Conversion Rules and Regulations

B.Tech/B.Tech (Honours) To M.Tech

M.Tech to PhD

B.Tech to PhD

Introduction

This booklet details the proposed rules and regulations pertaining to the Dual Degree (B.Tech/B.Tech (Honours) +M.Tech) programme at IIT Hyderabad. The following points were taken into account in the preparation of this proposal:

1. Minimize changes to B.Techprogramme of study.
2. Minimize changes to time tabling.
3. Maintain parity with 2-year M.Tech in terms of credit requirements.
4. Provide a flexible programme of study – both for students and faculty.
5. Maximize opportunity for research.
6. Give all B.Tech's (regular and honours) an opportunity.

The primary motivation for a dual degree programme is to create a win-win propo-sition for both students and faculty.

Conversion Rules and Regulations

B.Tech/B.Tech (Honours) to M.Tech

1. The duration of the dual degree program is 5 years from the time the student enters IIT Hyderabad. Both degrees (B.Tech and M.Tech) may be awarded at the end of the fifth year subject to satisfying necessary credit requirements.

2. All students that convert will be given MHRD stipend after the eighth semester.

3. Option to convert will be given at the end of the sixth semester (after grades are announced) till the beginning of the eighth semester (by coursework add/drop deadline).

4. Conversion after add/drop in the eighth semester will not be allowed.

5. Only students with no backlogs or incomplete grades are eligible.

6. For GM students with CGPA 7.0 and SC/ST/OBC students with CGPA 6.5 at the end of sixth or seventh semesters:

   (a) Must appear for a technical interview.

   (b) For Honours students, the same CGPA rules apply even after conversion to receive a B.Tech (Honours) +M.Tech degree.

7. For GM students with 6.0 CGPA < 7.0 and SC/ST/OBC students with 5.5 CGPA < 6.5 at the end of sixth or seventh semesters:

   (a) Must pass the M.Tech (3 year) written test (conducted twice a year for regular admission).

   (b) Must appear for a technical interview.

8. For GM students with CGPA < 6.0 and SC/ST/OBC students with CGPA<5.5 at the end of sixth or seventh semesters:

   (a) Conversion is not possible.

   (b) Interested students are encouraged to appear for GATE for admission to the regular M.Techprogramme.

9. Choice of advisor must be made within one semester of enrolment into the M.Tech program.

10. A total of 45 credit hours must be completed (in addition to regular B.Tech/B.Tech (Honours) requirements) to be awarded a dual degree M.Tech.

11. The partitioning of the credit requirement into coursework and project work is left to the discretion of the individual streams awarding the degree. The following recommendations are made however:

    (a) All coursework must ideally be completed before the fifth year.

    (b) Core courses in the stream of specialization must be completed.

    (c) The advisor can use his/her discretion in deciding coursework.

    (d) In case the student decides to leave prior to completing the M.Tech degree requirements, he/she may be awarded a B.Tech/B.Tech (Honours) degree provided all the necessary credit requirements are complete. Such cases are to be evaluated by the standing institute wide DPGC committee.

M.Tech to PhD

1. Option to convert will be given any time after the completion of the first year and before course add/drop in the fourth semester.
2. Only students with a CGPA of 7.0 (excluding thesis credits) for GM candidates and 6.0 (excluding thesis credits) or higher for SC/ST/OBC are eligible.
3. A formal application with a supporting letter from the advisor must be made.
4. The candidates will appear for a technical interview with a panel of at least three faculty members nominated by the head of the department.
5. It is recommended that the stipend be upgraded to PhD levels effective the date of conversion and for a duration of four years from the date of conversion.
6. In case the student decides to leave at the end of the second/third year, he/she may be awarded aM.Tech/M.Tech (3 year) degree provided all the appropriate credit requirements are complete. Such cases are to be evaluated by the standing institute wide DPGC committee.

B.Tech to PhD

1. Option to convert will be given only at the end of the sixth semester (after grades are announced). itemFor GM students with CGPA 7.0 and SC/ST/OBC students with CGPA 6.5 at the end of sixth or seventh semesters:

   (a) Must appear for a technical interview before a panel of at least three fac-ulty members nominated by the head of the department.

   (b) For Honours students, the same CGPA rules apply even after conversion to receive a B.Tech (Honours) +M.Tech degree.

2. For GM students with 6.0 CGPA < 7.0 and SC/ST/OBC students with 5.5 CGPA < 6.5 at the end of sixth or seventh semesters:

   (a) Must pass the M.Tech (3 year) written test.

   (b) Must appear for a technical interview.

   (c) It is recommended that students qualify in GATE to become eligible for MHRD scholarship.

3. For GM students with CGPA < 6.0 and SC/ST/OBC students with CGPA <5.5 at the end of sixth or seventh semesters:

   (a) Conversion is not possible.

   (b) Interested students are encouraged to appear for GATE for admission to the regular PhD Tech programme.

4. A formal application with a supporting letter from the advisor (the faculty member who is willing to guide the student) must be made.

5. The candidates will have to appear for a technical interview with a panel of faculty members.

6. The candidate becomes eligible for stipend from the beginning of the fifth year. The stipend (amount and duration) will be on par with a regular PhD student.

7. A total of 15 credit hours of course work (in addition to the B.Tech require-ments) must be completed by the end of the fifth year.

8. In case the student decides to leave at the end of:

(a) Fourth year, he/she may be awarded a B.Tech/B.Tech (Honours) degree provided all the appropriate credit requirements are complete.

(b) Fifth year or later, he/she may be awarded aM.Tech degree provided all the appropriate credit requirements are complete.

Curriculum/Program of Study

The following table summarizes the credits students earn in each semeseter of their B.Techprogramme (based on EE's curriculum).

Semester	Credits	Credits (Honours)	Credits (Minors)	Cumulative (excluding Minors/Honours)
I	23	-	-	23
II	23	-	-	46
III	22	-	-	68
IV	19	-	-	87
V	16	3	3	103
VI	16	3	3	119
VII	12	3	3	131
VIII	11	3	3	142

Institute	B.Tech/BS	M.Tech	Dual	Notes
IITH	142	60	202	All 3 credit courses
IITM	162	60	201	3/4 credit courses
IITB	252	96	348	5/6 credit courses
MIT	180	65	N/A	3/4/5 credit courses
Stanford	180	45	N/A	3/4/5 credit courses

Coursework Template

This chapter presents the course work template to be followed after conversion to the dual-degree M.Tech program. The details are presented below:

1. A total of 45 additional credits (meaning in addition to regular B.Tech credits) must be completed by the end of the dual degree program.

2. Of these 45 additional credits, a total of 15 credits must be completed by the end of the fourth year. Since the conversion happens at the end of the third year, these 15 credits must be completed in the fourth year. In case of conversion at the end of the fourth year, any extra credits from the B.Tech program can be transferred. If these are not enough to satisfy the credit requirements, the student must complete additional course to satisfy the same. Again, this could potentially result in the student having to spend one extra semester.

3. Individual departments may decide on the allocation of these 15 credits.

4. All core courses for regular 2 year M.Tech must be completed. As an example, the core courses for the three M.Tech streams in EE are mentioned below.

CSP

Course No.	Course Name
EE5300	Digital Signal Processing
EE5310	Probability and Random Processes
EE5320	Digital Communication
EE5330	Information Theory and Coding
EE6XXX	Core Elective

Micro

Course No.	Course Name
EE5110	Semiconductor Devices and Modeling
EE5120	VLSI Technology
EE5130	Analog IC Design
EE5140	Digital IC Design and Verification
EE6XXX	Core Elective

Power

Course No.	Course Name
EE5200	Steady State Power Systems Analysis
EE5220	Adaptive Control Systems
EE5230	Power Systems Dynamics and Control
EE5240	Electrical Machine Analysis and Control
EE6XXX	Core Elective

: since these CSP courses are mandatory in the regular B.Tech curriculum, they can be substituted by core electives or project work as deemed fit by the adviser.

5. The remaining 30 credits are assigned to project work in the final year of the program.

6. It is mandated that the students spend the summer between the fourth and fifth years working on their M.Tech project. Up to 6 credits can be assigned to work done in the summer.

Conversion Rules

M.Sc. to Ph.D

Option to convert to Ph. D program will be given only at the end of the third semester.

- General students with CGPA $\geq$ 8.5 and SC/ ST/ OBC students with CGPA $\geq$ 8.0 at the end of the third semester may be eligible. These students must appear for a technical interview along with other applicants shortlisted against departmental PhD advertisement. All applicants, internal and external, will be treated equally during the technical interviews.

- A formal application with a supporting letter from the advisor (the faculty member who is willing to guide the student) must be attached.

- The candidate becomes eligible for stipend from the beginning of the fifth semester. The stipend amount and duration will be on par with a regular Ph. D student with MHRD fellowship.

- A total minimum of 12 credit hours of course work must be completed by the end of third year. Department may suggest an equivalent course if the candidate has already taken the courses offered at that time.

- In case the student decides to leave program after completing the fourth semester, he/ she may be awarded M. Sc. provided all the appropriate credit requirements are fulfilled.