

**PERIYAR MANIAMMAI INSTITUTE OF SCIENCE & TECHNOLOGY**  
**M.Sc. Physics – Curriculum (Regulation 2021 Revision - 2)**

**Semester I**

Category	Subject code	Course Title	L	T	P	SS	H	C
Core Course I	YPH101	Mathematical Methods of Physics - I	4	1	0	0	5	5
Core Course II	YPH102	Classical Mechanics	4	1	0	0	5	5
Core Course III	YPH103	Electronics	4	1	0	0	5	5
Elective Course I	YPH104A	Numerical Methods and Computation	4	0	0	0	4	4
	YPH104B	Aerospace Dynamics						
	YPH104C	Physics Linear and Non-linear Circuits						
Core Course IV (Lab)	YPH105	General and Electronics Laboratory	0	0	5	1	6	3
		Library	0	0	0	1	1	0
		<b>Total</b>					<b>25</b>	<b>22</b>

**Semester II**

Course	Subject code	Course Title	L	T	P	SS	H	C
Core Course V	YPH201	Mathematical Methods of Physics-II	4	1	0	0	5	5
Core Course VI	YPH202	Quantum Mechanics	4	1	0	0	5	5
Core Course VII	YPH203	Atomic and Molecular Spectroscopy	4	1	0	0	5	5
Core Course VIII	YPH204	Microprocessor and Microcontroller	4	1	0	0	5	5
Elective Course II	YPH205A	Physics and Technology of Thin films	4	0	0	0	4	4
	YPH205B	Crystal Growth and Characterization Techniques						
	YPH205C	Nanoscience and Technology						
Core Course IX (Lab)	YPH206	Digital and Microprocessor Laboratory	0	0	5	1	6	3
Elective	YRM001	Research Methodology	1	0	0	1	2	2
							<b>30</b>	<b>29</b>

### Semester III

Course	Subject code	Course Title	L	T	P	SS	H	C
Core Course X	YPH301	Solid State Physics	4	1	0	0	5	5
Core Course XI	YPH302	Nuclear and Particle Physics	4	1	0	0	5	5
Core Course XII	YPH303	Thermodynamics and Statistical Mechanics	4	1	0	0	5	5
Core Course XIII	YPH304	Electromagnetic Theory	4	1	0	0	5	5
Elective Course III	YPH305A	Data Science for Physicist	3	1	0	0	4	4
	YPH305B	Physics in IOT						
	YPH305C	Artificial Intelligence and Machine Learning						
Core Course XIV (Lab)	YPH306	Advanced General & Electronics Laboratory	0	0	5	1	5	3
		Dissertation–Project work-Phase 1	0	0	0	3	3	0
		Library	0	0	0	1	1	0
							<b>30</b>	<b>27</b>

### Semester IV

Course	Subject code	Course Title	L	T	P	SS	H	C
Core Course XV	YPH403	Project Work and Viva voce	0	0	0	30	30	10

Note: L – Lecture Hours; T – Tutorial Hours; P – Practical Hours & C – Credits; SS – Self study

CREDIT SUMMARY							
SEMESTER		I	II	III	IV	TOTAL	% OF TOTAL CREDITS
Core	Theory	15	20	20	-	55	62.50
	Lab	3	3	3	-	09	10.22
Elective		4	6	4	-	14	15.9
Project		-	-	-	10	10	11.36
<b>Total</b>		<b>22</b>	<b>29</b>	<b>27</b>	<b>10</b>	<b>88</b>	<b>100</b>