

Passed by Academic Council dtd.

Ordinance for
Integrated M.Tech. + Ph.D. (Dual Degree)
Programme

as per

National Education Policy (NEP-2020)



Faculty of Engineering and Technology
MJP Rohilkhand University, Bareilly- 243 006, INDIA

2022

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MJP ROHILKHAND UNIVERSITY BAREILLY

Faculty of Engineering and Technology

Ordinance for Integrated M.Tech.+Ph.D. (Dual Degree) Program

1. Preamble:

The **Integrated M.Tech.+Ph.D.(Dual Degree)** program is a specialized program that permits the eligible students to complete both M.Tech and PhD degrees at an accelerated pace, as well as specialize in several interdisciplinary areas of Engineering and Technology. This programme is going to be beneficial for those students who are research oriented and can contribute to the society with his/her innovative research ideas. Hence, this programme will provide a unique opportunity to enhance the academic qualification and expertise not only to the B.Tech/M.Sc. students but also by the industrial personnel and teaching faculty who wish to update their qualification and knowledge.

2. Departments offering the Course:

The Integrated M.Tech.+Ph.D. (Dual Degree) course is being offered in the following Departments:

- (i) Computer Science and Information Technology
- (ii) Electronics and Communication Engineering
- (iii) Electronics and Instrumentation Engineering
- (iv) Mechanical Engineering (specialization in Thermal Engineering, Industrial & Production Engg. and Machine Design Engg.)

3. Number of Seats:

Total 20 seats for each department are available for the course, out of which 15 seats are for candidates taking admission under eligibility condition mentioned in [4.1] below and remaining 05 seats are for industry/institute/defence sponsored candidates as per the eligibility mentioned in [4.2]

4. Eligibility for Admission:

[4.1] For normal candidates:

Sr. No.	Department	Eligibility
1.	Computer Science and Information Technology	B.E./B.Tech in Computer Science/IT/Electronics and other relevant fields with minimum 60% marks (for GEN/OBC) and 55% marks for SC/ST and OBC(NCL) or equivalent grade from recognized university/institute. OR MCA/M.Sc.(CS)/M.Sc.(IT)/MSc.(Physics) with specialization in Electronics and other relevant fields with minimum 60% marks (for GEN/OBC) and 55% marks for SC/ST and OBC(NCL) or equivalent grade from recognized university/institute.
2.	Electronics and Communication Engineering	B.E./B.Tech. or equivalent degree of Engineering with specialization in Electronics and Communication/

S. Singh

		<p>Electronics and Telecommunication /Electronics/ Signal Processing / VLSI Design / AI&ML / Computer Science / Information Technology / Antenna Engineering/Electronics &Instrumentation/ Instrumentation and Control/ Electrical / Electrical & Electronics / and other relevant fields with minimum 60% marks for Gen/OBC (55% marks for SC/ST and OBC(NCL) or equivalent grade from a recognized university/institute.</p> <p style="text-align: center;">OR</p> <p>M.Sc.(Physics) with specialization in Electronics and other relevant fields with minimum 60% marks (for GEN/OBC) and 55% marks for SC/ST and OBC(NCL) or equivalent grade from recognized university/institute.</p>
3.	Electronics and Instrumentation Engineering	<p>B.E/ B.Tech or equivalent degree of Engineering with specialization in Electronics/ Electronics &Instrumentation/ Instrumentation and Control/ Electrical / Electrical & Electronics / Electronics and Communication and other relevant fields with minimum 60% marks for Gen/OBC (55% marks for SC/ST and OBC(NCL) or equivalent grade from a recognized university/institute.</p> <p style="text-align: center;">OR</p> <p>M.Sc. in Physics with specialization in Electronics or M.Sc. in Electronics and other relevant fields with minimum 60% marks for Gen/OBC (55% marks for SC/ST and OBC(NCL) or equivalent grade from a recognized university/institute.</p>
4.	Mechanical Engineering	<p>B.E./B.Tech in Mechanical Engineering and other relevant fields with minimum 60% marks (for GEN/OBC) and 55% marks for SC/ST and OBC(NCL) or equivalent grade from recognized university/institute.</p>

[4.2] For Sponsored candidates:

For sponsored candidates, apart from having qualifications mentioned in [4.1], candidate should be having minimum two years work experience of teaching/ research / industry/ defence in relevant field and at appropriate level and should officially be sponsored by the employer for the complete tenure of the course [two years for M.Tech. and 5 years for both degree]

5. Duration of the Course:

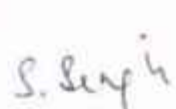
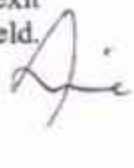
The Integrated M.Tech.+Ph.D. (Dual Degree) course is full-time regular five years programme. It is divided into two parts.

Part-A: First two years (04 semesters) is for M.Tech. The maximum time limit to complete the M.Tech. program is 8 semester (04 yrs.)

Part-B: 03 years for Ph.D. Degree. The maximum time limit to complete the Ph.D. degree will be as per the existing Ph.D. ordinance of the university.

After the successful completion of M.Tech. programme, candidate will have the choice to exit as per the National Education Policy 2020 (NEP-2020) with M.Tech. degree in relevant field.



For this, student should apply well in advance in written for his/her plan to exit the Integrated M.Tech.+Ph.D. (Dual Degree) course through the head of the department/Dean of the faculty. The final approval will be done by the Vice-Chancellor. Candidate not giving any application of exit will be automatically admitted to the Ph.D. course. Such students will be exempted from the Pre-PhD course work as they have already studied the subjects during the M.Tech. program and will be allowed to register for Ph.D. in the relevant branch as per the Ph.D. ordinance of the university.

6. Mode of Admission:

The Selection/Admission in Integrated M.Tech.+Ph.D. (Dual Degree) course will be based on the following criteria:

- | | |
|---------------------------|------------------------|
| (a) Written Entrance test | Qualifying Examination |
| (b) Interview | 50% weightage |
| (c) Academic Credential: | 50% weightage |

The candidates (Normal as well as sponsored) who have qualified GATE/NET will be exempted from appearing in the written entrance test. The written test will be of 50 marks consisting of 45 MCQs from the GATE syllabus of the concerned branch and 05 questions from research aptitude. The minimum passing criteria for written test is 50% marks for General/OBC and 45% for SC/ST and OBC(NCL). The sponsored candidates (without GATE/NET) also have to appear in the written test and need to qualify as per the above criterion.

The separate merit lists will be prepared taking into account of criterion (b) and (c) after the declaration of results of written examination for normal candidate and sponsored candidates. The admission will be offered to 15 normal candidates and 05 sponsored ones. If the selected candidate does not take admission within the given time schedule then the seat will be transferred to the waiting list candidates on merit basis. The reservation policy for admission will be same as that of UP Govt.

The admission to Integrated M.Tech.+Ph.D. (Dual Degree) course will be done twice (July and January) in a year, if seats remains vacant. Students admitted in January spell will do 2nd semester alongwith the students admitted in the July spell and 1st semester with the next batch admitted students.

7. Structure of the course:

The M.Tech.part of the Integrated M.Tech.+Ph.D. (Dual Degree) course will be of 80 credits distributed uniformly in four semesters. During each semester students will study the courses consisting of theory papers, Lab., seminar, Dissertation etc. as per the following scheme:

Course	Semester-I	Semester-II	Semester-III	Semester-IV
M.Tech. (Total Credits: 80)	Theory and lab courses of 20 Credits	Theory and lab courses of 20 Credits	Theory, Seminar and Dissertation-I of total 20 Credits	Dissertation-II (20 Credits)
Ph.D.	Students who have completed M.Tech. successfully and wish to continue for PhD. will be exempted from the Pre-PhD course work and will be allowed to register for Ph.D. in the relevant branch as per the Ph.D. ordinance of the university.			

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The syllabus of various courses will be proposed by the concerned BOS and approved by the Academic Council/Executive council of the university. The change/modification in the course curriculum will only be done by the concerned BOS and will be approved by Academic Council/Executive Council.

In the third semester students will study mandatory course on Research Methodology and Publication Ethics along with the dissertation-I and give a seminar on a topic of emerging areas in the relevant branch of study. The final semester will be fully devoted to Dissertation-II to be carried out at our university or any other reputed Research Institute/ Industry/Academic Institute under the guidance of experienced Supervisors (one supervisor from the department and one from external place of project/dissertation work). Head of the department will allow any student to carry out his/her project/dissertation at some reputed Research Institute/ Industry/Academic Institute in India or abroad, on the recommendation of internal supervisor.

It is desirable that student should publish at least 01 paper in National/International Journal (SCI indexed or UGC care listed) OR WoS/Scopus indexed Conference out of her/his M.Tech. Dissertation work.

After successfully completion of M.Tech. course, student will have the option to exit from the programme as per the provision made in point 5 of this ordinance. If students continue his/her Ph.D. degree, the then existing Ph.D. ordinance of the university will be applicable to him/her.

8. Scheme of Evaluation:

It is proposed to have total internal evaluation system for Integrated MTech+ Ph.D. Programme (except for Dissertation-I and II). 50% of the marks will be from continuous evaluation like quiz, home assignment and attendance, whereas other 50% will be from the end semester examination. The student has to pass in internal assessment and end-semester examination separately. The minimum passing marks are 50% in each subject (sessional+end semester) and in aggregate for each semester.

The detailed marks breakup is as follow:

(8.1) Theory papers Evaluation:

(a) Continuous internal assessment: 50% weightage

(i) Mid-term examination – 2	: 30 marks (15 marks each)
(ii) Home Assignments	: 10 marks
(iii) Attendance	: 10 marks
Total	: 50 marks

(b) End-semester examination: 50% weightage

End-semester theory paper : 50 marks

The minimum passing marks are 50% in each subject. The end semester paper will consists of 08 questions of 10 marks each and student has to attempt 05 questions. One or two questions may be MCQ, short answer type, True/false type and remaining will be of subjective type.



(8.2) Lab Evaluation:

(a) Continuous internal assessment: 50% weightage

(i) Sessional Evaluation	: 30 marks
(ii) Attendance	: 10 Marks
(iii) Record/file	: 10 Marks
Total	: 50 marks

(b) End-semester examination : 50% weightage

(i) Viva-voce	: 30 marks
(ii) Experiment execution	: 10 Marks
(iii) Answer sheet/copy	: 10 marks
Total	: 50 marks

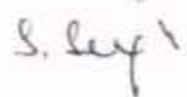
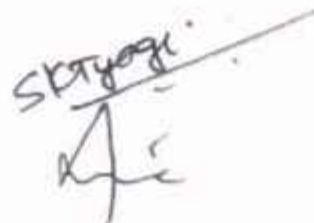
(8.3) Dissertation-I/II Evaluation:

Students ^{who have} successfully completed one year of Integrated M.Tech.+Ph.D. (Dual Degree) will be allow^{ed} to pursue their Dissertation-I/II work as per point [7] of this ordinance. The student will be evaluated as per following scheme:

- (i) The dissertation-I/II will be evaluated by the external experts recommended by the BOS and approved by the Vice-Chancellor.
- (ii) Atleast one week before the final presentation/defense/Viva-voce, a notice from the supervisor and head will be circulated to all concerned departments and authorities.
- (iii) It will be an open defense and all faculty members and students of the department and other related department can attend the open Viva-Voce.
- (iv) The presence of one external expert, Supervisor(s), Head of the department is mandatory and completes the quorum.
- (v) After the successful presentation, external experts will send his report and marks in a sealed envelope to the head of the department, which will be forwarded to the controller of examination for further processing.

9. The Passing Criteria:

- 9.1 Candidates have to obtain a minimum of 50% of marks or its equivalent Grade (D) in a particular semester. However passing marks for a subject is 50%.For each semester, a Mark-sheet/ Grade-Card wouldbe issued by the University.
- 9.2 If any student fails in any paper (not obtained 50%), he/she will be given only one chance to clear the paper along with the coming batch by paying applicable examination fee. If student does not clear the paper in the second attempt he or she will be declared fail in the semester.
- 9.3 Maximum one back is allowed to ^{one} move to second and subsequent semesters. For candidates having back in more ^{than one} ~~two~~ back, first has to clear his/her back to move to next semester. In this case also student ^{will have} has to pay the applicable examination fee.



10. Regularity and Attendance:

10.1 Students has to obtained at least 75% attendance in each subject of study. It is provided that the Head of the concerned department/faculty/college may condone shortage of percentage in attendance not exceeding 10 percent in each subject due to one or more of the following reasons, involving absence from theclasses.

- (a) Participation in any of the co-curricular activities organized by University/Institute/Department, duly certified by the competent authority.
- (b) Prolonged illness duly certified by the Superintendent/CMO of government hospital.

10.2 The Academic Council/ Vice Chancellor shall have power to condone any deficiency of attendance for cogent reasons.

11. The Grade Point System:

11.1 The 10-point grading system shall be implemented according to UGC guidelines as per following table:

Letter Grade	Grade Point
O [Outstanding]	10
A [Excellent]	9
B [Very Good]	8
C [Good]	7
D [Satisfactory]	6
F [Fail]	5
Ab [Absent]	0

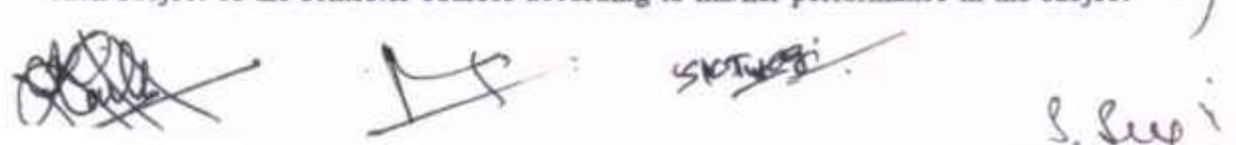
11.2 The above grades shall be awarded based on marks obtained by the student in each paper/course as per details given below:

Marks obtained in each theory paper/ lab course	Grades to be awarded
90% or above	O
80-90%	A
70-80%	B
60-70%	C
50-60%	D
Below 50%	F
Absent	Ab

7. Calculation of Semester Grade Point Average (SGPA) and Degree Grade Point Average (DGPA):

The academic performance of the student will be evaluated on the basis of Grades obtained in all subjects of study as per the provision made in point 11. The calculation of Semester Grade Point Average (SGPA) is calculated as per following scheme:

7.1 After the end of End Semester Examination, a student shall be awarded a grade in each subject of the semester courses according to his/her performance in the subject



and a Semester Grade Point Average (SGPA), shall be calculated as follows, correct up to three decimal places:

$$\text{SGPA} = \frac{\text{Sum of (Credits x Grade points) for all the Subjects of the semester}}{\text{Sum of (Credits) for all the Subjects of the semester}}$$

- 7.2 A student shall be considered to have passed the semester Course if he/she has obtained pass Grade (minimum D Grade) in each subject of the course work.
- 7.3 A student can take a benefit of, total 03 grace marks to be distributed between maximum of two subjects for passing the examinations in a particular semester.
- 7.4 The student who has given the grace marks, his/her result will mention that he/she has obtained the Grade with Grace.
- 7.5 The Illustration for calculation of SGPA is given in the following table:

Course	Credit	Grade letter	Grade point	Credit Point (Credit x Grade)
Paper-I	4	A	9	4 X 9 = 36
Paper-II	4	B	8	4 X 8 = 32
Paper-III	2	C	7	2 X 7 = 14

Thus, SGPA is will be $82/10 = 8.200$ (three decimal places)

- 7.6 The Degree grade point Average (DGPA) will be calculated by taking average of all four semesters grade point and divide it by 4.
- 7.7 The corresponding percentage is calculated by multiplying SGPA or DGPA with 10. For example, if some student obtained 7.800 SGPA in second semester, his marks in percentage is 78% and so on.

8. Declaration of Result:

On the basis of the SGPA obtained by the student, the result will be declared in the following format:

"Passed Semester-I with Grade..... and SGPA.....with Grace" (if student is given grace marks.

OR

"Passed Semester-I with Grade and SGPA....."

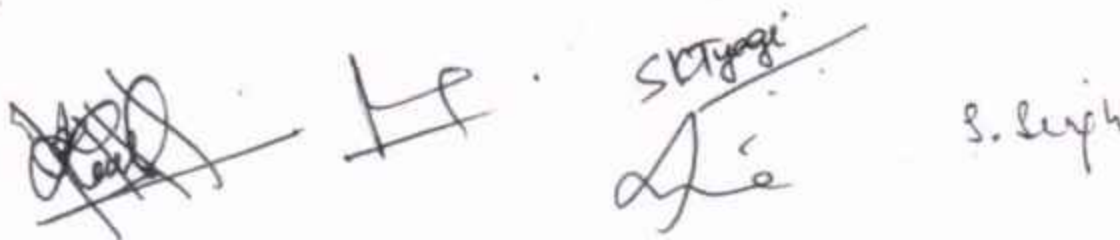
The Degree grade point Average (DGPA) will be calculated by taking average of all semester grade point and divided by four.

Finally on the basis of the DGPA obtained by the student, the result will be declared in the following format:

"Passed M.Tech.with Grade..... and DGPA.....with Grace" (if student is given grace marks.

OR

"Passed M.Tech.with Grade..... and DGPA"

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9. Interpretation of Rules and Regulations:

If any question arises as to the interpretation of these regulations, the same shall be decided by the Academic Council/ Vice-Chancellor. The Council shall have the power to issue clarification to remove any doubt which may arise in regard to implementation of these regulations.



S. Tyagi



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