INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal - 500 043, Hyderabad, Telangana

Department of Structural Engineering

Attainment of Program Outcomes (POs) of 2018 - 2020 batch (IARE – R18)

Course Code	Course Name	Program Outcomes (POs)					
		PO1	PO2	PO3	PO4	PO5	PO6
BSTB01	Advanced Structural Analysis	1.50	-	1.40	1.40	1.30	-
BSTB02	Advanced Solid Mechanics	1.40	-	1.30	1.30	1.30	-
BSTB03	Theory Of Thin Plates And Shells	2.00	-	1.90	-	1.70	-
BSTB07	Structural Health Monitoring	2.20	-	1.90	2.00	1.90	-
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	2.80	-	2.90	2.80	2.90	-
BSTB12	Structural Dynamics	2.90	-	2.90	2.90	2.90	-
BSTB13	Advanced Steel Design	2.00	-	2.10	2.20	2.10	-
BSTB17	Advanced Design of Foundations	2.70	2.60	2.80	2.70	2.70	2.30
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	1.50	-	2.30	1.90	1.30	-
BCSB31	Research Methodology & IPR	2.50	2.30	2.90	2.60	2.30	2.20
BCSB28	Cost Management of Engineering Projects	2.80	2.90	2.70	2.60	2.70	2.90
BSTB40	Phase - I Dissertation	3.00	3.00	3.00	3.00	3.00	3.00
BSTB41	Phase - II Dissertation	2.30	2.30	2.30	2.30	2.30	2.30
Direct Attainment Value		**2.4**	**2.7**	**2.5**	**2.5**	**2.4**	**2.7**

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)	2.4	2.7	2.5	2.5	2.4	2.7
2	Program Exit Survey (b)	2.3	2.5	2.4	2.5	2.6	2.7
3	Alumni Survey (c)	2.5	2.4	2.4	2.6	2.2	2.4
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		**2.4**	**2.6**	**2.5**	**2.5**	**2.4**	**2.7**

Action taken to improve the attainment of POs:

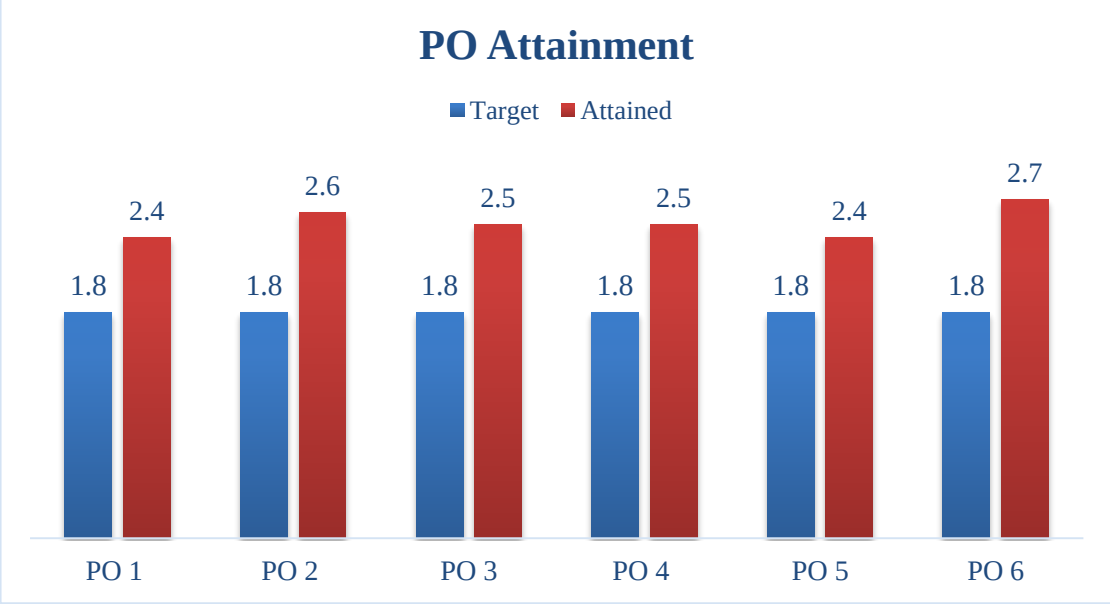
POs	Target Level	Attainment Level	Observation
PO1: An ability to Independently carry out research/investigation and development work to solve practical problems			
PO1	**1.8**	**2.4**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01, BSTB02 and BSTB22.**
Action: 1. Target attainment was maintained by incorporating software-based analysis, real-time design problems, and research-oriented case studies. 2. Curriculum was strengthened with advanced research topics, recent journal insights, and industry-relevant applications. 3. Applied mini-projects linked with academia and industry led to improved practical skills and journal publications.			
PO2: An ability to Write and present a substantial technical report/document			
PO2	**1.8**	**2.6**	**Target Achieved.**
Action: 1. Target attainment was sustained by evaluating structured technical reports based on design calculations, analysis results, and IS code compliance. 2. Research-oriented term papers were introduced to enhance literature review, methodology framing, and result interpretation abilities. 3. Standard report formats and rubrics were adopted across subjects to maintain uniformity and quality in documentation.			

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**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01 and BSTB02.**
Action: 1. Target attainment was sustained through advanced numerical problem solving and derivation-based discussions to reinforce subject mastery. 2. Curriculum was effectively delivered with advanced analytical and design topics to sustain subject mastery in structural engineering. 3. Technical seminars and technical presentations were conducted to promote critical analysis and subject expertise.			
PO4: Capable to apply the core, multidisciplinary knowledge for understanding the problems in structural engineering and allied fields.			
PO4	**1.8**	**2.5**	**Target Achieved. Following courses were identified which didn't meet the attainment target. BSTB01 and BSTB02.**
Action: 1. Target attainment was maintained through application-oriented numerical problems integrating mechanics, materials, and structural analysis concepts. 2. More application-oriented numerical problems and derivation-based exercises were included to improve conceptual clarity. 3. Individual mentoring and remedial assignments were provided to improve PO4 attainment in subsequent academic cycles.			
PO5: Conceptualize and design civil engineering structures considering various socio-economic factors.			
PO5	**1.8**	**2.4**	**Target Achieved. Following courses were identified which didn't meet the attainment target BSTB01, BSTB02, BSTB03 and BSTB22.**
Action: 1. Design problems were reformulated to include practical constraints such as span optimization, material usage, and constructability aspects. 2. Mini projects integrating analysis, design, and economic justification were assigned to improve applied design competence. 3. Industry-based examples were discussed to relate theoretical analysis to real-world design decisions and socio-economic considerations.			

PO6: Engage in life-long learning for continuing education in research level studies and professional development.			
PO6	**1.8**	**2.7**	**Target Achieved.**

Action:

1. Target value is achieved and systematic measures are being implemented to maintain consistency and achieve further improvement.
2. Research aptitude was strengthened by assigning literature-based reviews and research gap identification tasks in all core subjects.
3. Students were encouraged to publish research outcomes and attend conferences, reinforcing continuous learning beyond coursework.



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