Swami Keshvanand Institute of Technology, Management & Gramothan, Jaipur
(An Autonomous Institute Affiliated to Rajasthan Technical University, Kota)
Teaching and Examination Scheme-2024-25
B.Tech. I Year (Semester I & II)

Sr. No.	SEM.	Course Code	Course Name	Category	Teaching Scheme			Exam Hrs.	Marks			Credit
					L	T	P		CIE	SEE	Total	
1	I	MAUL101	Engineering Mathematics-I	BSC	3	1	0	3	40	60	100	4
2	I	PHUL101/CHUL101	Engineering Physics/Engineering Chemistry	BSC	3	1	0	3	40	60	100	4
3	I	HSUL101/HSUL102	Communication Skills/Universal Human Values	HSMC	2	0	0	3	40	60	100	2
4	I	CSUL101	Computational Thinking and Programming	ESC	2	0	0	3	40	60	100	2
5	I	EEUL101	Basic Electrical & Electronics Engineering (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/ME/CE)	ESC	2	0	0	3	40	60	100	2
		CEUL101	Basic Civil Engineering (EE/ECE/ME)	ESC	2	0	0	3	40	60	100	
		MEUL101	Basic Mechanical Engineering (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/EE/ECE/CE)	ESC	2	0	0	3	40	60	100	
6	I	PHUP120/CHUP120	Engineering Physics Lab/ Engineering Chemistry Lab	BSC	0	0	2	3	60	40	100	1
7	I	HSUP120/HSUP121	Language Lab/ Universal Human Values Lab	HSMC	0	0	2	3	60	40	100	1
8	I	CSUP120	C Programming Lab	ESC	0	0	2	3	60	40	100	1
9	I	EEUP120	Basic Electrical & Electronics Engineering Lab (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/ME/CE)	ESC	0	0	2	3	60	40	100	1
		CEUP120	Basic Civil Engineering Lab (EE/ECE/ME)	ESC	0	0	2	3	60	40	100	
		MEUP120	Manufacturing Practice Workshop (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/EE/ECE/CE)	ESC	0	0	2	3	60	40	100	
10	I	MEUP121/ MEUP122	Computer Aided Engineering Graphics/Computer Aided Machine Drawing	ESC	0	0	3	3	60	40	100	1.5
11	I	XXUA100	Social Outreach, Discipline and Extra-Curricular Activities (SODECA)	SODECA	-	-	0.5	-	-	-	-	0.5
12	I	NU99.X	Audit Course	NC	-	-	-	3	40	60	100	0
											Total Credit	**20**

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Sr. No.	SEM.	Course Code	Course Name	Category	Teaching Scheme L	Teaching Scheme T	Teaching Scheme P	Exam Hrs.	Marks CIE	Marks SEE	Marks Total	Credit
1	II	MAUL201	Engineering Mathematics-II	BSC	3	1	0	3	40	60	100	4
2	II	PHUL201/CHUL201	Engineering Physics/Engineering Chemistry	BSC	3	1	0	3	40	60	100	4
3	II	HSUL201/HSUL202	Communication Skills/Universal Human Values	HSMC	2	0	0	3	40	60	100	2
4	II	HSUL203	Innovation & Entrepreneurship	HSMC	1	0	0	3	40	60	100	1
5	II	CSUL201	Problem Solving using Object Oriented Paradigm	ESC	2	0	0	3	40	60	100	2
6	II	EEUL201	Basic Electrical & Electronics Engineering (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/ME/CE)	ESC	2	0	0	3	40	60	100	2
		CEUL201	Basic Civil Engineering (EE/ECE/ME)	ESC	2	0	0	3	40	60	100	
		MEUL201	Basic Mechanical Engineering (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/EE/ECE/CE)	ESC	2	0	0	3	40	60	100	
7	II	PHUP220/CHUP220	Engineering Physics Lab/ Engineering Chemistry Lab	BSC	0	0	2	3	60	40	100	1
8	II	HSUP220/HSUP221	Language Lab/ Universal Human Values Lab	HSMC	0	0	2	3	60	40	100	1
9	II	CSUP220	Object Oriented Programming Lab	ESC	0	0	2	3	60	40	100	1
10	II	EEUP220	Basic Electrical & Electronics Engineering Lab (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/ME/CE)	ESC	0	0	2	3	60	40	100	1
		CEUP220	Basic Civil Engineering Lab (EE/ECE/ME)	ESC	0	0	2	3	60	40	100	
		MEUP220	Manufacturing Practice Workshop (CSE/IT/CSE(DS)/CSE(AI)/CSE(IOT)/EE/ECE/CE)	ESC	0	0	2	3	60	40	100	
11	II	MEUP221/ MEUP222	Computer Aided Engineering Graphics/Computer Aided Machine Drawing	ESC	0	0	3	3	60	40	100	1.5
12	II	XXUA200	Social Outreach, Discipline and Extra-Curricular Activities (SODECA)	SODECA	-	-	0.5	-	-	-	-	0.5
13	I	NU99.X	Audit Course		-	-	-	3	40	60	100	0
											Total Credit	**21**

Syllabus

Name of the Programme: B.Tech.	Year: I	Semester: I/II
Course Name: Engineering Physics Lab	Course Code: PHUP120/ PHUP220	Credit: 1
Max Marks: 100	CIE: 60	SEE: 40
End Term Exam Time: 3 Hrs	Teaching Scheme: 0L+0T+2P	

Introduction: Objective, Scope, Outcome of the Course and Prerequisite

LIST OF EXPERIMENTS

1. To determine the wavelength of monochromatic light with the help of Michelson's interferometer.
2. To determine the wavelength of sodium light by Newton's Ring.
3. To determine the wavelength of prominent lines of mercury by plane diffraction grating with the help of spectrometer.
4. To determination the energy band gap of a given semiconductor material using a P-N junction diode.
5. To determine the dispersive power of material of a prism with the help of spectrometer.
6. To determine the height of a given object with the help of sextant.
7. To determine the dielectric constant of a given material.
8. To determine the Wavelength of laser light using He – Ne laser.
9. To measure the numerical aperture of a given optical fibre and hence to find its acceptance angle.
10. To study the Hall effect and determine Hall coefficient, carrier density and mobility of a given semiconductor material using Hall-effect set up.

Text Books:

1. A Textbook of Engineering Physics practical by Ruby das, Robinson and Rajesh Kumar; Laxmi Publications Pvt Ltd

2. Engineering Physics practical by S.K. Gupta; Krishna Prakashan Media P. Ltd.

3. Engineering Physics Practicals by B. Srinivasa Rao; Laxmi Publications

Reference Books:

1. Engineering Physics: Theory and Practical by A. K. Katiyar & C. K. Panday; Wiley India

2. Semiconductor Physics and Devices: Basic Principles" by Donald A Neaman

3. Optics, Principles and Applications" by K K Sharma.

Prerequisite:

1. Light and its characteristics, Reflection, refraction and transmission of light rays and relevant laws, Total internal reflection

2. Classification of matter, Electrical properties of matter, Atomic structure and bonding

3. Capability of doing mathematics like Integration, Differentiation, Graphical Analysis, Vector algebra etc.