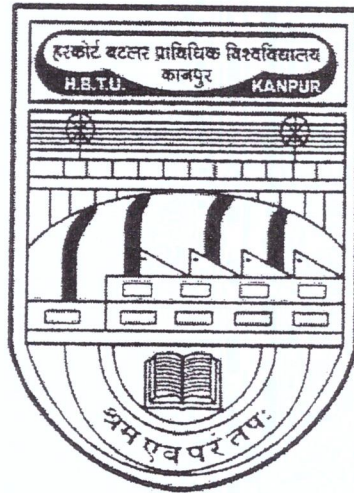


ORDINANCES
FOR
MASTER OF TECHNOLOGY
(FULL TIME/PART TIME)

(Effective from the session 2019-20 for new entrants)



HARCOURT BUTLER TECHNICAL UNIVERSITY
KANPUR-208002 (UP) – INDIA

(Revised October, 2019)

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First Ordinances

In pursuance of the provision of Section 45 (1-3) of the Uttar Pradesh Harcourt Butler Technical University, Kanpur Act, 2016, these are the first Ordinances for Harcourt Butler Technical University, Kanpur:

1. INTRODUCTION

Short Title, Commencement and Definitions

- 1.1 These Ordinances shall be called the First Ordinances, 2017 of Harcourt Butler Technical University, Kanpur.
- 1.2 They shall come into force from session 2017-18 for new entrants.
- 1.3 Anything contained in Ordinances in violation to provisions of Act shall be void, and the provisions of Act shall prevail.
- 1.4 In these Ordinances, unless the context otherwise requires,
 - a) 'Act' means the Uttar Pradesh Harcourt Butler Technical University Act, 2016 as amended from time to time.
 - b) 'Section' means a section of the Act.
 - c) 'Clause' means a clause of the Ordinances.
 - d) 'University' means the Harcourt Butler Technical University, Kanpur.
- 1.5 Words and expression used herein but not defined in the Act shall have the same meaning as assigned to them in the Act.
- 1.6 The admission of students, eligibility to various courses of study, qualifications, attendance, registration, course structure, grading system, award of degrees, certificates, medals and other academic distinctions are covered in these Ordinances.
 - a) The 'University' may start other Degree, Diploma, Certificate programmes and other academic distinctions as deemed necessary for fulfilling its objectives. The Ordinances for the same shall be as prescribed by the Academic Council and the Executive Council.
 - b) The 'Courses of Study' shall be as prescribed by the Academic Council and approved by the Executive Council.
 - c) Fellowships and Awards shall be instituted as per the requirements with approval of the Vice Chancellor under intimation to the Academic Council and the Executive Council.

2. SCHOOLS AND PROGRAMMES OF STUDY

The University offers M. Tech. programmes under different Schools of the University, as detailed hereunder:

A. M.Tech. Full Time Programmes

a) School of Engineering

- M.Tech. in Environmental Science and Engineering (Dept. of Civil Engineering)
- M.Tech. in Computer Aided Design (Dept. of Mechanical Engineering)
- M.Tech. in Electronics and Communication Engineering (Dept. of Electronics Engineering)

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b) School of Chemical Technology

M. Tech. in Chemical Engineering (Dept. of Chemical Engineering)

M.Tech. in Chemical Technology-Biochemical Engineering (Dept. of Biochemical Engineering)

M.Tech. in Chemical Technology-Food Technology (Dept. of Food Technology)

M.Tech. in Chemical Technology-Oil Technology (Dept. of Oil Technology)

The process of restarting M.Tech.in Chemical Technology-Paint Technology (Department of Paint Technology) and M.Tech. in Chemical Technology-Plastic Technology (Department of Plastic Technology) is under way.

B. M.Tech. Part Time Programmes

M.Tech. in Structural Engineering (Dept. of Civil Engineering)

M.Tech. in Soil Mechanics & Foundation Engineering (Dept. of Civil Engineering)

M.Tech. in Power Electronics and Control (Dept. of Electrical Engineering)

M.Tech. in Mechanical Engineering Design (Dept. of Mechanical Engineering)

M.Tech. in Industrial Systems Engineering (Dept. of Mechanical Engineering)

M.Tech. in Chemical Engineering (Dept. of Chemical Engineering)

3. ADMISSIONS

3.1 University offer M.Tech. degree programmes (Full-time / Part-time) in various disciplines of Engineering and Technology.

3.2 Admission to M.Tech. programmes will be made as per the rules prescribed by the University from time to time.

3.3 The reservation policy shall be governed by U.P. State Government or as prescribed by the University from time to time.

3.4 Admission of a candidate from any other University to Harcourt Butler Technical University, Kanpur on migration shall not be permitted.

3.5 If at any time after admission, it is found that a candidate has not fulfilled all the requirements stipulated in the offer of admission or has resorted to some fraudulent means to obtain admission, the University reserves the right to cancel the admission of the candidate.

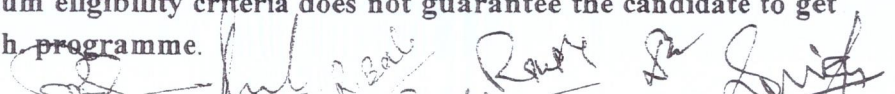
4. ELIGIBILITY

4.1 Candidates who have passed the Bachelor's degree in relevant discipline of Engineering/Technology or equivalent with first division are eligible for the admission to M.Tech. programmes.

4.2 Specific details regarding eligibility criteria for admission to various M.Tech. programmes shall be given by the University at the time of admission.

4.3 Preference will be given to candidates with valid GATE score. No written test shall be conducted for the GATE qualified candidates for their admission.

4.4 In the absence of candidates with valid GATE score, candidates without valid GATE score may be admitted on the basis of written test carried by the University. **Mere fulfilling the minimum eligibility criteria does not guarantee the candidate to get admission in M.Tech. programme.**



4.5 Modification in rules for admission shall be made as per the provisions of UGC / AICTE on approval from the competent authority.

4.6 The Academic Council of the University has the power to repeal or modify the eligibility criteria for admissions.

Table 1. Criteria for admission to M.Tech. (Full-time) programs

Sl. No.	Department	Specialization	Qualification
School of Engineering			
1.	Mechanical Engineering	Computer Aided Design	B.E. / B.Tech. or Equivalent in Mechanical Engineering with first division
2.	Civil Engineering	Environmental Science and Engineering	B.E. / B.Tech. or Equivalent in Civil Engineering / Environmental Engineering / Chemical Engineering with first division
3.	Electronics Engineering	Electronics and Communication Engineering	B.E. / B.Tech. or Equivalent in Electronics & Communication Engineering / Electronics Engineering/ Electronics & Telecommunication Engineering, with first division.
School of Chemical Technology			
Sl. No.	Department	Stream	Minimum Eligibility Criteria
1.	Oil Technology	Stream A	(i) B. Tech. / B. E. Degree in Oil Technology
		Stream B	(i) B. Tech. / B. E. Degree in Food Technology, Biochemical Engineering, Chemical Engineering, Paint Technology, Plastic Technology, Leather Technology, Biotechnology or any other relevant/allied discipline
		Stream C	(ii) M. Sc. Degree in Chemistry, Industrial Chemistry, Applied Chemistry, Food Technology, Biochemistry, Biotechnology, Microbiology, Life-Sciences or any other relevant/allied discipline
2.	Food Technology	Stream A	(i) B. Tech. / B. E. Degree in Food Technology
		Stream B	(i) B. Tech. / B. E. Degree in Plastic Technology, Biochemical Engineering, Chemical Engineering, Paint Technology, Oil Technology, Dairy Technology, Leather Technology, Biotechnology or any other relevant/allied discipline
		Stream C	(ii) M. Sc. Degree in Chemistry, Industrial Chemistry, Applied Chemistry, Food Science, Food Technology, Biochemistry, Biotechnology, Microbiology, Life-Sciences or any other relevant/allied discipline
3.	Biochemical Engineering	Stream A	(i) B. Tech. / B. E. Degree in Biochemical Technology
		Stream B	(i) B. Tech. / B. E. Degree in Food Technology, Plastic Technology, Chemical Engineering, Paint Technology, Oil Technology, Leather Technology, Biotechnology or any other relevant/allied discipline
		Stream C	(ii) M. Sc. Degree in Chemistry, Industrial Chemistry, Applied Chemistry, Food Technology, Food Science, Biochemistry, Biotechnology, Microbiology, Life-Sciences or any other relevant/allied discipline
4.	Chemical Engineering	Stream A	(i) B. Tech. / B. E. Degree in Chemical Engineering/Technology
		Stream B	(i) B. Tech. / B. E. Degree in Food Technology, Biochemical Engineering, Plastic Technology, Paint Technology, Oil Technology, Leather Technology, Petroleum Engineering/Technology or any other relevant/allied discipline

5.	Paint Technology*	Stream A	(i) B. Tech. / B. E. Degree in Paint Technology / Surface Coating/ Printing Ink Technology
		Stream B	(i) B. Tech. / B. E. Degree in Food Technology, Biochemical Engineering, Chemical Engineering, Oil Technology, Polymer Technology, Plastic Technology, Leather Technology, Biotechnology or any other relevant/allied discipline
		Stream C	(ii) M. Sc. Degree in Chemistry, Industrial Chemistry, Applied Chemistry, Polymer Chemistry, Food Technology, Biochemistry, Biotechnology, or any other relevant/allied discipline
6.	Plastic Technology*	Stream A	(i) B. Tech. / B. E. Degree in Plastic Technology/Polymer Engineering and Technology
		Stream B	(i) B. Tech. / B. E. Degree in Food Technology, Biochemical Engineering, Chemical Engineering, Paint Technology, Oil Technology, Leather Technology, Biotechnology or any other relevant/allied discipline
		Stream C	(ii) M. Sc. Degree in Chemistry, Industrial Chemistry, Applied Chemistry, Polymer Chemistry, Food Technology, Biochemistry, Biotechnology, or any other relevant/allied discipline

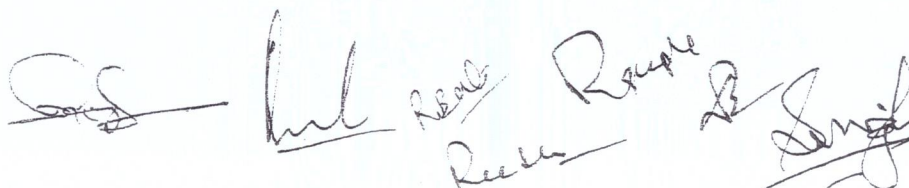
* Proposed to be continued.

A relaxation of 5% of marks in minimum qualifying marks is permissible (without grace marks) candidates belonging to SC/ST category for admissions to M.Tech. (Full-time) programs. B.Tech. candidates will be given preference over M.Sc. candidates in case of Chemical Technology branches.

Table 2. Eligibility criteria for admission to M.Tech. (Part-time) programs

Sl. No.	Department	Specialization	Intake (Seats)	Qualification
School of Engineering				
1.	Civil Engineering	Structural Engineering	05	B.E. / B.Tech. or Equivalent in Civil Engineering with first division.
2.	Civil Engineering	Soil Mechanics and Foundation Engineering	05	B.E. / B.Tech. or Equivalent in Civil Engineering with first division.
3.	Mechanical Engineering	Mechanical Engineering Design	10	B.E. / B.Tech. or Equivalent in Mechanical Engineering with first division.
4.	Mechanical Engineering	Industrial System Engineering	10	B.E. / B.Tech. or Equivalent in Mechanical Engineering / Production Engineering / Industrial Engineering with first division.
5.	Electrical Engineering	Power Electronics and Control	10	B.E. / B.Tech. or Equivalent in Electrical Engineering / Electrical & Electronics Engineering and other relevant branches with first division.
School of Chemical Technology				
6.	Chemical Engineering	Chemical Engineering	09	B.E. / B.Tech. or Equivalent in Chemical Engineering with first division.

A relaxation of 5% of marks in minimum qualifying marks is permissible (without grace marks) candidates belonging to SC/ST category for admissions to M.Tech. (Full-time) programs.



5. PROGRAM DURATION

- 5.1 The duration of M.Tech. programme for Full time students shall be two academic years (four semesters). Part time M.Tech. programme duration is three academic years (six semesters).
- 5.2 The duration of each semester shall be of 90 working days or as prescribed by the University from time to time.
- 5.3 There shall be two regular semesters in an academic year. The semester that begins in July (July to December) is known as the Odd Semester and the semester that begins in January (January to May) is known as the Even Semester.
- 5.4 The maximum time allowed for completion of M.Tech. programme for Full time students shall be three years and five years for the Part-time students. However, an extension of maximum one year may be granted on the approval of Vice Chancellor on case to case basis on the specific recommendations of Head of the Departments, Dean of concerned School and Dean of Academic Affairs. Admission of those candidates who are not able to complete their degree requirement in the stipulated period shall automatically be cancelled.

6. CATEGORY OF STUDENTS

a) Full Time

A student in this category works full-time for acquiring his / her M.Tech. degree. He/she will be eligible to receive assistantship/scholarship from the University or any other recognized funding agency as per rules (subject to availability of funds).

b) Sponsored

A student in this category is sponsored by a recognized R&D organization, Academic Institution, Government Organization or Industry for doing M.Tech. in the University on full-time basis. A minimum work experience of two years is required. **The experience in an Organization/Industry/Institution of less than 03 months will not be counted to calculate the total duration of 02 years.** The University shall not provide any assistantship / scholarship to such students.

c) Part Time

A student working in an organization within 100 kilometers distance from the University and fulfilling all other eligibility criteria may be considered for admission to M.Tech. programmes under this category. **A minimum work experience of two years is required. The experience in an Organization/ Industry/ Institution of less than 03 months will not be counted to calculate the total duration of 02 years.**

7. SCHOLARSHIPS AND FELLOWSHIPS

Students admitted with valid GATE Score shall be eligible for GATE scholarship sponsored by Ministry of Human Resource Development (MHRD). University

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Fellowship / Teaching Assistantship may be given to the non-GATE students as per the availability of finances. Some departments in the University are recognized QIP centers wherein in-service candidates may seek admission under QIP scheme of MHRD.

8. ATTENDANCE

- 8.1 Students are required to attend all the classes - lectures, tutorials, practical, research works and other prescribed curricular and co-curricular activities. However, a condonation of 25% in attendance may be granted in normal course during the semester.
- 8.2 A further relaxation of 15 percent can be granted by the Vice Chancellor on specific recommendations of the concerned Head of the Department/Dean of School, provided that the student was absent on medical grounds and / or due to any exigencies beyond the control of the student. In such cases a prior permission from concerned Head/Dean of School is required. In case of medical exigencies, the student is required to report immediately after the medical fitness issued by the hospital.
- 8.3 No student shall be allowed to appear in the Mid Semester / End Semester Examination of a subject, if he / she does not have requisite 75 percent (or requisite 60% after availing relaxation as per the provisions of **Clause 8.2**). Students not allowed to appear in the examination due to poor attendance shall be awarded 'U' grade such candidates, who do not fulfill the eligibility of minimum attendance in end semester examination have to register a fresh in subsequent year.
- 8.4 The attendance shall be counted from the date of start of academic session or the actual date of admission/registration. The commencement of classes shall begin one day after the date of registration.

9. (A) CURRICULUM STRUCTURE

The University follows a Credit Based Evaluation System. Every program shall have a specific curriculum for all semesters consisting of theory, practical, seminar, mini project, dissertation work etc. as listed in Table 3.

Table 3. Different Types of Courses and Their Credits

S. No.	Category of Courses	Credits (For Regular Program) SoE	Credits (For Regular Program) SoCT	Credits (For Part-Time Program)
1.	Program Core Courses (PCC)	30	30	28
2.	Program Elective Courses (PEC)	12	12	12
3.	Seminar (S)	02	04	02
4.	Dissertation (D)	16 (04 + 12)	14 (02 + 12)	16 (08 + 08)
5.	Mini project (MP)	-	-	02
	Total Credits	60	60	60

Respective Board of Studies (BOS) of the department will decide the semester wise course structure and evaluation scheme for various subjects (theory and theory-cum-practical) for Full time and Part-time programmes.

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(B) SEMESTER WISE COURSE STRUCTURE & EVALUATION SCHEME
M.TECH. (SCHOOL OF ENGINEERING)
(FULL TIME PROGRAMME)
SEMESTER I

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			5 (3-2-0)	30	20	-	50	50	100
2.	PCC			4 (3-1-0)	30	20	-	50	50	100
3.	PCC			5 (3-2-0)	30	20	-	50	50	100
4.	PCC			4 (3-1-0)	30	20	-	50	50	100
Total Credits					18					

SEMESTER II



Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4 (3-1-0)	30	20	-	50	50	100
2.	PCC			4 (3-1-0)	30	20	-	50	50	100
3.	PEC			4 (3-1-0)	30	20	-	50	50	100
4.	PEC			4 (3-1-0)	30	20	-	50	50	100
Total Credits					16					

SEMESTER III



Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	PCC			4 (3-1-0)	30	20	-	50	50	100
2.	PEC			4 (3-1-0)	30	20	-	50	50	100
3.	Seminar			2 (0-0-4)	-	50	-	50	50	100
4.	Dissertation			4 (0-0-8)	-	50	-	50	50	100
Total Credits					14					

SEMESTER IV

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ESM	Total Mark
					MSE	TA	Lab	Total		
1.	Dissertation			12 (0-0-24)	-	50	-	50	50	100
Total Credits					12					

Total Programme Credits : 60

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(C) SEMESTER WISE COURSE STRUCTURE & EVALUATION SCHEME

M.TECH. (SCHOOL OF CHEMICAL TECHNOLOGY)
(FULL TIME PROGRAMME)

SEMESTER I

(A Stream only for Candidates having B.Tech. Chemical Tech.)

(B Stream only for Candidates having B.Tech., in Branches other than Chemical Tech.)

(C Stream only for Candidates having M.Sc. Chemistry / Applied Chemistry / Industrial Chemistry etc.)

Group A										
Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4 (3-1-0)	30	20	-	50	50	100
2.	PCC			4 (3-1-0)	30	20	-	50	50	100
3.	PCC			5 (3-1-2)	15	20	15	50	50	100
4.	PEC			4 (3-1-0)	30	20	-	50	50	100
Total Credits				17						
OR Group B / C										
Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4 (3-1-0)	30	20	-	50	50	100
2.	PCC			4 (3-1-0)	30	20	-	50	50	100
3.	PCC			5 (3-1-2)	15	20	15	50	50	100
4.	PEC			4 (3-1-0)	30	20	-	50	50	100
Total Credits				17						

SEMESTER II

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4 (3-1-0)	30	20	-	50	50	100
2.	PCC			4 (3-1-0)	30	20	-	50	50	100
3.	PCC			5 (3-1-2)	15	20	15	50	50	100
4.	PEC			4 (3-1-0)	30	20	-	50	50	100
Total Credits				17						

SEMESTER III

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4 (3-1-0)	30	20	-	50	50	100
2.	PEC			4 (3-1-0)	30	20	-	50	50	100
3.	Seminar			4 (0-0-8)	-	50	-	50	50	100
4.	Dissertation			2 (0-0-4)	-	50	-	50	50	100
Total Credits				14						

SEMESTER IV

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	Dissertation			12(0-0-24)	-	50	-	50	50	100
Total Credits				12						

Total Programme Credits : 60

**(D) COURSE STRUCTURE & EVALUATION SCHEME M.TECH.
SCHOOL OF ENGINEERING
(PART TIME PROGRAMME)**

SEMESTER I

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4(3-1-0)	30	20	-	50	50	100
2.	PCC			4(3-1-0)	30	20	-	50	50	100
3.	PCC			4(3-1-0)	30	20	-	50	50	100
Total Credits				12						

SEMESTER II

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4(3-1-0)	30	20	-	50	50	100
2.	PCC			4(3-1-0)	30	20	-	50	50	100
3.	PCC			4(3-1-0)	30	20	-	50	50	100
Total Credits				12						

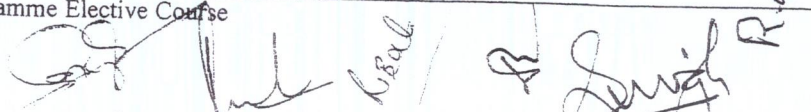
SEMESTER III

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PCC			4(3-1-0)	30	20	-	50	50	100
2.	PEC			4(3-1-0)	30	20	-	50	50	100
3.	Seminar			2(0-0-4)	-	50	-	50	50	100
Total Credits				10						

SEMESTER IV

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	PEC			4(3-1-0)	30	20	-	50	50	100
2.	PEC			4(3-1-0)	30	20	-	50	50	100
3.	Project			2(0-0-4)	-	50	-	50	50	100
Total Credits				10						

PCC-Programme Core course; PEC-Programme Elective Course



SEMESTER V

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	Dissertation			8(0-0-16)		50	-	50	50	100
Total Credits				08						

SEMESTER VI

Sr. No.	Course Type	Subject Code	Course Title	Credits (L-T-P)	Sessional Marks				ES M	Total Mark
					MS E	TA	Lab	Total		
1.	Dissertation			8(0-0-16)		50	-	50	50	100
Total Credits				08						

Total Programme Credits : 60

10. GRADING AND EVALUATION SCHEME

10.1 Grading System

Students are evaluated out of a maximum 100 marks in each subject. On the basis of marks obtained by the student in the subject, grades shall be awarded as per the Grading Scheme presented in Table 4. Depending upon the performance of the student in all the subjects offered during the semester, Semester Grade Point Average (SGPA) shall be calculated.

Table 4: Grading Scheme			
Marks (Out of 100)	Grade Obtained	Grade Points	Description
90 and above	A+	10	Outstanding
80 and above	A	9	Excellent
70 and above	B+	8	Very Good
60 and above	B	7	Good
50 and above	P	6	Pass
Less than 50	F	0	Fail
	W	-	Withdrawn
	U	-	Short Attendance
	I	-	Incomplete
	S	-	Satisfactory in USAC Activities

10.2 Evaluation Scheme

The evaluation of performance shall comprise of continuous assessment throughout the semester in the Mid Semester Examinations, End Semester Examinations and Teachers' Assessment through class work and tutorials. Evaluation Scheme is presented in Table 5 for different types of courses.

Irrespective to marks/grade obtained by the student in a particular subject, it is mandatory to secure 50% marks in total (sessional and end semester examination) to pass that particular subject. Out of which minimum 30% (15 marks) in theory subject in end semester is essential. "I" grade shall be given to the students who leaves the course midway during the semester. "W" grade shall be given to the

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students who withdraw from a course during the semester. Students not allowed to appear in the examinations due to poor attendance shall be awarded "U" grade.

10.3 Calculation of SGPA, YGPA and CGPA

The performance of a student shall be evaluated in terms of *three* indices: Semester Grade Point Average (SGPA) which is Grade Point Average for a Semester, *Yearly Grade Point Average (YGPA) and* Cumulative Grade Point Average (CGPA) which will be calculated at the end of final semester cumulatively.

I. Semester Grade Point Average (SGPA)

$$\text{SGPA} = \frac{\sum (\text{Credit weight of a subject} \times \text{Grade point earned in the subject})}{\sum \text{Total credits for all subjects offered during Semester}}$$

II. Yearly Grade Point Average (YGPA)

$$\text{YGPA} = \frac{(\text{SGPA for odd sem} \times \text{Total credit of odd sem}) + (\text{SGPA for even sem} \times \text{Total credit of even sem})}{\text{Total credits offered in the current year (Odd and Even Semester)}}$$

III. Cumulative Grade Point Average (CGPA)

$$\text{CGPA} = \frac{\sum (\text{SGPA} \times \text{Semester total credits for all semesters})}{\text{Total credits of all four semesters}}$$

The CGPA is calculated on the basis of all passed courses with 'P and above grades'. For Training & Placement requirements, CGPA of the student up to his/her recent completed semester may be computed for reporting purpose.

10.4 Award of Division

CGPA 7.500 or above	First Division with Honors
CGPA 6.500 or above	First Division
Below a CGPA 6.500	Second Division

10.5 Conversion of CGPA to Absolute Percentage

$$\text{CGPA} \times 10 = \text{Absolute Percentage}$$

Table 5: Evaluation Scheme

Sr. No.	Course Title	Sessional Marks				ESM	Total Marks
		MSE	TA	Lab	Total		
1.	Theory CourseX (L-T-P)	30	20	-	50	50	100
2.	Theory cum Lab. CoursesX (L-T-P)	15	20	15	50	50	100
3.	Lab Course	-	20	30	50	50	100
4.	Seminar	-	50	-	50	50	100
5.	Dissertation	-	50	-	50	50	100

Range

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10.6 Evaluation Scheme for Dissertation (in Semester III)

Dissertation courses may include a theoretical /experimental / numerical / analytical modeling, simulation and analysis, experimental investigation, a prototype design, product design and development etc. A dissertation grade is awarded in Semester III.

The Dissertation work will be evaluated in III semester by Department Post Graduate Committee (DPGC) consisting Head of Department, Supervisor (**or one senior faculty member of the Department in case supervisor himself is head of department**) and a senior faculty from other Department to be nominated by the Vice Chancellor.

10.7 Evaluation Scheme for Dissertation work (in Semester IV)

Evaluation of Dissertation in Semester IV will be held only after the student has secured pass grades in all the courses. Dissertation work will be allowed for submission only after pre-submission presentation before DPGC is found to be satisfactory.

Student is required to have publications for his / her research work for grant of permission for thesis submission. One of the following criteria should be fulfilled.

- a) One publication / acceptance for publication in a reputed International Journal. **OR**
- b) Two publications / presentations in International Conference(s) out of which one may be a poster presentation. **OR**
- c) Two publications in National Journal of repute.

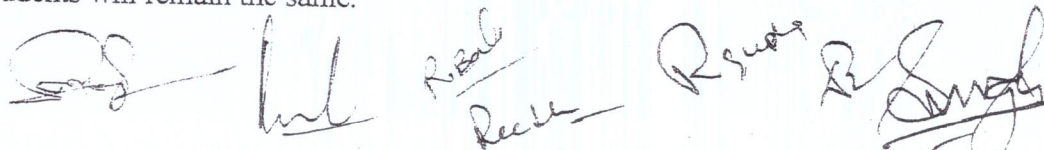
Evaluation of Dissertation work and final viva-voce will be conducted by External Examiner. Discipline wise list of refereed/reputed journals (International and National) **will be considered, as prescribed by UGC/AICTE, or any other regulatory body.** In case, a student is allowed to work with a co-supervisor in an industry/ research organization / Institute/University outside HBTU Kanpur, a certificate about the completion of work will be required by the concerned Supervisor.

10.8 Make-up Examination

Students who are not able to appear in Mid Semester Examination for genuine reasons such as hospitalization or representing the University in Sports/ Conference etc. are required to seek PRIOR permission from their Head of Departments and Dean of the concerned School for grant of permission for Make-up Examination. **In case of hospitalization, a written intimation within 10 days of hospitalization is MANDATORY.** Make-up Examination will be conducted one week before the End Semester Examination and shall cover the whole syllabus till date.

11. CARRY OVER EXAMINATION

Student with 'F' grade in any subject will be required to appear for Carryover Examination in the subsequent years. However, the Sessional Marks obtained by these students will remain the same.



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12. SUPERVISION OF RESEARCH WORK

12.1 Allotment of Supervisor

- a. Thesis supervisor for a student will be appointed from amongst the faculty members of the Department / University.
- b. Departments will evolve modalities for appointing supervisors keeping in view the aspirations of the students and interest of the faculty members.
- c. Generally, no student will have more than one supervisor from the same department / discipline / specialization. However, two supervisors may be allowed by the Vice Chancellor in special cases.
- d. No change in thesis supervisor will generally be allowed. However, change may be allowed by the Vice Chancellor on specific recommendation of Head of the Department and Dean of concerned School on valid academic /administrative reasons. In case of a change of supervisor, student will not be allowed to submit the thesis earlier than three months from the date of such change/addition.
- e. No change/addition of supervisor is allowed after the thesis submission.

12.2 Allotment of Research Topic

- a. Department shall notify the research area of all faculty members of the Department for the benefit of the students. Head of the Department will ensure that a student gets a supervisor in research area of his/her choice. Broad area of thesis must be finalized in II/III semester. In case of change in the thesis / research area, the students will not be allowed to submit the thesis before six months from the date of such change. No such change will be allowed in Final Semester.
- b. Students are required to make a brief presentation of their thesis topics, objectives and methodology of research work within a month of commencement of III Semester for the approval from the DPGC.

12.3 Change of Research Area

Change of research area will be allowed in rare cases in case to case basis on the recommendation of concerned Head and Dean of the school.

12.4 Monitoring of Research Work

Students are required to have two presentations in a semester before DPGC. Supervisor will continuously monitor and assess the performance of the student during the Semester.

12.5 Evaluation of Research Work

- a. After completion of research work, the candidate shall submit a written application for internal presentation. Student shall submit a copy of thesis with a certificate from the Supervisor that the research work is complete and free from plagiarism. Student is also required to fulfilled publications related requirement for grant of permission for internal presentation.
- b. On satisfactory pre submission presentation before DPGC candidate shall be allowed to submit one copy of thesis to the Head of the Department. Head of the Department will proposed a panel of three examiners for thesis examination with the consultation of supervisor and forward it to the Dean of concerned School

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and the Controller of Examination for approval of External Examiners by the Vice Chancellor.

Separate panel of examiners should be proposed for thesis evaluation different students. Not more than two M.Tech. thesis examinations should be conducted by One External Examiner at a time.

- c. The Controller of Examination shall send the letter of appointment to the approved Examiner with a copy of it to the concerned Head of the Department.
- d. Head of Department shall essentially send a loose bound thesis by registered/speed post to the appointed Examiner. A soft copy in PDF form may be send to the Examiner if desired in addition to the thesis send by post.
- e. Head of Department shall schedule the Final Viva-voce Examination only after receipt of acceptance report by post or e-mail/fax from the External Examiner. Accordingly, all concerned should be intimated of the same at least one week in advance.
- f. Thesis examination shall be conducted at the University only. The Head of the Department shall send the marks awarded to the candidate to the Controller of Examination after the candidate submits the final M.Tech. thesis in three hard-bound copies (one for the University Library, one for Departmental Library and one for the Supervisor) and two CDs containing soft copies of the thesis in a single file in the format notified by the University. One CD of thesis shall be stored in University Library and the other in the Department.
- g. Those who are not able to complete their M.Tech. Thesis in the stipulated time will be required to register in next semester by depositing the Semester fee till the work is completed. The duration of M.Tech. course shall be counted from the date of registration. However, if a student is able to submit the thesis in two weeks from the commencement of new semester, he / she may be exempted from fee.
- h. The responsibility for carrying out M.Tech. Thesis evaluation strictly as per the laid down procedure lies with the Head of the Department.

12.6 Appointment of External Examiners

External Examiners must not be of lower than the rank of Associate Professor in the concerned discipline. Examiners should be faculty from IITs/NITs/reputed Engineering Colleges or Universities /Industrial Professionals from concerned discipline/scientists from Central and Regional Laboratories.

13. PROMOTION RULES AND ACADEMIC CRITERIA FOR CONTINUATION (RE-ADMISSION & EX-STUDENTSHIP)

13.1 A candidate may be allowed Re-admission provided he/she satisfies one of the following conditions:

- (a) A student must secure a minimum **YGPA of 5.000 in current year** in order to be promoted to next year. If a student fails to fulfill this requirement of **5.000 YGPA**, he/she shall be considered 'Fail' and will have to repeat the year by taking readmission in the same class paying full annual fee or opting for ex-student status as per Clause 13.2 in the subsequent academic year. If a student after Re-admission again fails to attain a **YGPA of 5.000**, his/her admission will be cancelled and such students shall have to leave the M.Tech. programme.

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- (b) A candidate who failed to appear in a semester examination or he/she was not granted permission to appear in the examination.
- (c) A candidate who was detained by the University and subsequently was permitted to take re-admission.

13.2 Students having minimum 75% attendance (60% with medical/academic leave) in last semester shall be allowed to get registered as ex-student with following conditions:

- (a) Ex-student is required to register by paying only examination fee within 15 days from the start of new session.
- (b) A candidate opting for ex-student status will have to appear in all the theory and practical subjects during the End Semester Examinations in both semesters of the academic year. Sessional Marks of Project and Seminar etc. shall remain the same as secured earlier.

14. AWARD OF DIVISION, RANK AND MEDALS

- 14.1 A candidate who completes the course requirements for M.Tech. programme securing 'P' and above grades' in all the courses in the stipulated maximum duration for the M. Tech. programme shall be declared 'qualified' for the award of degree subject to the fulfillment of the requirements of Clause 13.
- 14.2 A candidate who qualifies for the award of the degree securing 'P' or above grades' in all the subjects in his/her first attempt in four consecutive semesters (six consecutive semesters for Part time programmes) and secures a CGPA of 7.500 or above shall be awarded FIRST DIVISION WITH HONOURS.
- 14.3 A candidate who qualifies for the award of the degree by securing 'P' or above grades' in all the subjects in the stipulated maximum duration for the M.Tech. programme and secures a CGPA of 6.500 and/or above shall be awarded FIRST DIVISION.
- 14.4 All other candidates who qualify for the award of degree by securing 'P' or above grades' in all subjects in the stipulated maximum duration for the M.Tech. programme and secures a CGPA less than 6.500 shall be awarded SECOND DIVISION.
- 14.5 Best performers in each Full time M.Tech. programme in each School will be awarded 'Certificate of Merit'. It is mandatory for such candidates to pass all the subjects in first attempt without any Carryover in any semester. Overall topper in the University amongst Full time M.Tech. programmes will be adjudged 'University Topper' on the basis of highest CGPA.
- 14.6 Following Medals shall be awarded annually by the University to those students who complete their Degree programmes within stipulated two years duration without any carryover.

a. Chancellor's Medal

Toppers of all M.Tech. programmes who secure First, Second and Third highest CGPA at the end of Fourth Semester in first attempt, will be awarded Chancellor's Gold, Silver and Bronze Medal, respectively.

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b. **Vice-Chancellor's Medal**

Students securing First, Second and Third highest CGPA at the end of Fourth Semester in each School in first attempt will be awarded Vice-Chancellor's Gold, Silver and Bronze Medal, respectively.

15. REGISTRATION AND ENROLMENT

15.1 Students must register at the start of each semester on the prescribed dates announced in the Academic Calendar till he/she completes the programme. If a student does not register in a particular semester, his/her admission is liable to be cancelled. Any academic activity undertaken by a student shall not be considered towards the fulfillment of requirements of degree without proper registration.

15.2 Registration should be carried out by the student himself/herself on stipulated dates. A student is allowed registration for 10 working days including the date of registration with a fine of Rs.100 per day. A student who failed to register in stipulated time will have to wait for the start of next academic session.

15.3 Every student admitted in the University will be provided a unique Roll Number. The Roll Number shall have nine digits. First two digit shall indicate the year of admission; next two the degree programme; next two the branch of study and last three digits, the serial number of the student. Every student shall be identified by this Roll Number throughout the stay in the University.

15.4 Students with outstanding dues to the University or hostel etc. shall be permitted to register only after clearing the outstanding dues.

15.5 In-absentia registration may be allowed only in rare cases with the permission of the Vice Chancellor in case of serious illness/ natural calamities/ unavoidable circumstances upon the recommendation of Head of the Department and Dean of Schools and Academic Affairs.

15.6 Every student admitted and registered in the University shall be required to submit the Enrolment Form within one month of registration for getting enrolled with the University. Non-compliance will lead to cancellation of admission.

16. TEMPORARY DISCONTINUATION FOR PROMOTION TO STARTUP /ENTERPRENEURIAL ACTIVITY

This facility will be available to the students of the University to promote startup/entrepreneurial activities. Maximum period of discontinuation shall be limited to one year for M.Tech. programmes. Such students on completion of degree shall be allowed by the University for Campus Placement provided that he/ she shall apply through the Head of Department, Dean of concerned School and Dean of Academic Affairs to the Vice Chancellor in advance and obtained a written order to this effect. Clause 5 shall be relaxed to those students who opt for this facility.

17. USE OF UNFAIR MEANS

17.1 *If a student is found possessing unfair means (in form of written document, mobile phone, electronic gadget like Bluetooth device, programmable calculators) or using them in the Mid Semester Examination and the material recovered is relevant to the subject / paper / his / her entire M.Tech. programme, the student shall be liable for cancellation of admission.*

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semester will be cancelled and 'zero' marks will be awarded in Mid Semester Exams of all subjects of that semester.

- 17.2 *If a student is found possessing unfair means (in form of written document, mobile phone, electronic gadget like Bluetooth device, programmable calculators) or using them in the End Semester Examination and the material recovered is relevant to the subject / paper, his/her entire End Semester Examination of all subjects of that semester will be cancelled and 'zero' marks will be awarded in all the subjects of that Semester.*
- 17.3 *In addition to either of the above charges at 17.1 or 17.2, if a student is found misbehaving with the teachers / staff or creating in discipline in the examination premises, such students will be rusticated from the University for one year.*
- 17.4 *For all other cases not covered in Clauses 17.1 to 17.3, the Chairman, Board of Examination shall recommend punishment to the students on case to case basis and obtain approval from Vice Chancellor in accordance with the Clause 37.8 of University Act.*
18. **CHALLENGE EVALUATION, AWARD OF MARKS AND ELIGIBILITY OF TEACHERS FOR REVALUATION:**
- A. **Challenge Evaluation**
- a. Challenge Evaluation of answer script will be carried out only for the latest semester whose result has been declared.
 - b. The students of all M.Tech courses appearing for the University examinations are eligible to apply for revaluation of answer scripts in all theory subjects.
 - c. There will be a single notification inviting applications from the students, to apply for Challenge Evaluation of Answer Scripts mentioning the last date.
 - d. Students may apply for Challenge Evaluation by paying the requisite fee of Rs. 5000.00 (Rs. Five Thousand Only) per subject. This fee may vary in future as decided by the University. After the last date, additional time may be granted, subject to the approval from the competent authority. However, under such case, student will have to pay a late fine (non-refundable) for applying for Challenge Evaluation as decided by the university from time to time.
 - e. A student cannot apply Challenge Evaluation of answer scripts in the subjects other than the THEORY subjects.
 - f. After the last day of application for challenge evaluation, the Controller of Examination Office shall initiate the process of challenge evaluation as per the procedure detailed hereunder:
 - i. Each answer script marked for Challenge Evaluation will be revaluated by two evaluators.
 - ii. After the revaluation, if the difference between the marks awarded by the two re-evaluators is more than 20% of maximum marks of that subject, then such scripts shall be evaluated once again by a third examiner (who has not evaluated the script in the first revaluation).
- B. **Award of Marks after Revaluation:**
- i. If the average marks of two revaluators after revaluation is higher/lesser than the original marks, the revaluation marks shall be awarded to the students in that subject.
 - ii. In case of revaluation as discussed in section 16.f(ii) marks to the student shall be awarded in following manner:
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Case: I

If the difference of marks awarded by two revaluators is more than 20% of maximum marks for a given subject, and the answer script is revaluated by a third examiner, average of Two Nearest Marks shall be awarded.

First revaluation Marks	Second revaluation Marks	Difference between Ist & IInd revaluator	Third revaluation Marks	Final Marks after Revaluation
15	40	>20%	48	44
25	28	≤20%	Not. Reqd.	27

Case: II

When the difference between the nearest two marks in the first, second and the third revaluation is approximately equal then average of Two Higher Marks shall be awarded.

First revaluation Marks	Second revaluation Marks	Difference between Ist & IInd revaluator	Third revaluation Marks	Final Marks after Revaluation
19	40	>20%	59	50

- In case of average being a fraction, for all above cases the awarded mark shall be rounded to the next higher number.
- The University will display the Original Marks, Marks after challenge evaluation, on the website and result of the subject will be upgraded/uploaded.

C. Eligibility of Teachers for Revaluation:

The faculty members who will be evaluating the script during revaluation must possess minimum five years of teaching experience and have experience of teaching that subject. If required, expert examiners from other University/Institutions may also be appointed as evaluators.

19. LEAVE RULES

A student is eligible for following leaves:

- a) Leave on personal grounds: 15 days per semester with scholarship
- b) Leave on medical grounds: Up to 30 days in a year with scholarship for extended sickness, normally requiring hospitalization
- c) Any other leaves permissible as per UGC norms.

20. ELIGIBILITY FOR AWARD OF M. TECH. DEGREE

A student shall be declared to be eligible for award of the M.Tech. Degree if he/she has:

- a. Registered and successfully passed with 'P' and above grades' in all the courses with a minimum CGPA of 6.000. All other requirements of the programme as prescribed in the Ordinances or as prescribed by the University from time to time.
- b. Has no dues to the University, Hostels, Library and USAC etc., and ;
- c. No disciplinary action is pending against the student.

21. PLAGIARISM

Plagiarism checking is mandatory and the thesis has to be checked for anti-plagiarism prior to submitting it for evaluation. This checking will be carried out by the respective Departments for ensuring originality of submitted thesis work. In case, any plagiarism (as defined in UGC/AICTE notifications) is found in the thesis, the University may take necessary action as per the guidelines provided by UGC/AICTE.

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notifications. A certificate regarding originality of research work must be signed by the Candidate and the Supervisor which should be submitted at the time of thesis submission to the University.

22. **STUDENT DISCIPLINE**

All the students who seek admission will have to abide by the discipline norms of the University and follow conduct or discipline rules/anti ragging measures in the University. In case of any act of indiscipline demonstrated by the student, the student shall be liable for punishment. On the recommendation of Proctorial Board punishment may be awarded in terms of suspension for the semester, expulsion from the hostel, *withholding results, scholarships or other benefits*, barring from the placement facility and/or termination from the University. The decision of the Vice Chancellor shall be final and binding.

23. **POWER TO MODIFY THE ORDINANCES**

Notwithstanding all that has been stated above, the Academic Council has the right to modify partly or completely the provisions of these Ordinances with the approval of Executive Council. Under extreme exceptional circumstances arising out of certain inconsistency in the Ordinances or otherwise, the Vice-Chancellor can take suitable decision in deference to the laid down provisions provided the standard of evaluation is not compromised and the same shall be reported to ensuing Academic Council / Executive Council with suitable justification. Such actions of Vice-Chancellor shall not be treated as precedence under any circumstances.

The block contains several handwritten signatures and initials. On the left, there is a signature that appears to be 'S. K. Singh' with 'R. Bal' written below it. To the right of this is a large, stylized signature that looks like 'S. Singh' with 'R. Singh' written below it. There are also some other smaller initials scattered around.