INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

Department of Structural Engineering

Attainment of Program Outcomes (POs) of 2023 - 2025 batch (IARE – MT23)

Course Code	Course Name	Program Outcomes (POs)					
		PO1	PO2	PO3	PO4	PO5	PO6
BSTD01	Advanced Structural Analysis	2.80		2.50	2.60	2.70	
BSTD02	Theory of Elastic and Plasticity	2.50		2.60	2.60	2.60	
BSTD04	Advanced Concrete Technology	2.80		2.80	2.80	2.80	2.80
BSTD07	Theory of Plates and Shells	1.30		2.10	2.50	1.70	
BHSD01	Research Methodology & IPR	2.60	2.70		2.80	2.80	2.70
BSTD11	Advanced CAD Laboratory		3.00	3.00	3.00	3.00	
BSTD12	Advanced Concrete Laboratory	3.00		3.00	3.00	3.00	
BSTD13	Finite Element Analysis	2.90		2.90	2.90	2.90	2.90
BSTD14	Structural Dynamics	3.00		3.00	3.00	3.00	
BSTD15	Design of Advanced Concrete Structures	2.90	2.30	2.50		2.20	
BSTD22	Rehabilitation and Retrofitting of Structures	2.90	2.90	2.90	2.80	2.90	
BSTD23	Structural Design Laboratory	3.00	3.00	3.00		3.00	
BSTD24	Numerical Analysis Laboratory	3.00	3.00				
BSTD25	Mini Project with Seminar	3.00	3.00	3.00	3.00	3.00	3.00
BSTD26	Design of Prestressed Concrete Structures			2.60	2.60	2.50	
BCCD31	Energy from Waste			2.90	2.70	2.70	2.80
BSTD34	Dissertation Work Review - II	3.00	3.00	3.00	3.00		
BSTD35	Dissertation Work Review - III	1.20	1.20	1.20	1.20	1.20	1.20
BSTD36	Dissertation Viva-Voce	2.00		2.00	2.00	2.00	2.00
Direct Attainment Value		**2.6**	**2.7**	**2.6**	**2.7**	**2.6**	**2.5**

Overall Attainment

Sl. No	Assessment Components (Direct + Indirect)	Program Outcomes (POs)					
		PO1	PO2	PO3	PO4	PO5	PO6
1	Direct Assessment (CIA + SEE + Course End Survey) (a)	2.6	2.7	2.6	2.7	2.6	2.5
2	Program Exit Survey (b)	2.3	2.3	2.1	1.7	2.0	2.1
3	Alumni Survey (c)	2.2	2.7	2.2	2.4	2.3	2.2
4	Employer Survey (d)	1.9	2.1	2.1	1.9	1.8	2.1
Overall attainment = a*0.8 + b*0.1 + c*0.05 + d*0.05		**2.5**	**2.6**	**2.5**	**2.5**	**2.5**	**2.4**

Action taken to improve the attainment of POs:

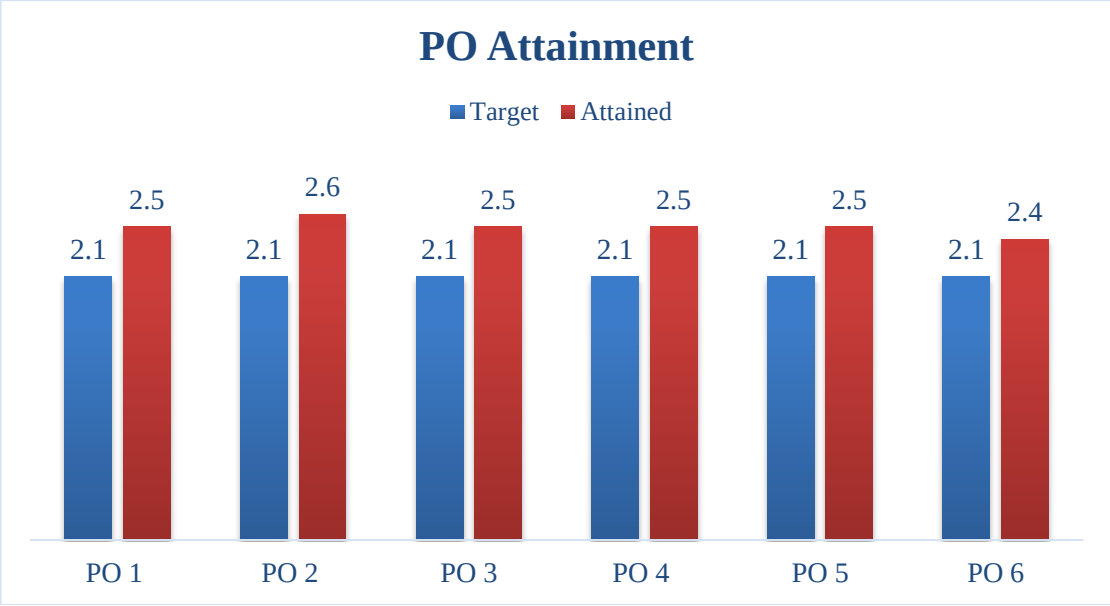
POs	Target Level	Attainment Level	Observation
PO1: An ability to Independently carry out research/investigation and development work to solve practical problems			
PO1	**2.1**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTD07, BSTD35 and BSTD36.**
Action: 1. Advanced design and analysis exercises were assigned requiring self-directed investigation using software tools and analytical methods. 2. Industry-linked case studies and field problems were incorporated to provide real-world contexts for independent problem-solving. 3. Participation in research seminars and workshops strengthened abilities to independently analyze data and present findings effectively.			
PO2: An ability to Write and present a substantial technical report/document			
PO2	**2.1**	**2.6**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTD35.**
Action: 1. Target attainment was sustained by assigning detailed technical reports for all design and analysis exercises, ensuring clarity and accuracy in documentation. 2. Standardized report formats and evaluation rubrics were introduced to maintain consistency and quality across all submissions. 3. Participation in workshops, conferences, and peer reviews reinforced skills in preparing and presenting substantial technical documents.			

PO3: Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.			
PO3	**2.1**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTD35, and BSTD36.**
Action: 1. Target attainment was maintained by assigning problem-solving sessions and numerical modeling exercises reinforced high-level analytical skills. 2. Advanced laboratory and computational exercises ensured hands-on application and validation of theoretical concepts. 3. Seminar presentations and report writing reinforced conceptual understanding and professional communication of advanced topics.			
PO4: Capable to apply the core, multidisciplinary knowledge for understanding the problems in structural engineering and allied fields.			
PO4	**2.1**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTD35, and BSTD36.**
Action: 1. Target attainment was maintained by assigning complex structural analysis and design problems that integrate multiple core concepts. 2. Collaborative assignments with interdisciplinary perspectives enhanced understanding of integrated structural systems. 3. Continuous evaluation through applied assignments, presentations, and technical discussions reinforced the practical application of multidisciplinary knowledge.			
PO5: Conceptualize and design civil engineering structures considering various socio-economic factors.			
PO5	**2.1**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTD35, and BSTD36.**
Action: 1. Target attainment was maintained by assigning advanced design problems that required optimization of structural safety, economy, and sustainability. 2. Curriculum incorporated real-world case studies to highlight socio-economic constraints and cost-effective design solutions. 3. Faculty-led discussions and seminars focused on optimizing designs under economic, environmental, and safety constraints.			

PO6: Engage in life-long learning for continuing education in research level studies and professional development.			
PO6	**2.1**	**2.4**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTD35, and BSTD36.**

Action:

1. Target attainment was sustained by encouraging students to explore advanced textbooks, journals, and online resources for self-learning beyond the syllabus.
2. Participation in webinars, workshops, and faculty development programs strengthened exposure to emerging structural engineering technologies.
3. Industry interactions and case studies increased awareness of professional practices and continuing education requirements.



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