

Branch Name:	B.Sc. Mathematics
Program Code:	SC104
Course Name:	Business Mathematics-VIII
Course Code:	2SC1040622
Pre-requisite Course:	

Course Objectives:

1. To understand the Fundamental for Newtonian Mechanics.
2. To understand the concept of Equilibrium of a particle.
3. To know about Equipollent system of forces.
4. To understand the concept of Reduction of general force system.

Teaching and Examination Scheme:

Teaching Scheme (Hours per week)				Evaluation Scheme (Marks)				
Lecture (L)	Tutorial (T)	Practical (P)	Credit	Theory (Marks)		Practical (Marks)		Total (Marks)
				University Assessment	Continuous Assessment	University Assessment	Continuous Assessment	
2	--	--	2	35	15	--	--	50

Subject Contents:

Sr. No	Topic	Total Hours	Weightage (%)
1	Method of Plane Statics: Fundamental for Newtonian Mechanics, Scalar Field, Gradient Vector, Equilibrium of a particle and system particles.	15	50
2	Necessary and Sufficient condition for Equilibrium, Equipollent system of forces. Reduction of general force system. Principles of virtual work and potential energy.	15	50

Reference Books:

1. Synge and Griffith: Principal of Mechanics
2. S.L.Loney: Statics, Macmillan and company, London.
3. R.S.Verma: A Text book on Statics, Pothishala Pvt. Ltd, Allahabad.
4. S.L.Loney: An elementary treatise on the Dynamics of a particle and rigid bodies, Cambridge University press 1956.
5. Mechanics: Dr. L.K.Patel.

List of Open Source Software/learning website:

1. <https://www.youtube.com/watch?v=IH6BTIZoo2s>
2. <https://www.youtube.com/watch?v=15KabFx99zU>
3. <https://www.youtube.com/watch?v=15KabFx99zU&t=12s>

Course Learning Outcomes (CLO): On completion of this course, the students will be able to:

CLO	Description	Bloom's Taxonomy Level
CLO1	Describe Equilibrium of a particle and system particles.	1 Remembering
CLO2	Discuss the knowledge on Scalar Field.	2 Understanding
CLO3	Use Gradient Vector and using it solve the example of its.	3 Applying
CLO4	Explain Equipollent system of forces.	4 Analysing
CLO5	Know the Fundamental for Newtonian Mechanics to Justify the application of its.	5 Evaluating
CLO6	Create an example of Gradient Vector.	6 creating

Mapping of CLOs with POs & PSOs

Course Learning Outcomes	Program Outcomes (POs)												Program Specific Outcomes (PSOs)			
	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3	PSO4
CLO1	L	M					L			L			L		M	
CLO2	L					L			L	H					L	
CLO3	M	M	H		M				M					L		
CLO4		L							L	L			M	L		
CLO5	L					L			M			L	L			
CLO6	L	M	H						M		L		M		L	

H: High, M: Medium, L: Low