

RANI CHANNAMMA UNIVERSITY, BELAGAVI
Department of Physics (CBCS)
(w.e.f 2016-17)
Course Structure and Scheme of Examination

I SEMESTER – MASTER OF SCIENCE

Sl. No	Subject Code	Subject Title	Teaching Scheme Hours / Week		Examination				Student contact hours	Credits
			Theory	Practical	Duration (hrs)	I.A. Marks	Theory/ Practical	Total Marks		
1	16MScPHCT11	Mathematical Methods in Physics	04	-	03	20	80	100	04	04
2	16MScPHCT12	Classical Mechanics	04	-	03	20	80	100	04	04
3	16MScPHCT13	Nuclear and Particle Physics (General)	03	-	03	20	80	100	03	03
4	16MScPHCT14	Condensed Matter Physics (General)	03	-	03	20	80	100	03	03
5	16MScPHCT15	Instrumentation	02	-	1.5	10	40	50	02	02
6	16MScPHCP16	Practical-I (Nuclear and Particle Physics)	-	03	03	20	80	100	03	02
7	16MScPCP17	Practical-II (Condensed Matter Physics)	-	03	03	20	80	100	03	02
8	16MScPHSS18	Self Study: Errors and Measurements/ Programming. FORTRAN		04	---	100	--	100	02	02
TOTAL			16	10		210	520	750	24	22

II SEMESTER – MASTER OF PHYSICS

Sl. No	Subject Code	Subject Title	Teaching Scheme Hours / Week		Examination				Student contact hours	Credits
			Theory	Practical	Duration (hrs)	I.A. Marks	Theory/ Practical	Total Marks		
1	16MScPHCT21	Quantum Mechanics-I	04	-	03	20	80	100	4	04
2	16MScPHCT22	Atomic, Molecular & Optical Physics (General)	03	-	03	20	80	100	3	03
3	16MScPHCT23	Electronics (General)	03	-	03	20	80	100	3	03
4	16MScPHCT24	Material Science	02	-	1.5	10	40	50	2	02
5	16MScPHOT25	Modern Physics (Open Elective Course)	04	-	03	20	80	100	4	04
6	16MScPHCF26	Practical-I (Electronics and FORTRAN Programming)	-	03	03	20	80	100	03	02
7	16MScPCF27	Practical-II (Atomic, Molecular & Optical Physics)	-	03	03	20	80	100	03	02
8	16MScPHSS28	Self Study: Research Methodology/ C Programming	-	04	---	100	---	100	02	02
TOTAL			16	10		210	520	750	24	22

BANI CHANNARAJA UNIVERSITY, BELAGAVI
Department of Physics (CBCS)
(B.A. I 2024-25)
Course Structure and Scheme of Examination

II SEMESTER - MASTER OF PHYSICS

Sl. No.	Subject Code	Subject Title	Teaching Scheme Hours / Week		Examination				Student contact hours	Credits
			Theory	Practical	Duration (hrs)	L.A. Marks	Theory/ Practical	Total Marks		
Compulsory Courses										
1	2005U-Ph6-T11	Statistical Mechanics	04	-	03	20	80	100	4	04
2	2005U-Ph6-T12	Classical Electrodynamics	04	-	03	20	80	100	4	04
Specialisation Courses										
3	2005U-Ph6-T13	Electronics -I/ Condensed Matter Physics-I/ Atomic, Molecular & Optical Physics-I/ Nuclear and Particle Physics-I	04	-	03	20	80	100	4	04
4	2005U-Ph6-P14	Practicals: Electronics -I/ Condensed Matter Physics-I/ Atomic, Molecular & Optical Physics-I/ Nuclear and Particle Physics-I (along with the specialisation practicals, C programming also to be carried out)	-	03	03	20	80	100	03	02
5	2005U-Ph6-P15	Practicals: Electronics -I/ Condensed Matter	-	03	03	20	80	100	03	02

Physics-I/ Atomic, Molecular & Optical Physics-I/ Nuclear and Particle Physics-I

6	16MScPHPP36	Project preliminary: Preliminary work for the final year project	-	02	--	100	--	100	02	01
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7	16MScPHSS37	Self Study: Laser Physics/Optical Fiber/ Ferromagnetic Materials/Nuclear waste management/ Advanced Instrumentation/ Advanced Material Science/Nuclear Instrumentation/Microprocessor/ad vanced spectroscopic techniques/plasma Physics/Astrophysics/Vacuum technology/Density Function Theory		04	---	100	--	100	02	02
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Open Elective Courses

8	16MScPHOT38	Physics of Nano Materials (OEC)	04	-	03	20	80	100	4	04
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TOTAL			16	12		320	480	800	28	23
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IV SEMESTER – MASTER OF PHYSICS

Sl. No	Subject Code	Subject Title	Teaching Scheme Hours / Week		Examination				Student contact hours	Credits
			Theory	Practical	Duration (hrs)	I.A. Marks	Theory/ Practical	Total Marks		
Compulsory Courses										
1	16MScPHCT41	Quantum Mechanics - II	04	-	03	20	80	100	04	04
2	16MScPHCT42	Advanced Mathematical Methods in Physics	04	-	03	20	80	100	04	04
Specialization Courses										
3	16MScPHST43	Electronics -II/ Condensed Matter Physics-II/ Atomic, Molecular & Optical Physics-I/ Nuclear and Particle Physics-II	04	-	03	20	80	100	04	04
4	16MScPHST44	Electronics -III/ Condensed Matter Physics-III/ Atomic, Molecular & Optical Physics-III/ Nuclear and Particle Physics-III	04	-	03	20	80	100	04	04
5	16MScPHSP45	Practicals: Electronics -I/ Condensed Matter Physics-I/ Atomic, Molecular & Optical Physics-I/ Nuclear and Particle Physics-I (along with the specialization practicals, C programming also to be carried out)	-	03	03	20	80	100	03	02
6	16MScPHPP46	Project: (Specialization)	-	08	--	20	80	100	08	05
TOTAL			16	11		120	480	600	25	23