INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

Department of Structural Engineering

Attainment of Program Outcomes (POs) of 2020 - 2022 batch (IARE – R18)

Course Code	Course Name	Program Outcomes (POs)					
		PO1	PO2	PO3	PO4	PO5	PO6
BSTB01	Advanced Structural Analysis	1.50		1.20	1.30	1.30	
BSTB02	Advanced Solid Mechanics	2.70		2.70	2.80	2.80	
BSTB03	Theory Of Thin Plates And Shells	1.50		1.60		1.40	
BSTB07	Structural Health Monitoring	2.90		2.90	2.90	2.90	
BSTB09	Structural Design Laboratory	3.00			3.00	3.00	
BSTB10	Advanced Concrete Laboratory			3.00	3.00	3.00	
BSTB11	FEM in Structural Engineering	2.70		2.80	2.70	2.80	
BSTB12	Structural Dynamics	2.90		2.70	2.80	2.90	
BSTB13	Advanced Steel Design	1.80		2.10	2.20	2.00	
BSTB17	Advanced Design of Foundations	2.50	1.90	2.50	2.50	2.30	1.20
BSTB19	Research and Content Development	3.00	3.00				3.00
BSTB20	Numerical Analysis Laboratory			3.00	3.00	3.00	
BSTB21	Mini project with Seminar	3.00	3.00	3.00	3.00	3.00	3.00
BSTB22	Design of Pre Stressed Concrete Structures	2.90		2.50	2.70	2.90	
BCSB31	Research Methodology & IPR	2.20	1.80	2.90	2.60	2.50	2.50
BCSB28	Cost Management of Engineering Projects	2.50	2.30	2.40	2.50	2.10	1.90
BSTB40	Phase - I Dissertation	3.00	3.00	3.00	3.00	3.00	3.00
BSTB41	Phase - II Dissertation	3.00	3.00	3.00	3.00	3.00	3.00
Direct Attainment Value		**2.6**	**2.6**	**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	2.6	2.6	2.7	2.6	2.6
2	Program Exit Survey (b)	2.4	2.1	2.4	2.4	2.4	2.4
3	Alumni Survey (c)	2.0	2.5	2.6	2.5	2.3	2.0
4	Employer Survey (d)	2.2	2.3	2.6	2.5	2.6	2.5
Overall attainment = a*0.8 + b*0.1 + c*0.05 + d*0.05		**2.5**	**2.5**	**2.6**	**2.7**	**2.6**	**2.5**

Action taken to improve the attainment of POs:

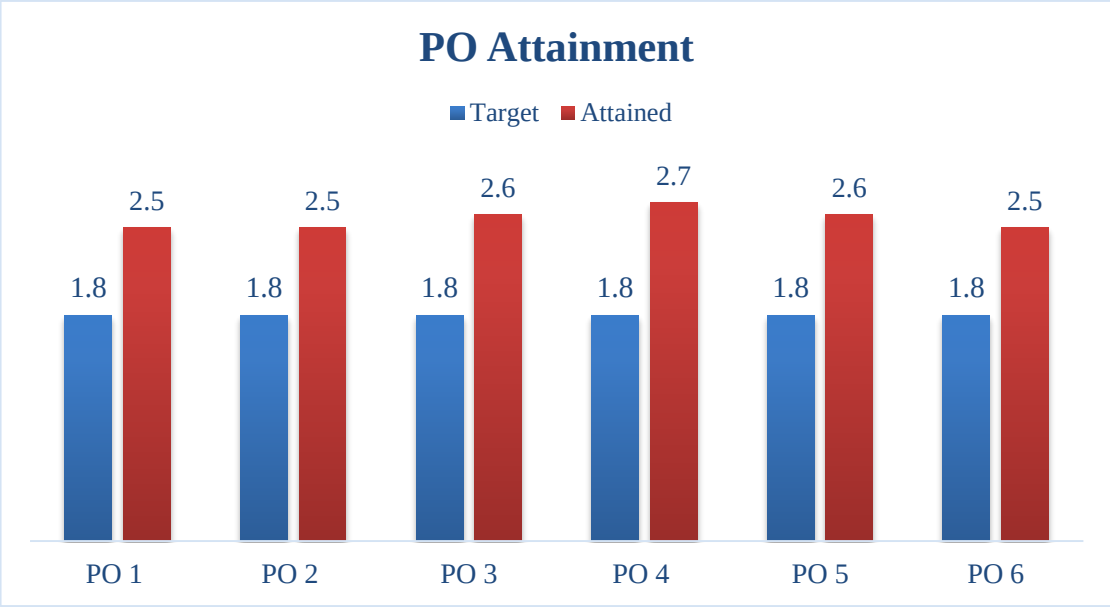
POs	Target Level	Attainment Level	Observation
PO1: An ability to Independently carry out research/investigation and development work to solve practical problems			
PO1	**1.8**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01 and BSTB03.**
Action: 1. Target attainment was sustained by assigning independent research-based problems requiring analytical, numerical, and design solutions. 2. Advanced analysis and design software were used to support investigative and development-oriented work. 3. Outcomes of independent investigations were documented through technical reports and presentations.			
PO2: An ability to Write and present a substantial technical report/document			
PO2	**1.8**	**2.5**	**Target Achieved.**
Action: 1. Target attainment was sustained by mandating structured technical reports for all analysis and design-based PG subjects. 2. Standardized report formats covering problem definition, methodology, results, and conclusions were adopted across courses. 3. Journal-style manuscript preparation was encouraged from mini-project and dissertation-related work.			

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	**1.8**	**2.6**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01 and BSTB03.**
Action: 1. Target attainment was sustained by emphasizing advanced theoretical depth beyond undergraduate level through complex derivations and higher-order problem solving. 2. Exposure to advanced IS codes and international standards enhanced professional-level competency. 3. Continuous evaluation and expert feedback helped sustain and further improve specialization-level proficiency.			
PO4: Capable to apply the core, multidisciplinary knowledge for understanding the problems in structural engineering and allied fields.			
PO4	**1.8**	**2.7**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01**
Action: 1. Case studies from allied fields such as earthquake engineering, durability, and sustainability were incorporated into coursework. 2. Research-oriented tasks promoted application of mathematics, mechanics, and material behavior in advanced structural investigations. 3. Continuous assessments focused on interpretation and integration of multidisciplinary data for structural performance evaluation.			
PO5: Conceptualize and design civil engineering structures considering various socio-economic factors.			
PO5	**1.8**	**2.6**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01 and BSTB03.**
Action: 1. Target attainment was sustained through advanced design assignments addressing safety, serviceability, economy, and constructability aspects. 2. Real-life case studies of residential, commercial, and infrastructure projects were used to link design decisions with societal needs. 3. Exposure to current construction practices enhanced awareness of practical constraints, resources, and societal impact.			

PO6: Engage in life-long learning for continuing education in research level studies and professional development.			
PO6	**1.8**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB17**

Action:

1. Target attainment was sustained by encouraging continuous learning through advanced textbooks, research journals, and technical databases.
2. Students were motivated to complete NPTEL/MOOC courses aligned with advanced structural analysis, materials, and design domains.
3. Regular research paper reading and review discussions were conducted to develop independent learning skills.



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