

Scheme of Examination

For

M.Sc. Physics

(Effective from the session: 2017-18)



**UTTARANCHAL
UNIVERSITY**

**Uttarakhand University, Dehradun
(Under Choice Based Credit System)**



UTTARANCHAL UNIVERSITY DEHRADUN

M.Sc. (Physics)

Two Years (Four Semesters) Programme

Evaluation Scheme

(w.e.f. Session 2017-18)

Ist Year-Course Programme:

| SEMESTER - I | | | | | | |
|-----------------------------|------------|--|----------------|-----------|------------|------|
| S.N. | Paper Code | Subject | L-T-P | Credit | Max. Marks | |
| | | | | | Ext. | Int. |
| 1.1 | TMPH-101 | Mathematical Physics | 4-0-0 | 4 | 60 | 40 |
| 1.2 | TMPH-102 | Classical Mechanics | 4-0-0 | 4 | 60 | 40 |
| 1.3 | TMPH-103 | E.M. Theory & Electrodynamics | 4-0-0 | 4 | 60 | 40 |
| 1.4 | TMPH-104 | Electronics-I | 4-0-0 | 4 | 60 | 40 |
| 1.5 | TMPH-105 | Fundamentals Of Computer Science And Programming | 4-0-0 | 4 | 60 | 40 |
| 1.6 | PMPH-151 | Lab Course-I (General Lab) | 0-0-4 | 2 | 70 | 30 |
| 1.7 | PMPH-152 | Lab Course-II (Electronics-I Lab) | 0-0-4 | 2 | 70 | 30 |
| 1.8 | PMPH-153 | Lab Course-III (Fundamentals Of Computer Science And Programming Lab.) | 0-0-4 | 2 | 70 | 30 |
| Total for I Semester | | | 20-0-12 | 26 | 800 | |



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Ist Year-Course Programme:

| SEMESTER -II | | | | | | |
|------------------------------|------------|-------------------------------------|----------------|-----------|------------|------|
| S.N. | Paper Code | Subject | L-T-P | Credit | Max. Marks | |
| | | | | | Ext. | Int. |
| 2.1 | TMPH-201 | Solid State Physics | 4-0-0 | 4 | 60 | 40 |
| 2.2 | TMPH-202 | Statistical Mechanics | 4-0-0 | 4 | 60 | 40 |
| 2.3 | TMPH-203 | Quantum Mechanics | 4-0-0 | 4 | 60 | 40 |
| 2.4 | TMPH-204 | Electronics-II | 4-0-0 | 4 | 60 | 40 |
| 2.5 | PMPH-251 | Lab Course-I (General Lab) | 0-0-4 | 2 | 70 | 30 |
| 2.6 | PMPH-252 | Lab Course-II (Electronics-II Lab) | 0-0-4 | 2 | 70 | 30 |
| 2.7 | PMPH-253 | Minor Project /Seminar Presentation | 0-0-4 | 2 | 70 | 30 |
| Total for II Semester | | | 16-0-12 | 22 | 700 | |



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2nd Year-Course Programme:

| SEMESTER -III | | | | | | |
|-------------------------------|----------------------|---|----------------|-----------|------------|------|
| S.N. | Paper Code | Subject | L-T-P | Credit | Max. Marks | |
| | | | | | Ext. | Int. |
| 3.1 | TMPH-301 | Advanced Quantum Mechanics | 4-0-0 | 4 | 60 | 40 |
| 3.2 | TMPH-302 | Atomic & Molecular Physics | 4-0-0 | 4 | 60 | 40 |
| 3.3 | TMPH-303 | Nuclear & Particle Physics | 4-0-0 | 4 | 60 | 40 |
| 3.4 | Gen. Elective | | 3-1-0 | 4 | 60 | 40 |
| 3.41 | TMPH-304A | Laser Physics | | | | |
| 3.42 | TMPH-304B | Renewable Energy Sources | 0-0-4 | 2 | 70 | 30 |
| 3.43 | PMPH-304A | Lab Course-I (Laser Physics Lab) | | | | |
| 3.44 | PMPH-304B | Lab Course-I (Renewable Energy Sources Lab) | 0-0-4 | 2 | 70 | 30 |
| 3.5 | PMPH-351 | Lab Course-II (General Lab) | | | | |
| 3.6 | PMPH-352 | Minor Project/Seminar Presentation | 0-0-4 | 2 | 70 | 30 |
| Total for III Semester | | | 15-1-12 | 22 | 700 | |

**Any one from general elective*



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Evaluation Scheme

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2nd Year-Course Programme

| SEMESTER -IV | | | | | | |
|--------------------------------------|--------------------|---|----------------|-----------|-------------|------|
| SN. | Paper Code | Subject | L-T-P | Credit | Max. | |
| | | | | | Ext. | Int. |
| 4.1 | Elective-I | | | | | |
| 4.11 | TMPH-401A | Condensed Matter Physics-A | 4-0-0 | 4 | 60 | 40 |
| 4.12 | TMPH-401B | Communication Electronics | | | | |
| 4.13 | TMPH-401C | Materials Science & Nanotechnology-A | | | | |
| 4.14 | PMPH-401A | Condensed Matter Physics-A Lab | 0-0-4 | 2 | 70 | 30 |
| 4.15 | PMPH-401B | Communication Electronics Lab | | | | |
| 4.16 | PMPH-401C | Materials Science & Nanotechnology-A Lab | | | | |
| 4.2 | Elective-II | | | | | |
| 4.21 | TMPH-402A | Condensed Matter Physics-B | 4-0-0 | 4 | 60 | 40 |
| 4.22 | TMPH-402B | Digital Electronics & Microprocessors | | | | |
| 4.23 | TMPH-402C | Materials Science & Nanotechnology-B | | | | |
| 4.24 | PMPH-402A | Condensed Matter Physics-B Lab | 0-0-4 | 2 | 70 | 30 |
| 4.25 | PMPH-402B | Digital Electronics And Microprocessors Lab | | | | |
| 4.26 | PMPH-402C | Materials Science & Nanotechnology-B Lab | | | | |
| 4.3 | DMPH-451 | Project (Dissertation) | 0-0-20 | 10 | 200 | 100 |
| Total for IV Semester | | | 08-0-28 | 22 | 700 | |
| Grand Total for all Semesters | | | | 92 | 2900 | |

**Any one from specialization electives*

| Dissertation | |
|-------------------------------|------------|
| Report | 200 |
| Viva-voce/Presentation | 50 |
| Seminar (Internal) | 30 |
| Periodic Assessment | 20 |
| TOTAL | 300 |



**UTTARANCHAL UNIVERSITY
DEHRADUN**

**M.Sc. COURSE IN PHYSICS
(SESSION 2017-18 ONWARDS)
(TOTAL MARKS=2900)**

SEMESTER SYSTEM COURSE STRUCTURE

(Total Four Semesters, 100 Marks In Each Paper Followed By Practical Carrying 100 Marks Each In Each Semester Along With Seminar And Project/ Dissertation)

(100= 70 Marks External+30 Marks Internal For Each Paper)
