



Yashoda Shikshan Prasarak Mandal's
YASHODA TECHNICAL CAMPUS, SATARA
 An Autonomous Institute
FACULTY OF ENGINEERING
Department of Basic Sciences and Humanities

Academic Year 2026-27

Semester- ODD

Structure of Course

Class	F.Y B.Tech Sem. -I
Course Code and Course Title	(0UBHES104) Elements of Civil Engineering
Prerequisite/s	-
Teaching Scheme: Lecture/Tutorial/Practical	02/00/00
Credits	02
Evaluation Scheme: ISE / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
0UBHES104_1	Choose construction materials to be used in various types of construction.	L3
0UBHES104_2	Illustrate principles of building planning, bye-laws and components in Construction activities.	L3
0UBHES104_3	Apply basics of surveying, leveling and interpretation in Construction projects.	L3
0UBHES104_4	Illustrate the significance of emerging technologies in civil engineering.	L3

Mapping of CO's with PO's and PSO's:

Course Outcomes	Programme Outcomes													
	1	2	3	4	5	6	7	8	9	10	11	PS O1	PSO 2	PSO 3
0UBHES104_1	3						2		2		2		2	2
0UBHES104_2	3	2		2		2	2		2		2	2	2	2
0UBHES104_3	3	3		2	2						2		2	2
0UBHES104_4	3	2			2			2		2	2		2	2
Total	12	7		4	4	2	4	2	4	2	8	2	8	8
Average	3	2.33		2	2	2	2	2	2	2	2	2	2	2
0UBHES104	3	2.33		2	2	2	2	2	2	2	2	2	2	2

ppkhalab

Prepared by Course Coordinator	Verified by Academic Coordinator	Approved by HOD- BSH
Mission M1 : To achieve the quality and an academic excellence in the frontier engineering areas and management relevant primarily to the nation. M2 : To train and produce the highly skilled and globally competent professionals through quality technical education and to prepare them with industry ready engineers for immediate employment and entrepreneurship. M3 : To inculcate and develop the research culture can be attributed to quality outputs in terms of research practices and products. M4 : To develop the professionals having high values of ethics, lifelong learning, teamwork, leadership and social responsibility. M5 : To enhance and empower the rural community by improving the productivity of the agricultural sector.		
Vision YTC, Satara looks forward to become a globally renowned institute of centre of excellence in technology and management education for rural community for technical and professional Knowledge		



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CO Attainment Targets:

CO	104_1	104_2	104_3	104_4
Previous Attainment	-	-	-	-
Target for CAY (2026-27)	2.00	2.00	2.00	2.00

Teaching Learning Activity Mapping with SDG's

Mode	Assessment Tool	Type of Learning	CO Mapped	Self-learning Hours	SDG's Mapped
Continuous Assessment	Unit Test	Individual Learning	CO1, CO2, CO3, CO4	6hrs	SDG 4: Quality Education
	Model Making	Collaborative Learning / Creative Learning	CO1, CO2	4hrs	SDG 4: Quality Education, SDG 9: Industry, Innovation and Infrastructure

Prkhalab



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 HOD- BSH

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Semester- ODD

Structure of Course

Class	F.Y. B.Tech. Sem. – I / II
Course Code and Course Title	0UBHES112, Engineering Mechanics
Prerequisite/s	***
Teaching Scheme: Lecture/Tutorial/Practical	03/00/00
Credits	03
Evaluation Scheme: ISE / MSE / ESE	20/20/60

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
0UBHES112_1	Apply the principles of force systems to determine the resultant and equilibrium of engineering systems.	L3
0UBHES112_2	Analyze the equilibrium of particles, rigid bodies, and beams using free-body diagrams and support reaction calculations.	L4
0UBHES112_3	Calculate forces in the members of truss using the joint and section method.	L4
0UBHES112_4	Examine the centroid and moment of inertia of plain and composite figure.	L4
0UBHES112_5	Compute motion parameters using kinematics and kinetics principles.	L3
0UBHES112_6	Analyze engineering systems using work-energy and impulse-momentum principles to determine the motion of particles and colliding bodies.	L3

Mapping of COs with PO's and PSO's:

Course Outcomes	Programme Outcomes													
	1	2	3	4	5	6	7	8	9	10	11	PSO1	PSO2	PSO3
0UBHES112_1	3	2	2		2		2						3	
0UBHES112_2	3	3	3		2		2						3	2
0UBHES112_3	3	3	3										3	2
0UBHES112_4	3	2	3		2	2	2						3	2
0UBHES112_5	3	2	2		2		2	3	3				3	2
0UBHES112_6	3	3	2	2	2	2	2	3	3				3	2
Total	18	15	15	2	10	4	10	6	6				18	10

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Average	3	2.5	2.5	2	2	2	2	3	3				3	2
0UBHES112	3	3	3	2	2	2	2	3	3				3	2

CO Attainment Targets:

CO	112_1	112_2	112_3	112_4	112_5	112_6
Previous Attainment	-	-	-	-	-	-
Target for CAY (2025-26)	2	3	3	2	2	2

Teaching Learning Activity Mapping with SDG's

Mode	Assessment Tool	Type of Learning	CO Mapped	Self-learning Hours	SDG's Mapped
Continuous Assessment	Unit Test	Active Learning and Problem-Based Learning	CO1, CO2, CO4, CO5	4	SDG 4: Quality Education; SDG 9: Industry, Innovation and Infrastructure
	PPT Presentation	Collaborative and Participative Learning	CO5, CO6	8	SDG 4: Quality Education; SDG 9: Industry, Innovation and Infrastructure



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- M5 : To enhance and empower the students to become global citizens and leaders.



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Semester- ODD

Structure of Course

Class	F.Y. B.Tech. Sem. – I / II
Lab Code and Lab Title	0UBHES117, Engineering Mechanics Lab
Prerequisite/s	***
Teaching Scheme: Lecture/Tutorial/Practical	0/0/2
Credits	1
Evaluation Scheme: ISE / ESE-OE/POE	25/25-POE

Course Outcomes:

Course Outcomes (COs): Upon successful completion of this course, the student will be able to:		Blooms Level
0UBHES117_1	Apply principles of coplanar force systems to verify laws of forces and determine support reactions using analytical and graphical methods.	L3
0UBHES117_2	Analyze equilibrium of engineering systems such as jib crane and bell crank lever using the principle of moments and force resolution.	L4
0UBHES117_3	Evaluate frictional behaviour between contact surfaces and interpret its effect on mechanical systems.	L4
0UBHES117_4	Examine centroid of irregular bodies and relate it to structural stability and load distribution.	L4
0UBHES117_5	Calculate the mechanical advantage, velocity ratio, and efficiency of simple machines such as screw jacks, single-purchase crabs, double-purchase crabs, and worm-and-worm-wheel mechanisms.	L3
0UBHES117_6	Analyze coplanar force systems and plane trusses using graphical methods and Microsoft Excel to determine equilibrium, support reactions, resultant forces, and member forces.	L4

Mapping of COs with PO's and PSO's:

Course Outcomes	Programme Outcomes													
	1	2	3	4	5	6	7	8	9	10	11	PSO1	PSO2	PSO3
0UBHES117_1	3	2			2								3	2
0UBHES117_2	3	3	2		2							1	3	2
0UBHES117_3	3	3											3	2
0UBHES117_4	3	2	2			2						2	3	2
0UBHES117_5	3	2	2		2								3	3
0UBHES117_6	3	3	2	2	3							1	3	3
Total	18	15	8	2	9	2						4	18	14

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Average	3	2.5	2	2	2.25	2						1.33	3	2.33
0UBHES117	3	3	2	2	2	2						1	3	2

CO Attainment Targets:

CO	117_1	117_2	117_3	117_4	117_5	117_6
Previous Attainment	-	-	-	-	-	-
Target for CAY (2025-26)	3	3	3	3	3	3

Teaching Learning Activity Mapping with SDG's

Mode	Assessment Tool	Type of Learning	CO Mapped	Self-learning Hours	SDG's Mapped
Continuous Assessment	Practical Performance & Observation	Experiential / Hands-on Learning	CO1, CO2, CO3, CO4, CO5 & CO6	8	SDG 4: Quality Education; SDG 9: Industry, Innovation and Infrastructure

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