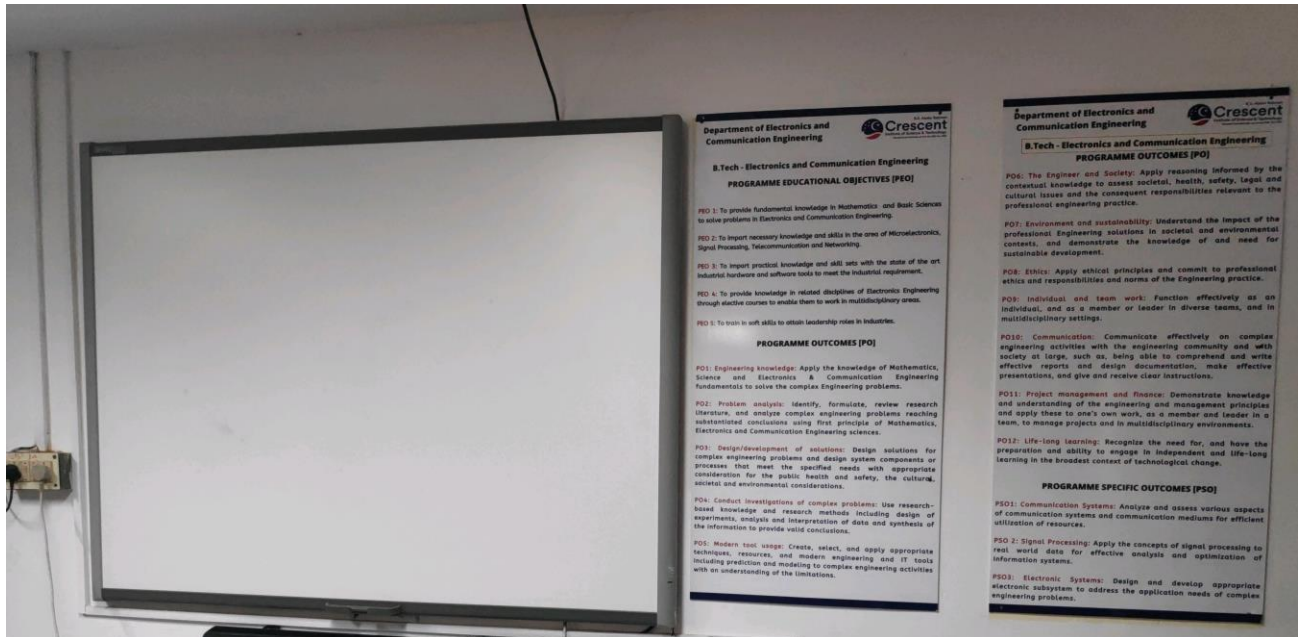


ANNEXURE 2.6.1

S. No.	Details	Page No.										
1.	Sample Display of POs and PSOs in class rooms and seminar halls	2										
2.	Lesson Plan - Engineering Mechanics	3										
3.	Website link of Curriculum & Syllabus of the following programmes:											
	<table border="1"> <thead> <tr> <th>Programme</th> <th>Link to website</th> </tr> </thead> <tbody> <tr> <td>B.Tech. Mechanical Engineering</td> <td>https://crescent.education/wp-content/uploads/2022/06/Dean-AA-B.Tech.-Mechanical-R2021-CS-Amended-upto-Feb.2022-23.05.22.pdf</td> </tr> <tr> <td>B.Com. (General)</td> <td>https://crescent.education/wp-content/uploads/2022/05/B.Com.General-R2021-CS-Updated-upto-Feb.2022-14.05.22.pdf</td> </tr> <tr> <td>M.Tech. CAD-CAM</td> <td>https://crescent.education/wp-content/uploads/2023/01/M.-Tech.-CAD-CAM-R2022_C_updt.-18-01-2023.pdf</td> </tr> <tr> <td>M.Sc. Physics</td> <td>https://crescent.education/wp-content/uploads/2020/07/M.Sc.-Physics-R2019-Amended-upto-June-2020-22.07.2020.pdf</td> </tr> </tbody> </table>	Programme	Link to website	B.Tech. Mechanical Engineering	https://crescent.education/wp-content/uploads/2022/06/Dean-AA-B.Tech.-Mechanical-R2021-CS-Amended-upto-Feb.2022-23.05.22.pdf	B.Com. (General)	https://crescent.education/wp-content/uploads/2022/05/B.Com.General-R2021-CS-Updated-upto-Feb.2022-14.05.22.pdf	M.Tech. CAD-CAM	https://crescent.education/wp-content/uploads/2023/01/M.-Tech.-CAD-CAM-R2022_C_updt.-18-01-2023.pdf	M.Sc. Physics	https://crescent.education/wp-content/uploads/2020/07/M.Sc.-Physics-R2019-Amended-upto-June-2020-22.07.2020.pdf	
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Sample Display of POs and PSOs in class room and seminar hall



Class room



Seminar Hall

LESSON PLAN

1. **Course Title** : **Engineering Mechanics**
2. **Course Code** : **GED 1201**
3. **Course Faculty** : **D. Pradeep Kumar (Coordinator)**
4. **Theory / Practical** : **Theory**
5. **Semester** : **II semester**
6. **Academic Year** : **2021-2022**
7. **Department** : **Mechanical Engineering**
8. **No. of Credits** : **4**

9. **Course Learning Objectives:**

- To impart knowledge about the basic laws of mechanics, resolution of forces, equilibrium of particles in 2D and 3D force systems.
- To learn about supports, reactions and equilibrium of rigid bodies
- To educate surface properties such as centroid and moment of inertia
- To impart knowledge on friction and its applications
- To study the laws of motion, impulse, momentum and elastic bodies

10. **Course pre-requisites:**

Knowledge on Vector Algebra

Knowledge on basic Physics and Mathematics

11. **Schedule of teaching and learning** [furnished as Annexure]

12. **Course material and References**

- Students are expected to take notes during lecture/tutorial sessions
- PPT's of certain topics will be made available in the intranet

References:

1. Beer, F.P and Johnston Jr. E.R, "Vector Mechanics for Engineers, Dynamics & Statics", Third SI Metric Edition, Tata McGraw-Hill International Edition, 2001.
2. Hibbeler, R.C., Engineering Mechanics, Vol. 1 Statics, Vol. 2 Dynamics, Pearson Education Asia Pvt. Ltd., 2000.
3. Irving H. Shames, Engineering Mechanics – Statics and Dynamics, IV Edition Pearson Education Asia Pvt. Ltd., 2003.

13. Assessment Scheme:

Assessment I	Percentage
Periodical Test 1	70
Assignment 1	30
Assessment II	
Periodical Test 2	70
Assignment 2	30
End semester exam	100

i) Periodical tests.

There will be two periodical assessment tests and the test portions are given below:

- Test I Complete Module I, II and Module III (first half)
 Test II Module III (second half) and complete Module IV and V

ii) Carry home exercise

Twenty problems in each unit will be given as tutorial.


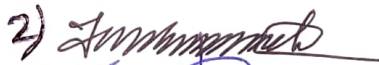




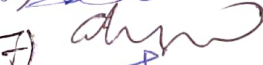


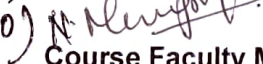
14. Expected outcome of the course:

On completion of this course students should be able to

- resolve composite forces, apply concept of equilibrium to particles and solve problems
- apply the concept of equilibrium to rigid bodies and solve problems
- determine the properties of surfaces
- analyze and evaluate the frictional forces between the bodies
- apply the laws of motion in solving dynamics problems

15. Mapping of course outcomes with learning activities and assessments

Course outcomes	Learning activities	Assessments	CAT I * %	CAT II * %	End Sem *
resolve composite forces, apply concept of equilibrium to particles and solve problems	Lecture	Tutorial, CAT, End Exam	40		20
apply the concept of equilibrium to rigid bodies and solve problems	Lecture	Tutorial, CAT, End Exam	30		20
determine the properties of surfaces	Lecture	Tutorial, CAT, End Exam	30	30	20
analyze and evaluate the frictional forces between the bodies	Lecture	Tutorial, CAT, End Exam		40	20
apply the laws of motion in solving dynamics problems	Lecture	Tutorial, CAT, End Exam		30	20

- 1) 
- 2) 
- 3) 
- 4) 
- 5) 
- 6) 
- 7) 
- 8) 
- 9) 
- 10) 

Course Faculty Members

Date: 14/03/2022


 14/03/2022
 Head of Department

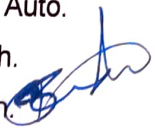




ANNEXURE (vide item 11)

Schedule of Teaching and Learning

Module No.	Sl. No	Topics	No. of Periods	Mode of Delivery	Teaching Aids	References / Sources
Module 1 Vector Approach and equilibrium of particle	1	Introduction - Vectors – Vectorial representation of forces and moments	1	Lecture	Chalk & talk	T1, R1 & R2
	2	Vector Algebra and its Physical relevance in Mechanics. Laws of Mechanics – Parallelogram and triangle law of forces	2,3	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	3	Coplanar Forces, Principle of transmissibility, Resolution and Composition of Forces	4,5	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	4	Forces in plane and space – Lame's Theorem – Equilibrium of a particle in 2D plane	6,7,8	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	5	Equilibrium of a particle in 3D space	9,10,11	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	6	Equivalent systems of forces – Single equivalent force	12,13,14	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
Module 2 Equilibrium of Rigid Bodies	7	Free body diagram – Types of supports and their reactions – requirements of stable equilibrium	15,16,17	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	8	Moments and Couples – Moment of a force about a point and about an axis	18,19	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	9	Vectorial representation of moments and couples – Scalar components of a moment – Varignon's theorem	20,21,22	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2

	10	Equilibrium of Rigid bodies in two dimensions – Examples	23,24	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
Module 3 Properties of surfaces	11	Determination of Areas – First moment of area and the centroid of sections –Rectangle, circle, triangle from integration	25,26	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	12	T section, I section, Angle section, Hollow section by using standard formula	27,28	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	13	Second and product moments of plane area – Physical relevance – Standard sections: Rectangle, triangle from integration	29, 30	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	14	Circle from integration - composite section, hollow section using standard formula	31,32	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	15	Parallel axis theorem and perpendicular axis theorem	33,34,35	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	16	Polar moment of inertia	36,37	Lecture & Cooperative Problem solving	Chalk & talk	T1, R1 & R2
	Module 4 Friction	17	Introduction to Friction – Types of Friction, Laws of Coloumb friction	38,39,40	Lecture & Cooperative Problem solving	PPT, chalk & talk
18		Frictional force – Simple contact friction	41,42	Lecture & Cooperative Problem solving	PPT, chalk & talk	T1, R1 & R2
19		Block Friction, Rolling resistance	43,44,45	Lecture & Cooperative Problem solving	PPT, chalk & talk	T1, R1 & R2
20		Ladder Friction	46,47	Lecture & Cooperative Problem solving	PPT, chalk & talk	T1, R1 & R2
21		wedge friction	48,49	Lecture & Cooperative Problem solving	PPT, chalk & talk	T1, R1 & R2

Faculty Members handling the course:

1. Dr. P. D. Jeyakumar - Associate Professor & HoD (i/c) / Auto.
2. Dr. J. Mahashar Ali - Assistant Professor (Sr. G) / Mech. 
3. Dr. S. Jeavudeen - Assistant Professor (Sr. G) / Mech. 
4. Dr. Nisha Khanam - Assistant Professor / Civil. 
5. Mr. D. Pradeep kumar - Assistant Professor / Mech. 
6. Mr. M. Balasrinivasan - Assistant Professor / Mech.
7. Mr. G. Rajesh - Assistant Professor / Mech. 
8. Dr. M. Pervaz Ahamed - Assistant Professor / Mech.
9. Mr. A. Sheik Farid - Assistant Professor / Civil.
10. Ms. N. Manicka Priya - Assistant Professor / Civil.