

**CURRICULUM
B.Sc. Physics
REGULATION 2021**

SEMESTER – I

Category	Code	COURSE NAME	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
AECC-1	XGL101	Basic English Communication Skills	2	0	0	2	2	0	0	0	2
LAN	XGL102A / XGL102B	Ariviyal Tamil / Comprehensive English	3	0	0	3	3	0	0	0	3
CC-1	XMG103	Algebra, Trigonometry Applications of Laplace Transforms and Fourier series	4	1	0	5	4	1	0	0	5
CC-2	XPH104	Properties of Matter and Sound	3	1	0	4	3	1	0	0	4
CC-3	XPH105	Mechanics	3	1	0	4	3	1	0	0	4
UMAN-1	XUMA106	Human Ethics, Values, Rights, and Gender Equality	3	0	0	3	2	0	0	1	2
CC-4	XPH107	Mechanics and Properties of Matter - laboratory	0	0	2	2	0	0	4	0	4
Total			18	3	2	23	17	3	4	1	24

SEMESTER – II

Category	Code	COURSE NAME	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
AECC-2	XGL201	Advanced English Communication Skills	2	0	0	2	2	0	0	0	2
AECC-3	XUMA202	Environmental Studies	2	0	0	2	2	0	0	0	2
CC5	XMG203	Calculus and Differential Equations	4	1	0	5	4	1	0	0	5
UVM	XVM204	Entrepreneurship Development	2	0	0	2	2	0	0	0	2
CC-6	XPH205	Electricity and Magnetism	3	1	0	4	3	1	0	0	4
CC-7	XPH206	Atomic Physics	3	1	0	4	3	1	0	0	4
CC-8	XPH207	Electricity and Magnetism - laboratory	0	0	2	2	0	0	4	0	4
Total			16	3	2	21	16	3	4	0	23

SEMESTER – III

Category	Code	COURSE NAME	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC 1	XPH301	Physics Workshop Skills	0	0	2	2	0	0	4	0	4
CC-9	XPH302	Inorganic, Organic and Physical Chemistry – I	3	0	0	3	3	0	0	0	3
CC-10	XPH303	Thermal Physics and Statistical Mechanics	3	0	0	3	3	0	0	0	3
CC-11	XPH304	Basic Electronics	3	0	0	3	3	0	0	0	3
GE-1		*Open Elective – To be chosen by student	3	0	0	3	3	0	0	0	3
CC-12	XPH305	Volumetric and Organic Qualitative Analysis Practical – I	0	0	2	2	0	0	4	0	4
UMAN-2	XUM306	Disaster Management	3	0	0	3	3	0	0	0	3
CC-13	XPH307	Thermal and Electronics - Laboratory	0	0	2	2	0	0	4	0	4
Total			15	0	6	21	13	0	12	0	25

SEMESTER – IV

Category	Code	COURSE NAME	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC 2	XPH401	Electrical Circuit Network Skills	0	0	2	2	0	0	2+2*	0	4
CC-14	XPH402	Inorganic, Organic and Physical Chemistry – II	3	1	0	4	3	1	0	0	4
CC-15	XPH403	Waves and Optics	3	1	0	4	3	1	0	0	4
CC-16	XPH404	Digital Electronics	3	1	0	4	3	1	0	0	4
GE-2		Generic Elective – 2	3	0	0	3	3	0	0	0	3
CC-17	XPH405	Volumetric and Organic Qualitative Analysis –II Lab	0	0	2	2	0	0	4	0	4
CC-18	XPH406	Optics and Digital Electronics - Laboratory	0	0	2	2	0	0	4	0	4
Total			12	3	6	21	12	3	10+2*	0	25

Note: 2*–Directed study

SEMESTER – V

Category	Code	COURSE NAME	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
SEC 3	XPH501	Basic Instrumentation Skills	0	0	2	2	0	0	4	0	4
DSE1	XPH502A	Communication Electronics	3	1	0	4	3	1	0	0	4
	XPH502B	Nuclear and Particle Physics									
DSE2	XPH503A	Mathematical Physics	3	1	0	4	3	1	0	0	4
	XPH503B	Solid State Physics									
DSE3	XPH504A	Measurement and Instrumentation	3	1	0	4	3	1	0	0	4
	XPH504B	Microprocessor and C Programming									
GE 3		Generic Elective – 3	3	0	0	3	3	0	0	0	3
DSE Lab	XPH505A	Measurement and Instrumentation - Laboratory	0	0	2	2	0	0	4	0	4
	XPH505B	Microprocessor and C Programming - Laboratory									
	XPH506	IPT (21 days)	–	–	–	4	–	–	–	–	–
Total			12	3	4	23	12	3	8	0	23

SEMESTER – VI

Category	Code	COURSE NAME	Credits				Hours				
			L	T	P	Total	L	T	P	SS	Total
UMAN–3	XUMA601	Cyber Security	3	0	0	3	3	0	0	0	3
SEC	XPH602	Renewable and Energy Harvesting Skills	0	0	2	2	0	0	4	0	4
DSE4	XPH603A	Laser Physics	3	1	0	4	3	1	0	0	4
	XPH603B	Nano Material and Applications									
DSE5	XPH604A	Power Electronics	3	1	0	4	3	1	0	0	4
	XPH604B	Astronomy and Astrophysics									
DSE6	XPH605A	Introduction of Microcontroller	3	1	0	4	3	1	0	0	4
	XPH605B	Quantum Mechanics									
DSC	XPH606	Project	–	–	6	6	–	–	6	–	6
Total			12	3	8	23	12	3	10	6	25

Total = 132 Credits

Credit Summary

S. No.	Type of Subject	Numbers	Total Credit	Credits As per UGC norms
1	AECC	03	06	08
2	Core Course (Theory & Lab)	18	59	72
3	DSE (Theory & Lab)	07	26	36
4	SEC	04	08	16
5	GE	03	09	–
6	UMAN	03	09	–
7	UVM	01	02	–
8	LAN	01	03	
9	IPT	1	4	–
10	Project	1	6	
Total		42	132	132