2                                             |             |      |                          |                                                                                     | 65-74                            |                  |                |                           |   |
| Level 3                                             |             |      |                          |                                                                                     | ≥75                              |                  |                |                           |   |
| Course                                              | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score | Course Outcome attainment |   |
| I SEMESTER OF ACEDEMIC YEAR 2023-24                 |             |      |                          |                                                                                     |                                  |                  |                |                           |   |
| Maths-I                                             | 23000001    | INT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | CEC  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
| Fundamentals of Computer Programming                | 23000004    | INT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | CEC  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
| Elements of Electrical Engineering                  | 23000012    | INT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | CEC  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
| Elements of Mechanical Engineering                  | 23000003    | INT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | CEC  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
| Orientation Program in Startuo and Entrepreneurship | 12300001    | INT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |
|                                                     |             | EXT  | -                        | -                                                                                   | -                                | -                | -              | -                         | - |



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| II SEMESTER OF ACEDEMIC YEAR 2023-24   |          |     |   |   |        |   |   |     |     |
|----------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| MATHS-II                               | 23000010 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| CHEMISTRY                              | 23020216 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| Personality Development                | 24190203 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| Web Technology                         | 24190204 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| Introduction to Cloud Technology       | 24190205 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| Engineering Graphics & Design          | 24190206 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| Mentoring and Counselling              | 24190207 | INT | - | - | -      | - | - | -   | -   |
|                                        |          | CEC | - | - | -      | - | - | -   | -   |
|                                        |          | EXT | - | - | -      | - | - | -   | -   |
| III SEMESTER OF ACEDEMIC YEAR 2023-24  |          |     |   |   |        |   |   |     |     |
| Discrete Mathematics                   | 24130301 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                        |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Computer Organization and Architecture | 24130302 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                        |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Operating Systems                      | 24130303 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 2   |
|                                        |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Data Structures and Algorithm          | 24130304 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                        |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Object Oriented Programming using Java | 24130305 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                        |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Introduction to Information Security   | 24130306 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 2   |
|                                        |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                        |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |



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| IV SEMESTER OF ACEDEMIC YEAR 2023-24       |          |     |   |   |        |   |   |     |     |
|--------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
| Soft skills and Aptitude-I                 | 24130401 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Linux Administration                       | 24130402 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 2   |
|                                            |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   | 1.4 |     |
| Database Management Systems                | 24130403 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                            |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Software Engineering                       | 24130404 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                            |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Python Programming                         | 24130405 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                            |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Computer Networks                          | 24130406 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                            |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| Cryptography Fundamentals                  | 24130407 | INT | 2 | 2 | 100.00 | 2 | 2 | 0.6 | 0.6 |
|                                            |          | CEC | 2 | 2 | 100.00 | 2 |   |     |     |
|                                            |          | EXT | 2 | 2 | 100.00 | 2 |   |     |     |
| V SEMESTER OF ACEDEMIC YEAR 2023-24        |          |     |   |   |        |   |   |     |     |
| Soft skills and Aptitude-II                | 24130501 | INT | 3 | 2 | 66.67  | 0 | 3 | 0.9 | 0.9 |
|                                            |          | EXT | 3 | 2 | 66.67  | 0 |   |     |     |
| Design and Analysis of Algorithms          | 24130502 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                            |          | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                            |          | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |
| Ethical Hacking                            | 24130503 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                            |          | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                            |          | EXT | 3 | 2 | 66.67  | 0 |   |     |     |
| Introduction to Cryptocurrency and Bitcoin | 24130505 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                            |          | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                            |          | EXT | 3 | 3 | 100.00 | 3 |   |     |     |
| Principles of Virtualization               | 24130506 | INT | 3 | 3 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                            |          | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                            |          | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |
| Network Security                           | 24130508 | INT | 3 | 3 | 100.00 | 3 | 2 | 0.6 | 2.7 |
|                                            |          | CEC | 3 | 3 | 100.00 | 3 |   |     |     |
|                                            |          | EXT | 3 | 3 | 100.00 | 3 |   | 2.1 |     |





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| VI SEMESTER OF ACEDMIC YEAR 2023-24     |          |     |   |   |        |   |     |      |      |
|-----------------------------------------|----------|-----|---|---|--------|---|-----|------|------|
| Personality Development Lab             | 24130601 | INT | 4 | 4 | 100.00 | 3 |     | 0.9  | 3    |
|                                         |          | EXT | 4 | 4 | 100.00 | 3 |     | 2.1  |      |
| Cloud web services                      | 24130602 | INT | 4 | 4 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                         |          | CEC | 4 | 4 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 4 | 4 | 100.00 | 3 |     | 2.1  |      |
| Digital Forensic Investigation          | 24130603 | INT | 4 | 4 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                         |          | CEC | 4 | 4 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 4 | 4 | 100.00 | 3 |     | 2.1  |      |
| Linux Security and Forensics            | 24130607 | INT | 4 | 4 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                         |          | CEC | 4 | 4 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 4 | 4 | 100.00 | 3 |     | 2.1  |      |
| Storage and Data Centre                 | 24130608 | INT | 4 | 4 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                         |          | CEC | 4 | 4 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 4 | 4 | 100.00 | 3 |     | 2.1  |      |
| VII SEMESTER OF ACEDMIC YEAR 2023-24    |          |     |   |   |        |   |     |      |      |
| IT Governance and Risk Management       | 24130704 | INT | 3 | 3 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                         |          | CEC | 3 | 3 | 100.00 | 3 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |
| Block Chain                             | 24130706 | INT | 3 | 3 | 100.00 | 3 | 1.5 | 0.45 | 2.55 |
|                                         |          | CEC | 3 | 2 | 66.67  | 0 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |
| Machine Learning                        | 24130707 | INT | 3 | 3 | 100.00 | 3 | 1.5 | 0.45 | 2.55 |
|                                         |          | CEC | 3 | 2 | 66.67  | 0 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |
| Environmental Science                   | 24130710 | INT | 3 | 3 | 100.00 | 3 | 2   | 0.45 | 2.55 |
|                                         |          | CEC | 3 | 2 | 66.67  | 0 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |
| VIII SEMESTER OF ACEDMIC YEAR 2023-24   |          |     |   |   |        |   |     |      |      |
| Industrial Training/Major Project ( PT) | 24130801 | INT | 3 | 3 | 100.00 | 3 | 2   | 0.45 | 2.55 |
|                                         |          | CEC | 3 | 2 | 66.67  | 0 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |
| Technical Seminar                       | 24130802 | INT | 3 | 3 | 100.00 | 3 | 2   | 0.45 | 2.55 |
|                                         |          | CEC | 3 | 2 | 66.67  | 0 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |
| Start-Up Project Part-II                | 12300008 | INT | 3 | 3 | 100.00 | 3 | 2   | 0.45 | 2.55 |
|                                         |          | CEC | 3 | 2 | 66.67  | 0 |     |      |      |
|                                         |          | EXT | 3 | 3 | 100.00 | 3 |     | 2.1  |      |



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**SWARRNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: CTIS**

**ACADEMIC YEAR: 2023-2024**

**FINAL DIRECT ATTAINMENT LEVELS FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000004 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000012 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 12300001 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000010 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 23020216 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24190203 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24190204 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24190205 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24190206 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24190207 | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
| 24130301 | 0.16 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130302 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130303 | 0.58 | 0.58 | 0.62 | 0.40 | 0.56 | 0.44 | 0.52 | 0.22 | 0.44 | 0.44 | 0.33 | 0.39 |
| 24130304 | 0.16 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130305 | 0.16 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130306 | 0.58 | 0.58 | 0.62 | 0.40 | 0.56 | 0.44 | 0.52 | 0.22 | 0.44 | 0.44 | 0.33 | 0.39 |
| 24130401 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130402 | 0.58 | 0.58 | 0.62 | 0.40 | 0.56 | 0.44 | 0.52 | 0.22 | 0.44 | 0.44 | 0.33 | 0.39 |
| 24130403 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130404 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130405 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130406 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130407 | 0.17 | 0.17 | 0.19 | 0.12 | 0.17 | 0.13 | 0.16 | 0.07 | 0.13 | 0.13 | 0.10 | 0.12 |
| 24130501 | 0.26 | 0.26 | 0.28 | 0.18 | 0.25 | 0.20 | 0.23 | 0.10 | 0.20 | 0.20 | 0.20 |      |
| 24130502 | 0.73 | 0.67 | 0.47 | 0.67 | 0.80 | 0.67 | 0.77 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |



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|--------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| 24130503                       | 0.22        | 0.20        | 0.14        | 0.20        | 0.24        | 0.20        | 0.23        | 0.10        | 0.20        | 0.20        | 0.18        | 0.18        |
| 24130505                       | 0.18        | 0.15        | 0.07        | 0.15        | 0.21        | 0.15        | 0.20        | 0.04        | 0.15        | 0.15        | 0.11        | 0.11        |
| 24130506                       | 0.73        | 0.67        | 0.47        | 0.67        | 0.80        | 0.67        | 0.78        | 0.33        | 0.66        | 0.66        | 0.50        | 0.58        |
| 24130508                       | 0.66        | 0.60        | 0.42        | 0.60        | 0.72        | 0.60        | 0.69        | 0.30        | 0.60        | 0.60        | 0.45        | 0.53        |
| 24130601                       | 0.73        | 0.67        | 0.47        | 0.67        | 0.80        | 0.67        | 0.77        | 0.33        | 0.67        | 0.67        | 0.58        | 0.58        |
| 24130602                       | 0.64        | 0.59        | 0.44        | 0.56        | 0.68        | 0.57        | 0.66        | 0.28        | 0.57        | 0.57        | 0.49        | 0.50        |
| 24130603                       | 0.11        | 0.10        | 0.08        | 0.10        | 0.12        | 0.10        | 0.12        | 0.05        | 0.10        | 0.10        | 0.09        | 0.09        |
| 24130607                       | 0.23        | 0.21        | 0.16        | 0.20        | 0.24        | 0.20        | 0.23        | 0.10        | 0.20        | 0.20        | 0.17        | 0.17        |
| 24130608                       | 0.64        | 0.59        | 0.46        | 0.56        | 0.69        | 0.57        | 0.66        | 0.28        | 0.57        | 0.57        | 0.49        | 0.49        |
| 24130707                       | 0.75        | 0.69        | 0.53        | 0.66        | 0.81        | 0.67        | 0.78        | 0.33        | 0.67        | 0.67        | 0.58        | 0.58        |
| 24130706                       | 0.64        | 0.59        | 0.45        | 0.56        | 0.69        | 0.57        | 0.66        | 0.28        | 0.57        | 0.57        | 0.49        | 0.49        |
| 24130704                       | 0.64        | 0.59        | 0.45        | 0.56        | 0.69        | 0.57        | 0.66        | 0.28        | 0.57        | 0.57        | 0.49        | 0.49        |
| 24130710                       | 0.64        | 0.59        | 0.45        | 0.56        | 0.69        | 0.57        | 0.66        | 0.28        | 0.57        | 0.57        | 0.49        | 0.49        |
| 24130801                       | 0.64        | 0.59        | 0.45        | 0.56        | 0.69        | 0.57        | 0.66        | 0.28        | 0.57        | 0.57        | 0.49        | 0.49        |
| 24130802                       | 0.76        | 0.76        | 0.80        | 0.52        | 0.71        | 0.57        | 0.66        | 0.28        | 0.66        | 0.66        | 0.52        | 0.71        |
| 12300008                       | 0.76        | 0.76        | 0.80        | 0.52        | 0.71        | 0.57        | 0.66        | 0.28        | 0.66        | 0.66        | 0.52        | 0.71        |
| <b>TOTAL PO<br/>ATTAINMENT</b> | <b>7.81</b> | <b>7.17</b> | <b>5.35</b> | <b>6.87</b> | <b>8.42</b> | <b>6.96</b> | <b>8.10</b> | <b>3.43</b> | <b>6.95</b> | <b>6.95</b> | <b>5.82</b> | <b>5.88</b> |
| <b>COUNT</b>                   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>15</b>   | <b>14</b>   |
| <b>AVERAGE<br/>ATTAINMENT</b>  | <b>0.52</b> | <b>0.48</b> | <b>0.36</b> | <b>0.46</b> | <b>0.56</b> | <b>0.46</b> | <b>0.54</b> | <b>0.23</b> | <b>0.46</b> | <b>0.46</b> | <b>0.39</b> | <b>0.42</b> |



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**PROGRAM NAME: CTIS**

**ACADEMIC YEAR: 2023-2024**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.64 | 0.62 | 0.64 | 0.62 | 0.61 | 0.60 | 0.61 | 0.60 | 0.59 | 0.61 | 0.62 | 0.59 |
| 23000004 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | 0.73 | 0.83 | 0.50 |
| 23000012 | 0.77 | 0.33 | 0.73 | 0.83 | 0.83 | 0.83 | 0.73 | 0.83 | 0.83 | 0.73 | 0.83 | 0.60 |
| 23000003 | 0.87 | 0.73 | 0.87 | 0.87 | 0.73 | 0.87 | 0.87 | 0.80 | 0.80 | 0.80 | 0.77 | 0.67 |
| 12300001 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 | 0.33 |
| 23000010 | 0.73 | 0.87 | 0.53 | 0.60 | 0.60 | 0.50 | 0.87 | 0.53 | 0.60 | 0.60 | 0.60 | 0.50 |
| 23020216 | 0.33 | 0.73 | 0.67 | 0.67 | 0.58 | 0.50 | 0.83 | 0.67 | 0.67 | 0.56 | 0.67 | 0.50 |
| 24190203 | 0.33 | 0.73 | 0.67 | 0.67 | 0.58 | 0.50 | 0.83 | 0.67 | 0.67 | 0.80 | 0.50 | 0.33 |
| 24190204 | 0.78 | 0.78 | 0.78 | 0.56 | 0.78 | 0.50 | 0.78 | 0.78 | 0.78 | 0.56 | 0.78 | 0.33 |
| 24190205 | 0.60 | 0.53 | 0.60 | 0.73 | 0.67 | 0.73 | 0.67 | 0.60 | 0.53 | 0.60 | 0.73 | 0.67 |
| 24190206 | 0.67 | 0.72 | 0.78 | 0.78 | 0.68 | 0.67 | 0.72 | 0.67 | 0.72 | 0.78 | 0.78 | 0.68 |
| 24190207 | 0.83 | 0.83 | 0.67 | 0.75 | 0.83 | 0.67 | 0.75 | 0.83 | 0.83 | 0.67 | 0.75 | 0.75 |
| 24130301 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130302 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130303 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130304 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130305 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130306 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130401 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130402 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130403 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130404 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130405 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130406 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130407 | 0.78 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130501 | 0.87 | 0.87 | 0.93 | 0.60 | 0.83 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.67 | —    |
| 24130502 | 0.73 | 0.67 | 0.47 | 0.67 | 0.80 | 0.67 | 0.77 | 0.33 | 0.67 | 0.67 | 0.50 | 0.58 |
| 24130503 | 0.73 | 0.67 | 0.47 | 0.67 | 0.80 | 0.67 | 0.77 | 0.33 | 0.67 | 0.67 | 0.58 | 0.58 |
| 24130505 | 0.73 | 0.67 | 0.47 | 0.67 | 0.80 | 0.67 | 0.78 | 0.33 | 0.67 | 0.67 | 0.58 | 0.58 |
| 24130506 | 0.73 | 0.67 | 0.47 | 0.67 | 0.80 | 0.67 | 0.78 | 0.33 | 0.66 | 0.66 | 0.50 | 0.58 |



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|-----------------------------------------------|-------|-------|------|------|-------|-------|-------|------|-------|-------|------|------|
| 24130508                                      | 0.73  | 0.67  | 0.47 | 0.67 | 0.80  | 0.67  | 0.77  | 0.33 | 0.67  | 0.67  | 0.50 | 0.58 |
| 24130601                                      | 0.73  | 0.67  | 0.47 | 0.67 | 0.80  | 0.67  | 0.77  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130602                                      | 0.75  | 0.69  | 0.52 | 0.66 | 0.80  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130603                                      | 0.75  | 0.70  | 0.53 | 0.66 | 0.81  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130607                                      | 0.76  | 0.70  | 0.55 | 0.66 | 0.81  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130608                                      | 0.75  | 0.70  | 0.54 | 0.66 | 0.81  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130707                                      | 0.75  | 0.69  | 0.53 | 0.66 | 0.8   | 0.7   | 0.8   | 0.3  | 0.7   | 0.7   | 0.6  | 0.6  |
| 24130706                                      | 0.75  | 0.70  | 0.53 | 0.66 | 0.81  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130704                                      | 0.75  | 0.70  | 0.53 | 0.66 | 0.81  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130710                                      | 0.75  | 0.70  | 0.53 | 0.66 | 0.81  | 0.67  | 0.78  | 0.33 | 0.67  | 0.67  | 0.58 | 0.58 |
| 24130801                                      | 0.89  | 0.89  | 0.94 | 0.61 | 0.83  | 0.67  | 0.78  | 0.33 | 0.78  | 0.78  | 0.83 | 0.67 |
| 24130802                                      | 0.89  | 0.89  | 0.94 | 0.61 | 0.83  | 0.67  | 0.78  | 0.33 | 0.78  | 0.78  | 0.61 | 0.83 |
| 12300008                                      | 0.89  | 0.89  | 0.94 | 0.61 | 0.83  | 0.67  | 0.78  | 0.33 | 0.78  | 0.78  | 0.61 | 0.83 |
| SUM OF PO                                     | 11.29 | 10.43 | 8.01 | 9.86 | 12.08 | 10.01 | 11.62 | 4.99 | 10.00 | 10.00 | 8.55 | 8.15 |
| COUNT OF PO                                   | 15    | 15    | 15   | 15   | 15    | 15    | 15    | 15   | 15    | 15    | 15   | 14   |
| DIRECT TARGET (AVG)                           | 0.75  | 0.70  | 0.53 | 0.66 | 0.81  | 0.67  | 0.77  | 0.33 | 0.67  | 0.67  | 0.57 | 0.58 |
| ATTAINMENT OF PO DIRECT (Average value found) | 0.52  | 0.48  | 0.36 | 0.46 | 0.56  | 0.46  | 0.54  | 0.23 | 0.46  | 0.46  | 0.39 | 0.42 |
| 80% OF DIRECT ATT                             | 0.42  | 0.38  | 0.29 | 0.37 | 0.45  | -     | -     | -    | 0.37  | 0.37  | 0.31 | 0.34 |
| 20% OF INDIRECT ATTAINMENT                    | 0.50  | 0.45  | 0.56 | 0.54 | 0.56  | 0.44  | 0.59  | 0.50 | 0.57  | 0.49  | 0.57 | 0.58 |
| TOTAL                                         | 0.92  | 0.83  | 0.85 | 0.91 | 1.01  | 2.66  | 2.00  | 2.66 | 0.94  | 0.86  | 0.88 | 0.92 |



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STARTUP & INNOVATION  
UNIVERSITY  
WHERE IDEAS COME ALIVE

**SWARRNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: CYBER SECURITY**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**THIS DATA IS COMPILED FROM CRITERIA 1.1.1**

**CO PO MATRIX ALL COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | OVERALL<br>CO AVG |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|-------------------|
| 26050101 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.20 | 2.20 | 1.60 | 1.60 | 1.50 | 2.50 | 2.03              |
| 26050102 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.20 | 2.20 | 1.60 | 1.60 | 1.50 | 2.50 | 2.03              |
| 26050103 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.00 | 3.00 | 2.00 | 1.25 | 2.80 | 1.33 | 1.33 | 2.07              |
| 26050104 | 2.40 | 1.80 | 1.80 | 2.40 | 2.20 | 1.00 | 1.00 | 1.00 | 1.50 | 2.80 | 1.25 | 1.00 | 1.89              |
| 26010001 | 2.40 | 2.20 | 1.80 | 1.80 | 2.00 | 1.00 | 2.00 | 2.00 | 1.25 | 2.80 | 1.50 | 1.33 | 1.92              |
| 26300201 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.25 | 1.80 | 2.00 | 2.60 | 2.00 | 2.33 | 2.67 | 2.25              |
| 26300202 | 1.80 | 2.00 | 2.20 | 2.60 | 2.00 | 1.60 | 2.00 | 2.25 | 1.50 | 1.60 | 1.50 | 2.50 | 1.94              |
| 26300203 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.50 | 2.50 | 2.67 | 1.50 | 2.50 | 2.00 | 2.33 | 2.16              |
| 26300204 | 2.40 | 1.80 | 1.80 | 2.20 | 2.40 | 2.25 | 1.67 | 1.00 | 1.50 | 2.80 | 1.40 | 1.20 | 1.92              |
| 26300206 | 2.40 | 2.40 | 2.20 | 2.20 | 2.20 | 1.67 | 2.00 | 2.00 | 1.25 | 2.80 | 1.67 | 1.25 | 2.03              |
| 24060301 | 2.60 | 2.60 | 2.20 | 1.80 | 2.00 | 1.00 | 2.00 | 1.00 | 2.67 | 2.20 | 2.00 | 2.00 | 2.11              |
| 24000001 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.20 | 2.20 | 2.40 | 2.00 | 2.00 | 3.00 | 2.01              |
| 24000002 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.67 | 2.25 | 2.02              |
| 26060104 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.75 | 1.60 | 2.00 | 2.00 | 2.75 | 1.00 | 1.86              |
| 24000006 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 3.00 | 2.00 | 2.00 | 2.67 | 2.20 | 2.00 | 2.00 | 1.93              |
| 24000004 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.20 | 2.00 | 2.60 | 2.20 | 2.00 | 3.00 | 2.09              |
| 24000005 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.25 | 2.75 | 1.25 | 2.80 | 2.75 | 2.75 | 2.20              |
| AVERAGE  | 1.78 | 1.69 | 1.68 | 1.86 | 1.79 | 1.75 | 2.10 | 1.93 | 1.85 | 2.29 | 1.83 | 2.04 | 2.03              |



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**SWARNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: CYBER SECURITY**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

| Target level | Internal marks | Target level | External marks | Target level | CEC      |
|--------------|----------------|--------------|----------------|--------------|----------|
| 1            | ≤18            | 1            | ≤42            | 1            | ≤30      |
| 2            | 19 to 24       | 2            | 43 to 56       | 2            | 31 to 40 |
| 3            | ≥25            | 3            | ≥57            | 3            | ≥41      |

| Course Name                 | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|-----------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
|                             |             | Mid Sem | CEC | External | Mid sem | CEC | External |              |              |        |
| 1ST SEM                     |             |         |     |          |         |     |          |              |              |        |
| Digital Forensics           | 26050101    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Cyber Security              | 26050102    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Cloud Computing             | 26050103    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Data Mining and Warehousing | 26050104    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Research Skills             | 26010001    | 18      | 30  | 42       | 1       | 1   | 0        | 0.3          | 0            | 0.3    |
| 2ND SEM                     |             |         |     |          |         |     |          |              |              |        |
| Network Programming         | 26300201    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Ethical Hacking             | 26300202    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Cryptography and Biometrics | 26300203    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Soft Computing              | 26300204    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Software Project Management | 26300206    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| 3RD SEM                     |             |         |     |          |         |     |          |              |              |        |



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|                         |          |    |    |    |   |   |   |     |     |   |
|-------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Cyber Law               | 24060301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Seminar 1               | 24000001 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| Internal Review         | 24000002 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| Dissertation Phase I    | 26060104 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| 4TH SEM                 |          |    |    |    |   |   |   |     |     |   |
| Seminar II              | 24000006 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| External Mid Sem Review | 24000004 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| Dissertation Phase II   | 24000005 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |



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**PROGRAM NAME: CYBER SECURITY**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | Percentage |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                      | Course Code |  | Exam | No. of Students<br>appeared | No. of Students<br>scoring more | % students<br>scoring defined<br>marks | Attainment level | Weighted Score |     | Course Outcome<br>attainment |
|-----------------------------|-------------|--|------|-----------------------------|---------------------------------|----------------------------------------|------------------|----------------|-----|------------------------------|
|                             |             |  |      |                             |                                 |                                        |                  | AVG            |     |                              |
| Digital Forensics           | 26050101    |  | INT  | 2                           | 1                               | 50.00                                  | 3                | 3              | 0.9 | 3                            |
|                             |             |  | CEC  | 2                           | 1                               | 50.00                                  | 3                |                |     |                              |
|                             |             |  | EXT  | 2                           | 1                               | 50.00                                  | 3                | 3              | 2.1 |                              |
| Cyber Security              | 26050102    |  | INT  | 2                           | 1                               | 50.00                                  | 3                | 3              | 0.9 | 3                            |
|                             |             |  | CEC  | 2                           | 1                               | 50.00                                  | 3                |                |     |                              |
|                             |             |  | EXT  | 2                           | 1                               | 50.00                                  | 3                | 0              | 2.1 |                              |
| Cloud Computing             | 26050103    |  | INT  | 2                           | 1                               | 50.00                                  | 3                | 3              | 0.9 | 3                            |
|                             |             |  | CEC  | 2                           | 1                               | 50.00                                  | 3                |                |     |                              |
|                             |             |  | EXT  | 2                           | 1                               | 50.00                                  | 3                | 3              | 2.1 |                              |
| Data Mining and Warehousing | 26050104    |  | INT  | 2                           | 1                               | 50.00                                  | 3                | 0              | 0.6 | 2.7                          |
|                             |             |  | CEC  | 2                           | 1                               | 50.00                                  | 3                |                |     |                              |
|                             |             |  | EXT  | 2                           | 1                               | 50.00                                  | 3                | 3              | 2.1 |                              |
| Research Skills             | 26010001    |  | INT  | 2                           | 1                               | 50.00                                  | 3                | 0              | 0.6 | 0.6                          |
|                             |             |  | CEC  | 2                           | 1                               | 50.00                                  | 3                |                |     |                              |
|                             |             |  | EXT  |                             |                                 |                                        |                  |                |     |                              |



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|-----------------------------|----------|-----|---|---|--------|---|---|-----|---|
| Network Programming         | 26300201 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |   |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |   |
| Ethical Hacking             | 26300202 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |   |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |   |
| Cryptography and Biometrics | 26300203 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |   |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |   |
| Soft Computing              | 26300204 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |   |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |   |
| Software Project Management | 26300206 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |   |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |   |
| Cyber Law                   | 24050301 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |
|                             |          | EXT | 0 | 0 | 0      | 0 | 0 | 0   |   |
| Seminar 1                   | 24000001 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |
| Internal Review             | 24000002 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |
| Dissertation Phase I        | 26060104 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |
| Seminar II                  | 24000006 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |
| External Mid Sem Review     | 24000004 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |
| Dissertation Phase II       | 24000005 | INT | 0 | 0 | 0      | 0 | 0 | 0   | 0 |
|                             |          | CEC | 0 | 0 | 0      | 0 |   |     |   |



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**PROGRAM NAME: CYBER SECURITY**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**ATTAINMENT LEVEL FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 26050101 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.20 | 2.20 | 1.60 | 1.60 | 1.50 | 2.50 |
| 26050102 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.20 | 2.20 | 1.60 | 1.60 | 1.50 | 2.50 |
| 26050103 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.00 | 3.00 | 2.00 | 1.25 | 2.80 | 1.33 | 1.33 |
| 26050104 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.00 | 3.00 | 2.00 | 1.25 | 2.80 | 1.33 | 1.33 |
| 26010001 | 3.20 | 2.00 | 1.82 | 2.22 | 2.02 | 0.50 | 4.09 | 1.82 | 0.98 | 4.90 | 1.19 | 0.71 |
| 26300201 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.25 | 1.80 | 2.00 | 2.60 | 2.00 | 2.33 | 2.67 |
| 26300202 | 1.80 | 2.00 | 2.20 | 2.60 | 2.00 | 1.60 | 2.00 | 2.25 | 1.50 | 1.60 | 1.50 | 2.50 |
| 26300203 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.50 | 2.50 | 2.67 | 1.50 | 2.50 | 2.00 | 2.33 |
| 26300204 | 2.40 | 1.80 | 1.80 | 2.20 | 2.40 | 2.25 | 1.67 | 1.00 | 1.50 | 2.80 | 1.40 | 1.20 |
| 26300206 | 2.40 | 2.40 | 2.20 | 2.20 | 2.20 | 1.67 | 2.00 | 2.00 | 1.25 | 2.80 | 1.67 | 1.25 |
| 24060301 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24000001 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24000002 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26060104 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24000006 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24000004 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 24000005               | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| TOTAL PO<br>ATTAINMENT | 22.40 | 20.20 | 20.62 | 24.22 | 22.42 | 15.77 | 24.46 | 20.13 | 15.03 | 25.40 | 15.75 | 18.33 |
| COUNT                  | 10    | 10    | 10    | 10    | 10    | 10    | 10    | 10    | 10    | 10    | 10    | 10    |
| AVERAGE<br>ATTAINMENT  | 2.24  | 2.02  | 2.06  | 2.42  | 2.24  | 1.58  | 2.45  | 2.01  | 1.50  | 2.54  | 1.58  | 1.83  |



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**PROGRAM NAME: CYBER SECURITY**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT                                       | PO1   | PO2   | PO3   | PO4   | PO5   | PO6   | PO7   | PO8   | PO9   | PO10  | PO11  | PO12  |
|-----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 26050101                                      | 0.67  | 0.73  | 0.87  | 0.80  | 0.67  | 0.73  | 0.73  | 0.53  | 0.53  | 0.50  | 0.83  | 0.68  |
| 26050102                                      | 0.67  | 0.73  | 0.87  | 0.80  | 0.67  | 0.73  | 0.73  | 0.53  | 0.53  | 0.50  | 0.83  | 0.68  |
| 26050103                                      | 0.67  | 0.67  | 0.80  | 0.73  | 0.33  | 1.00  | 0.67  | 0.42  | 0.93  | 0.44  | 0.44  | 0.69  |
| 26050104                                      | 0.60  | 0.60  | 0.80  | 0.73  | 0.33  | 0.33  | 0.33  | 0.50  | 0.93  | 0.42  | 0.33  | 0.63  |
| 26010001                                      | 0.73  | 0.60  | 0.60  | 0.67  | 0.33  | 0.67  | 0.67  | 0.42  | 0.93  | 0.50  | 0.44  | 0.64  |
| 26300201                                      | 0.67  | 0.73  | 0.87  | 0.80  | 0.75  | 0.60  | 0.67  | 0.87  | 0.67  | 0.78  | 0.89  | 0.75  |
| 26300202                                      | 0.67  | 0.73  | 0.87  | 0.67  | 0.53  | 0.67  | 0.75  | 0.50  | 0.53  | 0.50  | 0.83  | 0.65  |
| 26300203                                      | 0.67  | 0.67  | 0.80  | 0.73  | 0.50  | 0.83  | 0.89  | 0.50  | 0.83  | 0.67  | 0.78  | 0.72  |
| 26300204                                      | 0.60  | 0.60  | 0.73  | 0.80  | 0.75  | 0.56  | 0.33  | 0.50  | 0.93  | 0.47  | 0.40  | 0.64  |
| 26300206                                      | 0.80  | 0.73  | 0.73  | 0.73  | 0.56  | 0.67  | 0.67  | 0.42  | 0.93  | 0.56  | 0.42  | 0.68  |
| 24060301                                      | 0.87  | 0.73  | 0.60  | 0.67  | 0.33  | 0.67  | 0.33  | 0.89  | 0.73  | 0.67  | 0.67  | 0.70  |
| 24000001                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.73  | 0.73  | 0.80  | 0.67  | 0.67  | 1.00  | 0.67  |
| 24000002                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.56  | 0.75  | 0.67  |
| 26060104                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.67  | 0.92  | 0.53  | 0.67  | 0.67  | 0.92  | 0.33  | 0.62  |
| 24000006                                      | 0.33  | 0.33  | 0.33  | 0.33  | 1.00  | 0.67  | 0.67  | 0.89  | 0.73  | 0.67  | 0.67  | 0.64  |
| 24000004                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.67  | 0.73  | 0.67  | 0.87  | 0.73  | 0.67  | 1.00  | 0.70  |
| 24000005                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.67  | 0.75  | 0.92  | 0.42  | 0.93  | 0.92  | 0.92  | 0.73  |
| SUM OF PO                                     | 9.60  | 9.53  | 10.53 | 10.13 | 9.89  | 11.92 | 10.96 | 10.51 | 12.97 | 10.38 | 11.54 | 11.49 |
| COUNT OF PO                                   | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 | 17.00 |
| DIRECT TARGET (AVG)                           | 0.56  | 0.56  | 0.62  | 0.60  | 0.58  | -     | -     | -     | -     | 0.61  | 0.68  | 0.68  |
| ATTAINMENT OF PO DIRECT (Average value found) | 0.34  | 0.44  | 0.61  | 0.51  | 0.37  | -     | -     | -     | 0.28  | 0.28  | 0.46  | 0.32  |



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|----------------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| 80% OF DIRECT ATT          | 0.27 | 0.35 | 0.49 | 0.41 | 0.29 | -    | -    | -    | 0.23 | 0.23 | 0.36 | 0.26 |
| 20% OF INDIRECT ATTAINMENT | 2.00 | 2.66 | 2.66 | 2.00 | 2.66 | 2.66 | 2.00 | 2.66 | 2.66 | 2.00 | 2.66 | 2.00 |
| TOTAL                      | 2.27 | 3.01 | 3.15 | 2.41 | 2.95 | 2.66 | 2.00 | 2.66 | 2.89 | 2.23 | 3.02 | 2.26 |



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## Swarnnim Institute of Technology

Program: Mechanical Engineering

Year: 1st To 4th

THIS DATA IS COMPILED FROM CRITERIA 1.1.1

### CORRELATION OF COS WITH POS (ALL COURSES)

| SUBJECT  | PO 1 | PO 2 | PO 3 | PO 4 | PO 5 | PO 6 | PO 7 | PO 8 | PO 9 | PO1 0 | PO1 1 | PO1 2 | OVERALL CO AVG |
|----------|------|------|------|------|------|------|------|------|------|-------|-------|-------|----------------|
| 23000001 | 2.10 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1.091667       |
| 23000004 | 2.50 | 2.50 | 2.20 | 2.50 | 2.50 | -    | -    | 2.00 | 2.00 | 3.00  | -     | -     | 2.4            |
| 23000012 | 2.30 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | -     | -     | -     | 1.144444       |
| 23000003 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40  | -     | -     | 2.45           |
| 12300001 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00  | 1.00  | 1.00  | 1              |
| 23000006 | 1.30 | 1.30 | 1.30 | 1.50 | 1.00 | -    | -    | -    | -    | -     | 1.00  | 1.00  | 1.2            |
| 23000029 | 1.00 | 1.00 | -    | -    | 1.00 | 1.00 | -    | -    | -    | -     | 1.00  | 1.00  | 1              |
| 23000005 | 2.50 | 1.50 | 2.80 | 2.30 | 2.50 | -    | -    | -    | -    | -     | -     | -     | 2.32           |
| 23000008 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40  | -     | -     | 2.45           |
| 23000010 | 2.20 | 2.60 | 1.60 | 1.80 | 1.80 | -    | -    | -    | -    | -     | -     | -     | 2              |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 2.20 | 2.20 | 2.00  | 2.00  | 1.80  | 2.04           |
| 12300002 | 2.00 | 2.00 | 2.00 | 2.00 | -    | -    | -    | -    | -    | -     | -     | -     | 2              |
| 23000030 | -    | -    | -    | -    | -    | -    | -    | 2.50 | 1.70 | 2.50  | 1.70  | 1.70  | 2.02           |
| 23020216 | 2.10 | 2.30 | 1.80 | 1.90 | 1.80 | -    | -    | -    | -    | -     | 1.85  | 1.75  | 1.928571       |
| 24190203 | -    | -    | -    | -    | -    | -    | 2.60 | 2.40 | 2.40 | 2.40  | -     | -     | 2.45           |
| 23000015 | 1.00 | 1.50 | 1.75 | 1.50 | 1.00 | 1.50 | 2.60 | 2.00 | 1.80 | 1.80  | 1.60  | 1.80  | 1.654167       |
| 23080301 | 1.00 | 1.50 | 2.50 | 2.00 | 1.00 | 1.00 | 2.00 | 1.75 | 1.75 | 2.00  | 2.00  | 1.50  | 1.666667       |
| 23080303 | 1.00 | 1.33 | 2.33 | 1.50 | 1.50 | 1.40 | 2.20 | 2.00 | 2.00 | 1.80  | 1.40  | 1.33  | 1.65           |



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|----------|------|------|------|------|------|------|------|------|------|------|------|------|----------|
| 23110304 | 1.00 | 1.50 | 2.50 | 2.00 | 1.00 | 1.60 | 2.00 | 1.60 | 2.00 | 1.60 | 1.50 | 1.33 | 1.636111 |
| 23080304 | 2.67 | 2.00 | 2.00 | 2.40 | 2.20 | 1.67 | 1.80 | 2.00 | 1.80 | 2.60 | 2.20 | 1.20 | 2.044444 |
| 23080305 | 2.00 | 2.50 | 2.50 | 2.25 | 2.00 | 2.00 | 2.50 | 1.50 | 1.50 | 1.75 | 1.50 | 2.00 | 2        |
| 23000014 | 2.00 | 2.50 | 2.50 | 2.25 | 2.00 | 2.00 | 2.25 | 1.50 | 1.50 | 2.25 | 1.75 | 2.00 | 2.041667 |
| 23000018 | 2.29 | 2.14 | 2.71 | 2.29 | 2.43 | -    | -    | -    | -    | -    | -    | -    | 2.371429 |
| 23110401 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.25 | 2.25 | 2.00 | 2.00 | 1.00 | 1.50 | 1.625    |
| 23090401 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.20 | 1.67 | 1.40 | 1.50 | 1.80 | 1.50 | 1.547222 |
| 23000017 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.00 | 2.20 | 1.67 | 1.40 | 1.50 | 1.80 | 1.50 | 1.547222 |
| 23090402 | 1.00 | 1.50 | 2.00 | 2.00 | 1.50 | -    | -    | -    | -    | -    | 1.50 | 1.25 | 1.535714 |
| 23090404 | 2.40 | 1.60 | 2.50 | 2.00 | 1.00 | 1.50 | 2.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 1.708333 |
| 23090501 | 1.67 | 1.50 | 2.00 | 1.60 | 2.00 | 1.83 | 2.00 | 2.00 | 2.33 | 1.00 | 2.00 | 1.00 | 1.744444 |
| 23090502 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 2.40 | 2.00 | 2.00 | 1.40 | 2.40 | 1.20 | 1.658333 |
| 23090503 | 2.00 | 1.60 | 2.00 | 1.60 | 1.40 | 1.60 | 1.00 | 1.50 | 2.00 | 1.33 | 2.00 | 1.00 | 1.586111 |
| 23090504 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 2.00 | 2.40 | 2.00 | 2.00 | 2.20 | 2.00 | 2.00 | 1.841667 |
| 23090505 | 2.00 | 2.33 | 2.00 | 2.00 | 1.00 | 2.40 | 2.20 | 2.40 | 1.80 | 2.60 | 1.60 | 2.00 | 2.027778 |
| 23000027 | 1.75 | 1.80 | 1.75 | 2.00 | 2.00 | 2.00 | 1.50 | 2.25 | 1.50 | 2.00 | 1.75 | 2.00 | 1.858333 |
| 12300005 | 2.00 | 2.33 | 2.00 | 2.00 | 1.50 | 1.75 | 2.00 | 1.67 | 1.75 | 1.75 | 1.50 | 1.50 | 1.8125   |
| 23090601 | 1.00 | 1.50 | 2.00 | 2.00 | 1.00 | 1.60 | 2.00 | 2.00 | 2.40 | 2.25 | 2.40 | 1.33 | 1.790278 |
| 23090602 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 2.00 | 2.60 | 2.25 | 2.00 | 2.00 | 2.00 | 1.779167 |
| 23090603 | 1.33 | 1.50 | 2.00 | 1.50 | 1.50 | 1.00 | 1.80 | 2.00 | 2.00 | 1.67 | 2.33 | 1.50 | 1.677778 |
| 23090604 | 1.00 | 1.50 | 2.00 | 1.50 | 1.50 | 1.75 | 1.75 | 2.50 | 1.75 | 1.33 | 2.00 | 1.00 | 1.631944 |
| 23090605 | 1.00 | 1.75 | 2.50 | 2.00 | 3.00 | 2.00 | 2.50 | 2.67 | 2.67 | 2.00 | 3.00 | 1.00 | 2.173611 |
| 23000026 | 1.50 | 1.60 | 2.00 | 1.80 | 1.33 | 1.50 | 1.50 | 1.00 | 1.50 | 2.00 | 1.67 | 2.00 | 1.616667 |
| 12300006 | 2.25 | 1.75 | 2.50 | 2.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.00 | 2.33 | 2.00 | 2.00 | 1.819444 |
| 23090701 | 2.20 | 1.80 | 2.20 | 1.80 | 1.00 | 1.33 | 1.00 | 2.50 | 2.33 | 2.67 | 2.00 | 2.00 | 1.902778 |



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|-----------------|--------------|-------------|------------|--------------|--------------|--------------|--------------|--------------|-------------|--------------|---------------|---------------|-----------------|
| <b>23090702</b> | 2.20         | 1.60        | 2.40       | 1.80         | 1.00         | 1.00         | 1.33         | 2.00         | 1.67        | 2.33         | 2.00          | 1.50          | <b>1.736111</b> |
| <b>23090703</b> | 2.00         | 1.80        | 2.20       | 2.00         | 1.00         | 1.33         | 1.00         | 1.50         | 1.67        | 2.25         | 1.50          | 2.00          | <b>1.6875</b>   |
| <b>23090704</b> | 2.00         | 1.60        | 2.40       | 1.80         | 1.50         | 1.00         | 1.33         | 1.33         | 2.00        | 2.50         | 2.00          | 2.00          | <b>1.788889</b> |
| <b>23090712</b> | 2.00         | 1.80        | 2.20       | 2.00         | 1.67         | 1.33         | 1.33         | 1.50         | 2.00        | 2.00         | 2.00          | 2.00          | <b>1.819444</b> |
| <b>12300007</b> | 2.25         | 1.75        | 2.50       | 2.00         | 1.00         | 1.00         | 1.00         | 2.00         | 2.00        | 2.33         | 2.00          | 2.00          | <b>1.819444</b> |
| <b>23000023</b> | 2.00         | 1.80        | 2.20       | 1.80         | 1.33         | 1.50         | 1.25         | 2.25         | 1.50        | 2.20         | 1.25          | 2.00          | <b>1.756944</b> |
| <b>23000025</b> | 2.00         | 2.00        | 2.50       | 2.00         | 1.25         | 1.40         | 1.00         | 2.33         | 1.67        | 2.50         | 1.67          | 1.50          | <b>1.818056</b> |
| <b>23000028</b> | 2.00         | 1.75        | 2.00       | 2.00         | 1.00         | 1.33         | 1.00         | 2.00         | 2.00        | 2.33         | 1.50          | 2.00          | <b>1.743056</b> |
| <b>23090805</b> | 2.00         | 2.00        | 2.50       | 2.00         | 1.25         | 1.40         | 1.00         | 2.33         | 1.67        | 2.50         | 1.67          | 1.50          | <b>1.818056</b> |
| <b>12300008</b> | 2.00         | 1.75        | 2.00       | 2.00         | 1.00         | 1.33         | 1.00         | 2.00         | 2.00        | 2.33         | 1.50          | 2.00          | <b>1.743056</b> |
| <b>AVERAGE</b>  | <b>1.662</b> | <b>1.74</b> | <b>2.2</b> | <b>1.916</b> | <b>1.402</b> | <b>1.445</b> | <b>1.706</b> | <b>1.936</b> | <b>1.88</b> | <b>2.009</b> | <b>1.8245</b> | <b>1.6153</b> | <b>1.801011</b> |



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**Swarnnim Institute of Technology**

**Program: Mechanical Engineering**

**Year: 1st To 4th**

**TARGET MARKS AND LEVEL FOR ACADEMIC YEAR 2023-24**

| Target Level | Internal Marks | CE C     | External |
|--------------|----------------|----------|----------|
| 1            | ≤18            | ≤30      | ≤42      |
| 2            | 19 to 24       | 31 to 40 | 43 to 56 |
| 3            | ≥26            | ≥41      | ≥57      |

| IE           |                |              |          |
|--------------|----------------|--------------|----------|
| Target Level | Internal Marks | Target Level | External |
| 1            | ≤30            | 1            | ≤30      |
| 2            | 31 to 40       | 2            | 31 to 40 |
| 3            | ≥40            | 3            | ≥40      |

| Course Name                          | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|--------------------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
|                                      |             | Mid sem | CEC | External | Mid sem | CEC | External |              |              |        |
| I SEM                                |             |         |     |          |         |     |          |              |              |        |
| Maths-I                              | 23000001    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Fundamentals of Computer Programming | 23000004    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Elements of Electrical Engineering   | 23000012    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |



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|-----------------------------------------------------|-----------|----|----|----|---|---|---|-----|-----|---|
| Elements of Mechanical Engineering                  | 23000003  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Orientation Program in Startuo and Entrepreneurship | 12300001  | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Environmental Studies                               | 23000006  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Workshop                                            | 230000029 | 60 |    |    | 1 |   |   | 1   |     | 1 |
| II SEM                                              |           |    |    |    |   |   |   |     |     |   |
| Engineering Physics                                 | 23000005  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Communication Skills                                | 23000008  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Maths-II                                            | 230000010 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Graphics                                | 230000011 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Basic Program In Entrepreneureship                  | 12300002  | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Elements of Civil Engineering                       | 230000030 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Chemistry                                           | 23020216  | 18 |    | 42 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Personality Development                             | 24190203  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| III SEM                                             |           |    |    |    |   |   |   |     |     |   |
| Maths-3                                             | 230000015 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mechanics of Solids                                 | 23080301  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Material Science and Metallurgy                     | 23080304  | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |



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|------------------------------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Manufacturing Process I                  | 23080303 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Kinematics of Machines                   | 23080304 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Electrical Technology                    | 23080305 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Foundation Program in Entrepreneurship   | 12300003 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| <b>IV SEM</b>                            |          |    |    |    |   |   |   |     |     |   |
| Maths-4                                  | 23000018 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Mechanical Measurement & Metrology       | 23090402 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Manufacturing Process-II                 | 23090404 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Engineering Thermodynamics               | 23090401 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Machine Design and Industrial Drafting   | 23090403 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intermediate Program In Entrepreneurship | 12300004 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| <b>V SEM</b>                             |          |    |    |    |   |   |   |     |     |   |
| Fluid Mechanics                          | 23090501 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Design of Machine Elements               | 23090502 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Heat Transfer                            | 23090503 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Theory of Machine                        | 23090504 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Control Engineering                      | 23090505 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |



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|---------------------------------------|--------------|----|----|----|---|---|---|-----|-----|---|
| Case Study                            | 2300002<br>7 | 30 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Intellectual Property Rights          | 1230000<br>5 | 30 | 0  | 30 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| VI SEM                                |              |    |    |    |   |   |   |     |     |   |
| Dynamics of Machinery                 | 2309060<br>1 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Fluid Power Engineering               | 2309060<br>2 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Production Technology                 | 2309060<br>3 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Refrigeration air Conditioning        | 2309060<br>4 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Industrial Engineering                | 2309060<br>5 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Seminar                               | 2300002<br>6 | 30 |    |    | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Expert Program In Enterprenuarship    | 1230000<br>6 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| VII SEM                               |              |    |    |    |   |   |   |     |     |   |
| Computer Aided Design & Manufacturing | 2309070<br>1 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Power Plant Engineering               | 2309070<br>2 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Operation Research                    | 2309070<br>3 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Machine Design                        | 2309070<br>4 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Metal Forming Analysis                | 2309071<br>2 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Startup Projects                      | 1230000<br>7 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Project-1                             | 2300002<br>3 | 30 |    | 30 | 1 |   | 1 | 0.3 | 0.7 | 1 |



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| VIII SEM                           |              |     |    |     |   |   |   |     |     |   |
|------------------------------------|--------------|-----|----|-----|---|---|---|-----|-----|---|
| Project- 2                         | 2300002<br>5 | 30  |    | 30  | 1 |   | 1 | 0.3 | 0.7 | 1 |
| Industrial Training                | 2300002<br>8 | 180 |    | 300 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Energy Conservation and Management | 2309080<br>5 | 18  | 30 | 42  | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Start-Up Project Part-II           | 1230000<br>8 | 30  |    | 30  | 1 |   | 1 | 0.3 | 0.7 | 1 |



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**Swarnnim Institute of Technology**

**Program: Mechanical Engineering**

**Year: 1st To 4th**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | Percentage |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                               | Course Code | Exam | No. of Students appeared | No. of Students scoring more than 18/30/42 marks (in internal, CEC & external exam) | % students scoring defined marks | Attainment level | Weighted Score |      | Course Outcome attainment |
|--------------------------------------|-------------|------|--------------------------|-------------------------------------------------------------------------------------|----------------------------------|------------------|----------------|------|---------------------------|
| I-SEMESTER OF ACEDEMIC YEAR 2023-24  |             |      |                          |                                                                                     |                                  |                  |                |      |                           |
| Maths-I                              | 23000001    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 1.5            | 0.45 | 2.55                      |
|                                      |             | CEC  | 74                       | 37                                                                                  | 50                               | 0                |                |      |                           |
|                                      |             | EXT  | 74                       | 56                                                                                  | 75.68                            | 3                | 3              | 2.1  |                           |
| Fundamentals of Computer Programming | 23000004    | INT  | 74                       | 73                                                                                  | 98.65                            | 3                | 3              | 0.9  | 0.9                       |
|                                      |             | CEC  | 74                       | 54                                                                                  | 72.97                            | 3                |                |      |                           |
|                                      |             | EXT  | 72                       | 11                                                                                  | 15.28                            | 0                | 0              | 0    |                           |
| Elements of Electrical Engineering   | 23000012    | INT  | 74                       | 65                                                                                  | 87.84                            | 3                | 3              | 0.9  | 2.3                       |
|                                      |             | CEC  | 74                       | 74                                                                                  | 100                              | 3                |                |      |                           |
|                                      |             | EXT  | 73                       | 50                                                                                  | 68.49                            | 2                | 3              | 1.4  |                           |



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|                                                     |          |     |    |    |       |   |     |      |      |
|-----------------------------------------------------|----------|-----|----|----|-------|---|-----|------|------|
| Elements of Mechanical Engineering                  | 23000003 | INT | 74 | 49 | 66.22 | 2 | 0   | 0.4  | 0.4  |
|                                                     |          | CEC | 74 | 48 | 64.86 | 1 |     |      |      |
|                                                     |          | EXT | 74 | 25 | 33.78 | 0 | 3   | 0    |      |
| Environmental Studies                               | 23000006 | INT | 74 | 70 | 94.59 | 3 | 3   | 0.6  | 0.6  |
|                                                     |          | EXT | 74 | 16 | 21.62 | 0 | 0   | 0    |      |
| Orientation Program in Startuo and Entrepreneurship | 12300001 | INT | 74 | 74 | 100   | 3 | 3   | 0.6  | 0.6  |
|                                                     |          | EXT | 74 | 4  | 5.41  | 0 | 0   | 0    |      |
| Workshop                                            | 23000029 | EXT | 12 | 12 | 100   | 3 | 3   | 2.1  | 2.1  |
| <b>II-SEMESTER OF ACEDEMIC YEAR 2023-24</b>         |          |     |    |    |       |   |     |      |      |
| Engineering Physics                                 | 23000005 | INT | 67 | 65 | 97.01 | 3 | 3   | 0.9  | 0.9  |
|                                                     |          | CEC | 67 | 64 | 95.52 | 3 |     |      |      |
|                                                     |          | EXT | 67 | 51 | 76.12 | 3 |     |      |      |
| Communication Skills                                | 23000008 | INT | 72 | 38 | 52.78 | 0 | 0   | 0    | 0    |
|                                                     |          | EXT | 72 | 24 | 33.33 | 0 |     | 0    |      |
| Maths-II                                            | 23000010 | INT | 76 | 76 | 100   | 3 | 3   | 0.9  | 1.6  |
|                                                     |          | CEC | 76 | 60 | 78.95 | 3 |     |      |      |
|                                                     |          | EXT | 72 | 41 | 56.94 | 1 | 1   | 0.7  |      |
| Engineering Graphics                                | 23000011 | INT | 67 | 48 | 71.64 | 2 | 2.5 | 0.75 | 1.45 |
|                                                     |          | CEC | 67 | 66 | 98.51 | 3 |     |      |      |
|                                                     |          | EXT | 64 | 36 | 56.25 | 1 | 1   | 0.7  |      |
| Elements of Civil Engineering                       | 23000030 | INT | 7  | 7  | 100   | 3 | 3   | 0.9  | 0.9  |
|                                                     |          | CEC | 7  | 7  | 100   | 3 |     |      |      |
|                                                     |          | EXT | 7  | 1  | 14.29 | 0 | 0   | 0    |      |
| Basic Program in Enterprenuership                   | 12300002 | INT | 76 | 45 | 59.21 | 2 | 2   | 0.6  | 0.6  |
|                                                     |          | EXT | 74 | 2  | 2.7   | 0 |     | 0    |      |
| Chemistry                                           | 23020216 | INT | 8  | 8  | 100   | 3 | 3   | 0.9  | 0.9  |
|                                                     |          | CEC | 8  | 8  | 100   | 3 |     |      |      |
|                                                     |          | EXT | 8  | 3  | 37.5  | 0 | 0   | 0    |      |
| Personality Development                             | 24190203 | INT | 4  | 4  | 100   | 3 | 3   | 0.9  | 3    |







|                                        |          |     |   |   |        |   |     |      |      |
|----------------------------------------|----------|-----|---|---|--------|---|-----|------|------|
|                                        |          | EXT | 4 | 4 | 100    | 3 | 3   | 2.1  |      |
| III-SEMESTER OF ACEDEMIC YEAR 2023-24  |          |     |   |   |        |   |     |      |      |
| Maths-3                                | 23000015 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 1.6  |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 3 | 60.00  | 1 |     | 0.7  |      |
| Mechanics of solids                    | 23080301 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 0.9  |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 2 | 40.00  | 0 |     | 0    |      |
| Material Science and Metallurgy        | 23080303 | INT | 5 | 2 | 40.00  | 0 | 1.5 | 0.45 | 2.55 |
|                                        |          | CEC | 5 | 2 | 40.00  | 3 |     |      |      |
|                                        |          | EXT | 5 | 3 | 60.00  | 3 |     | 2.1  |      |
| Manufacturing Process I                | 23080303 | INT | 5 | 5 | 100.00 | 3 | 1   | 0.6  | 1.3  |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 3 | 60.00  | 1 |     | 0.7  |      |
| Kinematics of Machines                 | 23080304 | INT | 5 | 1 | 20.00  | 0 | 0   | 0    | 0    |
|                                        |          | CEC | 5 | 2 | 40.00  | 0 |     | 0    |      |
|                                        |          | EXT | 5 | 1 | 20.00  | 0 |     | 0    |      |
| Electriacal Technology                 | 23080305 | INT | 5 | 2 | 40.00  | 0 |     | 0    | 2.1  |
|                                        |          | EXT | 5 | 3 | 60.00  | 3 |     | 2.1  |      |
| Foundation Program in Entrepreneurship | 1230003  | INT | 3 | 1 | 33.33  | 0 |     |      | 0    |
|                                        |          | EXT | 3 | 1 | 33.33  | 0 |     |      |      |
| IV-SEMESTER OF ACEDEMIC YEAR 2023-24   |          |     |   |   |        |   |     |      |      |
| Maths-4                                | 23000018 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 3    |
|                                        |          | CEC | 5 | 5 | 100.00 | 3 |     |      |      |
|                                        |          | EXT | 5 | 1 | 20.00  | 3 |     | 2.1  |      |
| Machine Design & Industrial Drafting   | 23090403 | INT | 5 | 5 | 100.00 | 3 | 3   | 0.9  | 0.   |





|                                          |          |     |   |   |        |   |   |     |     |
|------------------------------------------|----------|-----|---|---|--------|---|---|-----|-----|
|                                          |          | CEC | 5 | 5 | 100.00 | 3 |   |     | 9   |
|                                          |          | EXT | 5 | 1 | 20.00  | 0 |   | 0   |     |
| Mechanical Measurement and Metrology     | 23090402 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 5 | 5 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 5 | 4 | 80.00  | 3 |   |     |     |
| Manufacturing Process-II                 | 23090404 | INT | 5 | 5 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Engineering Thermodynamics               | 23090401 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                          |          | CEC | 2 | 2 | 100.00 | 3 |   |     |     |
|                                          |          | EXT | 2 | 2 | 100.00 | 3 |   |     |     |
| Intermediate Program in Entrepreneurship | 12300004 | INT | 2 | 2 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                          |          | EXT | 2 | 0 | 0.00   | 0 |   |     |     |

**V-SEMESTER OF ACADEMIC YEAR 2023-24**

|                            |          |     |    |    |        |   |     |      |      |
|----------------------------|----------|-----|----|----|--------|---|-----|------|------|
| Fluid Mechanics            | 23090501 | INT | 14 | 3  | 21.43  | 0 | 1.5 | 0.45 | 0.45 |
|                            |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 4  | 28.57  | 0 |     |      |      |
| Design of Machine Elements | 23090502 | INT | 14 | 12 | 85.71  | 3 | 3   | 0.9  | 3    |
|                            |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 5  | 35.71  | 3 |     |      |      |
| Heat Transfer              | 23090503 | INT | 14 | 6  | 42.86  | 0 | 1.5 | 0.45 | 0.45 |
|                            |          | CEC | 14 | 14 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 4  | 28.57  | 0 |     |      |      |
| Theory of Machine          | 23090504 | INT | 14 | 13 | 92.86  | 3 | 3   | 0.9  | 3    |
|                            |          | CEC | 13 | 13 | 100.00 | 3 |     |      |      |
|                            |          | EXT | 14 | 1  | 7.14   | 3 |     |      |      |
| Control Engineering        | 23090505 | INT | 14 | 5  | 35.71  | 3 |     | 0.9  | 3    |





|                              |          |     |    |    |        |   |  |     |   |
|------------------------------|----------|-----|----|----|--------|---|--|-----|---|
|                              |          | CEC | 14 | 14 | 100.00 |   |  |     |   |
|                              |          | EXT | 14 | 1  | 7.14   | 3 |  | 2.1 |   |
| Case Study                   | 23000027 | CEC | 14 | 5  | 35.71  | 3 |  | 0.9 | 3 |
|                              |          | EXT | 14 | 1  | 7.14   | 3 |  | 2.1 |   |
| Intellectual Property Rights | 12300005 | INT | 14 | 5  | 35.71  | 3 |  | 0.9 | 3 |
|                              |          | EXT | 14 | 1  | 7.14   | 3 |  | 2.1 |   |

**VI-SEMESTER OF ACEDMIC YEAR 2023-24**

|                                    |          |     |    |    |        |   |   |     |     |
|------------------------------------|----------|-----|----|----|--------|---|---|-----|-----|
| Dynamics of Machinery              | 23090601 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 6  | 42.86  | 0 |   |     |     |
| Fluid Power Engineering            | 23090602 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 14 | 100.00 | 3 |   |     |     |
| Production Technology              | 23090603 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 6  | 42.86  | 0 |   |     |     |
| Refrigeration air Conditioning     | 23090604 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                    |          | CEC | 14 | 14 | 100.00 | 3 |   |     |     |
|                                    |          | EXT | 14 | 2  | 14.29  | 0 |   |     |     |
| Industrial Engineering             | 23090605 | INT | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                    |          | CEC | 14 | 14 | 100.00 |   |   |     |     |
|                                    |          | EXT | 14 | 9  | 64.29  | 3 |   |     |     |
| Seminar                            | 23000026 | CEC | 14 | 14 | 100.00 | 3 | 3 | 0.9 | 3   |
|                                    |          | EXT | 14 | 9  | 64.29  | 3 |   |     |     |
| Expert Program in Enterprenuership | 1230006  | INT | 14 | 3  | 21.43  | 3 | 3 | 0.9 | 3   |
|                                    |          | EXT | 14 | 3  | 21.43  | 3 |   |     |     |

**VII-SEMESTER OF ACEDMIC YEAR 2023-24**





|                                       |           |     |    |    |        |   |   |     |     |
|---------------------------------------|-----------|-----|----|----|--------|---|---|-----|-----|
| Computer Aided Design & Manufacturing | 23090701  | INT | 21 | 20 | 95.24  | 3 | 3 | 0.9 | 0.9 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 7  | 33.33  | 0 |   |     |     |
| Power Plant Engineering               | 23090702  | INT | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 11 | 52.38  | 0 |   |     |     |
| Operation Research                    | 23090703  | INT | 21 | 20 | 95.24  | 3 | 3 | 0.9 | 1.6 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 12 | 57.14  | 1 |   |     |     |
| Machine Design                        | 23090704  | INT | 21 | 20 | 95.24  | 3 | 3 | 0.9 | 0.9 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 12 | 57.14  | 0 |   |     |     |
| Metal Forming Analysis                | 23090712  | INT | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 2.3 |
|                                       |           | CEC | 21 | 21 | 100.00 | 3 |   |     |     |
|                                       |           | EXT | 21 | 15 | 71.43  | 2 | 3 | 1.4 |     |
| Project-i                             | 23000023  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Start-Up Project Part-I               | 123000007 | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| VIII-SEMESTER OF ACEDMIC YEAR 2023-24 |           |     |    |    |        |   |   |     |     |
| Project-II                            | 23000025  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Industrial Training                   | 23000028  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Energy Conservation and Management    | 23090805  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |
| Start-Up Project Part-II              | 12300008  | CEC | 21 | 21 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                                       |           | EXT | 21 | 9  | 42.86  | 0 |   | 0   |     |





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## Swarnnim Institute of Technology

Program: Mechanical Engineering

Year: 1st To 4th

### ATTAINMENT LEVELS FOR POS THROUGH COURSES

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000001 | 0.28 | 0.38 | 0.66 | 0.43 | 0.43 | 0.40 | 0.62 | 0.57 | 0.57 | 0.51 | 0.40 | 0.38 |
| 23000004 | 0.25 | 0.25 | 0.22 | 0.25 | 0.25 | 0.00 | -    | 0.20 | 0.20 | -    | -    | -    |
| 23000012 | 0.59 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | 0.26 | -    | -    | -    |
| 23000003 | -    | -    | -    | -    | -    | -    | 0.12 | 0.11 | 0.11 | 0.11 | -    | -    |
| 12300001 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 | 0.07 |
| 23000006 | 0.09 | 0.09 | 0.09 | 0.10 | 0.07 | -    | -    | -    | -    | -    | 0.07 | 0.07 |
| 23000029 | 0.23 | 0.23 | -    | -    | 0.23 | 0.23 | -    | -    | -    | -    | 0.23 | 0.23 |
| 23000005 | 0.25 | 0.15 | 0.28 | 0.23 | 0.25 | -    | -    | -    | -    | -    | -    | -    |
| 23000008 | -    | -    | -    | -    | -    | -    | 0.00 | 0.00 | 0.00 | 0.00 | -    | -    |
| 23000010 | 0.39 | 0.46 | 0.28 | 0.32 | 0.32 | -    | -    | -    | -    | -    | -    | 0.39 |
| 23000011 | -    | -    | -    | -    | -    | -    | -    | 0.35 | 0.35 | 0.32 | 0.32 | 0.29 |
| 12300002 | 0.20 | 0.20 | 0.20 | 0.20 | -    | -    | -    | -    | -    | -    | -    | -    |
| 23000030 | -    | -    | -    | -    | -    | -    | -    | 0.17 | 0.11 | 0.17 | 0.11 | 0.11 |
| 23020216 | 0.21 | 0.23 | 0.18 | 0.19 | 0.18 | -    | -    | -    | -    | -    | 0.19 | 0.18 |
| 24190203 | -    | -    | -    | -    | -    | -    | 0.87 | 0.80 | 0.80 | 0.80 | -    | -    |
| 23000015 | 0.18 | 0.27 | 0.31 | 0.27 | 0.18 | 0.27 | 0.46 | 0.36 | 0.32 | 0.32 | 0.28 | 0.32 |
| 23080301 | 0.10 | 0.15 | 0.25 | 0.20 | 0.10 | 0.10 | 0.20 | 0.18 | 0.18 | 0.20 | 0.20 | 0.15 |
| 23080303 | 0.28 | 0.38 | 0.66 | 0.43 | 0.43 | 0.40 | 0.62 | 0.57 | 0.57 | 0.51 | 0.40 | 0.38 |
| 23110304 | 0.14 | 0.22 | 0.36 | 0.29 | 0.14 | 0.23 | 0.29 | 0.23 | 0.29 | 0.23 | 0.22 | 0.19 |
| 23080304 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23080305 | 0.23 | 0.35 | 0.58 | 0.47 | 0.23 | 0.37 | 0.47 | 0.37 | 0.47 | 0.37 | 0.35 | 0.31 |
| 23000014 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 23000018 | 0.76 | 0.71 | 0.90 | 0.76 | 0.81 | -    | -    | -    | -    | -    | -    | -    |
| 23110401 | 0.10 | 0.15 | 0.20 | 0.20 | 0.10 | 0.10 | 0.23 | 0.23 | 0.20 | 0.20 | 0.10 | 0.15 |
| 23090401 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.73 | 0.56 | 0.47 | 0.50 | 0.60 | 0.50 |
| 23000017 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.33 | 0.73 | 0.56 | 0.47 | 0.50 | 0.60 | 0.50 |
| 23090402 | 0.33 | 0.50 | 0.67 | 0.67 | 0.50 | -    | -    | -    | -    | -    | 0.50 | 0.42 |
| 23090404 | 0.24 | 0.16 | 0.25 | 0.20 | 0.10 | 0.15 | 0.20 | 0.15 | 0.20 | 0.15 | 0.15 | 0.10 |
| 23090501 | 0.08 | 0.08 | 0.10 | 0.08 | 0.10 | 0.09 | 0.10 | 0.10 | 0.12 | 0.05 | 0.10 | 0.05 |
| 23090502 | 0.33 | 0.50 | 0.67 | 0.50 | 0.50 | 0.33 | 0.80 | 0.67 | 0.67 | 0.47 | 0.80 | 0.40 |
| 23090503 | 0.10 | 0.08 | 0.10 | 0.08 | 0.07 | 0.08 | 0.05 | 0.08 | 0.10 | 0.07 | 0.10 | 0.05 |
| 23090504 | 0.33 | 0.50 | 0.67 | 0.67 | 0.33 | 0.67 | 0.80 | 0.67 | 0.67 | 0.73 | 0.67 | 0.67 |
| 23090505 | 0.67 | 0.78 | 0.67 | 0.67 | 0.33 | 0.80 | 0.73 | 0.80 | 0.60 | 0.87 | 0.53 | 0.67 |
| 23000027 | 0.58 | 0.60 | 0.58 | 0.67 | 0.67 | 0.67 | 0.50 | 0.75 | 0.50 | 0.67 | 0.58 | 0.67 |
| 12300005 | 1.17 | 0.93 | 0.58 | 0.67 | 0.67 | 0.80 | 0.46 | 0.90 | 0.45 | 0.79 | 0.47 | 0.67 |
| 23090601 | 0.10 | 0.15 | 0.20 | 0.20 | 0.10 | 0.16 | 0.20 | 0.20 | 0.24 | 0.23 | 0.24 | 0.13 |
| 23090602 | 0.33 | 0.50 | 0.67 | 0.50 | 0.50 | 0.33 | 0.67 | 0.87 | 0.75 | 0.67 | 0.67 | 0.67 |
| 23090603 | 0.03 | 0.08 | 0.23 | 0.15 | 0.08 | 0.07 | 0.29 | 0.19 | 0.40 | 0.19 | 0.34 | 0.13 |
| 23090604 | 0.10 | 0.15 | 0.20 | 0.15 | 0.15 | 0.18 | 0.18 | 0.25 | 0.18 | 0.13 | 0.20 | 0.10 |
| 23090605 | 0.33 | 0.58 | 0.83 | 0.67 | 1.00 | 0.67 | 0.83 | 0.89 | 0.89 | 0.67 | 1.00 | 0.33 |
| 23000026 | 0.50 | 0.53 | 0.67 | 0.60 | 0.44 | 0.50 | 0.50 | 0.33 | 0.50 | 0.67 | 0.56 | 0.67 |
| 12300006 | 0.75 | 0.58 | 0.83 | 0.67 | 0.33 | 0.33 | 0.33 | 0.67 | 0.67 | 0.78 | 0.67 | 0.67 |
| 23090701 | 0.22 | 0.18 | 0.22 | 0.18 | 0.10 | 0.13 | 0.10 | 0.25 | 0.23 | 0.27 | 0.20 | 0.20 |
| 23090702 | 0.22 | 0.16 | 0.24 | 0.18 | 0.10 | 0.10 | 0.13 | 0.20 | 0.17 | 0.23 | 0.20 | 0.15 |
| 23090703 | 0.36 | 0.32 | 0.39 | 0.36 | 0.18 | 0.24 | 0.18 | 0.27 | 0.30 | 0.40 | 0.27 | 0.36 |
| 23090704 | 0.20 | 0.16 | 0.24 | 0.18 | 0.15 | 0.10 | 0.13 | 0.13 | 0.20 | 0.25 | 0.20 | 0.20 |
| 23090712 | 0.51 | 0.46 | 0.56 | 0.51 | 0.43 | 0.34 | 0.34 | 0.38 | 0.51 | 0.51 | 0.51 | 0.51 |
| 12300007 | 0.23 | 0.18 | 0.25 | 0.20 | 0.10 | 0.10 | 0.10 | 0.20 | 0.20 | 0.23 | 0.20 | 0.20 |
| 23000023 | 0.20 | 0.18 | 0.22 | 0.18 | 0.13 | 0.15 | 0.13 | 0.23 | 0.15 | 0.22 | 0.13 | 0.20 |
| 23000025 | 0.20 | 0.20 | 0.25 | 0.20 | 0.13 | 0.14 | 0.10 | 0.23 | 0.17 | 0.25 | 0.17 | 0.15 |
| 23000028 | 0.20 | 0.18 | 0.20 | 0.20 | 0.10 | 0.13 | 0.10 | 0.20 | 0.20 | 0.23 | 0.15 | 0.20 |
| 23090805 | 0.20 | 0.20 | 0.25 | 0.20 | 0.13 | 0.14 | 0.10 | 0.23 | 0.17 | 0.25 | 0.17 | 0.15 |



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|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 12300008               | 0.67  | 0.58  | 0.67  | 0.67  | 0.33  | 0.44  | 0.33  | 0.67  | 0.67  | 0.78  | 0.50  | 0.67  |
| TOTAL PO<br>ATTAINMENT | 14.21 | 15.04 | 18.24 | 16.16 | 12.45 | 10.93 | 14.04 | 16.05 | 15.29 | 15.55 | 14.39 | 13.58 |
| COUNT                  | 46    | 46    | 45    | 45    | 45    | 38    | 39    | 42    | 42    | 40    | 42    | 43    |
| AVERAGE<br>ATTAINMENT  | 0.31  | 0.33  | 0.41  | 0.36  | 0.28  | 0.29  | 0.36  | 0.38  | 0.36  | 0.39  | 0.34  | 0.32  |



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## Swarnnim Institute of Technology

Program: Mechanical Engineering

Year: 1st To 4th

### TARGET LEVEL FOR POS THROUGH COURSES

| SUBJECT  | PO1  | PO2          | PO3  | PO4          | PO5  | PO6              | PO7  | PO8          | PO9  | PO10         | PO 11 | PO 12       |
|----------|------|--------------|------|--------------|------|------------------|------|--------------|------|--------------|-------|-------------|
| 23000001 | 0.70 | 0.333<br>333 | 0.33 | 0.333<br>333 | 0.33 | 0.3333<br>33     | 0.33 | 0.3333<br>33 | 0.33 | 0.3333<br>33 | 0.33  | 0.33<br>333 |
| 23000004 | 0.83 | 0.833<br>333 | 0.73 | 0.833<br>333 | 0.83 | -<br>0.3333<br>3 | -    | 0.6666<br>67 | 0.67 | -            | -     | -           |
| 23000012 | 0.77 | 0.333<br>333 | 0.33 | 0.333<br>333 | 0.33 | 0.3333<br>33     | 0.33 | 0.3333<br>33 | 0.33 | -            | -     | -           |
| 23000003 | -    | -            | -    | -            | -    | -                | 0.87 | 0.8          | 0.80 | 0.8          | -     | -           |
| 12300001 | 0.33 | 0.333<br>333 | 0.33 | 0.333<br>333 | 0.33 | 0.3333<br>33     | 0.33 | 0.3333<br>33 | 0.33 | 0.3333<br>33 | 0.33  | 0.33<br>333 |
| 23000006 | 0.43 | 0.433<br>333 | 0.43 | 0.5          | 0.33 | -                | -    | -            | -    | -            | 0.33  | 0.33<br>333 |
| 23000029 | 0.33 | 0.333<br>333 | -    | -            | 0.33 | 0.3333<br>33     | -    | -            | -    | -            | 0.33  | 0.33<br>333 |
| 23000005 | 0.83 | 0.5          | 0.93 | 0.766<br>667 | 0.83 | -                | -    | -            | -    | -            | -     | -           |
| 23000008 | -    | -            | -    | -            | -    | -                | 0.87 | 0.8          | 0.80 | 0.8          | -     | -           |
| 23000010 | 0.73 | 0.866<br>667 | 0.53 | 0.6          | 0.60 | -                | -    | -            | -    | -            | -     | 0.73<br>333 |
| 23000011 | -    | -            | -    | -            | -    | -                | -    | 0.7333<br>33 | 0.73 | 0.6666<br>67 | 0.67  | 0.6         |
| 12300002 | 0.67 | 0.666<br>667 | 0.67 | 0.666<br>667 | -    | -                | -    | -            | -    | -            | -     | -           |
| 23000030 | -    | -            | -    | -            | -    | -                | -    | 0.8333<br>33 | 0.57 | 0.8333<br>33 | 0.57  | 0.56<br>667 |



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|----------|------|--------------|------|--------------|------|-----------------|-----------------|-----------------|-----------------|-----------------|------|--------------|
| 23020216 | 0.70 | 0.766<br>667 | 0.60 | 0.633<br>333 | 0.60 | -               | -               | -               | -               | -               | 0.62 | 0.58<br>333  |
| 24190203 | -    | -            | -    | -            | -    | -               | 0.87            | 0.80            | 0.80            | 0.80            | -    | -            |
| 23000015 | 0.33 | 0.50         | 0.58 | 0.50         | 0.33 | 0.50            | 0.87            | 0.67            | 0.60            | 0.60            | 0.53 | 0.60         |
| 23080301 | 0.33 | 0.50         | 0.83 | 0.67         | 0.33 | 0.33333<br>3333 | 0.6666<br>66667 | 0.58333<br>3333 | 0.58            | 0.67            | 0.67 | 0.50         |
| 23080303 | 0.33 | 0.44         | 0.78 | 0.50         | 0.50 | 0.47            | 0.73            | 0.67            | 0.67            | 0.60            | 0.47 | 0.44         |
| 23110304 | 0.33 | 0.50         | 0.83 | 0.67         | 0.33 | 0.53333<br>3333 | 0.6666<br>66667 | 0.53333<br>3333 | 0.66666<br>6667 | 0.53333<br>3333 | 0.50 | 0.44         |
| 23080304 | 0.33 | 0.56         | 0.89 | 0.89         | 0.22 | 0.38            | 0.61            | 0.47            | 0.58            | 0.59            | 0.71 | 0.50         |
| 23080305 | 0.33 | 0.50         | 0.83 | 0.67         | 0.33 | 0.33            | 0.67            | 0.58            | 0.58            | 0.67            | 0.67 | 0.50         |
| 23000014 | 0.33 | 0.44         | 0.78 | 0.50         | 0.50 | 0.47            | 0.73            | 0.67            | 0.67            | 0.60            | 0.47 | 0.44         |
| 23000018 | 0.76 | 0.71         | 0.90 | 0.76         | 0.81 | -               | -               | -               | -               | -               | -    | 0.44         |
| 23110401 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.33            | 0.75            | 0.75            | 0.67            | 0.67            | 0.33 | 0.5          |
| 23090401 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.33            | 0.73            | 0.56            | 0.47            | 0.50            | 0.60 | 0.5          |
| 23000017 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.33            | 0.73            | 0.56            | 0.47            | 0.50            | 0.60 | 0.5          |
| 23090402 | 0.33 | 0.50         | 0.67 | 0.67         | 0.50 | -               | -               | -               | -               | -               | 0.50 | 0.41<br>6667 |
| 23090404 | 0.80 | 0.53         | 0.83 | 0.67         | 0.33 | 0.50            | 0.67            | 0.50            | 0.67            | 0.50            | 0.50 | 0.33<br>3333 |
| 23090501 | 0.56 | 0.50         | 0.67 | 0.53         | 0.67 | 0.61            | 0.67            | 0.67            | 0.78            | 0.33            | 0.67 | 0.33<br>3333 |
| 23090502 | 0.33 | 0.50         | 0.67 | 0.50         | 0.50 | 0.33            | 0.80            | 0.67            | 0.67            | 0.47            | 0.80 | 0.4          |
| 23090503 | 0.67 | 0.53         | 0.67 | 0.53         | 0.47 | 0.53            | 0.33            | 0.50            | 0.67            | 0.44            | 0.67 | 0.33<br>3333 |
| 23090504 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.67            | 0.80            | 0.67            | 0.67            | 0.73            | 0.67 | 0.66<br>6667 |
| 23090505 | 0.67 | 0.78         | 0.67 | 0.67         | 0.33 | 0.80            | 0.73            | 0.80            | 0.60            | 0.87            | 0.53 | 0.66<br>6667 |
| 23000027 | 0.58 | 0.60         | 0.58 | 0.67         | 0.67 | 0.67            | 0.50            | 0.75            | 0.50            | 0.67            | 0.58 | 0.66<br>6667 |
| 12300005 | 0.67 | 0.78         | 0.67 | 0.67         | 0.50 | 0.58            | 0.67            | 0.56            | 0.58            | 0.58            | 0.50 | 0.5          |
| 23090601 | 0.33 | 0.50         | 0.67 | 0.67         | 0.33 | 0.53            | 0.67            | 0.67            | 0.80            | 0.75            | 0.80 | 0.44<br>4444 |



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|------------------------------------|---------------------|----------------------|----------------------|----------------------|----------------------|---------------------|----------------------|----------------------|----------------------|----------------------|---------------------|---------------------|
| 23090602                           | 0.33                | 0.50                 | 0.67                 | 0.50                 | 0.50                 | 0.33                | 0.67                 | 0.87                 | 0.75                 | 0.67                 | 0.67                | 0.66<br>6667        |
| 23090603                           | 0.44                | 0.50                 | 0.67                 | 0.50                 | 0.50                 | 0.33                | 0.60                 | 0.67                 | 0.67                 | 0.56                 | 0.78                | 0.5                 |
| 23090604                           | 0.33                | 0.50                 | 0.67                 | 0.50                 | 0.50                 | 0.58                | 0.58                 | 0.83                 | 0.58                 | 0.44                 | 0.67                | 0.33<br>3333        |
| 23090605                           | 0.33                | 0.58                 | 0.83                 | 0.67                 | 1.00                 | 0.67                | 0.83                 | 0.89                 | 0.89                 | 0.67                 | 1.00                | 0.33<br>3333        |
| 23000026                           | 0.50                | 0.53                 | 0.67                 | 0.60                 | 0.44                 | 0.50                | 0.50                 | 0.33                 | 0.50                 | 0.67                 | 0.56                | 0.66<br>6667        |
| 12300006                           | 0.75                | 0.58                 | 0.83                 | 0.67                 | 0.33                 | 0.33                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.67                | 0.66<br>6667        |
| 23090701                           | 0.73                | 0.60                 | 0.73                 | 0.60                 | 0.33                 | 0.44                | 0.33                 | 0.83                 | 0.78                 | 0.89                 | 0.67                | 0.66<br>6667        |
| 23090702                           | 0.73                | 0.53                 | 0.80                 | 0.60                 | 0.33                 | 0.33                | 0.44                 | 0.67                 | 0.56                 | 0.78                 | 0.67                | 0.5                 |
| 23090703                           | 0.67                | 0.60                 | 0.73                 | 0.67                 | 0.33                 | 0.44                | 0.33                 | 0.50                 | 0.56                 | 0.75                 | 0.50                | 0.66<br>6667        |
| 23090704                           | 0.67                | 0.53                 | 0.80                 | 0.60                 | 0.50                 | 0.33                | 0.44                 | 0.44                 | 0.67                 | 0.83                 | 0.67                | 0.66<br>6667        |
| 23090712                           | 0.67                | 0.60                 | 0.73                 | 0.67                 | 0.56                 | 0.44                | 0.44                 | 0.50                 | 0.67                 | 0.67                 | 0.67                | 0.66<br>6667        |
| 12300007                           | 0.75                | 0.58                 | 0.83                 | 0.67                 | 0.33                 | 0.33                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.67                | 0.67                |
| 23000023                           | 0.67                | 0.60                 | 0.73                 | 0.60                 | 0.44                 | 0.50                | 0.42                 | 0.75                 | 0.50                 | 0.73                 | 0.42                | 0.66<br>6667        |
| 23000025                           | 0.67                | 0.67                 | 0.83                 | 0.67                 | 0.42                 | 0.47                | 0.33                 | 0.78                 | 0.56                 | 0.83                 | 0.56                | 0.5                 |
| 23000028                           | 0.67                | 0.58                 | 0.67                 | 0.67                 | 0.33                 | 0.44                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.50                | 0.66<br>6667        |
| 23090805                           | 0.67                | 0.67                 | 0.83                 | 0.67                 | 0.42                 | 0.47                | 0.33                 | 0.78                 | 0.56                 | 0.83                 | 0.56                | 0.5                 |
| 12300008                           | 0.67                | 0.58                 | 0.67                 | 0.67                 | 0.33                 | 0.44                | 0.33                 | 0.67                 | 0.67                 | 0.78                 | 0.50                | 0.67                |
| SUM OF<br>PO                       | 25.95               | 26.54                | 32.79                | 28.88                | 21.14                | 17.65               | 24.19                | 28.94                | 28.13                | 28.26                | 25.6<br>4           | 23.9<br>6           |
| COUNT<br>OF PO                     | 48                  | 48                   | 47                   | 47                   | 47                   | 40                  | 42                   | 45                   | 45                   | 43                   | 44                  | 46                  |
| <b>DIRECT<br/>TARGET<br/>(AVG)</b> | <b>0.540<br/>53</b> | <b>0.552<br/>873</b> | <b>0.697<br/>585</b> | <b>0.614<br/>556</b> | <b>0.449<br/>848</b> | <b>0.4411<br/>9</b> | <b>0.575<br/>938</b> | <b>0.6430<br/>86</b> | <b>0.6251<br/>85</b> | <b>0.6573<br/>21</b> | <b>0.58<br/>277</b> | <b>0.52<br/>077</b> |



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|-----------------------------------------------|------|------|------|------|------|------|------|------|------|------|------|----------|
| ATTAINMENT OF PO DIRECT (Average value found) | 0.31 | 0.33 | 0.41 | 0.36 | 0.28 | 0.29 | 0.36 | 0.38 | 0.36 | 0.39 | 0.34 | 0.315861 |
| 80% OF DIRECT ATT                             | 0.25 | 0.26 | 0.32 | 0.29 | 0.22 | 0.23 | 0.29 | 0.31 | 0.29 | 0.31 | 0.27 | 0.25     |
| 20% OF INDIRECT ATTAINMENT                    | 0.54 | 0.53 | 0.54 | 0.52 | 0.52 | 0.51 | 0.56 | 0.54 | 0.51 | 0.52 | 0.53 | 0.528    |
| TOTAL                                         | 0.78 | 0.79 | 0.86 | 0.81 | 0.74 | 2.66 | 2.00 | 2.66 | 0.80 | 0.83 | 0.80 | 0.78     |



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**SWARRNIM INSTITUTE OF TECHNOLOGY**

**PROGRAM NAME: MACHINE LEARNING & ARTIFICIAL INTELLIGENCE**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

THIS DATA IS COMPILED FROM CRITERIA 1.1.1

**CO PO MATRIX ALL COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 | OVERALL CO AVG |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|----------------|
| 26060101 | 2.80 | 2.40 | 2.60 | 1.40 | 2.00 | 1.00 | 1.00 | 1.00 | 2.33 | 2.20 | 2.00 | 2.00 | 2.03           |
| 26060102 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.20 | 2.20 | 1.60 | 1.60 | 1.50 | 2.50 | 2.03           |
| 26060103 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.00 | 3.00 | 2.00 | 1.25 | 2.80 | 1.33 | 1.33 | 2.06           |
| 26060104 | 2.40 | 1.80 | 1.80 | 2.40 | 2.20 | 1.00 | 1.00 | 1.00 | 1.50 | 2.80 | 1.25 | 1.00 | 1.89           |
| 26010001 | 2.40 | 2.20 | 1.80 | 1.80 | 2.00 | 1.00 | 2.00 | 2.00 | 1.25 | 2.80 | 1.50 | 1.33 | 1.92           |
|          |      |      |      |      |      |      |      |      |      |      |      |      |                |
| 24060201 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.25 | 1.80 | 2.00 | 2.60 | 2.00 | 2.33 | 2.67 | 2.22           |
| 24060202 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.00 | 2.25 | 1.50 | 1.60 | 1.50 | 2.50 | 2.02           |
| 24060203 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.50 | 2.50 | 2.67 | 1.50 | 2.50 | 2.00 | 2.33 | 2.16           |
| 24060204 | 2.40 | 1.80 | 1.80 | 2.20 | 2.40 | 2.25 | 1.67 | 1.00 | 1.50 | 2.80 | 1.40 | 1.20 | 1.92           |
| 24060206 | 2.40 | 2.40 | 2.20 | 2.20 | 2.20 | 1.67 | 2.00 | 2.00 | 1.25 | 2.80 | 1.67 | 1.25 | 2.03           |
|          |      |      |      |      |      |      |      |      |      |      |      |      |                |
| 24060301 | 2.60 | 2.60 | 2.20 | 1.80 | 2.00 | 1.00 | 2.00 | 1.00 | 2.67 | 2.20 | 2.00 | 2.00 | 2.11           |
| 24000001 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.20 | 2.20 | 2.40 | 2.00 | 2.00 | 3.00 | 2.01           |
| 24000002 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.67 | 2.25 | 2.02           |
| 26060104 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.75 | 1.60 | 2.00 | 2.00 | 2.75 | 1.00 | 1.86           |
| 24000006 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 3.00 | 2.00 | 2.00 | 2.67 | 2.20 | 2.00 | 2.00 | 1.93           |

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|          |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 24000004 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.20 | 2.00 | 2.60 | 2.20 | 2.00 | 3.00 | 2.09 |
| 24000005 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 2.00 | 2.25 | 2.75 | 1.25 | 2.80 | 2.75 | 2.75 | 2.20 |
| AVERAGE  | 1.8  | 1.7  | 1.7  | 1.8  | 1.8  | 1.7  | 2.0  | 1.9  | 1.9  | 2.3  | 1.9  | 2.0  | 2.0  |



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**PROGRAM NAME: MACHINE LEARNING & ARTIFICIAL INTELLIGENCE**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

| Target level | Internal marks | Target level | External marks | Target level | CEC      |
|--------------|----------------|--------------|----------------|--------------|----------|
| 1            | ≤18            | 1            | ≤42            | 1            | ≤30      |
| 2            | 19 to 24       | 2            | 43 to 56       | 2            | 31 to 40 |
| 3            | ≥25            | 3            | ≥57            | 3            | ≥41      |

| Course Name                 | Course Code | Marks   |     |          | Level   |     |          | 30% Internal | 70% External | Target |
|-----------------------------|-------------|---------|-----|----------|---------|-----|----------|--------------|--------------|--------|
|                             |             | Mid Sem | CEC | External | Mid sem | CEC | External |              |              |        |
| 1ST SEM                     |             |         |     |          |         |     |          |              |              |        |
| Digital Forensics           | 26060101    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Artificial Intelligence     | 26060102    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Cloud Computing             | 26060103    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Data Mining and Warehousing | 26060104    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Research Skills             | 26010001    | 18      | 30  | 42       | 1       | 1   | 0        | 0.3          | 0            | 0.3    |
| 2ND SEM                     |             |         |     |          |         |     |          |              |              |        |
| Business Analytics          | 24060201    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Neural Networks             | 24060202    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Cryptography and Biometrics | 24060203    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Soft Computing              | 24060204    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |
| Software Project Management | 24060206    | 18      | 30  | 42       | 1       | 1   | 1        | 0.3          | 0.7          | 1      |

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3RD SEM

|                      |          |    |    |    |   |   |   |     |     |   |
|----------------------|----------|----|----|----|---|---|---|-----|-----|---|
| Machine Learning     | 24060301 | 18 | 30 | 42 | 1 | 1 | 1 | 0.3 | 0.7 | 1 |
| Seminar 1            | 24000001 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| Internal Review      | 24000002 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |
| Dissertation Phase I | 26060104 | 18 | 30 | 42 | 0 | 1 | 0 | 0   | 0   | 0 |

4TH SEM

|                         |          |    |    |    |   |   |   |   |   |   |
|-------------------------|----------|----|----|----|---|---|---|---|---|---|
| Seminar II              | 24000006 | 18 | 30 | 42 | 0 | 1 | 0 | 0 | 0 | 0 |
| External Mid Sem Review | 24000004 | 18 | 30 | 42 | 0 | 1 | 0 | 0 | 0 | 0 |
| Dissertation Phase II   | 24000005 | 18 | 30 | 42 | 0 | 1 | 0 | 0 | 0 | 0 |



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**PROGRAM NAME: MACHINE LEARNING & ARTIFICIAL INTELLIGENCE**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**COURSE OUTCOME ATTAINMENT FOR 2023-24**

| Target Set: | Percentage |
|-------------|------------|
| Level 1     | 55-64      |
| Level 2     | 65-74      |
| Level 3     | ≥75        |

| Course                      | Course Code |  | Exam | No. of Students | No. of Students | % students scoring defined marks | Attainment level | Weighted Score |     | Course Outcome attainment |
|-----------------------------|-------------|--|------|-----------------|-----------------|----------------------------------|------------------|----------------|-----|---------------------------|
|                             |             |  |      |                 |                 |                                  |                  | AVG            |     |                           |
| Digital Forensics           | 26060101    |  | INT  | 1               | 1               | 100.00                           | 3                | 3              | 0.9 | 3                         |
|                             |             |  | CEC  | 1               | 1               | 100.00                           | 3                |                |     |                           |
|                             |             |  | EXT  | 1               | 1               | 100.00                           | 3                |                |     |                           |
| Artificial Intelligence     | 26060102    |  | INT  | 1               | 1               | 100.00                           | 3                | 3              | 0.9 | 3                         |
|                             |             |  | CEC  | 1               | 1               | 100.00                           | 3                |                |     |                           |
|                             |             |  | EXT  | 1               | 1               | 100.00                           | 3                |                |     |                           |
| Cloud Computing             | 26060103    |  | INT  | 1               | 1               | 100.00                           | 3                | 3              | 0.9 | 3                         |
|                             |             |  | CEC  | 1               | 1               | 100.00                           | 3                |                |     |                           |
|                             |             |  | EXT  | 1               | 1               | 100.00                           | 3                |                |     |                           |
| Data Mining and Warehousing | 26060104    |  | INT  | 1               | 1               | 100.00                           | 3                | 0              | 0.6 | 2.7                       |
|                             |             |  | CEC  | 1               | 1               | 100.00                           | 3                |                |     |                           |
|                             |             |  | EXT  | 1               | 1               | 100.00                           | 3                |                |     |                           |
| Research Skills             | 26010001    |  | INT  | 1               | 1               | 100.00                           | 3                | 0              | 0.6 | 0.6                       |
|                             |             |  | CEC  | 1               | 1               | 100.00                           | 3                |                |     |                           |
|                             |             |  | EXT  | 0               | 0               | 0.00                             | 0                |                |     |                           |

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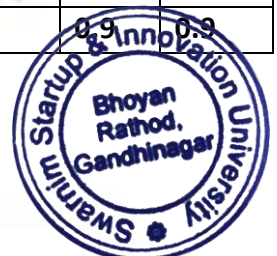
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|                             |          |     |   |   |        |   |   |     |     |
|-----------------------------|----------|-----|---|---|--------|---|---|-----|-----|
|                             |          |     |   |   |        |   |   |     |     |
| Business Analytics          | 24060201 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3   |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |     |
| Neural Networks             | 24060202 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3   |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |     |
| Cryptography and Biometrics | 24060203 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3   |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |     |
| Soft Computing              | 24060204 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3   |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |     |
| Software Project Management | 24060206 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 3   |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          | EXT | 1 | 1 | 100.00 | 3 | 3 | 2.1 |     |
|                             |          |     |   |   |        |   |   |     |     |
| Machine Learning            | 24060301 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          | EXT | 1 | 1 | 100.00 | 3 |   |     |     |
| Seminar 1                   | 24000001 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
| Internal Review             | 24000002 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
| Dissertation Phase I        | 26060104 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
|                             |          |     |   |   |        |   |   |     |     |
| Seminar II                  | 24000006 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
| External Mid Sem Review     | 24000004 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |
|                             |          | CEC | 1 | 1 | 100.00 | 3 |   |     |     |
| Dissertation Phase II       | 24000005 | INT | 1 | 1 | 100.00 | 3 | 3 | 0.9 | 0.9 |





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**PROGRAM NAME: MACHINE LEARNING & ARTIFICIAL INTELLIGENCE**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**ATTAINMENT LEVEL FOR POS THROUGH COURSES**

| SUBJECT  | PO1  | PO2  | PO3  | PO4  | PO5  | PO6  | PO7  | PO8  | PO9  | PO10 | PO11 | PO12 |
|----------|------|------|------|------|------|------|------|------|------|------|------|------|
| 26060101 | 2.80 | 2.40 | 2.60 | 1.40 | 2.00 | 1.00 | 1.00 | 1.00 | 2.33 | 2.20 | 2.00 | 2.00 |
| 26060102 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.20 | 2.20 | 1.60 | 1.60 | 1.50 | 2.50 |
| 26060103 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.00 | 3.00 | 2.00 | 1.25 | 2.80 | 1.33 | 1.33 |
| 26060104 | 2.16 | 1.62 | 1.62 | 2.16 | 1.98 | 0.90 | 0.90 | 0.90 | 1.35 | 2.52 | 1.13 | 0.90 |
| 26010001 | 0.48 | 0.44 | 0.36 | 0.36 | 0.40 | 0.20 | 0.40 | 0.40 | 0.25 | 0.56 | 0.30 | 0.27 |
| 24060201 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.25 | 1.80 | 2.00 | 2.60 | 2.00 | 2.33 | 2.67 |
| 24060202 | 1.80 | 2.00 | 2.20 | 2.60 | 2.40 | 2.00 | 2.00 | 2.25 | 1.50 | 1.60 | 1.50 | 2.50 |
| 24060203 | 2.40 | 2.00 | 2.00 | 2.40 | 2.20 | 1.50 | 2.50 | 2.67 | 1.50 | 2.50 | 2.00 | 2.33 |
| 24060204 | 2.40 | 1.80 | 1.80 | 2.20 | 2.40 | 2.25 | 1.67 | 1.00 | 1.50 | 2.80 | 1.40 | 1.20 |
| 24060206 | 2.40 | 2.40 | 2.20 | 2.20 | 2.20 | 1.67 | 2.00 | 2.00 | 1.25 | 2.80 | 1.67 | 1.25 |
| 24060301 | 2.40 | 2.16 | 1.98 | 2.02 | 2.40 | 2.50 | 1.33 | 0.75 | 1.25 | 3.14 | 1.17 | 0.64 |
| 24000001 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.66 | 0.66 | 0.72 | 0.60 | 0.60 | 0.90 |
| 24000002 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.72 | 0.60 | 0.60 | 0.72 | 0.66 | 0.50 | 0.68 |
| 26060104 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.60 | 0.83 | 0.48 | 0.60 | 0.60 | 0.83 | 0.30 |
| 24000006 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.90 | 0.60 | 0.60 | 0.80 | 0.66 | 0.60 | 0.60 |
| 24000004 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.60 | 0.66 | 0.60 | 0.78 | 0.66 | 0.60 | 0.90 |
| 24000005 | 0.30 | 0.30 | 0.30 | 0.30 | 0.30 | 0.60 | 0.68 | 0.83 | 0.38 | 0.84 | 0.83 | 0.83 |

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|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| TOTAL PO<br>ATTAINMENT | 24.64 | 22.62 | 22.96 | 24.74 | 24.78 | 20.99 | 22.82 | 20.93 | 20.38 | 28.54 | 20.28 | 21.79 |
| COUNT                  | 17    | 17    | 17    | 17    | 17    | 17    | 17    | 17    | 17    | 17    | 17    | 17    |
| AVERAGE<br>ATTAINMENT  | 1.45  | 1.33  | 1.35  | 1.46  | 1.46  | 1.23  | 1.34  | 1.23  | 1.20  | 1.68  | 1.19  | 1.28  |



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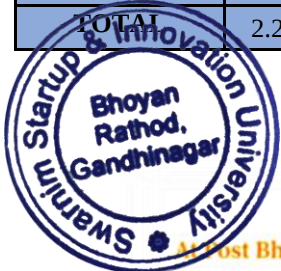
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**PROGRAM NAME: MACHINE LEARNING & ARTIFICIAL INTELLIGENCE**

**1<sup>ST</sup> - 4<sup>TH</sup> SEMESTER**

**TARGET LEVEL FOR POS THROUGH COURSES**

| SUBJECT                                       | PO1   | PO2   | PO3   | PO4   | PO5   | PO6   | PO7   | PO8   | PO9   | PO10  | PO11  | PO12  |
|-----------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 26060101                                      | 0.93  | 0.80  | 0.87  | 0.47  | 0.67  | 0.33  | 0.33  | 0.33  | 0.78  | 0.73  | 0.67  | 0.67  |
| 26060102                                      | 0.60  | 0.67  | 0.73  | 0.87  | 0.80  | 0.67  | 0.73  | 0.73  | 0.53  | 0.53  | 0.50  | 0.83  |
| 26060103                                      | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.33  | 1.00  | 0.67  | 0.42  | 0.93  | 0.44  | 0.44  |
| 26060104                                      | 0.80  | 0.60  | 0.60  | 0.80  | 0.73  | 0.33  | 0.33  | 0.33  | 0.50  | 0.93  | 0.42  | 0.33  |
| 26010001                                      | 0.80  | 0.73  | 0.60  | 0.60  | 0.67  | 0.33  | 0.67  | 0.67  | 0.42  | 0.93  | 0.50  | 0.44  |
| 24060201                                      | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| 24060202                                      | 0.60  | 0.67  | 0.73  | 0.87  | 0.80  | 0.75  | 0.60  | 0.67  | 0.87  | 0.67  | 0.78  | 0.89  |
| 24060203                                      | 0.60  | 0.67  | 0.73  | 0.87  | 0.80  | 0.67  | 0.67  | 0.75  | 0.50  | 0.53  | 0.50  | 0.83  |
| 24060204                                      | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.50  | 0.83  | 0.89  | 0.50  | 0.83  | 0.67  | 0.78  |
| 24060206                                      | 0.80  | 0.60  | 0.60  | 0.73  | 0.80  | 0.75  | 0.56  | 0.33  | 0.50  | 0.93  | 0.47  | 0.40  |
| 24060301                                      | 0.80  | 0.80  | 0.73  | 0.73  | 0.73  | 0.56  | 0.67  | 0.67  | 0.42  | 0.93  | 0.56  | 0.42  |
| 24000001                                      | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| 24000002                                      | 0.87  | 0.87  | 0.73  | 0.60  | 0.67  | 0.33  | 0.67  | 0.33  | 0.89  | 0.73  | 0.67  | 0.67  |
| 26060104                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.73  | 0.73  | 0.80  | 0.67  | 0.67  | 1.00  |
| 24000006                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.80  | 0.67  | 0.67  | 0.80  | 0.73  | 0.56  | 0.75  |
| 24000004                                      | 0.33  | 0.33  | 0.33  | 0.33  | 0.33  | 0.67  | 0.92  | 0.53  | 0.67  | 0.67  | 0.92  | 0.33  |
| 24000005                                      | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  | 0.00  |
| SUM OF PO                                     | 9.40  | 8.73  | 8.67  | 9.13  | 9.13  | 7.36  | 9.37  | 8.31  | 8.58  | 10.77 | 8.30  | 8.79  |
| COUNT OF PO                                   | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 | 14.00 |
| DIRECT TARGET (AVG)                           | 0.67  | 0.62  | 0.62  | 0.65  | 0.65  | -     | -     | -     | -     | 0.77  | 0.59  | 0.63  |
| ATTAINMENT OF PO DIRECT (Average value found) | 0.34  | 0.44  | 0.61  | 0.51  | 0.37  | -     | -     | -     | 0.28  | 0.28  | 0.46  | 0.32  |
| 80% OF DIRECT ATT                             | 0.27  | 0.35  | 0.49  | 0.41  | 0.29  | -     | -     | -     | 0.23  | 0.23  | 0.36  | 0.26  |
| 20% OF INDIRECT ATTAINMENT                    | 2.00  | 2.66  | 2.66  | 2.00  | 2.66  | 2.66  | 2.00  | 2.66  | 2.66  | 2.00  | 2.66  | 2.00  |
| TOTAL                                         | 2.27  | 3.00  | 3.15  | 2.41  | 2.95  | 2.66  | 2.00  | 2.66  | 2.89  | 2.23  | 3.00  | 2.26  |



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