## Padmashree Dr. D. Y. Patil College of Nursing, Pimpri, Pune-18

First year P.B. B. Sc Nursing Subject:Biophysics Faculty: External

UNIT	TOPIC	Number of	Lecture
		lecture	Serial No
UNIT I	Introduction: Concepts of unit and	1	1
INTRODUCTION	measurements		
	Fundamental and derived units	1	2
	- Unit length, weight, mass, time.		
	Tutorial	1	3
UNIT II MOTION	Vector and scalar motion, speed,	1	4
	velocity and acceleration		
	- Newton's law of motion	1	5
	Tutorial	1	6
UNIT III GRAVITY	Gravity: Specific gravity, centre of	1	7
	gravity, principles of gravity.		
	- Effect of gravitational forces on	1	8
	human body.		
	- Application of principles of gravity	1	9
	in nursing		
	Tutorial	1	10
UNIT IV	Force, work, Energy: Their units of	1	11
FORCE WORK	measurement.		
& ENERGIES	- Type and transformation of		
	energy, forces of the body, Static		
	forces.		
	- Principles of machines, friction	1	12
	and body mechanics.		
	- Simple mechanics - lever and	1	13
	body mechanics, pulley and		
	traction, incline		
	Application of these principles in		
	nursing.		
	Tutorial	1	14
UNIT V	Heat : Nature, measurement,	1	15
HEAT	transfer of heat		
	- Effects of heat on matter		
	- Relative humidity, specific heat	1	16
	- Temperature scales		
	- Regulation of body temperature		
	- Use of heat for sterilization		

	- Application of these principles in nursing	1	17
	Tutorial	1	18
UNIT VI LIGHT	Light: Laws of reflection - Focusing elements of the eye, defective vision and its correction, use of lenses - Relationship between energy, frequency and wavelength of light		
	<ul> <li>Biological effects of light</li> <li>Use of light in therapy</li> <li>Application of these principles in nursing</li> </ul>		