# INDIAN INSTITUTE OF TECHNOLOGY GANDHINAGAR

## NORMS FOR B.TECH-MSc DUAL DEGREE PROGRAMME
**(As approved by the BoG in its 24th meeting held on 27th July 2018)**

**1.** This program is intended to attract the Institute's B.Tech. students to its MSc programme and enable them to complete both the degrees in a reasonable duration.

**2. Eligibility and Selection Process**

- B.Tech students at IIT Gandhinagar may apply for a B.Tech - MSc dual degree programme anytime after completion of four semesters.
- The students should have secured a minimum CPI of 6.0 at the time of application.
- The students are free to apply to disciplines in which a regular M.Sc. programme exists.
- The disciplines may recommend the discipline wise eligibility criteria in advance and seek approval of Director through Dean, Academic Affairs.
- Recommendations for conversion to dual degree programme will be made by a committee setup at the discipline in which the student wishes to pursue his/her M.Sc. Dean, Academic Affairs will examine the recommendation and place it along with his/her own comments or recommendations before the Director for a decision.

**3. Graduation Requirements and Norms**

- Students enrolled in the BTech-MSc dual degree programme have to earn a minimum of 72 credits, in addition to the credits counted towards their B.Tech degree requirements.
- Students should obtain a minimum of 30 credits through core courses, a minimum of 12 credits through elective courses and a minimum of 20 credits through project work. A sample academic path is shown in Annexure I.
- The open elective requirement in the B.Tech programme of the student may be reduced by 4 credits.
- Single CPI will be maintained till the completion of all the requirements of both the degrees and two separate CPIs will be mentioned in the final transcript, based on the graduation claim made by the student. One CPI will be for all the courses claimed towards the B.Tech degree and another based on all credits earned towards the MSc degree.
- The students may also opt for Honours in the same discipline and/or Minor(s) in other discipline(s) as part of their B.Tech degree by clearing the additional requisite credits.
- Pass/fail conversion will be allowed only for two courses during the entire period of the dual degree.
- All other norms such as substitution of courses will be applicable separately for the courses counted towards B.Tech and MSc degrees.
- If the student does not maintain a CPI of above 6.0, the student will be converted to the B.Tech programme.
- The maximum duration of the dual degree programme will be seven years.

4. **Tuition fee:** The students will deposit the tuition fee as per norms of the B.Tech programme until completion of the eighth semester and will pay fees as per norms of the MSc programme afterwards, till completion of all requirements for the award of both the degrees.

5. **Award of degrees:** The student will be awarded separate B.Tech and MSc degrees after successfully completion all the requirements for the award of both the degrees.

6. **Exit options:** The student may request to opt out of the dual degree programme at any point during the programme after giving valid reasons, and if the request is approved, the student will be treated as in the B.Tech programme.

Annexure I: Sample Academic Path (BTech-MSc Dual Degree)

| Semester | Course 1 | Course 2 | Course 3 | Course 4 | Course 5 | Course 6 | Course 7 | Course 8 | Course 9 | Credits |
|---|---|---|---|---|---|---|---|---|---|---|
| First | FP:100<br>Foundation Programme | HS:101-9<br>Language | LS:101<br>Intro to Life Sciences | MA:101<br>Math-1 | ES:101<br>Engineering Graphics | ES:102<br>Computing | ES:103<br>Intro to Electrical Systems | PE:101<br>Physical Education | | |
| | **4** | **3 – 0 – 0: 4** | **3 – 0 – 0: 4** | **4 – 1 – 0: 4** | **2 – 0 – 3: 3** | **2 – 0 – 2: 3** | **3 – 1 – 0: 4** | **0 – 0 – 0: 0** | | 26 |
| Second | HS:151<br>Economics | MA:102<br>Math-2 | PH:101<br>Physics | PH:102<br>Physics Lab | ES:104<br>Intro to Analog and Digital Electronics | ES:105<br>Electrical & Electronics Lab | ES:106<br>Manufacturing and Workshop Practice | PE:102<br>Physical Education | FP:101<br>Introduction to Engineering | |
| | **3 – 0 – 0: 4** | **3 – 1 – 0: 4** | **3 – 1 – 0: 4** | **0 – 0 – 4: 2** | **3 – 1 – 0: 4** | **0 – 0 – 4: 2** | **2 – 0 – 3: 4** | **0 – 0 – 0: 0** | **0 – 0 – 2: 1** | 25 |
| Third | HS:221<br>Introduction to Philosophy | MA:201<br>Math-3 | CY:201<br>Chemistry | CY:202<br>Chemistry Lab | ES:201<br>Intro to Design and Innovation | EE:211<br>Network Theory | EE:221<br>Electronic Devices | | | |
| | **3 – 0 – 0: 4** | **3 – 1 – 0: 4** | **3 – 1 – 0: 4** | **0 – 0 – 4: 2** | **2 – 0 – 4: 4** | **2 –1 – 0: 3** | **2 –1 –0: 3** | | | 24 |
| Fourth | HS:201-9<br>World Civilization/ Culture/History | MA:202<br>Math-4 | ES:202<br>Materials Science and Engineering | ES:331<br>Signals and Systems | ES:232<br>Digital Systems & Microprocessors | | | | | |
| | **3 – 0 – 0: 4** | **3 – 2 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 3: 5** | | | | | 21 |
| Fifth | HS:XXX<br>Elective | EE:331<br>Electrical Machines | ES:334<br>Probability & Random Proc. | EE:321<br>Analog Circuits | EE:311<br>Electromagnetic Waves | PG<br>Elective 1 | | | | |
| | **3 – 0 – 0: 4** | **3 –1 – 0: 4** | **3 – 0 – 0: 4** | **3 –0 –3: 5** | **3 – 0 – 0: 4** | **4** | | | | 21+4 |
| Sixth | HS:XXX<br>Elective | EE:341<br>Comm. Systems | EE:332<br>Power Systems | ES:332<br>Control Theory | EE:333<br>Power Electronics | PG<br>Elective 2 | | | | |
| | **3 – 0 – 0: 4** | **3 – 0 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 0: 4** | **2 –1 –3: 4** | **4** | | | | 20+4 |
| Seventh | HS:XXX<br>Elective | BS:XXX<br>Elective | XX: XXX<br>Open Elective | XX: XXX<br>Open Elective | EE:411<br>Digital Signal Processing | PG<br>Core 1 | | | | |
| | **3 – 0 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 0: 4** | **4** | | | | 20+4 |
| Eighth | HS:XXX<br>Elective | BS:XXX<br>Elective | XX: XXX<br>Open Elective | XX: XXX<br>Open Elective 3 | EE:431<br>Electrical Systems Lab | PG<br>Core 2 | PG<br>Core 3 | | | |
| | **3 – 0 – 0: 4** | **3 –1 – 0: 4** | **3 –1 – 0: 4** | **4** | **0 – 0 – 4: 2** | **4** | **4** | | | 14+12 |
| Summer | PG<br>Project 1 | PG<br>Project 2 | | | | | | | | |
| | **4** | **4** | | | | | | | | **08** |
| Ninth | PG<br>Core 4 | PG<br>Core 5 | PG<br>Core 6 | PG<br>Elective 4 | PG<br>Project 3 | | | | | |
| | **4** | **4** | **4** | **4** | **4** | | | | | **20** |
| Tenth | PG<br>Core 7 | PG<br>Core 8 | PG<br>Elective 5 | PG<br>Project 4 | PG<br>Project 5 | | | | | |
| | **4** | **4** | **4** | **4** | **4** | | | | | **20** |

Total Credits: 175 (BTech.) + **72 (MSc.)**