

Aeronautical Engineering

List of Laboratory Experiments

MECHANICS OF SOLIDS LABORATORY									
Course Co	de	Category	Но	urs / W	eek	Credits	Maximum Marks		
AAECO	5	Core	L	Т	Р	С	CIA	SEE	Total
AAECU	5	Core	0	0	3	1.5	30 70	100	
Contact Classes	s: Nil	Tutorial Classes: Nil		Pract	tical Cla	asses: 36		Total C	lasses: 36
Branch: AI	2	Semester: III		Acader	nic Yea	r: 2021-22		Regulat	ion: UG20
olids and apply ASTM and IS)	them t for ident	chanics of solids labora o practical problems in ifying the properties of ng and support condition	Aerosp various	ace app	olication	s. Mechanic	al tests ar	e conducted	l as per standar
Course objecti	ves:								
II. The adop III. The illus	n the bas pt with th strate the	to learn: sic knowledge on the med he experimental methods crippling behaviour of d e elastic constants of dif	s to deten lifferent	mine the columns	e mecha s using l	nical proper Euler's and I	ties of mat Rankine's t	erials.	and cast iron.
Course outcon						<u> </u>			
After successfu	ul comp	oletion of the course, s	student	s will b	oe able	to:			
		lardness of mild steel, ca						ing Brinell's	s and Rockwell'
		r characterization of mat							
		ress and strains relations sign of machine component		l steel m	naterials	for observir	ig ultimate	load using	Universal testin
			ents.					-	
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WEEK – VII	IZOD IMPACT TEST				
	Determination the toughness of the materials like steel, copper, brass and other alloys using Izod test.	CO4			
WEEK –VIII	CHARPY IMPACT TEST				
	Determine the toughness of the materials like steel, copper, brass and other alloys using Charpy test	CO4			
WEEK - IX	COMPRESSION TEST ON SHORT COLUMN	CO5			
	Determine the compressive stress on material.	05			
WEEK - X	COMPRESSION TEST ON LONG COLUMN	CO5			
	Determine Young's modulus of the given long column.	005			
WEEK - XI	DEFLECTION TEST FOR SIMPLE SUPPORTED BEAM	CO6			
	Determine the Young's modulus of the given material with the help of deflection of Simple Supported Beam.				
WEEK - XII	DEFLECTION TEST FOR CANTILEVER BEAM				
	Determine the Young's modulus of the given material with the help of deflection of Cantilever beam.	CO6			