

## **ORDINANCE PGDEG6**

### **M.Tech. Programme**

#### **1. Overview**

- 1.1 HBNI offers M.Tech. programs in various engineering disciplines related to nuclear technology. Engineers joining BARC training Schools (BARCTS) or Technical Training Programme (TTP) of IPR have the option of enrolling for M.Tech. program at the beginning of the session. In some applied disciplines, science students may also enroll for M.Tech. Such engineering graduates enrolled for M.Tech. in the BARCTS have the option of discontinuing and receiving a Post Graduate Diploma in Nuclear Science and Engineering (PGDSE) on successful completion of one year of course work provided he/she applies for the same within 6-months of the completion of the course work.
- 1.2 M.Tech. program will be under purview of the Board of Studies in Engineering Sciences.

#### **2. Admission**

- 2.1 Minimum qualification for admission to the M.Tech. shall be Bachelor's degree B.E./B.Tech. or equivalent in Engineering/Technology or a Master's degree in Science (M.Sc.) from a University recognized by the University Grants Commission with minimum 60% marks. However, whenever the stipulation by MHRD/UGC/Statutory Authority is higher than 60%, the stipulated percentage shall be followed.
- 2.2 Selection of candidates for admission to M.Tech. programme shall be through a selection process formulated by the CI with the approval of Academic Council and in line with guidelines issued by statutory authority.

#### **3. Programme**

- 3.1 This programme comprises course work followed by a project work, each of one academic-year duration.
- 3.2 The coursework for the M.Tech. program is conducted at the BARCTS (refer Ordinance PGDSE) and TTP of IPR. The course work shall comprise classroom teaching, practical, viva-voce and/or minor projects. The syllabus for the course work shall be as approved by the Academic

Council on the recommendation of the Board of Studies (Engineering Sciences).

- 3.3 In case, a student needs to repeat a course work or appear in reexamination, it must be completed in no more than two years from the date of enrolment without changing the total duration of the academic program.
- 3.4 The Director of the CI shall constitute Standing Academic Committee (SAC) consisting of HBNI faculty members. The SAC will evaluate each project proposal, assign project guide, constitute M.Tech. monitoring committee and suggest additional course work, if any. For valid reasons, the duration of the project work can be extended by one calendar year in two stages (6-months each) based on the recommendation of M.Tech. monitoring committee. Further extension for a limited period up to six months may be considered by competent authorities of HBNI in the exceptional cases based on the recommendation of the Director of CI.

#### **4. Course Work and Performance Assessment**

- 4.1 A minimum of 60 credits is required for successful completion of the M.Tech. course work. However, depending upon the specific program, the CI may assign additional course work to be carried out by the student.
- 4.2 Marks for regular class room courses are assigned based on the following formula:  $2 \times \text{Contact Hours} + 20 \times \text{Credits}$  (rounded to nearest multiple of 25).
- 4.3 Performance Assessment is carried out on the basis of examinations – written, viva voce, seminars and internal assessment. To qualify for carrying out project work in the second year, a student must score more than 50% in each subject and more than 60% in aggregate during the course work. Re-examinations are held for students missing examinations on medical grounds or in case of students who score less than 50% marks in a subject or less than 60% in aggregate. However, in case of not meeting the aggregate requirement, student can appear for reexamination only for a maximum of five subjects. If a student does not score the required marks even on reexamination, Director of the CI or his/her nominees may interview the student and make recommendations regarding continuation of the program by the student.

## **5. M.Tech. Monitoring Committee**

- 5.1 To monitor the progress, the Standing Academic Committee at the CI, shall constitute M.Tech. Monitoring Committee for each student. The composition of each committee shall be as follows:
- I. A Professor or an Associate Professor shall be the Chairman of the Committee,
  - II. The guide shall be the convener,
  - III. Two faculty members or recognized M.Tech. guides of the Institute specializing in a domain encompassing the topic of project,
  - IV. A Technology Adviser, if any, shall be a permanent invitee (To get guidance on issues related to technology, a student may have a guide and a Technology Adviser. A Technology Adviser will be an individual who has demonstrated abilities in technology development or engineering design in areas related with the topic of the project.)
- 5.2 During the project work, the student shall give periodic seminars, at least once in every six months to the M.Tech. Monitoring Committee on the progress. The committee shall assess the progress and advise the student as appropriate including permission for final submission of the project report.

## **6. Award of Degree**

- 6.1 Each student must defend his/her project at an oral examination as a requirement in partial fulfillment of the M.Tech. degree. The M.Tech. Committee will function as Final Examination Committee. Committee can also invite external examiner if desired so. All members must receive the project report at least seven working days before the scheduled oral examination.
- 6.2 *Physical participation* of the student is mandatory. In addition to this, *participation* of Chairman, Guide, External Examiner (if any) and one member is mandatory in the final examination. One of them can participate by means of video.
- 6.3 The examination will be open to all. The student will make a presentation. The members of the committee will ask questions and seek clarifications, if any. Student will also respond to questions from the audience.
- 6.4 The Examination Committee will then hold a separate discussion to decide about successful defense of the project report and suitability of the candidate for award of the degree. It has the following options.

- a. To accept the project report without any changes and recommend award of the degree.
  - b. To recommend revisions to the project report. The student shall make all the changes suggested, get the revised project report duly certified by the guide and submit the same for the approval of the committee. The Examination Committee recommends award of the degree if they are satisfied with the revised report.
  - c. To declare the project report and/or viva-voce unsatisfactory. The student fails in that circumstance.
- 6.5 The report of the Examination Committee shall be signed by all the members (present either physically or by means of video) with names and date.
- 6.6 In case a member is unable to participate in the examination, the Convener shall arrange to obtain his/her comments on the project report prior to examination for discussion during the meeting. The Convener shall also obtain signature of absent member after the examination on the recommendation sheet of the committee with a declaration that "I was absent during the final examination. I agree with the decision of the examination committee"
- 6.7 The Chair signs the report of the committee indicating which of the alternatives indicated at 6.4 above has been adopted. The Chair shall inform the student of the outcome of the examination.
- 6.8 The student passes if all members of the Final Examination Committee accept the project report and oral examination as satisfactory. One or more negative votes constitute a failure of the candidate to meet the requirement. In case of failure, the Final Examination Committee must specify in detail and in writing the nature of deficiencies in the report and/or in the oral examination that led to the failure. A second examination may be permitted. If the student fails in the second examination or if the second examination is not permitted, the student's admission to the programme is terminated.
- 6.9 The report of the examination committee signed by all members along with other documents must reach the office of Dean, HBNI through Dean (Academic) of the CI for the award of the degree.