**SHIVAJI UNIVERSITY, KOLHAPUR**
**416 004, MAHARASHTRA**
PHONE : EPABX – 2609000, BOS Section – 0231-2609094, 2609487
Web : www.unishivaji.ac.in Email: bos@unishivaji.ac.in
**शिवाजी विद्यापीठ, कोल्हापूर ४१६ ००४, महाराष्ट्र**
दूरध्वनी - इपीबीएक्स - २०६०९०००, अभ्यासमंडळे विभाग - ०२३१- २६०९०९४, २६०९४८७
वेबसाईट : www.unishivaji.ac.in ईमेल : bos@unishivaji.ac.in

Estd. 1962
"A++" Accredited by
NAAC (2021)
With CGPA 3.52

जा.क्र./शि.वि./अं.म./ *549*                                     दिनांक:– ११/०९/२०२५

प्रति,

प्र. संचालक,
स्कुल ऑफ इंजिनिअरींग ॲण्ड टेक्नॉलॉजी,
शिवाजी विद्यापीठ, कोल्हापूर

**विषय:–** राष्ट्रीय शैक्षणिक धोरण–२०२० नुसार बी. टेक अभ्यासक्रमाच्या
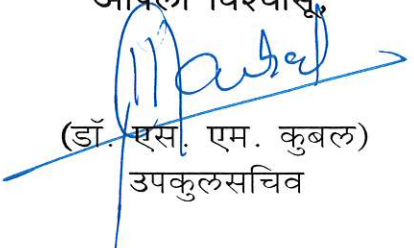नियमावलीबाबत.

**महोदय,**

उपरोक्त संदर्भिय विषयास अनुसरुन आपणास आदेशान्वये कळविण्यात यते की, राष्ट्रीय शैक्षणिक धोरण–२०२० नुसार लागू करण्यात आलेल्या **बी.टेक अभ्यासक्रमाच्या सुधारीत नियमावलीस** विद्यापीठ अधिकार मंडळाने मंजुरी दिली आहे. सोबत सदर नियमावलीची प्रत जोडली आहे.

सदरची नियमावली विद्यापीठाच्या https://www.unishivaji.ac.in,NEP-2020@suk (Online Syllabus) या संकेस्थळावर उपलब्ध आहे. सदर नियमावली सर्व संबंधितांच्या निदर्शनास आणावी.

कळावे.

आपला विश्वासू,

(डॉ. एस. एम. कुबल)
उपकुलसचिव

प्रत :– माहितीसाठी व पुढील योग्यत्या कार्यवाहीसाठी

| | |
|---|---|
| प्र. अधिष्ठाता, विज्ञान व तंत्रज्ञान विद्याशाखा | पात्रता विभागास |
| अध्यक्ष, सर्व अभियांत्रिकी अभ्यास व अस्थायी मंडळ | पीजी प्रवेश विभागास |
| संचालक, परीक्षा व मुल्यमापन मंडळ | पीजी सेमिनार विभागास |
| परीक्षक नियुक्ती ए व बी विभागास. | संलग्नता टी. १ व टी. २ विभागास |
| इतर परिक्षा ४ विभागास. | आय.क्यु.ए.सी विभाग |
| संगणक केंद्र / आयटी सेल | |

# SHIVAJI UNIVERSITY, KOLHAPUR.

**Established: 1962**

**A ++ Accredited By NAAC with CGPA 3.52**

**Rules and Regulations**

**For**

**Various B.Tech Programs**

**At**

**Department of Technology, Shivaji University, Kolhapur**

**Under Faculty of Science and Technology**

**To be implemented from 2025-26**

# Shivaji University
# Vidyanagar, Kolhapur - 416 004, Maharashtra.

## Department of Technology



## Rules and Regulations for MDM-Featured B.Tech Programs

## Effective from Academic Year 2025-26

## A. Definition of Credit

- 1 Hour of Lecture (L) per week = 1 Credit
- 1 Hour of Tutorial (T) per week = 1 Credit
- 2 Hours of Practical/Laboratory (P) per week = 1 Credit

## B. Credits for award of Degrees

a) A total of **176 credits** are required for a student to be eligible for the award of an undergraduate degree in **Engineering (Major) with a Multidisciplinary Minor (MDM).** This degree structure corresponds to **the fourth vertical (Level 6.0)** of the National Credit Framework. The degree awarded will be titled: **B.Tech in [Major] with the Particular Multidisciplinary Minor **. There will be a pool of multidisciplinary minors for each major UG Program. The regular program fees will apply for the award of this degree.

b) **B.Tech (Honors):**
A student may opt for the **MDM-featured undergraduate degree** with Honors by earning an additional 17 credits. These include:

**15 credits** from **five theory courses** (3 credits each) relevant to the major discipline.

**2 credits** from an **advanced laboratory course** in the respective specialization.
These theory credits are preferably to be earned through MOOCs, the titles of which will be announced in advance. This program falls under **the fifth vertical (Level 6.0)** of the National Credit Framework.
The degree awarded will be: **B.Tech (Honors) in [Major] with the Particular Multidisciplinary Minor.**
Students opting for the Honors program are required to pay additional fees as prescribed by the institute.

c) **B.Tech (Honors with Research):**
Students opting for the **Honors with Research** pathway must earn the 17 credits required for the Honors program **plus an additional 3 credits** through an **independent research project.**
A key requirement is the **successful publication of at least one research paper** based on the research conducted. This program aligns with **the sixth vertical (Level 6.0)** of the National Credit Framework.
The degree awarded will be: **B.Tech (Honors with Research) in [Major] with the Particular Multidisciplinary Minor.**
Students opting for this pathway must pay additional fees as prescribed.

d) **B.Tech with Double Minor (Multidisciplinary + Specialization Minor):**
Students who earn **an additional 14 credits** by completing another **specialization-based minor** (in addition to the Multidisciplinary Minor) will be awarded a degree titled:

**B.Tech in [Major] with Double Minors**

(i.e., both Multidisciplinary Minor and Specialization Minor).

These 14 credits may include courses offered via **MOOCs**, subject to academic approval. This option falls under the **seventh vertical (Level 6.0)** of the National Credit Framework. Students must pay additional fees as notified.

## C.  Component wise distribution of credits

**(Expected range of credits as per AICTE & NEP2020 guidelines is 160-176)**

All the Programs will have the details of curriculum components distribution in their curriculum document for SY B.Tech and Onwards.

## D.  Notation/Course code and Definition: Table 1

| Notation/Course code | Definitions |
|---|---|
| L | Lecture |
| T | Tutorial |
| P | Practical |
| MDM | Multidisciplinary Minor |
| SPM | Specialization Minor |
| ISE | In Semester Evaluation |
| MST | Mid Semester Tests |
| ESE or SEE | End Semester Examination/Semester End Examination |
| IE or IOE or IPE | Internal Evaluation/Internal Oral Evaluation/Internal Practical Evaluation |
| EE or EOE or EPE | External Evaluation/External Oral Evaluation/External Practical Evaluation |
| BSC | Basic Science Course |
| ESC | Engineering Science Course |
| HSMEC | Humanities and Social Sciences including Management , Environmental Course |
| PCC | Professional Core Course |
| PEC | Professional Elective Course |
| OEC | Open Elective Courses |
| VSEC | Vocational and Skill Enhancement Courses |
| IKS | Indian Knowledge System |
| AEC | Ability Enhancement Course |
| VEC | Value Education Courses |

| MAC | Mandatory Audit Course |
|---|---|
| PSI | Project, Seminar, Internship |
| PBL | Project Based Learning |
| PBL, PBI | Project Based Learning   Program Based Internship |
| MN , HN, HNR | Minor , Honors, Honors with Research |
| CC, DC | Certificate Course, Diploma Course |
| CHE, CE,CST | Chemical Engineering, Civil Engineering, Computer Science and Technology |
| ETC, FT, ME | Electronics and Telecommunication Engineering,  Food Technology, Mechanical Engineering, |
| NCrF | National  Credit Framework |
| NSQF | National Skills Qualification Framework |
| NCF | National Curriculum Framework |

**Mandatory Induction Program at FY B. Tech First Term Commencement**
**(3 Weeks Duration)**

a) Physical activity

b) Creative Arts

c) Universal Human Values

d) Literary

e) Proficiency Modules

f) Lectures by Eminent People

g) Visits to local Areas

h) Familiarization to Dept./Branch & Innovations

**Note:** In addition to the academic curriculum, the campus offers opportunities for students to participate in co-curricular activities. The **National Cadet Corps (NCC)** is available for interested and selected students. The **National Service Scheme (NSS)** unit is open to all volunteer students who wish to contribute their services as and when required.

**E.     Academic Rules and Regulations for MDM featured Four-Year B. Tech. Degree**
**INDEX: Table 2**

| Sr. No. | Rule No. | Description |
|---|---|---|
| 1. | R.B.T. 1 | Admission |
| 2. | R.B.T. 2 | Award of Degree |

| 3. | R.B.T. 3 | Attendance Rule |
|---|---|---|
| 4. | R.B.T. 4 | Academic Progress Rules (ATKT Rules) |
| 5. | R.B.T. 5 | Academic Flexibility |
| 6. | R.B.T. 6 | Credit system |
| 7. | R.B.T. 7 | Features of Credit System at Department of Technology, Shivaji University, Kolhapur |
| 8. | R.B.T. 8 | Course credits assignment |
| 9. | R.B.T. 9 | Detailed Evaluation Scheme |
| 10. | R.B.T. 10 | Earning credits |
| 11. | R.B.T.11 | CGPA Improvement Policy for award of degree |
| 12. | R.B.T. 12 | Evaluation System |
| 13. | R.B.T. 13 | Entry of Students from previous credit to new Credit Pattern |
| 14. | R.B.T. 14 | Audit Courses |
| 15. | R.B.T. 15 | Award of Grades for Re-Examination |
| 16. | R.B.T. 16 | Showing Evaluated End Semester Examination Answer Papers, Re-evaluation, and applying for revaluation |
| 17. | R.B.T. 17 | Change of Branch |
| 18. | R.B.T. 18 | Disciplines and Conduct |
| 19. | R.B.T. 19 | Details regarding B.Tech Major, Multidisciplinary Minor, Honors, Honors with Research, Specialization Minor and Multiple entry, multiple exit features |

**Glossary**

**B. Tech.:** Bachelor of Technology, an Under Graduate Degree awarded from the Shivaji University, Kolhapur

**Director:** Director, Department of Technology, Shivaji University, Kolhapur

**Program:** The specialization in B.Tech (Particular Major Branch)

**Program Head:** The Head of the Specialized Branch of B.Tech studies

**DC:** Department Committee

**DEC:** Departmental Examination Coordinator

**Semester:** The academic year will be divided into two regular semesters of approximately 20 weeks' duration each. Typically, the odd semester will be from the first week of July to last week of November while the even semester will be from the first week of January to the last week of May. This will include the period of academic delivery (14 to 15 weeks), Internal Evaluation (CIE) i.e. In Semester Examination and Assignments, End Semester Examination (ESE) assessment and declaration of results.

**R.B.T.:** Rule B.Tech

**Course:** Subject

**Course Coordinator:** Subject teacher

**Course Credit:** Weighted sum of the number of Lecture hours (L), Tutorial hours (T), and Practical hours (P) associated with the course.

**Credits Earned:** The sum of course credits for credit courses in which a student has passed.

**Grade:** Assessment of the student's performance in a course indicated by the letters, "AA", "AB", "BB", "BC", "CC", "CD", "DD", "DD $", "DD #", "FF", "XX", "ABSENT", "PP", "NP".

**Grade Point:** Number equivalent of the letter grades given are 10, 9, 8, 7, 6, 5, 4, 4, 3 for the grades as "AA", "AB", "BB", "BC", "CC", "CD", "DD", "DD $", "DD #" respectively while "FF" means zero grade points.

**Course Instructor:** Member of faculty who will be assigned to conduct a specific laboratory course.

**Semester Grade Points:** The sum of the products of credits and Grade Points for each course registered by a student in a semester.

**SGPA: Semester Grade Point Average**

**CGPA: Cumulative Grade Point Average**

**ATKT:** Allowed to Keep Terms.

**R.B.T. 1 Admission:**

At the Department of Technology, Shivaji University, **admissions to all specialized B.Tech programs** are conducted in accordance with the rules and regulations prescribed by the **All India Council for Technical Education (AICTE), New Delhi** and the **Directorate of Technical Education (DTE), Mumbai**, Government of Maharashtra.

**R.B.T. 2 Award of Degree:**

The **B.Tech degree** shall be awarded to a student upon fulfilment of the following conditions:

a. The student has **registered for and successfully earned all credits** prescribed under the program's curriculum and departmental requirements.

b. The student has **successfully completed all mandatory Audit Courses (AC)** during the program. The result of an audit course is recorded as:

- o **PP** – Passed
- o **NP**– Not Passed

Obtaining "PP" in all Audit Courses is **mandatory** for degree award. However, audit course grades **will not be considered** in CGPA computation.

c. The student has secured a **minimum CGPA of 4.5**.

d. The student has **cleared all dues** and fulfilled any other academic or administrative obligations to the institute.

e. There is **no pending case of indiscipline** or misconduct against the student.

Upon satisfying all the above conditions, the **University authorities shall recommend** the award of the B.Tech degree.

**R.B.T. 3 Attendance Rule:**

All students are expected to **attend every scheduled lecture, tutorial, and practical session**. To accommodate unforeseen circumstances such as late registration or medical issues, a **minimum of 75% attendance** is required in each course (including lectures, tutorials, and practicals taken together, as applicable).

- A student who fails to meet the 75% attendance requirement in any course shall be awarded the **'XX' grade**, **regardless of performance** in assessments or examinations.

- Attendance shall be recorded through **roll calls or equivalent means** during every scheduled session. The **course coordinator** is responsible for maintaining and consolidating the attendance records for each course.

**R.B.T. 4 Academic Progress Rules (ATKT Rules)**

I. A student **failing in any number of courses in Semester I** shall be permitted to continue to Semester II.

II. To be eligible for admission to **Second Year B.Tech (Level 5.0)**, a student must have **earned at least 50% of the total credits** prescribed for **First Year B.Tech (Level 4.5)**.

III. A student **failing in any number of courses in Semester III** shall be permitted to continue to Semester IV.

IV. To be eligible for admission to **Third Year B.Tech (Level 5.5)**, a student must have **earned at least 50% of the total credits** of **Second Year B.Tech (Level 5.0)**.

V. No student shall be permitted to enter Semester V (Third Year) **without passing all courses of Level 4.5 (First Year B.Tech)**.

VI. A student **failing in any number of courses in Semester V** shall be permitted to continue to Semester VI.

VII. To be eligible for admission to **Final Year B.Tech (Level 6.0)**, a student must have **earned at least 50% of the credits** of **Third Year B.Tech (Level 5.5)**.

VIII. No student shall be permitted to enter Semester VII (Final Year) **without passing all courses of Level 5.0 (Second Year B.Tech)**.

IX. A student **failing in any number of courses in Semester VII** shall be allowed to continue to Semester VIII.

**Additional Clauses:**
- If regulations of any apex statutory body differ from these rules, **the rules of the apex body shall prevail**.
- As per NEP 2020, **university-issued ATKT rules** will also apply where necessary.

**Yearly Aggregate Clause:**
- A student must secure a **minimum of 45% aggregate across both semesters** of an academic year.
- Failure to meet this aggregate shall be considered as an **additional backlog**, and the student must **appear for re-examination** in any course(s) to improve the aggregate.
- The revised grade will be awarded **with a penalty**, as per R.B.T. 15 (g) and Table 8.

**Backlog Clearance Options:**
- A student who earns an **'FF' grade in two consecutive attempts** of ESE can:
    1. **Re-register** for the course in a future semester.
    2. Apply for a **Repeated Examination** when offered.
- A student awarded an **'XX' grade** (due to detention) must **re-register** for the course when it is next offered.

**Maximum Program Duration:**
- For regular students admitted in Semester I: **16 semesters (8 academic years)**.
- For lateral entry students admitted in Semester III: **14 semesters (7 academic years)**.
    The maximum duration includes **withdrawals, leaves, and absences**, but **excludes rustication**.

**Discontinuation Clause:**
- A student who **fails to complete First Year B.Tech** within **three academic years** from admission will be declared **"Not Fit for Engineering"**, and **de-registered** from the program.
- The department may review and decide on the **continuation or discontinuation** of registration in other exceptional cases.

**R.B.T. 5 Academic Flexibility**

The B.Tech program offers **flexibility in curriculum design**, allowing periodic updates to **course content and structure** in alignment with emerging technologies, industry needs, and academic advancements.

Key features include:
a. **Dynamic Curriculum**:
   - Flexibility in revising course structure and content **at regular intervals** to remain current and relevant.
b. **Continuous Assessment**:
   - Student performance is evaluated on a **continuous basis**, following the **credit-based grading system** as per **NEP 2020** guidelines.
c. **Credit as Learning Currency**:
   - Credits represent the **relative academic weightage** of a course component.
   - They are a **measure of the time and effort** typically required to achieve **defined learning outcomes**.
d. **Unitized Course Offerings**:
   - All courses in each academic year and program are **structured into standardized units**, enabling comparability and systematic evaluation.

**R.B.T. 6 Credit system:**

The Department of Technology follows a **semester-based credit system** for all B.Tech programs. This system ensures both **continuous evaluation** and **flexibility**, enabling students to progress at a pace suited to their individual capabilities, provided minimum academic requirements are met.

Key features include:

I. **Credit-Based Evaluation**:

A student's academic progress is assessed based on the **number of credits earned**, which reflects successful completion of courses.

II. **Grade Point Average (GPA)**:

Based on the **credits and grades** earned in each course, students' **Semester Grade Point Average (SGPA)** and **Cumulative Grade Point Average (CGPA)** are calculated.

III. **Eligibility Criteria**:

To qualify for the award of a degree, a student must:

- o Earn the **minimum required credits** as prescribed for the program.
- o Maintain a **minimum CGPA** as defined in the evaluation rules.

IV. **Curriculum Design**:

Each program is defined by a **specific total credit load**, with a **structured distribution of credits** across various categories such as core, elective, laboratory, project, internship, audit, etc.

**R.B.T. 7 Features of Credit System at Department of Technology, Shivaji University, Kolhapur:**

I. **Credit Allocation**:
- o Credits are assigned based on the **academic weightage** of each course.
- o Most courses are standardized to consist of **six academic units**, with exceptions where necessary.

II. **Credit Distribution**:
- o **First Year (FY) B.Tech to Final Year B.Tech** : 22 credits per semester per week for entire Program of 8 semesters.
- o It includes **162 credits for B.Tech Major** + **14 credits for Multidisciplinary Minor (MDM)** = **176 credits**
- o This aligns with the **Fourth Vertical (Level 6.0)** of the National Credit Framework.

III. **Grading System**:
- o An **absolute grading system** is followed, with the **passing grades**: AA, AB, BB, BC, CC, CD, DD, DD$, DD # and **FF** indicating failure.

IV. **Evaluation Scheme**:
- o Each course includes both:
  - ▪ **In-Semester Evaluation (ISE)** – 40% weightage
  - ▪ **End Semester Examination (ESE)** – 60% weightage
- o Students must secure **a minimum of 40% marks in ESE** to pass, irrespective of ISE marks.

V. **ISE Components**:
- o Conducted at the Course Coordinator end through scheduled tests and assignments etc. as planned by the Course Coordinator.
- o Evaluated and declared periodically by the Course Coordinator.

**VI. ESE Components**:
- o Coordinated by the department as per **University examination rules**.
- o Includes:
  - ▪ **Written examination** for theory courses
- o For **MOOC-based courses**, the ESE performance may be either based on the one by MOOC-offering institute or it may be from the exams conducted as usual at the University End.

**VII. Minimum Academic Days**:
- o Each academic year shall have **at least 180 instructional days**.
- o The academic calendar issued by the department is **mandatory for all programs**.

**R.B.T. 8 Course credits assignment:**

Each course is assigned a specific number of **credits**, determined by the **weekly contact hours** for lectures, tutorials, and practicals/laboratory work. This assignment reflects the **academic effort** required for the course, including both classroom interaction and independent study.

**Credit Calculation Guidelines:**

- **Lecture (L)**: 1 hour/week = **1 credit**

- **Tutorial (T)**: 1 hour/week = **1 credit**

- **Practical/Laboratory (P)**: 2 hours/week = **1 credit**

**Illustrative Example:**

**Course**: Fluid Flow Operations

**Structure**: 3-1-2

- 3 hours/week of Lectures = 3 credits

- 1 hour/week of Tutorial = 1 credit

- 2 hours/week of Practical = 1 credit

**Total Credits** = **5**

**Total Contact Hours per Week** = **6 hours**

**R.B.T. 9 Detailed Evaluation Scheme:**

The evaluation of a student's academic performance in each course shall be based on a **composite score out of 100 marks**, distributed as follows:

- **In-Semester Evaluation (ISE):** 40 marks

- **End Semester Examination (ESE):** 60 marks

**A. In-Semester Evaluation (ISE) – 40 Marks**

To ensure continuous and comprehensive evaluation, the **ISE component of 40 marks** is divided into structured sub-parts that vary according to the student's academic level:

**Split-up of ISE Marks: Table 3**

| Level as per NCrF | Part | B.Tech  and Semesters | ISE Description | Marks assigned |
|---|---|---|---|---|
| 4.5 | I | First Year,  Semesters 1 & 2 | Home Assignment | 10 |
| | | | Class Assignment (Tutorial Type) | 10 |
| | | | Quiz | 10 |
| | | | Mid Semester Tests* | 10 |
| 5 | II | Second Year, Semesters 3 & 4 | Oral Examination | 10 |
| | | | Group Discussion | 10 |
| | | | Seminar | 10 |
| | | | Mid Semester Tests* | 10 |
| 5.5 | III | Third Year, Semesters 5 & 6 | Case Studies | 10 |
| | | | Field Work | 10 |
| | | | Book Review/Poster Presentation | 10 |
| | | | Mid Semester Tests* | 10 |
| 6 | IV | Fourth Year, Semesters 7 & 8 | Seminar | 10 |
| | | | Case Study/Problem Solving | 10 |
| | | | Book Review/Poster Presentation | 10 |
| | | | Mid Semester Tests* | 10 |

Mid Semester Tests *: Out of the first four units there will be 4 unit tests called the Mid Semester Test conducted by the course in charge immediately after the completion of the respective unit. Thus the 10 marks under the heading of Mid Semester Tests would be the average of these 4 unit tests. These tests will be designed, conducted and evaluated by the course in charge/course coordinator. The nature of these unit tests will be preferably of MCQ type.

- The nature and weightage of other components (assignments, seminars, quizzes, case studies, field work etc.) may be tailored by the course coordinator as per the course requirement and approved academic plan.
- All ISE marks must be declared to the students **on an ongoing basis**, and records must be maintained transparently by the department.

**B. End Semester Examination (ESE) – 60 Marks**

- **Duration**: 2 hours
- **Maximum Marks**: 60
- **Minimum Passing Marks**: 24 (i.e., 40% of 60)

**Model ESE Question Paper Structure**

(To ensure alignment with CO-PO attainment, NEP 2020, and Bloom's Taxonomy)

**Nature and Format of End Semester Examination (ESE): Table 4**

| Q. No. | Type of Questions | Marks per Sub Question | Questions to Attempt | Total Marks | Bloom's Level (Cognitive Domain) | Targeted COs |
|---|---|---|---|---|---|---|
| Q.1 | Short Answer (Definition/Conceptual) | 2 | Attempt any 5 out of 6 | 10 | K1–K2 | CO1, CO2 |
| Q.2 | Application/Reasoning Based Questions | 5 | Attempt any 3 out of 4 | 15 | K2–K3 | CO2, CO3, CO4 |
| Q.3 | Long Answer / Analytical / Design | 10 | Attempt any 2 out of 3 | 20 | K4–K6 | CO4, CO5, CO6 |
| Q.4 | Optional Questions (Bonus/Alternate) | Varies | Attempt any as applicable | Up to +15 | K2–K5 | Optional coverage |

Bloom's Taxonomy Levels are as follows:
K1: Remember, K2: Understand, K3: Apply, K4: Analyze, K5: Evaluate, and K6: Create.

**Note**: The ESE paper will include **~75 marks worth of questions**, allowing students to attempt for **any 60 marks**. This ensures **flexibility, academic fairness**, and reduces stress while improving **attainment tracking** across COs. **However, all 4 main questions are compulsory** and there would be the internal options in each of these questions.

- Students must pass the **ESE independently** with at least 24 marks, **regardless of ISE performance**, to earn a passing grade in the course.

**C. Nature of Laboratory courses evaluation**

**From Second Year onwards**, laboratory courses are assessed in **two parts namely** Internal Evaluation (IE) & External Evaluation (EE). **However, some courses may have only IE for which the weightage will be 100% while some may have both IE and EE. For the later case the weightage is as follows:**
  - **Internal Evaluation (IE)** – 50% weightage
  - **External Evaluation (EE)** – 50% weightage
- To pass the laboratory courses, the student must secure a **minimum of 40% marks separately in both IE and EE**.

**Internal Evaluation (IE) Includes:**
- Turn-by-turn supervision of the student's work
- Assessment of **lab journal/records**
- Periodic **oral or practical evaluations**

- Uniform distribution of evaluation throughout the semester

  **Note**: Students must complete and submit the lab work and secure at least **40% marks in IE**. Failing to acquire so will result in a '**Term Not Granted' (TNG)** status.

- TNG cases must be **immediately reported** by the course teacher to the **Department Examination Cell (DEC)**, which will then notify the **Office of the Director, Board of Examinations and Evaluation, Shivaji University**.

The split up of 50 marks against laboratory internal evaluation as **IE/IOE/IPE** is as per the table below:

**Nature of Internal Laboratory Work Evaluation: Table 5**

| Sr. No. | Assessment Description | Maximum marks |
|---|---|---|
| 1. | Laboratory Experiments Journal Writing | 20 |
| 2. | Maintaining the Laboratory Work Logbook | 10 |
| 3. | Minimum Two Tests Based on Laboratory Work | 10 |
| 4. | Seminar Based on Laboratory Work | 10 |
| | Total Maximum Marks | 50 |

All the laboratory course teachers will mandatorily follow this nature of internal laboratory evaluation and they will maintain the record of the same. The teachers will submit a copy of the student wise split of this evaluation to the Department.

**The features and nature of External Evaluation (EE/EOE/EPE) Includes:**
- There will be conduct of the same preferably **one week prior** to the theory examination **(ESE)**
- It will be carried out by a panel including **internal and external examiners**

The split up of 50 marks against laboratory external evaluation as **EE/EOE/EPE** is as per the tables below:

**Nature of External Practical Evaluation (EPE): Table 6**

| Sr. No. | Assessment Description | Maximum marks |
|---|---|---|
| 1. | Laboratory Experiments Journal Writing | 10 |
| 2. | Maintaining  the Laboratory Work Logbook | 10 |
| 3. | Experiment Performance on the Day of Evaluation | 20 |
| 4. | Viva Voce Based on the Performed Experiment | 10 |
| | Total Maximum Marks | 50 |

**Nature of External Oral Evaluation (EOE): Table 7**

| Sr. No. | Assessment Description | Maximum marks |
|---|---|---|
| 1. | Laboratory Experiments Journal Writing | 10 |
| 2. | Maintaining the Laboratory Work Logbook | 10 |
| 3. | Viva Voce Based on Laboratory Work of Entire Semester | 30 |
| | Total Maximum Marks | 50 |

**Exception for First-Year Laboratory Courses:**

- Assessed entirely through **Internal Evaluation (100%)**
- A **minimum of 40% in IE** is required to pass

No EE is applicable for these courses

### D. Final Course Evaluation

- **Theory Courses**: Final score = ISE (40) + ESE (60) = **100 marks**
- **Laboratory Courses**: Final score = Internal Evaluation (IE) 50% + External Evaluation (EE) 50%
    - From Second Year onwards, both IE and EE must be passed **individually** (minimum 40% in each).
    - **First Year labs** are assessed solely on **IE (100%)** which must be passed (minimum 40% in each).

### E. Evaluation of Seminars, Projects, and Internships

**Seminar and Mini Project:**

- Evaluated by a **panel of three internal faculty members**
- Components include:
    - Quality of report
    - Presentation skills
    - Subject understanding

**Major Project (Final Year):**

Evaluation is conducted in **two phases**:

a. **Internal Evaluation (IE)**:
    - Approval of synopsis by a **Departmental Committee**
    - Continuous assessment by the **Project Guide**
    - Departmental Committee comprises:
        - Director (Chairman)
        - Program/Branch Coordinator (Member)
        - Senior Faculty Member (Member)
        - Project Guide (Member)

b. **External Evaluation (EE)**:
    - Conducted via viva-voce and presentation
    - Evaluated by a **panel of internal and external examiners**

**Apprenticeship / Internship (8th Semester – 20 Credits):**

- Students must submit a report summarizing their industrial work
- May include:
    - Case study of a technology or system
    - Design, implementation, or analysis tasks
- Surprise visits by the department will ensure performance tracking
- Evaluation is conducted similarly to major project assessment

**F. Evaluation of Audit (Non-Credit) Courses**
- Typically assessed via **five assignments of 10 marks each** (Total: 50 marks)
- A **minimum of 20 marks** is required to be considered as **Passed (PP)**
- Result appears on the mark sheet as either:
  - **PP** – Passed
  - **NP** – Not Passed
- Audit course coordinators must communicate final result status (PP/NP) to the Examination Section

**G. Completion Guidelines for Lab Assignments and IE Work**
- For each lab assignment/sheet/job/experiment, a **target completion date** will be fixed
- Work shall be **assessed immediately** after the due date by the concerned faculty
- Marks will be submitted to the **Coordinator of the Department**
- The department will consolidate and forward IE marks to the **University**

**R.B.T. 10 Earning credits:**

At the conclusion of each course, students are awarded a **letter grade** reflecting their academic performance. Upon earning a **passing grade** (minimum **DD**, equivalent to 40% marks); the student shall accumulate the corresponding **course credits**.

**General Guidelines:**
a. **Credits Earned**:
   - The credits of only those courses passed with **DD grade or higher** will be a part of count towards the total earned credits.
b. **Program Progression and Graduation**:
   - A student's academic progress is tracked through the accumulation of earned credits.
   - The final **Cumulative Grade Point Average (CGPA)** and total credits will determine eligibility for graduation.
c. **Evaluation through Continuous and Flexible Credit Accumulation**:
   - The credit system allows students to progress at a pace aligned with their academic ability and performance.
   - Flexibility exists to repeat or improve performance in courses as per policies outlined in R.B.T. 11 and 15.

**Optional Credit Accumulation for Additional Certifications and Pathways:**
a. **Certificate and Diploma Exit Options**:
   - For students exiting the program after **First Year**, additional credits must be earned (as specified in R.B.T. 19) to be eligible for a **Certificate in the specialization**.
   - For exit after **Second Year**, additional credits are needed for a **Diploma award**.
b. **Honors, Honors with Research, and Minor Programs**:
   - Students may opt for additional credit-based offerings like:

- ▪ **Honors** (17 extra credits)
- ▪ **Honors with Research** (20 extra credits)
- ▪ **Specialization Minor** (14 extra credits)

c. **Credit Deadlines for Optional Awards**:
- o **Certificate/Diploma credits** must be earned and submitted **within 45 days** from the last date of the respective **Even Semester End Examination**.
- o For Honors/Minors, students must **plan ahead** from SY B.Tech onward to ensure timely completion.

**Mentoring and Evaluation of Optional Credit Programs:**
- Students opting for these pathways will be assigned mentors by the **Program Coordinator** and the **Director**, Department of Technology.
- Course delivery, assessment, and examination schedules for such students will be planned by the department and reported to the **University Examination Section**.

**End Semester Examination for Additional Courses:**
- The ESE for such courses will be conducted **alongside the regular ESE** of the Major Program.
- **MOOCs** may also be used to complete such courses, with due approval.

**Academic Bank of Credits (ABC):**
- All students will be **mandatorily enrolled** in the **Academic Bank of Credits** platform.
- Students entering through **multiple-entry pathways** must have accumulated equivalent credits from their last academic year, verifiable through the ABC account.

**R.B.T. 11 Cumulative Grade Point Average (CGPA) Improvement Policies**

Case I: Students who fail to maintain CGPA 4.5 in an academic year:

An opportunity will be given to a student who has earned all the credits required by the respective program. But the student's CGPA is less than 4.50, in such a case, to improve the grade, the student is allowed to appear for next ESE of maximum three theory courses of the respective academic year.

Case II: Students who have successfully completed the B. Tech program but wish to improve their **Cumulative Grade Point Average (CGPA)** may do so under the following guidelines:

**Eligibility:**
- Applicable to students who have:
  - o **Passed all prescribed courses** and are eligible for the **award of the degree**.
  - o Secured a **CGPA less than 6.75** at the end of the program.

**Improvement Attempt Details:**

    a. A student may apply to **reappear for a maximum of three (03) theory courses** from the final year of the program (7th and 8th semesters only).

    b. The improvement attempt must be completed **within one year** from the date of declaration of the final result.

    c. The **End Semester Examination (ESE)** of the selected courses will be conducted as per the University's scheduled examination cycle.

**Grade and CGPA Consideration:**

- The **better of the two grades** (original and improvement attempt) will be considered for the **CGPA calculation**.
- If the grade obtained in the improvement attempt is **lower than the original**, the **original grade shall be retained**.

**Important Conditions:**

- The option to improve CGPA is **available only once** and must be availed **before accepting the Degree Certificate**.
- Once the degree is awarded, **no request for improvement will be entertained**.
- This provision applies **only to theory courses**. Practical/project/internship evaluations are **not eligible** for improvement.

**R.B.T. 12 Evaluation System**

**I. Grade Points and Passing**

Grades and grade points remain as per Table 8 (AA=10 … DD=4, DD#=3, FF=0). "XX" denotes detention, "ABSENT" denotes absence, and "PP/NP" applies to Audit Courses. The special case grade **DD#** is defined in § VI.

**Marking scale used below**

- **Total Marks (%)** = (ISE out of 40) + (ESE out of 60), expressed on a 0 – 100 scale.
- **ESE (out of 60)** is also referenced **only where explicitly mentioned**.

**System of Evaluation: Table 8**

| Grade | Grade Points | Total Marks (ISE+ESE) % | | | Description |
|---|---|---|---|---|---|
| | | **Regular Attempt** | **Re-examination** | **Repeated Examination** | |
| AA | 10 | 90–100 | — | — | Outstanding |
| AB | 9 | 80–89 | 90-100 | — | Excellent |
| BB | 8 | 70–79 | 80-89 | 90-100 | Very Good |
| BC | 7 | 60–69 | 70-79 | 80-89 | Good |
| CC | 6 | 50–59 | 60-69 | 70-79 | Fair |
| CD | 5 | 45–49 | 50-59 | 60-69 | Average |
| DD | 4 | 40–44 | 40-49 | 40-59 | Poor (Pass) |
| DD$ | 4 | Below 40 (*Footnote F1) | Below 40 | Below 40 | Poor (only under Ordinance 96) (Condonation, if applicable) |

| DD# | 3 | 24-39 but ESE ≥ 24/60 (*Footnote F3) | 24-39 | 24-39 | Poor (ESE+ISE < 40) |
|---|---|---|---|---|---|
| FF | 0 | ESE < 24/60 | ESE < 24/60 | ESE < 24/60 | Fail |
| XX | — | — | — | — | Detained |
| ABSENT | — | — | — | — | Absent |
| PP | — | — | — | — | Passed (Audit Course) |
| NP | — | — | — | — | Not Passed (Audit Course) |

**F1 — DD$ under Ordinance 96 (Condonation/Grace):** *DD$ (4 grade points) may be awarded **only under the University's Ordinance 96** on grace/condonation, subject to the exact eligibility limits, ceilings, and conditions specified therein (e.g., maximum condonable shortfall, non-applicability to ESE minimum wherever so specified). Where Ordinance 96 is **not** applicable, students below 40% shall not receive DD$ and will be graded as **FF**.*

**F2 — Grade penalty for non-regular attempts (Re-examination / Repeated Examination):** *As per R.B.T. 15(g), the **awarded grade is one level lower** than the grade that would have been awarded for the same total marks in a regular attempt. This **one-level penalty** applies to both **Re-examination** and **Repeated Examination**, unless a different penalty is explicitly notified in the Regulations.*

**F3 — Definition of DD#:** *DD# is awarded **only** when the student attains the minimum ESE passing threshold (**ESE ≥ 24/60**) but the **overall total (ISE + ESE) is < 40%**. In such a case, DD# carries **3 grade points** and indicates that the ESE has been cleared but the overall course requirement has not been met.*

## II. SGPA and CGPA — Definitions and Formulae

Let $C_i$ be the credits of course i, and $G_i$, the grade point earned in that course.

**Semester Grade Point Average (SGPA):**

$$SGPA = \frac{\sum_{i=1}^{N}\left(C_i \times G_i\right)}{\sum_{i=1}^{N} C_i}$$

**Cumulative Grade Point Average (CGPA):**

$$CGPA = \frac{\sum_{\text{all courses up to the current term}} (C \times G)}{\sum_{\text{all courses up to the current term}} C}$$

- **Regular students:** CGPA is computed cumulatively from **Semester I to VIII**.
- **Lateral entry students:** CGPA is computed cumulatively from **Semester III to VIII**.

## III. Performance in terms of Class or Division obtained and the conversion of CGPA to percentage of marks

At the end of an academic year or after the entire B. Tech Program, students will be placed in any one of the divisions as detailed below:

I^st Class (Division) with distinction : CGPA ≥ 7.5 and above

I^st Class (Division) : CGPA ≥ 6.0 and < 7.5

$II^{nd}$ Class (Division)          : CGPA $\geq$ 5.5 and < 6.0

Pass Class                 : CGPA $\geq$ 4.5 and < 5.5

Conversion of CGPA to percentage of marks for CGPA $\geq$ **4.5** can be obtained using the formula: **Percentage marks = (CGPA x 10)**

### Synoptic for CGPA to Percentage Conversion: Table 9

| Obtained CGPA | Equivalent % Range |
|---|---|
| 5.5 | 55% |
| 6.0 | 60% |
| 6.5 | 65% |
| 7.0 | 70% |
| 7.5 | 75% |

(For CGPA < 4.5, degree award criteria are not met; conversion is not applicable.)

### Note on "Registered" vs. "Earned" Credits

- **Registered Credits:** Total credits of all courses registered in the semester.

- **Earned Credits:** Credits from only those courses with **grade $\geq$ DD (or DD\$ / DD#)**; for **FF**, earned credits are **0**, although the course still contributes to the SGPA denominator in that semester (because registration occurred).

### IV. Specimen Calculations (Assuming 22 Credits per Semester)

**i.**        **Specimen SGPA Calculation (All Pass)**

**Registered credits this semester = 22**

### Specimen SGPA Calculation (Pass in all Courses): Table 10

| Course No. | Credits (C) | Grade | Grade Point (G) | Credit Points (C×G) |
|---|---|---|---|---|
| MALXXX | 4 | AA | 10 | 40 |
| CSLXXX | 4 | AB | 9 | 36 |
| PHLXXX | 4 | BB | 8 | 32 |
| PHPXXX | 3 | BC | 7 | 21 |
| MELXXX | 3 | CC | 6 | 18 |
| TTNXXX | 4 | CD | 5 | 20 |
| Totals | 22 | — | — | 167 |

$$SGPA = \frac{167}{22} = 7.59 \text{ (rounded to 2 d.p.)}$$

**Earned credits this semester:** 22 (all courses passed).

**ii.**        **Specimen SGPA Calculation (One Fail)**

**Registered credits this semester = 22**

**Specimen SGPA Calculation (Fail in one Course): Table 11**

| Course No. | Credits (C) | Grade | Grade Point (G) | Credit Points (C×G) |
|---|---|---|---|---|
| MALXXX | 5 | CC | 6 | 30 |
| CSLXXX | 4 | CD | 5 | 20 |
| PHLXXX | 4 | AA | 10 | 40 |
| PHPXXX | 3 | BB | 8 | 24 |
| MELXXX | 3 | **FF** | 0 | 0 |
| TTNXXX | 3 | AB | 9 | 27 |
| **Totals** | **22** | — | — | **141** |

$$SGPA = \frac{141}{22} = 6.41 \text{ (rounded)}$$

**Earned credits this semester:** 22 − 3 (failed course) = **19**.

Clarification: The credits of failed course are also the part of the registered credits and these are considered in the SGPA denominator for that term, but earn **0 credits** until cleared.

### iii.     Specimen CGPA Calculation (Two Semesters @ 22 Credits Each)

- **Semester I**: Credit Points = 167, Registered Credits = 22 → SGPA1=7.59
- **Semester II**: Credit Points = 141, Registered Credits = 22 → SGPA2=6.41

**Cumulative after Semester II:**

$$CGPA = \frac{167 + 141}{22 + 22} = \frac{308}{44} = \mathbf{7.00}$$

 (Percentage equivalent = 7.00×10=70%)

**V. Rounding Rule**
Unless otherwise notified, **SGPA/CGPA is reported to two decimal places**; intermediate computations may retain more precision to avoid rounding bias.

**VI. Special Case: DD# (Grade Point = 3)**
**When awarded:** If a student secures **ESE ≥ 24/60** (i.e., the minimum ESE pass threshold) **but the total (ISE + ESE) < 40/100**, the grade **DD# (GP=3)** is awarded for result *processing* consistency. This reflects that the student met the **ESE threshold** but did not reach the **overall 40%** course threshold. (This aligns with the intent described under Table 8.)

**Implications:**

- Contributes to SGPA/CGPA with **grade point 3**.

- **Earned credits** are awarded (course is not "FF"), but performance is recorded as **"Poor (ESE+ISE < 40)"**.

- All other progression rules (ATKT, etc.) continue to apply as per the Regulations.

**VII. Display of Results, Re-examination, and Improvement**

As per existing clauses on showing evaluated scripts, re-examination weightage (60% like ESE), and grade penalty in re-exams (one level lower than the regular attempt), the **SGPA/CGPA shall be recomputed automatically** when a course grade improves in any subsequent attempt.

**Note:** An equivalent certificate of CGPA to percentage of marks will be provided to students on request demand after remitting prescribed fees by Shivaji University.

**R.B.T. 13 Entry of Students from previous credit to new Credit Pattern**

With the implementation of the revised credit and evaluation structure from the academic year **2025–26**, students who were admitted under the **previous credit system** but are yet to complete their program shall be permitted to continue under the new credit structure, subject to the following guidelines:

**I. Applicability:**

- This provision is applicable to:
    - Students with **academic backlogs** under the previous credit system
    - Students who are readmitted or continuing after a gap due to valid academic or administrative reasons

**II. Course and Credit Mapping:**

- The **Departmental Equivalence Committee** shall:
    - Identify equivalent courses from the new curriculum
    - Determine the **credit equivalence and mapping** from old to new structure
    - Recommend **bridge courses**, if necessary

**III. Evaluation and Results:**

- Students will undergo **evaluation as per the new scheme** (ISE/ESE or IE/EE as applicable).
- Performance will be graded under the **new grading pattern**, and final results will be computed accordingly.
- Students must fulfill all academic requirements as per the **revised curriculum** to qualify for the award of the degree.

### IV. Transcript Notation:

- A suitable note shall be included in the student's academic record indicating: "Student transitioned from the previous credit pattern to the revised B.Tech credit structure (w.e.f. 2025–26)."

## R.B.T. 14 Audit Courses:

To promote holistic development and exposure to multidisciplinary knowledge, **Audit Courses** are included in the curriculum across various semesters.

### I.       Nature and Scope

- Audit Courses are **non-credit** courses offered in addition to the core curriculum.
- These courses are aimed at broadening student learning without contributing to the credit load.

### II.       Evaluation and Grade Reporting

- The **performance of students in Audit Courses** shall be evaluated and **recorded in the Grade Card**.
- However, the **grades obtained in Audit Courses shall not be counted** towards the calculation of **SGPA (Semester Grade Point Average)** or **CGPA (Cumulative Grade Point Average)**.

### III.       Mandatory Requirement

- **Passing in all Audit Courses is compulsory** for every student.
- A student must obtain at least the **minimum passing grade** as per the evaluation scheme to be declared **'Passed' (PP)** in the Audit Course.
- Students not fulfilling the passing requirement will be awarded an **'NP' (Not Passed)** grade and may be required to reappear as per departmental guidelines.

## R.B.T. 15 Awards of Grades for Re-Examination:

a. A student who has obtained a grade **'FF'** in any course during regular semesters (both Odd and Even) shall be eligible to appear for the **Re-examination**.

b. The Re-examination shall be conducted **immediately after the declaration of results** of the Even Semester of that academic year, and **prior to the commencement** of the next academic year.

c. The **In-Semester Evaluation (ISE)** marks obtained earlier by the student shall be **retained** and shall not be nullified.

d. A student must apply for the Re-examination **within the stipulated deadline**, as announced by the examination section, and shall appear as per the declared schedule.

e. The Re-examination shall carry a weightage of **60%**, similar to the End Semester Examination (ESE).

f. A student who is **eligible but remains absent** for the Re-examination shall be assigned the grade **'Absent'**.

**g.** Based on the cumulative marks (ISE + Re-examination), a student shall be awarded a grade between 'AB' to 'DD', or 'FF' or 'XX', as per Table 8. However, in such cases, the student shall incur a **grade penalty**: The grade awarded shall be **one level lower** than the grade that would have been awarded in a regular attempt. The same concept of grade penalty will be applicable to the repeated examination with still **one level lower** than the grade that would have been obtained in the re-examination.

**R.B.T. 16 Showing Evaluated End Semester Examination Answer Papers, Re-evaluation, and Applying for Revaluation:**

After the declaration of results, the **evaluated End Semester Examination (ESE) answer books** shall be shown to the students **promptly as per the schedule** announced by the Examination Cell of the Department of Technology.

If a student identifies a discrepancy — such as **incorrect totalling** or an **un-assessed question** — the grievance shall be addressed by the **respective evaluator**, upon submission of a **grievance form** to the Examination Cell.

A student who has **doubts about the awarded grade** in a course may apply for a **photocopy of the evaluated answer book** by paying the prescribed fee.

In addition, the student may apply for **rechecking** of the ESE answer book as per the applicable rules and regulations of **Shivaji University**.

The **same procedure** shall also be applicable for the **Re-examination answer books**.

**R.B.T. 17 Change of Branch:**

Students shall be eligible to apply for a **Change of Branch** after successful completion of the **first two semesters** of the B.Tech program.

The change of branch shall be permitted **strictly on the basis of merit** and shall be subject to the rules and regulations **prescribed by the Directorate of Technical Education (DTE), Maharashtra State**, and/or the **Admission Regulatory Authority (ARA), Maharashtra State**, as applicable **from time to time**.

**R.B.T. 18 Disciplines and Conduct:**

I. Every student is expected to observe **discipline and decorous behavior** both inside and outside the campus, and must refrain from any activity that could **tarnish the image or reputation** of the Department.

II. Any act of indiscipline reported to the Department shall be **dealt with in accordance with the norms and procedures prescribed by Shivaji University, Kolhapur**.

III. If a student is found indulging in **anti-national activities** or acting in violation of the provisions of laws enforced by the Government, he/she shall be **liable for expulsion from the Department without prior notice**.

IV. Involvement in **ragging** shall attract **strict disciplinary action** as per the provisions of the **Maharashtra Prohibition of Ragging Act, 1999**, which has been in effect from **15th May 1999**.

V. If any **false or misleading information** is submitted by the student at any stage of admission or enrollment, his/her **admission shall be cancelled**, the student will be **expelled from the institute**, and **all fees paid will be forfeited**.

VI. Once admitted to the Department of Technology, every student shall be **bound to follow all instructions** issued by the authorities from time to time.

VII. A student found guilty of **malpractice in examinations** shall be punished as per the **recommendations and regulations of Shivaji University, Kolhapur**.

VIII. Every student admitted to the Department shall be issued a **Photo Identification (ID) card**, which must be retained by the student for the duration of their enrollment. The **valid ID card must be carried at all times while on campus**.

IX. A student who **alters, mutilates or misuses the ID card** or uses another student's ID card or allows their own to be used by someone else, shall be **subject to disciplinary action**.

X. Students are required to **present their valid ID card upon request** by any authorized person. **Refusal to present the ID card** shall be treated as a **disciplinary violation**.

**R.B.T. 19: Details regarding B.Tech Major, Multidisciplinary Minor, Honors, Honors with Research, Specialization Minor, and Multiple Entry-Multiple Exit Features:**
(Note: "Major" refers to the six UG programs offered at the Department of Technology, Shivaji University.)

**I. B.Tech Major**
- The B.Tech Major requires the successful completion of **162 credits**, distributed across the 8 semesters as follows: 22+22+22+19+19+19+19+20

**II. B.Tech Multidisciplinary Minor (MDM)**
- Each UG Major will offer at least **one Multidisciplinary Minor Program**.
- For completion of a Minor, an additional **14 credits** must be earned, comprising:
  - Three theory courses of 3 credits each
  - One 3-credit MDM-based internship
  - One 2-credit MDM-based mini project
- From the chosen multidisciplinary minor Program, its courses will be launched from the 4<sup>th</sup> Semester and onwards.

**III. B.Tech with Multidisciplinary Minor**
- A student completing both the Major and a Multidisciplinary Minor will be awarded a degree titled: **B.Tech in [Major] with Minor in [Minor Title]**

- As per the **National Credit Framework (NCrF)**, this degree falls under **Vertical 4 (Level 6.0)**.
- Usual institutional fees will apply.
- Graduates may pursue **2-year PG programs** in accordance with standard progression.

## IV. Credit Distribution (with Multidisciplinary Minor)
- Total credits for B.Tech with MDM:
  **22 + 22 + 22 + 22 + 22 + 22 + 22 + 22 = 176 credits**
- SGPA and CGPA shall be computed accordingly.

## V. B.Tech (Honors)
- This is an **optional** track for interested students.
- Requires completion of an additional **17 credits**:
  - 5 theory courses of 3 credits each (preferably through MOOCs other than those in Regular Semesters)
  - 1 course (2 credits) in **Advanced Laboratory Practice** from the student's major
- Courses are to be completed across 4 years, preferably starting from Second Year ($4^{th}$ Semester onwards).
- Separate fees are applicable.
- As per NCrF, this track falls under **Vertical 5 (Level 6.0)**.
- As per **NEP 2020**, students qualifying under this track may seek **direct admission to Second Year of PG programs**.

## VI. B.Tech (Honors with Research)
- Also **optional**, this track includes:
  - The same 17 credits as in the Honors track
  - **An additional 3-credit Project Work** leading to publication of at least one research paper
- Separate fees apply.
- Falls under **Vertical 6 (Level 6.0)** per NCrF.
- As per **NEP 2020**, students with a **CGPA of 7.5 or above** under this track will be eligible to pursue **direct Ph.D.** studies.

## VII. B.Tech Double Minor
- Optional track where a student may choose one additional Minor from the **Pool of Specialization Minors (SPM)**, in addition to the MDM.
- Must earn an **additional 14 credits** for the Specialization Minor.
- Degree awarded as: **B.Tech in [Major] with Double Minor (MDM + SPM)**
- Separate fees applicable.
- As per NCrF, this falls under **Vertical 7 (Level 6.0)**.

**VIII. Multiple Entry and Multiple Exit Feature**

**i. After First Year:**
- Students may **exit with a Certificate** in the respective specialization after earning:
    - 44 First-Year credits
    - Plus 8 additional credits:
        - Two 2-credit theory courses
        - One 4-credit skill-based course (1-month industrial training)
- These courses are to be designed by the respective specialization and clearly communicated to aspirants.
- Fees applicable.
- Classified as **Vertical 1 (Level 4.5)** under NCrF.

**ii. After Second Year:**
- Students may **exit with a Diploma** in the specialization after earning:
    - 88 credits (First and Second Year)
    - Plus 10 additional credits:
        - Three 2-credit theory courses
        - One 4-credit skill-based course (1-month industrial training)
- Courses are to be defined and described by the specialization.
- Fees applicable.
- Classified as **Vertical 2 (Level 5.0)**.

**iii. After Third Year:**
- Students may **exit with a Bachelor's Degree in Vocation (B.Voc.)** after earning:
    - 132 credits up to Third Year
    - Plus 8 additional credits:
        - Two 2-credit theory courses
        - One 4-credit skill-based course (1-month industrial training)
- Choice of theory courses can be made from previously defined Certificate/Diploma exit options.
- Falls under **Vertical 3 (Level 5.5)** under NCrF.

**iv. Industry Interface and Internship Providers:**
- For skill-based components, preference should be given to AICTE-approved **Skill Knowledge Providers (SKPs)**.
- For apprenticeship or training during the 8th semester, the following organizations are recommended:
    - National Skill Training Institutes (NSTI)
    - National Skill Development Corporation (NSDC)
    - National Apprenticeship Training Scheme (NATS)
    - Apprenticeship Portal, MSDE

      o   Polytechnics, Universities, State Government Centres, and other AICTE/University recognized entities

## IX. Courses through MOOCs

- In case MOOCs are **not available**, students may prepare the course content in **self-study mode**, under the guidance of an assigned mentor and the Program Coordinator/Head.
- Students may opt to appear for the **End Semester Examination** conducted either by:
  - The respective MOOC provider, **or**
  - **Shivaji University**, as per policy

## N.B.: Academic Bank of Credits (ABC)

- All students shall be **mandatorily enrolled** in the Academic Bank of Credits (ABC).
- For re-entry under the Multiple Entry-Multiple Exit (MEME) feature, students must present **evidence of accumulated credits in the ABC account** up to their last completed year before rejoining.

**Note:** Also, as a part of this revised structure, in addition to the academic curriculum, co-curricular opportunities such as the National Cadet Corps (NCC) and the National Service Scheme (NSS) are available on campus. Participation in these units is open to interested students, subject to selection as per the respective guidelines and norms.

## F. Engineering Graduate Attributes

1. Domain specific Engineering Knowledge
2. Problem Analysis Ability
3. Acquiring Skills that enable them to Design & Develop Solutions to the Problems
4. Capacity to investigate Complex Problems
5. Familiarity of using Modern Tools
6. Understanding Engineer's role and connectivity towards Society
7. Awareness about Environment & Sustainability
8. Practicing ethics and values
9. Ability to work as an Individual & in a Team also
10. Acquiring Communication skills
11. Becoming well verse with task of Project management & Finance aspects
12. Developing Lifelong Learning attitude

**(Note:** For every program, there are its own Program Educational Objectives (PEOs) while there are 12 Program Outcomes (POs) which are aligned with these graduate attributes for the engineers.)

**G.    Fees structure for Multiple Entry/Exit, Minor, Honors, Honors with Research**

**Table 12**

| Sr. No. | Component | Total additional Credits | Fees to be charged* INR |
|---------|-----------|--------------------------|--------------------------|
| 1. | Exit After FY B.Tech claiming Certification in respective specialization | 08 | 8000/- |
| 2. | Exit After SY B.Tech claiming Diploma in respective specialization | 10 | 10000/- |
| 3. | Exit After TY B.Tech claiming Bachelor's Degree in Vocation (B.Voc.) in respective specialization. | 08 | 8000/- |
| 4. | B.Tech Double minor (Only for Specialization Minor) | 14 | 14000/- |
| 5. | B.Tech (Honors) | 17 | 17000/- |
| 6. | B.Tech (Honor with Research) | 20 | 20000/- |

* For all these optional features, the applicable fees shall be calculated at the rate of INR 1,000 per credit. These charges are payable over and above the total tuition fees approved by the management for **B.Tech Majors with MDM features**, along with any other admissible and payable fees.

These provisions shall apply only to students enrolled from the academic year 2023–24 onwards. Students admitted prior to the academic year 2023–24 shall not be eligible to avail these NEP-based features.