

**Annexure – I**

**NATIONAL INSTITUTE OF TECHNOLOGY NAGALAND  
CHUMUKEDIMA, DIMAPUR – 797 103**

**Master Degree Programmer**

**Curriculum  
Regulations 2017**

**Master of Science in Physics**

**Overall Course Structure**

Category	Total No. of Courses	Credits	Percentage
Core Courses	13	49	58%
Project and Comprehensive Viva-Voce	2	18	22%
Electives	4	12	14%
Practical	3	5	6%
<b>TOTAL</b>	<b>22</b>	<b>84</b>	<b>100%</b>

**Course Credits - Semester Wise**

PG Course	I	II	III	IV	Total
Physics	22	20	21	21	84

**Semester I**

Course Code	Course Title	L	T	P	C
PH111	Classical Mechanics	3	1	0	4
PH112	Statistical Physics	3	1	0	4
PH113	Quantum Mechanics-I	3	1	0	4
PH114	Mathematical Physics	3	1	0	4
PH115	Numerical Methods and Computer Programming	3	0	0	3
PH116	Numerical Methods and Computer Programming Laboratory	0	0	2	1
PH117	General Physics Laboratory-I	0	0	4	2
<b>TOTAL</b>		15	4	6	22

**Semester II**

Course Code	Course Title	L	T	P	C
PH121	Quantum Mechanics-II	3	1	0	4
PH122	Condensed Matter Physics-I	3	1	0	4
PH123	Electromagnetic Theory	3	1	0	4
PH124	Electronics	3	0	0	3
PH125	Experimental Techniques	2	1	0	3
PH126	General Physics Laboratory II	0	0	4	2
<b>TOTAL</b>		14	4	4	20

**Semester III**

Course Code	Course Title	L	T	P	C
PH231	Condensed Matter Physics-II	3	1	0	4
PH232	Nuclear and Particle Physics	3	1	0	4
PH233	Atomic and Molecular Spectroscopy	3	1	0	4
PH5XX	Elective I	3	0	0	3
PH233	Minor project	0	0	6	6
<b>TOTAL</b>		12	3	6	21

**Semester IV**

Course Code	Course Title	L	T	P	C
PH5XX	Elective II	3	0	0	3
PH5XX	Elective III	3	0	0	3
XXXXX	Elective IV (Open Electives)	3	0	0	3
PH242	Major Project	0	0	12	12
<b>TOTAL</b>		9	0	12	21

**Electives I**

Course Code	Course Title	L	T	P	C
PH501	Physics of Solid State Devices	3	0	0	3
PH502	Physics of Dielectrics and Ferroelectrics	3	0	0	3
PH503	Crystallography	3	0	0	3
PH504	Superconductivity	3	0	0	3

**Electives II**

Course Code	Course Title	L	T	P	C
PH505	Nanoscience Technology and Applications	3	0	0	3
PH506	Physics of Thin Films	3	0	0	3
PH507	Surface Science	3	0	0	3
PH508	Material Characterization Methods	3	0	0	3

**Electives III**

Course Code	Course Title	L	T	P	C
PH509	Spintronics	3	0	0	3
PH510	Photonics	3	0	0	3
PH511	Soft Condensed Matter Physics	3	0	0	3
PH512	High Energy Physics	3	0	0	3