

## B.Tech Curriculum for Engineering Physics

### SEMESTER - I

Subject Name	Type	Subject Code	L-T-P	Credit	Contact Hour
Calculus and Ordinary Differential Equations	Mathematics	MA1L003	3-1-0	4	4
Introduction to Bio Science and Technology	Chemistry	ID2L002	2-0-0	2	2
Happiness and life skill	Humanities, Social Science and Management	ID1LXXX	1-0-0	1	1
Introduction to Bharatiya Knowledge Traditions	Humanities, Social Science and Management	ID1LXXX	2-0-0	2	2
Programming in C	Computer Science Engineering	CS1L002	2-0-2	3	4
Chemistry	Chemistry	CY1L001	3-0-0	3	3
Chemistry Laboratory	Chemistry	CY1P001	0-0-3	2	3
Introduction to Manufacturing Process	Mechanical Sciences	ME1P001	0-0-3	2	3
Extra Academic Activity-1		ID1T001	0-0-3	1	-
<b>Total</b>				<b>20</b>	<b>22</b>

### SEMESTER - II

Subject Name	Type	Subject Code	L-T-P	Credit	Contact Hour
Linear Algebra and Complex Analysis	Mathematics	MA1L004	3-1-0	4	4
Environmental Science, Technology and Management	Earth, Ocean and Climate Science	ID2L003	2-0-0	2	2
English for learning and Communication	Humanities, Social Science and Management	HS1L011	2-0-2	3	4
Basic Electrical and Electronics Engineering	Electrical Engineering	EE1L002	3-1-0	4	4
Basic Electrical and Electronics Engineering Laboratory	Electrical Engineering	EE1P002	0-0-3	2	3
Engineering Drawing and Graphics	Infrastructure	CE1P001	1-0-3	3	4
Classical Mechanics and Special Relativity	Physics	EP1L001	3-0-0	3	3
Extra Academic Activity-2		ID1T002	0-0-3	1	-
<b>Total</b>				<b>22</b>	<b>24</b>

### SEMESTER-III

Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
	HSS 2			3	3
Mathematical Methods for Physics	DC 2	EP2L001	3-1-0	4	4
Thermal Physics	DC 3	EP2L003	3-0-0	3	3
Elements of Quantum Mechanics	DC 4	EP2L005	3-1-0	4	4
AI course	SDC 3		1-0-3 / 2-0-2	3	3/4
Engineering Physics Lab - I	Lab-4	EP2P001	0-0-6	4	6
	Lab-5				
<b>Total</b>				<b>21</b>	<b>23/24</b>

SEMESTER-IV					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
	HSS 3			3	3
Electromagnetic Theory and Applications	DC 5	EP2L004	3-1-0	4	4
Statistical Physics	DC 6	EP2L006	3-1-0	4	4
Numerical Techniques and Computational Physics	SDC 4	EP2L007	2-0-2	3	4
Engineering Physics Lab - II	Lab-6 (DC 5)	EP2P002	0-0-6	4	6
	Lab-7 (DC 6)				
Survey of Quantum Technologies and Applications	DC7	xxxxx	3-0-0	3	3
<b>Total</b>				<b>21</b>	<b>24</b>
SEMESTER-V					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
	HSS 4			3	3
Solid State Physics	DC 8	EP3L007	3-1-0	4	4
Optics and Photonics	DC 9	EP3L008	3-0-0	3	3
Introduction to Nuclear and Particle Physics	DC10	EP3L006	3-0-0	3	3
Materials Characterisation Techniques	SDC 5	EP3LXXX	2-0-2	3	4
Engineering Physics Lab - III	Lab-8 (DC 7)	EP3P001	0-0-6	4	6
	Lab-9 (DC 8)				
OE	OE 1		3-0-0	3	3
<b>Total</b>				<b>23</b>	<b>26</b>
SEMESTER-VI					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
Physics of Atoms and Molecules	DC 11	EP3L003	3-0-0	3	3
Advanced Quantum Mechanics	DC 12	EP3L004	3-0-0	3	3
Industrial Instrumentation and Inverse Design	SDC 6	EP3LXXX	2-0-2	3	4
Product Development Lab	Lab-10 (DC 9)	EP3P002	0-0-6	4	6
	Lab-11 (DC 10)				
OE	OE 2		3-0-0	3	3
OE/DE	OE 3/DE 1		3-0-0	3	3
<b>Total</b>				<b>19</b>	<b>22</b>
SEMESTER-VII					
Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
OE / DE	OE 4 / DE 2		3-0-0	3	3

OE / DE	OE 5 / DE 3		3-0-0	3	3
OE / DE	OE 6 / DE 4		3-0-0	3	3
Summer Internship	Internship		0-0-0	2	0
BTP - 1	Project 1/DE/OE-A	xxxx/ Subject from OE/DE Basket	0-0-0	3	0
<b>Total</b>				<b>14</b>	<b>9</b>

**SEMESTER-VIII**

Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
OE / DE	OE 7 / DE 5		3-0-0	3	3
OE / DE	OE 8 / DE 6		3-0-0	3	3
OE / DE	OE 9 / DE 7		3-0-0	3	3
BTP - 2	Project 2/DE/OE- B & C	xxxx/2 subjects from OE/DE Basket	0-0-0	6	0
<b>Total</b>				<b>15</b>	<b>9</b>

**SEMESTER-VIII FOR SIX MONTH INTERNSHIP STUDENTS**

Name of the Subject	Type	Subject Code	L-T-P	Credit	Contact Hour
Six month internship	Internship		3-0-0	3	0
OE/DE	OE 4 / DE 2		3-0-0	3	3
	OE 5 / DE 3		3-0-0	3	3
Summer Internship	Internship		0-0-0	2	0
BTP - 1	Project 1/DE/OE-A	xxxx/ Subject from OE/DE Basket	3-0-0	3	3
<b>Total</b>				<b>14</b>	<b>9</b>

**Total Credits: 155**