

ORDINANCES GOVERNING

M.Sc. COURSE

IN

APPLIED PHYSICS

FACULTY OF ENGINEERING & TECHNOLOGY

M.J.P. ROHILKHAND UNIVERSITY, BAREILLY

**1. Eligibility**

**1.1. Admission Criteria :** Admission to these post graduate courses shall be carried out through Entrance test and merit thereof.

**1.2. Qualifying Examination :**

Applied Physics :B.Sc. with Physics as one of the subject in B.Sc. III year.

**1.3. Marks** 45% Aggregate for general and OBC category and 40% aggregate for SC/ST category.

**2. Duration of course :**Two years

**3. Medium of instruction :** English

**4. Curriculum:** These M.Sc. courses shall be based on semester system which will be of two years duration, divided into two parts and four semesters. Each part shall be of two semesters, Part-I shall comprise of two semesters i.e. semester-I and semester-II. Similarly part-II shall comprise of two semesters i.e. semester-III and semester –IV. The academic will follow the pattern as mentioned below:

<b>Academic calendar</b>	<b>Classes</b>	<b>Examination</b>
I & III Semester	August to December	10 <sup>th</sup> Dec - 24 <sup>th</sup> Dec
II & IV Semester	January to May	15 <sup>th</sup> May-30 <sup>th</sup> May
Summer vacation	June & July	

**5. Attendance:** A student shall be deemed to have pursued a regular course of study in a subject during the whole academic session, if he/she has attended at least 75% of classes held in each subject. However the University/Faculty/ department may condone shortage of percentage of attendance which will not exceed 5% in each subject due to one or more of the following reasons:

a Participation in N.C.C./N.S.S. camps duly supported by a certificate from O.C.N.C.C/ in charge N.S.S.

b Participation in University or college team(s) games or interstate or

inter university tournaments duly supported by a certificate from the competent authority of the University,

- c Participation in any of the co-curricular activities organized by Faculty/department, duly certified by competent authority,
- d University deputation for youth festival certified by the Head of the Institution concerned.
- e Prolonged illness duly certified by the CMO.

**6. Internal Assessment:** Internal Assessment and distribution of sessional marks shall be done as mentioned below:

**i. Theory :**

Through departmental tests, where in each semester two tests of 15 marks shall be conducted and a sum of these two will be considered for awarding the sessionals.

**ii. Labs :**

In lab courses 30% sessionals will be based on lab record, viva voce, project and dissertation etc. and rest 70% marks shall be awarded through end semester lab examination.

**7. Marks distribution :**

7.1. End semester examination : 70%

7.2. Sessionals (internal assessment) : 30%

**The department wise details are enclosed**

**8. Schedule of Examination :**

8.1	I & III Semester	10 <sup>th</sup> Dec ..... 24 <sup>th</sup> Dec.
8.2	II & IV Semester	15 <sup>th</sup> May.... 30 <sup>th</sup> May

**9. Promotion (Criterion for passing a program):**

- 9.1 The M.Sc. courses shall be of four semesters (two years) duration, where there shall be an end Semester Examination at the end of each Semester.

9.2 The student shall be promoted to next year only if he/she clears the first part with an aggregate marks of 36% in theory and lab examinations separately in each semester of part-1. However promotion from odd to even semester i.e. from Semester-I to Semester-II and Semester-III to Semester-IV shall be automatic Irrespective of the result of odd semester, Similarly student shall be eligible to get the degree at the completion of course if he/she clears the second part with an aggregate marks of 36% in theory and lab examinations separately in each semester of part-II.

9.3 Each semester shall comprise of 800-900 marks out of which 500-600 marks shall be awarded based on theory papers and rest 300 marks shall be awarded based on Lab Examinations/ project dissertation etc. wherever applicable.

9.4 There shall be 5-6 theory papers in each Semester. Each paper shall comprise of 100 marks out of which 30% marks shall be awarded based on sessionals and rest 70% based on End Semester Examination.

9.5 For appearing in end semester examination at the end of each semester, the student shall be required to fill up the examination form by depositing the examination fee.

9.6 The progress of student in each semester shall be continuously evaluated and at the completion of the semester the student shall be declared pass or fail depending upon the aggregate marks obtained by him/her in aggregate of theory and lab examinations separately.

9.7 Student has to pass the theory and lab examinations separately in order to pass a semester.

9.8 The criterion for awarding the division at the end of IV semester shall be as follows:

Below 36%	:	Fail
36% to 45%	:	III Division
45% to 60%	:	II Division
60% and above	:	I Division
75% and above	:	I Division with honors

#### **10. Back paper/ Improvement Examination :**

There shall be back paper examination normally in October- November, where a student who fails to clear any Semester then he/she shall be allowed for appearing in an

improvement/back paper examination up to the maximum of one theory paper in each semester at the end of part-I and similarly at the end of part-II .No improvement/back paper examination shall be allowed in lab examinations.

**11. Readmission:** If a student fails to clear part-I or part-II after the end semester as well back paper examination he/she shall have to take readmission in the respective year after depositing the prescribed fee as decided by the University.

**12. Result :**

**12.1.** At the end of each Semester examinations a mark sheet shall be given to every student which will indicate the marks obtained by the candidates in individual theory and lab examinations.

**12.2.** The progress of student in each semester shall be continuously evaluated and at the completion of the Semester, the student shall be declared pass or fail depending upon the aggregate marks obtained by him/her in aggregate of theory and lab Examinations separately.

**12.3.** A student has to pass the theory and lab examinations separately in order to pass a semester.

**13. Award of Division :**

The criterion for awarding the division at the end of IV semester shall be as follows :

Below 36%	:	Fail
36% to 45%	:	III Division
45% to 60%	:	II Division
60% and above	:	I Division
75% and above	:	I Division with honors

**14. Grace Marks :** Grace marks of value 1 shall be provided if it leads to improvement of Division and up to maximum of 3 be allowed to the total if it leads to pass.

**15. Scrutiny:** As per existing provisions of the University.

**16. Unfair Means:** As per existing provisions of the University.

**17. Cancellation of Admission:** If a student at any stage is found to have concealed any information or have furnished false documents or found to be indulged in gross indiscipline/ misconduct, his/her admission shall be cancelled and fee deposited by the student shall not be refunded in any case.

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**7. Marks distribution :**

**Semester-I**

Subjects/ Paper	End Semester Theory Paper		Internal Assessment Theory			Total	Practical M.Sc. Semester I End Semester Lab (PH-513P)		
	Duration	Max.Marks	Ist Mid Sem.test	II Mid Sem.test	Total		Internal Asses.	End Sem Lab Examination	Total
Paper-I - Mathematical Physics I (PH 501)	3hrs	70	15	15	30	100	90	210	300
Paper-II – Classical Mechanics (PH 503)	3hrs	70	15	15	30	100			
Paper-III - Quantum Mechanics I (PH 505)	3hrs	70	15	15	30	100			
Paper-IV - Nuclear and Particle Physics I (PH 507)	3hrs	70	15	15	30	100			
Paper-V - Solid State Physics I (PH 509)	3hrs	70	15	15	30	100			
Paper VI- Solid State Electronics I (PH 511)	3hrs	70	15	15	30	100			
								<b>Grand Total</b>	<b>900</b>

## Semester II

Subjects/ Paper	End Semester Theory Paper		Internal Assessment theory			Total	Practical M.Sc.Semester II End Semester Lab (PH-514P)		
	Duration	Max.marks	I Mid. Sem .test	II Mid. Sem. test	Total		Internal Assessment	End Sem.Lab Examination	Total
Paper-I - Mathematical Physics II (PH 502)	3hrs	70	15	15	30	100	90	210	300
Paper-II – Statistical Mechanics (PH 504)	3hrs	70	15	15	30	100			
Paper-III - Quantum Mechanics II (PH 506)	3hrs	70	15	15	30	100			
Paper-IV . Nuclear Physics II (PH 508)	3hrs	70	15	15	30	100			
Paper-V - Solid State Physics II (PH 510)	3 hrs	70	15	15	30	100			
Paper-VI – Solid State Electronics II (PH 512)	3hrs	70	15	15	30	100			
								Grand Total	900

### Semester -III

Subjects/ Paper	End Semester Theory Paper		Internal Assessment Theory			Total	Practical M.Sc. Semester III End semester lab (PH-613P)		
	Duration	Max Marks	I Mid Sem test	II Mid Sem test	Total		Internal Asses	End Sem Lab Examination	Total
Paper I : -Advanced Quantum Mechanics I (PH 601)	3hrs.	70	15	15	30	100	90	210	300
Paper II; - Classical Electrodynamics I (PH 603)	3 hrs.	70	15	15	30	100			
Paper III; – Atomic and Molecular Physics I (PH 605)	3 hrs.	70	15	15	30	100			
Paper-IV; - Nanophysics & Technology I (PH 607)	3 hrs.	70	15	15	30	100			
Paper-V; - Material Science I (PH 609)	3 hrs.	70	15	15	30	100			
Paper-VI; - Advanced Solid State Physics I (PH 611)	3 hrs.	70	15	15	30	100			
								Grand Total	900



## Semester IV

Subjects/ Paper	End Semester Theory Paper		Internal Assessment Theory			Total	Practical M.Sc. Semester IV End Semester Lab (PH-614P) and Project & Seminar		
	Duration	Max.marks	I Mid Sem test	II Mid Sem test	Total		Internal Assessment	End Sem Lab Examination	Total
Paper-I -Advanced Quantum Mechanics II (PH 602)	3hrs	70	15	15	30	100	90	210	300
Paper-II - Classical Electrodynamics II (PH 604)	3hrs	70	15	15	30	100			
Paper-III – Atomic and Molecular Physics II (PH 606)	3hrs	70	15	15	30	100			
Paper-IV - Nanophysics & Technology II (PH 608)	3hrs	70	15	15	30	100			
Paper-V – Material Science II (PH 610)	3hrs	70	15	15	30	100			
Paper –VI – Advanced Solid State Physics II (PH 612)	3hrs	70	15	15	30	100			
								<b>Grand Total</b>	<b>800</b>