

Proposed Course Structure of B. Tech. (Engineering Physics)

Semester I

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.	MAT101	Mathematics I	IC	3-1-0	4
2.	ECT101	Basics of Electrical and Electronics Engineering	IC	3-0-0	3
3.	HST101	English Communication skills	IC	2-0-0	2
4.	21PHT101	Modern Physics	IC	2-1-0	3
5.	ECP102	Electronics Engineering Lab	IC	0-0-2	1
6.	EEP102	Electrical Engineering Lab	IC	0-0-2	1
7.	HSP103	Communication Skills lab	IC	0-0-2	1
8.	21PHP102	Modern Physics Lab	IC	0-0-2	1
9.	24PHT101	Waves & Optics	PC	3-1-0	4
10.	24PHT102	Mechanics & Relativity	PC	3-1-0	4
Total					24

Semester II

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.	MAT102	Mathematics II	IC	3-1-0	4
2.	CPT101	Computer Science & Programming	IC	2-0-0	2
3.	CET101	Engineering Drawing & Sketching	IC	1-0-2	2
4.	CET102	Environmental Science and Ecology	IC	2-0-0	2
5.	CYT101	Chemistry	IC	2-1-0	3
6.	HST102	Basic Economics	IC	2-0-0	2
7.	MET101	Introduction to Mechanical Systems	IC	2-0-0	2
8.	CPP102	Programming Lab	IC	0-0-2	1
9.	CYP102	Chemistry Lab	IC	0-0-2	1
10.	MEP102	Product Realization through Manufacturing	IC	0-0-2	1
11.	24PHT201	Introduction to Thermodynamics	PC	3-1-0	4
TOTAL					24

Semester III

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.	24PHT301	Mathematical Methods in Physics - I	PC	3-1-0	4
2.	24PHT302	Computational Physics	PC	2-1-2	4
3.	24PHT303	Electromagnetic Theory	PC	3-1-0	4
4.	24PHT304	Quantum Mechanics	PC	3-1-0	4
5.	24PHT305	Analog Electronics	PC	3-1-0	4
6.	24PHT306	Astronomy & Astrophysics	PC	3-1-0	4
7.	24PHP307	Analog Electronics Lab	PC	0-0-4	2
8.	24PHP308	Electricity & Magnetism Lab	PC	0-0-4	2
		Total			28

Semester IV

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.	24PHT401	Mathematical Methods in Physics - II	PC	3-1-0	4
2.	24PHT402	Condensed Matter Physics	PC	3-1-0	4
3.	24PHT403	Atomic & Molecular Physics	PC	3-1-0	4
4.	24PHT404	Digital Electronics	PC	3-1-0	4
5.	24PHT405	Statistics Mechanics	PC	3-1-0	4
6.	BMT499	Basic Management	MM	3-0-0	3
7.	24PHP406	Digital electronics lab	PC	0-0-4	2
8.	24PHP407	Solid State Physics Lab	PC	0-0-4	2
		Total			27

Semester V

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.	24PHT501	Nuclear and Particle Physics	PC	3-1-0	4
2.	24PHT502	Semiconductor Physics and Devices	PC	3-1-0	4
3.	24PHT503	Quantum Electronics	PC	3-1-0	4
4.	24PHT504	Thin Film Science and Technology	PC	3-1-0	4
5.	24PHP505	Laser and Optoelectronics lab	PC	0-0-4	2
6.	24PHP506	Nuclear and Spectroscopy Lab	PC	0-0-4	2
		Total			20

Semester VI

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.	24PHT601	Instrumentation Physics	PC	3-1-0	4
2.	24PHT602	Data Analysis & Interpretation	PC	3-1-0	4
3.		Program Elective 01	PE	2-1-2	4
4.		Program Elective 02	PE	3-0-0	3
5.		PL EAS	EAS	3-0-0	3
6.	24PHP603	Advanced Physics Lab	PC	0-0-8	4
		Total			22

Semester VII

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.		Program Elective 03	PE	3-0-0	3
2.		Program elective 04	PE	3-0-0	3
3.		Program Elective 05	PE	3-0-0	3
4.		Advance Elective 01	AE	3-0-0	3
5.		Open Elective 01	OE	3-0-0	3
6.		Minor Project	DC	0-0-6	3
		Total		15-0-6	18

Semester VIII

S. No.	Course Code	Title of the course	Subject Area	L-T-P	Credits
1.		Advance Elective 02	AE	3-0-0	3
2.		Advance Elective 03	AE	3-0-0	3
3.		Open Elective 02	OE	3-0-0	3
4.		Major Project	DC	0-0-18	9
		Total		9-0-18	18

Program elective courses for B. Tech. (Engineering Physics)

S. No.	Course Type	Course Code	Title of the course	L-T-P	Credits
1.	PE	24PHTXXX	Surface Physics and Engineering	3-0-0	3
2.	PE	24PHTXXX	Materials Science and Engineering	3-0-0	3
3.	PE	24PHTXXX	LabVIEW for Beginners	2-0-2	3
4.	PE	24PHTXXX	Particle Detector and its Technology	3-0-0	3
5.	PE	24PHTXXX	Problem Solving in Physics with Python	2-0-2	3
6.	PE	24PHTXXX	Sensors: Materials, Fabrication & Applications	3-0-0	3
7.	PE	24PHTXXX	Introduction to Bio-inspired and bio-mimetic materials	3-0-0	3
8.	PE	24PHTXXX	Soft Materials	3-0-0	3

Advance elective courses for B. Tech. (Engineering Physics)

S. No.	Course Type	Course Code	Title of the course	L-T-P	Credits
1.	AE	24PHTXXX	Solar Energy and Physics of solar cells	3-0-0	3
2.	AE	24PHTXXX	Nanoscience and nanofabrication	3-0-0	3
3.	AE	24PHTXXX	Fundamentals of Energy Materials and Devices	3-0-0	3