

## **Gandhinagar Institute of Technology (GIT)**

### **B.Tech (Undergraduate) Program CE, IT, CSE, CS, AI, ICT, EE, EC, Civil and Mechanical**

#### **Academic Regulations**

##### **R.1 ADMISSION**

A candidate for admission to the four year degree programme for Bachelor of Technology (B.Tech.) must have eligibility criteria as per the AICTE/Gujarat Government/ACPC rules. Candidates must have passed the HSC exam (10+2) with Physics, Chemistry and Mathematics (PCM) being compulsory subjects from the Gujarat board or any other state boards. Diploma Engineering Passed students are eligible for direct admission: Diploma to Degree (D2D) in Second Year of the B Tech by fulfillment of the minimum eligibility criteria as per AICTE/ACPC/Govt of Gujarat.

##### **R.2 PROGRAMME OF STUDY**

A student shall follow the respective programme of study enclosed at Annexure – 1 to 7 for B.Tech. Program.

##### **R.3 EXEMPTIONS**

Exemptions are not applicable for the B.Tech. Program.

##### **R.4 REGISTRATION**

To earn subject credits in a semester a student must register for the subjects at the commencement of the semester in case of the program/course admission transfer from the one institute to another institute of the Gandhinagar University or from other University. Subject registration is required only for the elective subjects offered in the respective program for enrolled students in the respective regular program/course.

A student shall not be permitted to attend any classes without completing his/her registration formalities. The registration formalities must be completed by the student in person or on e-Governance software of the Gandhinagar University.

##### **R.5 REQUIREMENTS FOR REGISTRATION**

A student can register for a subject provided following conditions are satisfied:  
The student has successfully completed the pre-requisites for the subject, and the subject is being offered in the semester.

If a student is required to repeat one or more subjects due to inadequate performance, it is essential that he/she must register for these subjects in the earliest following semester in which the courses are offered.

Any registration which violates the above requirements will automatically be canceled and grades obtained, if any, shall be withdrawn.

## **R.6 ASSESSMENT OF STUDENT PERFORMANCE IN SUBJECTS**

Grading in each subject is assigned based on earned marks. The performance of a student in a subject is judged through (i) Continuous Internal Evaluation of theory and (ii) End-Semester Theory Examinations. The minimum passing criteria in the end-semester theory examination (70 marks) in each subject is 40 %.

Continuous internal evaluation component (30 Marks) may be done through written tests (MSE/RMSE) and/or quizzes, Seminar, carry-home exercise etc.

The overall passing criteria in theory is 45% from total marks.

Practical Examination/viva voce for semester 1 to 4 will be conducted at internal level during the last week of the respective semester.

External Practical Exam/Viva-voce, Project Work/Dissertation will be conducted only at the end of the respective semester by the University and overall passing (out of total marks) will be 50%.

## **R.7 EXAMINATIONS**

The end-semester examinations (theory and practical) for all subjects offered in each semester of an academic year will be conducted by the University.

No student shall be permitted for the end semester examination if he/she has not completed the required term work as per the rules and regulations in force.

The ratio between the external and internal theory assessment will be 70:30.

## **R.8 LETTER GRADES**

The overall performance of a student in a course is represented by a letter grade with equivalent grade points as below:

|           |    |           |    |
|-----------|----|-----------|----|
| <b>AA</b> | 10 | <b>CC</b> | 06 |
| <b>AB</b> | 09 | <b>CD</b> | 05 |
| <b>BB</b> | 08 | <b>DD</b> | 04 |
| <b>BC</b> | 07 | <b>FF</b> | 00 |

A subject is completed successfully, i.e., credit is earned for a subject, when a letter grade **DD** or better is obtained in the subject.

#### **R.9 FAILURE IN A SUBJECT**

A student does not earn any credit for a subject when he/she gets a letter grade FF in the subject.

The letter grade FF obtained in a subject will be shown in the final transcript issued to the student whether he/she subsequently obtains another letter grade in a repeat attempt.

#### **R.10 PERFORMANCE EVALUATION (SGPA AND CGPA)**

The student's performance in a semester will be indicated by the semester grade point average (SGPA). The SGPA and CGPA (Cumulative grade point average) are calculated as below.

$$SGPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

Where  $C_i$  is the number of credits of the course  $i$ ;  $G_i$  is the grade point for the course  $i$ ; where  $i= 1$  to  $n$ ,  $n$ = number of courses in a semester.

Performance at the end of two or more consecutive semesters will be indicated by the CGPA. CGPA is calculated as below.

$$CGPA = \frac{\sum_{i=1}^n C_i G_i}{\sum_{i=1}^n C_i}$$

Where  $C_i$  is the number of credits of the course  $i$ ;  $G_i$  is the grade point for the course  $i$ ; where  $i= 1$  to  $n$ ,  $n$ = number of courses of all semesters up to which CGPA is computed.

#### **R.11 DISCONTINUATION FROM REGULAR STUDY**

Students who are having more than **4 backlog** up to the current semester excluding immediate previous semester are not eligible to continue study till the said criteria is fulfilled.

In such case student shall not be permitted for regular study of concerned next semester.

#### **R.12 REPEAT SUBJECTS**

A Subject which usually accounts for a higher rate of failure may be offered again as a repeat subject or subjects as the case may be in the following semester.

Repeat subjects are not offered to students as a matter of right. These subjects are offered subject to the availability of manpower and other facilities.

#### **R.13 TO BE ELIGIBLE FOR AWARD OF THE DEGREE,**

A Student required to earn the total credits declared by the University.

A minimum Cumulative Grade Point Average (CGPA) of 4.00.

No course with letter grade FF.

A student who for whatever reason is not able to complete the programme within the normal period or the minimum duration prescribed for the programme, may be allowed two years beyond the normal period to clear the backlogs to be qualified for the degree.

The general formula, therefore should be as follows:

- a. **Time Span = N + 2years** for the completion of the programme.

Where N stands for the normal minimum duration prescribed for the completion of the programme.

- b. In exceptional circumstances a further extension of one more year may be granted upon the representation to Honourable Vice Chancellor (Provost) stating the reason for extension request with supporting documents.
- c. During the extended period student shall be considered as private candidate and also not eligible for ranking.

#### **R.14 AWARD OF CLASS**

The class awarded to a student with his B.Tech. (Electronics and Communication) degree is decided by final **CGPA** as under.

**DISTINCTION - CGPA  $\geq$  7.5**

**FIRST CLASS - CGPA  $\geq$  6.0**

**SECOND CLASS - CGPA  $\geq$  5.0**

**PASS CLASS - CGPA  $<$  5.0**

#### **R.15 TRANSCRIPT**

The Transcript issued to the student at the time of leaving the University will contain a consolidated record of all the courses taken by him, grades obtained, **SGPA, CGPA** etc.

#### **R.16 ATTENDANCE**

A Student will be required 75% attendance during the semester.

**Annexure 1-A: B.Tech. First Year (CE, CSE, IT, ICT, ME, Civil, EE, EC)**

**Program Name:** Bachelor of Technology (01)

**Program Code:** ME(001)/Civil(002) /EE (003)/EC  
(004)/CE (005) /IT (006)/

**Semester / Year :** First Year Bachelor of Technology - Semester I & II

**Effective From Academic Year:** 2022-23

| Subject Code   | Course Type                   | Subject Name                                     | Credit | Hours per week |   |   |       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|--|-------------------------------|--|--------|----------------|---|---|-------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
|  |                               |  |        | L              | T | P | Total | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 1000003<br>(CE/IT/EC/<br>EE/CSE/AI/<br>CS/ICT)/100<br>00004<br>(CL/ME) | Basic Science                 | Engineering Physics                              | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10000101   | Basic Science                 | Engineering Mathematics-I                        | 5      | 3              | 2 | 0 | 5     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000102   | Humanities and Social Science | Effective Technical Communication-I              | 3      | 2              | 0 | 2 | 4     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030101   | Engineering Science           | Basics of Electrical and Electronics Engineering | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10010102   | Engineering Science           | Fundamental Mechanical Engineering               | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |

|          |                               |                                      |           |           |          |           |           |    |    |    |    |            |
|----------|-------------------------------|--------------------------------------|-----------|-----------|----------|-----------|-----------|----|----|----|----|------------|
| 10010103 | Engineering Science           | Engineering Workshop                 | 2         | 0         | 0        | 4         | 4         | 0  | 0  | 80 | 20 | 100        |
| 10020101 | Mandatory                     | Environmental Studies                | 0         | 2         | 0        | 0         | 2         | 50 | 0  | 0  | 0  | 50         |
| 10000001 | Mandatory                     | Induction Program (3 Week)           | 0         | 0         | 0        | 0         | 0         | 0  | 0  | 0  | 0  | 0          |
| 10010101 | Engineering Science           | Engineering Drawing Practice         | 5         | 3         | 0        | 4         | 7         | 70 | 30 | 30 | 20 | 150        |
| 10000201 | Basic Science                 | Engineering Mathematics-II           | 5         | 3         | 2        | 0         | 5         | 70 | 30 | 0  | 0  | 100        |
| 10000202 | Humanities and Social Science | Effective Technical Communication-II | 3         | 2         | 0        | 2         | 4         | 70 | 30 | 30 | 20 | 150        |
| 10050101 | Engineering Science           | Programming for Problem Solving      | 5         | 4         | 0        | 2         | 6         | 70 | 30 | 30 | 20 | 150        |
| 10020102 | Engineering Science           | Fundamentals of Civil Engineering    | 4         | 3         | 0        | 2         | 5         | 70 | 30 | 30 | 20 | 150        |
| 10000002 | Mandatory                     | Physical Education                   | 0         | 0         | 0        | 2         | 2         | 0  | 0  | 30 | 20 | 50         |
|          |                               |                                      | <b>44</b> | <b>31</b> | <b>4</b> | <b>24</b> | <b>59</b> |    |    |    |    | <b>750</b> |

**Annexure 1-B: B.Tech. First Year (Cyber Security and AI)**

| Program Name: Bachelor of Technology (01)                        |                               |  |        |                |   |   |       | Program Code: CS() / AI()             |                       |                       |                       |               |  |
|--|-------------------------------|--|--------|----------------|---|---|-------|---------------------------------------|-----------------------|-----------------------|-----------------------|---------------|--|
| Semester / Year : First Year Bachelor of Technology - Semester I |                               |  |        |                |   |   |       | Effective From Academic Year: 2023-24 |                       |                       |                       |               |  |
| Subject Code   | Course Type                   | Subject Name                                     | Credit | Hours per week |   |   |       | Theory (Marks)                        |                       | Practical (Marks)     |                       | Total (Marks) |  |
|  |                               |  |        | L              | T | P | Total | University Assessment                 | Continuous Assessment | University Assessment | Continuous Assessment |               |  |
| 10000001   | Mandatory                     | Induction Program (3Week)                        | 0      | 0              | 0 | 0 | 0     | 0                                     | 0                     | 0                     | 0                     | 0             |  |
| 10000101   | Basic Science                 | Engineering Mathematics-I                        | 5      | 3              | 2 | 0 | 5     | 70                                    | 30                    | 0                     | 0                     | 100           |  |
| 10000102   | Humanities and Social Science | Effective Technical Communication-I              | 3      | 2              | 0 | 2 | 4     | 70                                    | 30                    | 30                    | 20                    | 150           |  |
| 10030101   | Engineering Science           | Basics of Electrical and Electronics Engineering | 4      | 3              | 0 | 2 | 5     | 70                                    | 30                    | 30                    | 20                    | 150           |  |
|  | Engineering Science           | Basics of AI and Cyber Security                  | 4      | 3              | 0 | 2 | 5     | 70                                    | 30                    | 30                    | 20                    | 150           |  |
| 10010103   | Engineering Science           | Engineering Workshop                             | 2      | 0              | 0 | 4 | 4     | 0                                     | 0                     | 80                    | 20                    | 100           |  |
| 10010101   | Engineering Science           | Engineering Drawing Practice                     | 5      | 3              | 0 | 4 | 7     | 70                                    | 30                    | 30                    | 20                    | 150           |  |
|  |                               |  | 23     |                |   |   | 30    |                                       |                       |                       |                       |               |  |

| <b>Program Name: Bachelor of Technology (01)</b>                         |                               |                                      |    |   |   | <b>Program Code: CS() / AI()</b>             |    |    |    |    |    |     |
|--|-------------------------------|--------------------------------------|----|---|---|--|----|----|----|----|----|-----|
| <b>Semester / Year : First Year Bachelor of Technology - Semester II</b> |                               |                                      |    |   |   | <b>Effective From Academic Year: 2023-24</b> |    |    |    |    |    |     |
|  |                               |                                      |    |   |   |  |    |    |    |    |    |     |
| 10000003   | Basic Science                 | Engineering Physics                  | 4  | 3 | 0 | 2  | 5  | 70 | 30 | 30 | 20 | 150 |
| 10000201   | Basic Science                 | Engineering Mathematics-II           | 5  | 3 | 2 | 0  | 5  | 70 | 30 | 0  | 0  | 100 |
| 10000202   | Humanities and Social Science | Effective Technical Communication-II | 3  | 2 | 0 | 2  | 4  | 70 | 30 | 30 | 20 | 150 |
| 10050101   | Engineering Science           | Programming for Problem Solving      | 5  | 4 | 0 | 2  | 6  | 70 | 30 | 30 | 20 | 150 |
|  | Engineering Science           | Modern of AI and Cyber Security      | 4  | 3 | 0 | 2  | 5  | 70 | 30 | 30 | 20 | 150 |
| 10020101   | Mandatory                     | Environmental Studies                | 0  | 2 | 0 | 0  | 2  | 50 | 0  | 0  | 0  | 50  |
| 10000002   | Mandatory                     | Physical Education                   | 0  | 0 | 0 | 2  | 2  | 0  | 0  | 30 | 20 | 50  |
|  |                               |                                      | 21 |   |   |  | 29 |    |    |    |    |     |



### Annexure 2: B.Tech. Computer Engineering

| Program Name: Bachelor of Technology (01)                           |                               |  |        |                |   |   | Program Code: CE (005)                |                       |                       |                       |                       |               |
|---|-------------------------------|--|--------|----------------|---|---|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester III |                               |  |        |                |   |   | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code  | Course Type                   | Subject Name                           | Credit | Hours per week |   |   |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|   |                               |  |        | L              | T | P | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10050301  | Professional Core             | Data Structure                         | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10050302  | Professional Core             | Database Management System             | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10050303  | Professional Core             | Digital Fundamentals                   | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|   | Humanities and Social Science | Principles of Economics and Management | 3      | 3              | 0 | 0 | 3                                     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000301  | Basic Science                 | Mathematical Statistics                | 4      | 3              | 1 | 0 | 4                                     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000006  | Humanities and Social Science | Universal Human Values                 | 3      | 2              | 1 | 0 | 3                                     | 0                     | 0                     | 30                    | 20                    | 50            |

| Program Name: Bachelor of Technology (01)                          |                   |  |        |                |   |   |       | Program Code: CE (005)                |                       |                       |                       |               |
|--|-------------------|--|--------|----------------|---|---|-------|---------------------------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester IV |                   |  |        |                |   |   |       | Effective From Academic Year: 2023-24 |                       |                       |                       |               |
| Subject Code   | Course Type       | Subject Name                           | Credit | Hours per week |   |   |       | Theory (Marks)                        |                       | Practical (Marks)     |                       | Total (Marks) |
|  |                   |  |        | L              | T | P | Total | University Assessment                 | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10050401   | Professional Core | Object Oriented Programming            | 4      | 3              | 0 | 2 | 5     | 70                                    | 30                    | 30                    | 20                    | 150           |
| 10050402   | Professional Core | Computer Organization and Architecture | 4      | 3              | 0 | 2 | 5     | 70                                    | 30                    | 30                    | 20                    | 150           |
| 10050403   | Professional Core | Operating System                       | 4      | 3              | 0 | 2 | 5     | 70                                    | 30                    | 30                    | 20                    | 150           |
| 10050404   | Professional Core | Discrete Mathematics                   | 4      | 3              | 1 | 0 | 4     | 70                                    | 30                    | 0                     | 0                     | 100           |
| 10000007   | Mandatory         | Indian Constitution                    | 0      | 2              | 0 | 0 | 2     | 50                                    | 0                     | 0                     | 0                     | 50            |
|  |                   | Cyber Security                         | 4      | 3              | 0 | 2 | 5     | 70                                    | 30                    | 30                    | 20                    | 150           |

|  |  |  |    |  |  |  |  |  |  |  |  |  |
|--|--|--|----|--|--|--|--|--|--|--|--|--|
|  |  |  | 20 |  |  |  |  |  |  |  |  |  |
|--|--|--|----|--|--|--|--|--|--|--|--|--|

**Annexure 3: B.Tech. Information Technology**

| Program Name: Bachelor of Technology (01)                           |                               |  |        |                |   |   | Program Code: IT (006)                |                       |                       |                       |                       |               |
|---|-------------------------------|--|--------|----------------|---|---|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester III |                               |  |        |                |   |   | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code  | Course Type                   | Subject Name                           | Credit | Hours per week |   |   |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|   |                               |  |        | L              | T | P | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10050301  | Professional Core             | Data Structure                         | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10050302  | Professional Core             | Database Management System             | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10050303  | Professional Core             | Digital Fundamentals                   | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|   | Humanities and Social Science | Principles of Economics and Management | 3      | 3              | 0 | 0 | 3                                     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000301  | Basic Science                 | Mathematical Statistics                | 4      | 3              | 1 | 0 | 4                                     | 70                    | 30                    | 0                     | 0                     | 100           |

|          |                               |                        |    |   |   |   |   |   |   |    |    |    |
|----------|-------------------------------|------------------------|----|---|---|---|---|---|---|----|----|----|
| 10000006 | Humanities and Social Science | Universal Human Values | 3  | 2 | 1 | 0 | 3 | 0 | 0 | 30 | 20 | 50 |
|          |                               |                        | 22 |   |   |   |   |   |   |    |    |    |

| <b>Program Name: Bachelor of Technology (01)</b>                          |                   |                             |        |                |   |   | <b>Program Code: IT (006)</b>                |                       |                       |                       |                       |               |
|---|-------------------|-----------------------------|--------|----------------|---|---|--|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| <b>Semester / Year : Second Year Bachelor of Technology - Semester IV</b> |                   |                             |        |                |   |   | <b>Effective From Academic Year: 2023-24</b> |                       |                       |                       |                       |               |
| Subject Code  | Course Type       | Subject Name                | Credit | Hours per week |   |   |  | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|   |                   |                             |        | L              | T | P | Total  | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10050401  | Professional Core | Object Oriented Programming | 4      | 3              | 0 | 2 | 5  | 70                    | 30                    | 30                    | 20                    | 150           |
| 10060401  | Professional Core | Computer Organization       | 4      | 3              | 0 | 2 | 5  | 70                    | 30                    | 30                    | 20                    | 150           |
| 10050403  | Professional Core | Operating System            | 4      | 3              | 0 | 2 | 5  | 70                    | 30                    | 30                    | 20                    | 150           |
| 10050404  | Professional Core | Discrete Mathematics        | 4      | 3              | 1 | 0 | 4  | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000007  | Mandatory         | Indian Constitution         | 0      | 2              | 0 | 0 | 2  | 50                    | 0                     | 0                     | 0                     | 50            |
|   |                   | Cyber Security              | 4      | 3              | 0 | 2 | 5  | 70                    | 30                    | 30                    | 20                    | 150           |



**Annexure 4: B.Tech. Electrical Engineering**

| Program Name: Bachelor of Technology (01)                           |                                     |   |        |                |   | Program Code: EE (003)                |       |                       |                       |                       |                       |               |
|---|-------------------------------------|---|--------|----------------|---|---------------------------------------|-------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester III |                                     |   |        |                |   | Effective From Academic Year: 2023-24 |       |                       |                       |                       |                       |               |
| Subject Code  | Course Type                         | Subject Name                                    | Credit | Hours per week |   |                                       |       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|   |                                     |   |        | L              | T | P                                     | Total | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10030301  | Professional Core                   | Analog and Digital Electronics                  | 5      | 4              | 0 | 2                                     | 6     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030302  | Professional Core                   | Electrical Measurement and measuring Instrument | 4      | 3              | 0 | 2                                     | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030303  | Professional Core                   | Circuit and Networks                            | 5      | 4              | 0 | 2                                     | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030304  | Professional Core                   | Numerical and Statistical Methods               | 5      | 3              | 2 | 0                                     | 5     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000006  | Skill Enhancement Elective Course-1 | Universal Human Values (UHV)                    | 3      | 2              | 1 | 0                                     | 3     | 0                     | 0                     | 30                    | 20                    | 50            |
|   | Humanities and Social Science       | Principles of Economics and Management          | 3      | 3              | 0 | 0                                     | 3     | 70                    | 30                    | 0                     | 0                     | 100           |
|   |                                     |   | 25     | 19             | 3 | 6                                     | 27    |                       |                       |                       |                       | 700           |

| Program Name: Bachelor of Technology (01)                          |                   |                       |        |                |   |    | Program Code: EE (003)                |                       |                       |                       |                       |               |
|--|-------------------|-----------------------|--------|----------------|---|----|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester IV |                   |                       |        |                |   |    | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code   | Course Type       | Subject Name          | Credit | Hours per week |   |    |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|  |                   |                       |        | L              | T | P  | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10030401   | Professional Core | Electrical Machine-1  | 5      | 4              | 0 | 2  | 6                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030402   | Professional Core | Power System -1       | 5      | 4              | 0 | 2  | 6                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030403   | Professional Core | Control Theory        | 4      | 3              | 0 | 2  | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10030404   | Professional Core | Power Electronics - 1 | 4      | 3              | 0 | 2  | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10000007   |                   | Indian constitution   | 0      | 2              | 0 | 0  | 2                                     | 70                    | 0                     | 0                     | 0                     | 70            |
|  |                   | Cyber Security        | 4      | 3              | 0 | 2  | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|  | Total             |                       | 22     | 19             | 0 | 10 | 29                                    |                       |                       |                       |                       | 820           |

**Annexure 5: B.Tech. Electronics & Communication Engineering**

| Program Name: Bachelor of Technology (01)                           |   |   |        |                |   |   | Program Code: EC (004)                |                       |                       |                       |                       |               |
|---|---|---|--------|----------------|---|---|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester III |   |   |        |                |   |   | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code  | Course Type                                 | Subject Name                                | Credit | Hours per week |   |   |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|   |   |   |        | L              | T | P | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10040301  | Professional Core                           | Electronic Devices and Circuits             | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10040302  | Professional Core                           | Digital System Design                       | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10040303  | Professional Core                           | Network Theory                              | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10040304  | Professional Core                           | Signal and Systems                          | 3      | 3              | 0 | 0 | 3                                     | 70                    | 30                    | 0                     | 0                     | 100           |
|   | Basic Science                               | Probability Theory and Stochastic Processes | 3      | 2              | 1 | 0 | 3                                     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10000006  | Skill Enhancement Elective Course-1 (SEC-1) | Universal Human Values (UHV)                | 3      | 2              | 1 | 0 | 3                                     | 0                     | 0                     | 30                    | 20                    | 50            |
|   | Humanities and Social Science               | Principles of Economics and Management      | 3      | 3              | 0 | 0 | 3                                     | 70                    | 30                    | 0                     | 0                     | 100           |
|   |   |   | 24     |                |   |   | 27                                    |                       |                       |                       |                       | 800           |



| Program Name: Bachelor of Technology (01)                          |                   |                                  |        |                |   |   | Program Code: EC (004)                |                       |                       |                       |                       |               |
|--|-------------------|----------------------------------|--------|----------------|---|---|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester IV |                   |                                  |        |                |   |   | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code   | Course Type       | Subject Name                     | Credit | Hours per week |   |   |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|  |                   |                                  |        | L              | T | P | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10040401   | Professional Core | Analog Circuit design            | 5      | 4              | 0 | 2 | 6                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10040402   | Professional Core | Control System Engineering       | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10040403   | Professional Core | Microprocessor & Microcontroller | 5      | 4              | 0 | 2 | 6                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|  | Basic Science     | Numerical Methods                | 3      | 2              |   | 2 | 4                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10000007   |                   | Indian constitution              | 0      | 2              | 0 | 0 | 2                                     | 70                    | 0                     | 0                     | 0                     | 70            |
|  |                   | Cyber Security                   | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|  |                   |                                  | 21     |                |   |   | 28                                    |                       |                       |                       |                       | 820           |

**Annexure 6: B.Tech. Civil Engineering**

| Program Name (Code): Bachelor of Technology (01)                    |                   |   |        |                |   |   | Program Code: CL (002)                |                       |                       |                       |                       |               |
|---|-------------------|---|--------|----------------|---|---|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester III |                   |   |        |                |   |   | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code  | Course Type       | Subject Name                                  | Credit | Hours per week |   |   |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|   |                   |   |        | L              | T | P | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10000006  | Mandatory         | Universal Human Values                        | 3      | 2              | 1 | 0 | 3                                     | 0                     | 0                     | 30                    | 20                    | 50            |
| 10000303  | Basic Science     | Statistics and Partial Differential Equations | 4      | 3              | 1 | 0 | 4                                     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10020301  | Professional Core | Construction Technology                       | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020303  | Professional Core | Fluid Mechanics                               | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020304  | Professional Core | Geotechnical Engineering-I                    | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020305  | Professional Core | Mechanics of Solids                           | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|   |                   |   | 23     |                |   |   | 27                                    |                       |                       |                       |                       | 750           |

| Semester / Year : Second Year Bachelor of Technology - Semester IV |                   |                                  |        |                |   |   |       |                       |                       |                       |                       |               |
|--|-------------------|----------------------------------|--------|----------------|---|---|-------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Subject Code   | Course Type       | Subject Name                     | Credit | Hours per week |   |   |       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|  |                   |                                  |        | L              | T | P | Total | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10000007   | Mandatory         | Indian Constitution              | 0      | 2              | 0 | 0 | 2     | 50                    | 0                     | 0                     | 0                     | 50            |
|  |                   | Cyber Security                   | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020401   | Professional Core | Building Planning & Architecture | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020402   | Professional Core | Basic Transportation Engineering | 4      | 3              | 1 | 0 | 4     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020403   | Professional Core | Engineering Surveying            | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020404   | Professional Core | Geotechnical Engineering-II      | 4      | 3              | 0 | 2 | 5     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10020405   | Professional Core | Structural Analysis - I          | 4      | 3              | 1 | 0 | 4     | 70                    | 30                    | 30                    | 20                    | 150           |
|  |                   |                                  | 24     |                |   |   | 30    |                       |                       |                       |                       | 950           |

**Annexure 7: B.Tech. Mechanical Engineering**

| <b>Program Name: Bachelor of Technology (01)</b>                           |                    |   |               | <b>Program Code: ME (001)</b>                |          |          |              |                              |                              |                              |                              |                      |
|--|--------------------|---|---------------|--|----------|----------|--------------|------------------------------|------------------------------|------------------------------|------------------------------|----------------------|
| <b>Semester / Year : Second Year Bachelor of Technology - Semester III</b> |                    |   |               | <b>Effective From Academic Year: 2023-24</b> |          |          |              |                              |                              |                              |                              |                      |
| <b>Subject Code</b>  | <b>Course Type</b> | <b>Subject Name</b>                           | <b>Credit</b> | <b>Hours per week</b>                        |          |          |              | <b>Theory (Marks)</b>        |                              | <b>Practical (Marks)</b>     |                              | <b>Total (Marks)</b> |
|  |                    |   |               | <b>L</b>                                     | <b>T</b> | <b>P</b> | <b>Total</b> | <b>University Assessment</b> | <b>Continuous Assessment</b> | <b>University Assessment</b> | <b>Continuous Assessment</b> |                      |
| 10010302   | Professional Core  | Material Science and Metallurgy               | 4             | 3  | 0        | 2        | 5            | 70                           | 30                           | 30                           | 20                           | 150                  |
| 10010303   | Professional Core  | Engineering Thermodynamics                    | 4             | 3  | 1        | 0        | 4            | 70                           | 30                           | 0                            | 0                            | 100                  |
| 10010304   | Professional Core  | Manufacturing Processes                       | 4             | 3  | 0        | 2        | 5            | 70                           | 30                           | 30                           | 20                           | 150                  |
| 10010305   | Professional Core  | Mechanics of Solids                           | 5             | 4  | 0        | 2        | 6            | 70                           | 30                           | 30                           | 20                           | 150                  |
| 10000006   | Mandatory          | Universal Human Values                        | 3             | 2  | 1        | 0        | 3            | 0                            | 0                            | 30                           | 20                           | 50                   |
| 10000303   | Basic Science      | Statistics and Partial Differential Equations | 4             | 3  | 1        | 0        | 5            | 70                           | 30                           | 0                            | 0                            | 100                  |
|  |                    |   | 24            |  |          |          | 28           |                              |                              |                              |                              | 700                  |

| Program Name: Bachelor of Technology (01)                          |                   |                                 |        |                |   |   | Program Code: ME (001)                |                       |                       |                       |                       |               |
|--|-------------------|---------------------------------|--------|----------------|---|---|---------------------------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| Semester / Year : Second Year Bachelor of Technology - Semester IV |                   |                                 |        |                |   |   | Effective From Academic Year: 2023-24 |                       |                       |                       |                       |               |
| Subject Code   | Course Type       | Subject Name                    | Credit | Hours per week |   |   |                                       | Theory (Marks)        |                       | Practical (Marks)     |                       | Total (Marks) |
|  |                   |                                 |        | L              | T | P | Total                                 | University Assessment | Continuous Assessment | University Assessment | Continuous Assessment |               |
| 10010401   | Professional Core | Fluid Mechanics                 | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10010402   | Professional Core | Kinematics & Theory of Machines | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10010403   | Professional Core | Fundamental of Machine Design   | 5      | 4              | 1 | 0 | 5                                     | 70                    | 30                    | 0                     | 0                     | 100           |
| 10010405   | Professional Core | Manufacturing Technology        | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
|  |                   | Cyber Security                  | 4      | 3              | 0 | 2 | 5                                     | 70                    | 30                    | 30                    | 20                    | 150           |
| 10000007   | Mandatory         | Indian Constitution             | 0      | 2              | 0 | 0 | 2                                     | 50                    | 0                     | 0                     | 0                     | 50            |
|  |                   |                                 | 21     |                |   |   | 27                                    |                       |                       |                       |                       | 750           |