

**RULES AND REGULATIONS
OF**

(B. TECH.)

**Manufacturing Engineering and Metallurgy
& Materials Engineering
(EFFECTIVE FROM 2013-14)**



**NATIONAL INSTITUTE OF FOUNDRY AND FORGE
TECHNOLOGY**

HATIA, RANCHI - 834 003 (JHARKHAND)

1. INTRODUCTION

- 1.1 The National Institute of Foundry and Forge Technology, Ranchi, hereafter referred to as the Institute, offers Eight-semester Undergraduate (UG) courses leading to the award of Degree of Bachelor of Technology (B. Tech.) of Ranchi University, Ranchi. The objective of these courses is to develop quality manpower to cater the needs of industries and R&D organizations and also to fulfill the growing need for qualified faculty at the institutions of higher learning. The courses have been designed to meet these objectives while maintaining the highest standards of Undergraduate engineering education.
- 1.2 The B. Tech. courses will be administered by a Undergraduate Coordination Committee (UGCC) under the Chairmanship of Director of the Institute. The Dean (Academic), Heads of all Departments, Associate Dean (U.G), Tabulator(s) and Assistant Registrar (Academic) will be Members of UGCC.
- 1.3 The UGCC will be responsible for admissions and smooth running of the B. Tech. courses.

2. ADMISSIONS

- 2.1 Admission to all disciplines will be made in the Autumn Semester of each session at the First Year level through JEE (Main), the counseling for which is done by Central Seat Allocation Board (CSAB) [The acronym JEE { Joint Entrance Examination} in this document shall mean JEE(Main) or any other equivalent examination relevant to the context]. There shall be no opportunity of a change of branch mid-way during the programme.
- 2.2 Besides the successful JEE candidates, a specified number of foreign nationals selected under the policy laid down by the Government of India may be admitted directly to the 1st year of any of the programmes covered by these regulations. At present foreign nationals selected under DASA.
- 2.3 The medium of instruction, examinations, seminars and project reports will be in English.
- 2.4 The B. Tech. courses are fulltime, residential courses. All students are required to reside in the hostels to which they are allotted at the time of admission. However, re-allotment of rooms may be made at later stages for administrative reasons.

- 2.5 In each course, seats shall be reserved as per prevalent Government of India norms.
- 2.6 The Institute reserves the right to cancel the admission of any student and ask him/her to discontinue the studies at any stage of the program either due to unsatisfactory academic performance or unsatisfactory attendance in classes or indecent behavior or any other reason, as the case may be.

3. STRUCTURE OF THE B.TECH. COURSES

- 3.1 Each B. Tech. course will consist of (a) core courses, (b) elective courses and (c) project work. The student may be required to give a seminar/ colloquium, comprehensive Viva- Voce and undergo industrial / practical training during the course.
- 3.2 The complete course will have duration of eight semesters. The academic programmes in each semester may consist of course work and/or project work approved by Academic Council.
- 3.3 Each B. Tech. course will have a curriculum and syllabi, approved by the Academic Council.
- 3.4 Credits based evaluation will be followed. The credits will be assigned to each subject based on the following general pattern:
 - (a) One credit for each lecture period;
 - (b) One credit for each tutorial period;
 - (c) One credit for practical session of two periods (Two Hours)
 - (d) Credits for the seminar, project work and industrial/practical training will be as specified in the curriculum approved by the Academic Council.
- 3.5 Electives will have to be taken from the subjects offered by the department concerned in that particular semester from among the list of approved courses.
- 3.6 Students may be permitted to take elective subjects offered by other departments with the approval of Dean (Academic) of the Institute, provided that the subjects are relevant to their branch of study. Such requests must be processed through the head of the concerned department and Associate Dean (UG).

4. SEMESTER REGISTRATIONS

- 4.1 Only those students will be permitted to register, who have
- (a) Paid all required fees, such as tuition fee, seat rent, etc.
 - (b) Cleared all Institute and hostel dues of the previous semester.
 - (c) Has maintained the SGPA requirement during the earlier semester(s) as mentioned in rule 11.3.
- 4.2 Semester registration shall be as per the Institute's academic calendar and it is solely the responsibility of the student.
- 4.3 A student, who is unable to register on the dates fixed for registration due to compelling reasons, may be permitted for late registration within thirty days from the date of commencement of classes (including Saturdays, Sundays and other holidays) on payment of a prevalent additional late fee as prescribed by the Institute. Registration will not be permitted beyond this extended date and those students have not registered by this extended time limit will be deemed to have abandoned the course. It is imposed a fine of Rs. 200/- per day for first 7 days of delay in registration and thereafter Rs. 300/- per day subject to a maximum amount of Rs. 6000/- only. In-case the student fails to register within thirty days from the date of commencement of classes then he/she has to discontinue the semester and repeat the semester in next academic year.

5. MAXIMUM DURATION OF THE COURSE

- 5.1 A student is ordinarily expected to complete the B. Tech. course in eight semesters. For all categories of students, the maximum time allowed the completion of the course 6 (Six) years.
- 5.3 Under any circumstances, students shall not be permitted to spend more than 6 (Six) years to complete the B. Tech. course including Project work.

6. ATTENDANCE

- 6.1 The faculty handling a subject must finalize the attendance 3 calendar days before the commencement of end semester examinations. Copies of the same should be sent to the Associate Dean (U.G) and Head of the Department concerned.

- 6.2 A minimum of 70% attendance shall be required by a student in each subject, in both theory and practical. The particulars of all students who have attendance less than 70% in that subject must be announced in the class by the concerned faculty.
- 6.3 No relaxation may be considered on any other ground including medical. However, students may be allowed to avail leave on medical ground only, beyond the permissible limit at the discretion of Director.
- 6.4 Students having less than 70% attendance in any subject (in both theory and practical) shall be debarred from appearing in the end semester examination of that semester and shall not be allowed to continue the course. However, they may be allowed to continue afresh in the same semester from which they were debarred along with next batch of students.

7. ASSESSMENT PROCEDURE

- 7.1 There will be continuous assessment of the student's performance throughout the semester and grades will be awarded on the basis of following:
- a) Internal marks (Rule 8.1), MID Semester marks and END semester examinations in the case of theoretical subjects;
 - b) Comprehensive viva-voce;
 - c) Laboratory/design/workshop, thesis/project, seminars, dissertation and viva-voce.
- 7.2 The Associate Dean (U.G), who will also be Centre Superintendent, will conduct Mid semester and end semester examinations on behalf of the Ranchi University.
- 7.3 Comprehensive viva-voce committee will be constituted by Associate Dean (U.G) consisting of all HODs of the departments.
- 7.4 Seminar assessment committee will be formed by Associate Dean (U.G) with members from all the departments.

8. Tests and Examinations

- 8.1 Internal assessment shall be awarded based on assignments (20%), class tests (40%), general class performance (20%) and attendance of the student (20%).
- 8.1.1 Allocation of marks for assignment will be as follows:
- Submission by due date : 20%
 - Late submission : 0% to 16%

8.1.2 The attendance of the student must be considered following the pattern given below:

<u>Attendance</u>	<u>Percentage of Internal marks</u>
≥ 95.0%	20
≥ 80.0% and < 95.0%	18
≥75.0% and < 80.0%	16
8.1.3 Class performance :	20%
8.1.4 Class Test :	40%

8.2 There will be one mid semester of 1.5 hours duration and one end semester examination of 3 hours duration in each lecture based subject. There shall be 7 to 8 questions in the end semester examination out of those, 5 questions shall be answered.

8.3 Evaluation of project work will be taken up at the eighth semester of the B. Tech Course. In the case of projects, a viva-voce examination will be conducted on eight semesters after completion of theory and practical examinations.

9. Allocation of Marks for Different Courses

9.1 Lecture and laboratory based courses will have 50 marks for internal assessment, 50 marks for mid semester examinations, 100 marks for end semester examination and 100 marks for laboratory based practical examinations.

9.2 Lecture and tutorial based courses will have 50 marks for internal assessment, 50 marks for mid semester examinations and 100 marks for end semester examination.

9.3 Only laboratory based courses will have 100 marks for the Practical or oral examination.

10. Grades and Performance Indices

- 10.1 For the purpose of indicating the performance of a B. Tech. student in a given specialization, the Institute awards letter grades in each course for the students.
- 10.2 A student is deemed to have completed a course successfully if he/she secures a letter grade other than F.
- 10.3 A course successfully completed cannot be repeated for obtaining better grades.
- 10.4 Grades will be awarded on the basis of total marks obtained in the course (after adding moderation marks, vide rule 12.3) using the following criteria:

≥ 90.0%	Ex
≥ 80.0% and < 90.0%	A
≥ 70.0% and <80.0%	B
≥ 60.0% and <70.0%	C
≥ 50.0% and <60.0%	D
≥ 35.0% and <50.0%	P
< 35.0%	F

- 10.5 These letter grades and their corresponding points on a 10 point-scale are:
Ex = 10; A = 9; B = 8; C = 7; D = 6; P = 5; and F = 0.
(SGPA will not be calculated if F grade is awarded in a subject)
- 10.6 A maximum of 1.5% marks may be added to the total marks secured by the student if and only if, the student is securing a fail grade i.e. F grade. The above marks may be added by Moderation Board. The marks added by Moderation Board should be posted in the tabulation sheet. The total marks that can be added in the result of a student in a particular semester should however be limited to 5.0.
- 10.7 The Director of the Institute shall be the Chairman of the Moderation Board. The heads of all the departments, Dean (Academic), Associate Dean (U.G) and Tabulator(s) shall be the members of the Moderation board.
- 10.8 Any student, who fails to appear in any subject(s) of the end semester examinations on any ground, shall be deemed to have failed in such subject(s).
- 10.9 If a student has failed to appear in a maximum of two subjects in the end semester examinations on justified grounds, he/she will be permitted to appear in supplementary examinations..
- 10.10 If a student fails to appear in more than two subjects of the end semester examination, he/she will have to leave the programme.

10.11 Overall Performance (Final Grade Card):

Overall Cumulative Grade Point Average (OCGPA)

≥ 9.0

≥ 7.5 and < 9.0

≥ 6.5 and < 7.5

≥ 5.5 and < 6.5

< 5.5

Performance

Outstanding

Very Good

Good

Satisfactory

Unsatisfactory

11. Supplementary Examinations

- 11.1 A student who earns F grade in any subject shall appear in the supplementary examination in that subject. The supplementary examination will be only for written portion of the subject and it will be held within 2-3 weeks after the announcement of results of a semester.
- 11.2 The rule 11.1 is not applicable if a student earns F grades in more than two subjects in any semester. In such case, the student will have to leave the course (Year Back).
- 11.3 Notwithstanding rules 11.1 and 11.2, if a student fails to secure a SGPA of 5.5, he/she will have to leave the course (Year Back).
- 11.4 Those students who fail in the supplementary examinations also will have to leave the course (Year Back).

12. Declaration of Results and Issue of Grade Cards

- 12.1 The letter grades awarded to the students in each subject will be displayed on the notice boards of the academic section soon after the meeting of UGPEC for B. Tech courses up-to seventh semester. For B. Tech final year second semester, result will be published after the final approval of the Vice Chancellor, Ranchi University, Ranchi. Results will be also available in our Institute Website: www.nifft.ac.in
- 12.2 Grade cards will be issued to the students at the end of each semester that will contain the following:
- a) Course number, name of the course and the credits for each course registered in the semester.
 - b) Performance in each subject by the letter grade obtained, vide rule 10.4.
 - c) Semester grade point average (SGPA).

12.3 The Semester Grade Point Average (SGPA) will be calculated by the formula:

$$SGPA = \frac{\sum C_i \times GP}{\sum C_i}$$

where, C_i is the credits for course, GP is the grade points obtained in that course and $\sum C_i$ is the sum of credits of all courses in that semester. For the Cumulative Grade Point Average (CGPA), a similar formula is used except that $\sum C_i$ is the sum of credits of all courses in all the semesters of a year (i.e. I, II, III, and IV Year).

12.4 No SGPA will be awarded if a student earns one or more F grades. The SGPA for that particular semester in which the student earns F grades will be computed when he/she clears the subjects in the supplementary examination.

12.5 No class/division/rank will be awarded to the students at the end of the B. Tech. course, However Overall Performance of a student is awarded at the end of B. Tech. course based on his Overall CGPA of the 8th semester.

12.6 The Institute shall follow the following conversion between CGPA and % of Marks.

$$\% \text{ of Marks} = (\text{CGPA} - 0.5) * 10.0$$

12.7 **Cases of Students using unfair means in Examinations**

In case any student is found using unfair means in written / practical examination in any subject paper in Mid-semester examinations, then the particular paper will stand cancelled. However, in case any student is found using unfair means in written / practical examinations in the end semester examinations in any subjects, the said subject would stand cancelled and a cash punishment of Rupees 15000/- will be imposed for the said subject. Cases of adoption of unfair means in an examination shall be dealt with by unfair means committee constituted of Deans, Associate Deans (Academic), concerned centre superintendent and AR (Academic) under the chairmanship of Director.

13. **Vacation Training:-**

All students will have to undergo vacation training for a minimum period of 4 (four) weeks at the end of the third year of the course. At the conclusion of the training, they will submit a report to the Institute for evaluation.

The students should themselves make all arrangements for taking the vacation training in any reputed industry to their choice but approved by the Institute. The

professor in-charge, Training & Placement shall issue the necessary letters in introduction.

14. B. Tech Fee Structure:

Fee Structure (in Indian Rupees)- July, 2014 Onwards		
Sl. No.	Details of fee	B. Tech Course
(A)	Institute Fee (Payable Every Semester)	
	Tuition Fee (Payable in equivalent INR)	17000*
	Computer fee	1000
	Internet access fee	300
	Library access fee	1000
	Examination fee	500#
	Registration/ Enrolment fee	200
	Gymkhana fee	300
	Medical fee	500
	Total:	20800
(B)	Institute Fee (Payable at the time of Admission)	
	Admission fee	200
	Grade cards	150
	Alumni Association Seminar/ Thesis fee	500
	Seminar/ Thesis fee	
	Institute Deposit (Refundable)	3000
	Library Deposit (Refundable)	2000
	Total:	5850
(C)	Hostel Fees (Payable Every Semester)	
	Establishment charges	3000
	Seat Rent (Inclusive of electricity & water charges)	1800
	Total:	4800
(D)	Hostel Fees (Payable at the time of Admission)	
	Hostel Admission fee	200
	Hostel Deposit (Refundable)	2000
	Total:	2200
	Total Fee Payable Every Semester	25600
	Total Fee Payable at the Time of Admission	33650

15. DISCIPLINE

- 15.1 Every student shall observe the discipline and decorous behavior both inside and outside the campus and should not indulge in any activity that will bring down the prestige of the Institute.
- 15.2 Students shall show due respect to the faculty of the Institute and wardens of the hostels. Proper courtesy and consideration should be extended to the employees of the Institute and of the hostels and Gymkhana. They shall also pay due attention and courtesy to the visitors of the Institute.
- 15.3 Ragging in any dimension is a criminal and non-bailable offence in our country. The current State and Central legislations provide for stringent punishment including imprisonment. Once the involvement of a student is established in ragging, the offending student will be dismissed from the Institute and will not be admitted into any other Institute in the country. Avenues also exist for collective punishment, if individuals can not be identified in this inhuman act.
- 15.4 The following acts of omission and/or commission shall constitute gross violation of the code of conduct and are liable to invoke disciplinary measures:
- (a) Ragging.
 - (b) Lack of courtesy and decorum; indecent behavior anywhere within or outside the campus.
 - (c) Willful damage or stealthy removal of any property/belongings of Institute, hostels and of fellow students.
 - (d) Possession, consumption or distribution of alcoholic drinks or any kind of hallucinogenic drug.
 - (e) Adoption of unfair means in the examinations.
 - (f) Mutilation or unauthorized possession of library books.
 - (g) Noisy and unseemly behavior, disturbing studies of fellow students.
- 15.5. Commensurate with the gravity of the offence, the punishment may be reprimand, fine, expulsion from the hostel, debarment from an examination, rustication for a specified period or even outright expulsion from the Institute.
- 15.6 For an offence committed in the following cases, the authority to reprimand or impose fine or take any other suitable measure shall vest with the persons indicated:
- (a) Department or classroom: Head of the department
 - (b) Hostels: Chief hostel warden

- (c) Elsewhere: Dean (Students Affairs)
- 15.7 All cases involving punishment other than reprimand shall be referred to the Conduct and Discipline Committee, constituted by the Director from time to time, by Dean (Academic).
- 15.8 The composition of the Conduct and Discipline Committee shall be as follows:
- (a) Dean (Students affairs): Chairman
 - (b) Chief Hostel Warden: Member
 - (c) Warden of hostel concerned: Member
 - (d) Head of concerned department: Member
 - (e) Chairman, Gymkhana: Member
 - (f) One member, nominated by Director: Member (On rotation basis, every 2 years)
 - (g) Assistant Registrar (Academic): Member-Secretary.
- 15.9 The committee will enquire into the charges and recommend suitable punishment to the Dean (Academic), if the charges are substantiated. The Dean (Academic) will consider the recommendation of the committee for appropriate action.
- 15.10 The student may appeal to the Director, whose decision will be final.
- 15.11 Cases of adoption of unfair means in an examination shall be dealt with the unfair means committee (Rule 12.7).
- 15.12 The Dean (Academic) / Associate Dean (UG) debar a student from appearing in an examination on any of the following grounds with the approval of Competent Authority, if his / her
- (a) Attendance in the lecture/tutorial/practical/workshop/design/field visits/project and seminar classes during the semester has been unsatisfactory;
 - (b) Performance in the laboratory/workshop/design etc. and work done during the semester/project has not been satisfactory;
 - (c) Conduct in the classes or in the Department/Centre has been unsatisfactory or the student has attempted to adopt unfair means at the examination;
- 15.13 A student may also be debarred from appearing at an examination if there is a written report from the Chief Hostel Warden to the effect that the student
- (a) Has not cleared the outstanding dues in the hostel;
 - (b) Has been involved in an act of misconduct or indiscipline;
 - (c) Has been involved in any such activity, which is/amounts to detrimental towards reputation and interests of the department/Institute.

16. USE OF POWERED VEHICLES

- 16.1 The students living in the Institute hostels are not allowed to use powered vehicles, namely two-wheelers and four-wheelers.
- 16.2 Exemption may be allowed on written permission from the Chairman Academic Affairs and Chief Hostel Warden, in case of persons with disabilities only.
- 16.3 One time excuse may be allowed for violation of 16.1 with a penalty of Rs. 500.00. The name of such student and the registration number of the vehicle will be noted down in the register.
- 16.4 If a student continues to use the same vehicle or different vehicle or the vehicle (in the register, vide 16.2) being used by any other student, including scholars (even those residing in married scholar's accommodation), will lead to a penalty of Rs. 5000.00 for every instance.

17.1 Equipment and Stationery

All the necessary equipment and apparatus for practical work in various laboratories and drawing board will be provided by the Institute. The students will however be expected to have their own drawing instruments, set-square, T- square, drawing sheet and stationary.

17.2 Library and Documentation Centre

The Institute has a well- equipped Library-Cum- Documentation Centre in a newly-housed four storeyed building, possessing more than 20,000 books on various subject of interest for teaching and research. The centre subscribes over 150 technical and research journals and has an up-to date stock of standards both Indian and foreign, films, slides, micro-films, microfiches etc. It provides photocopying facilities on a limited scale on payment basis. The centre also subscribe online journals of science direct, springer verlag and IEEE etc.

The students can avail of the lending facility for books only. The books (maximum two at a time) issued to them should be returned on or before the due date stamped on the due date slip pasted at the back of the book. A fine of Rs. 1/- per day per book will be payable by the students in case of default. The librarian has the right to recall any book even before the due date for any urgent requirement. The load

period, though ordinarily 2 weeks, may be shortened when the books are in acute demand.

For details of Central Library, visit our Institute website: www.nift.ac.in

17.3 Hostels

The students shall be provided accommodation in the Institute Hostel with basic amenities like table, chair and cot at the following rates. They shall not be provided with mattresses, blankets, bulbs etc.

Accommodation in hostel will be allotted by hostel wardens. Seat rent will be charged as applicable. The students shall be required to strictly abide the rules and regulations of the hostel.

17.4 Issue of Transcript to B. Tech. Students

B. Tech. students may be issued Transcript on their request. Rs. 1000/- (Rupees one thousand only) may be charged for 10 copies of Transcripts and Rs. 50/- may be charged per extra copy.

17.5 Placement

The Institute attempt to arrange campus interviews and help students to find suitable employment through its Industrial services section for the passing out students after completion of the course. The student would have wide scope of the course the student would have wide scope of employment in all engineering, Foundry, Forge, Metallurgical, Electrical, Automobile, Aeronautic, Aerospace, Shipbuilding, Railways, Mining, Defence and other industries after passing out this courses.

17.6 Repeal and Savings

(i) The Institute reserves the right to make modifications in connection with the course as per the decision of the Academic Council of the Institute from time to time.

(ii) The students are sent to Industry for vacation training. At that time, the students have to make their own arrangement for accommodation at the place of training.