

GURUKULA KANGRI VISHWAVIDYALAYA, HARIDWAR
M.Sc. PHYSICS SYLLABUS (w. e. f. 2020-21)
(CBCS Pattern)

S. N.	Course/Paper Code	Course/Paper Title	Periods per week			Credit	Evaluation Scheme			Maximum Marks (M.M.)
			L	T	P		Continuous Assessment (CA)	ESE		
									CT	
M.Sc. I Year										
Semester – I										
1	MPH-C101	Mathematical Physics	4	1	-	4	20	10	70	100
2	MPH-C102	Classical Mechanics	4	1	-	4	20	10	70	100
3	MPH-C103	Quantum Mechanics –I	4	1	-	4	20	10	70	100
4	MPH-C104	Computational Methods & Programming	4	1	-	4	20	10	70	100
5	MPH-C151	Lab. Course (General Physics Lab.)	-	-	9	4	15	15	70	100
6	MPH-C152	Lab. Course (Computational Lab.)	-	-	9	4	15	15	70	100
						24	TOTAL			600
Semester – II										
1	MPH-C201	E.M. Theory & Electrodynamics	4	1	-	4	20	10	70	100
2	MPH-C205	Physics & Vedic Thought	4	1	-	4	20	10	70	100
3	MPH-C203	Quantum Mechanics –II	4	1	-	4	20	10	70	100
4	MPH-C204	Electronic Devices & Circuits	4	1	-	4	20	10	70	100
5	MPH-C251	Lab. Course (Gen. Electronics Lab.)	-	-	9	4	15	15	70	100
6	MPH-C252	Lab. Course (Minor Project/Seminar)	-	-	9	4	15	15	70	100
						24	TOTAL			600
M. Sc. II Year										
Semester – III										
1	MPH-C301	Statistical Mechanics	4	1	-	4	20	10	70	100
2	MPH-C302	Atomic & Molecular Physics	4	1	-	4	20	10	70	100
ELECTIVES (TWO THEORY & TWO LAB.)*										
3	MPH-E303/ MPH-E305	ELECTIVE-I	4	1	-	4	20	10	70	100
4	MPH-E304/ MPH-E306	ELECTIVE-II	4	1	-	4	20	10	70	100
5	MPH-E351/ MPH-E353	Lab. Course (Elective-I Lab.)	-	-	9	4	15	15	70	100
6	MPH-E352/ MPH-E354	Lab. Course (Elective-II Lab.)	-	-	9	4	15	15	70	100
						24	TOTAL			600
Semester – IV										
1	MPH-C401	Physics of Nuclei & Particles	4	-	-	4	20	10	70	100
2	MPH-C402	Solid State Physics	2	-	-	4	20	10	70	100
ELECTIVES (ONE THEORY & ONE LAB.)*										
3	MPH-E403/ MPH-E404	ELECTIVE-III	4	-	-	4	20	10	70	100
4	MPH-E451/ MPH-E452	Lab. Course (Elective-III Lab.)	-	-	9	4	15	15	70	100
ELECTIVES (Dissertation or Two theory paper one each from Electives IV & V)										
5		ELECTIVE-IV	4	-	-	4	20	10	70	100
6		ELECTIVE-V	4	-	-	4	20	10	70	100
7	MPH-E460	Dissertation/Major Project	-	-	-	8	-	-	-	200
						24	TOTAL			600
TOTAL CREDITS						96	G. TOTAL			2400

L = Lecture P = Practical CT = Cumulative Test TA = Teacher Assessment
ESE = End Semester Examination

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LIST OF ELCTIVES

Elective – I / II		Elective - III	
Course/ Paper Code	Course/ Paper Name (02 Theory + 02 Practical)	Course/ Paper Code	Course/Paper Name (01 Theory + 01 Practical)
MPH-E303	Digital Electronics & Microprocessor	MPH-E403	Communication Electronics-II
MPH-E304	Communication Electronics-I	MPH-E404	Electrical Atmospheric and Modeling
MPH-E305	Atmospheric Physics	MPH-E451	Lab. Course (Communication Electronics-II Lab.)
MPH-E306	Advanced Atmospheric Physics	MPH-E452	Lab. Course (Advanced Atmospheric Physics Lab.)
MPH-E351	Lab. Course (Digital Electronics & Microprocessor Lab.)	ELECTIVE-IV& V (Any two)	
MPH-E352	Lab. Course (Communication Electronics-I Lab.)	MPH-E411	Physics of Nano Materials
MPH-E353	Lab. Course (Atmospheric Physics-I Lab.)	MPH-E412	Electronic Devices
MPH-E354	Lab. Course (Atmospheric Physics-II Lab.)	MPH-E413	Renewable Energy Sources
		MPH-E414	Optoelectronics and Lasers

DISTRIBUTION OF MARKS FOR PRACTICAL/MAJOR PROJECT/ SEMINAR/ DISSERTATION

Distribution of marks for Practical / Dissertation shall be as follows:

Practical Examination		Minajor Project		Dissertation	
Experiment/ Programming	40	Project/Report	40	Report Evaluation	80
Viva-voce	20	Viva-voce/Presentation	20	Viva-voce/Presentation	60
Record	10	Record	10	Seminar (Internal) #	40
				Diary (Periodic Assessment)#	20
TOTAL	70	TOTAL	70	TOTAL	200

Note:

1. Marks in the Dissertation shall be awarded jointly by the external and internal examiners after viva-voce examination.
- 2.# There shall be a seminar on dissertation work of the candidate to be evaluated by a Departmental Committee chaired by H.O.D.
- 3.#The supervisor will assess the student's work periodically and the marks shall be awarded for diary.