INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad -500 043

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

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

Course Code	Course	Program Outcomes (POs)					
		PO1	**PO2**	**PO3**	**PO4**	**PO5**	**PO6**
BCSB01	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	1.30			1.30	1.30	1.20
BCSB02	ADVANCED DATA STRUCTURES	1.70			1.70	1.70	1.90
BCSB04	WIRELESS SENSOR NETWORKS	2.30			2.00	2.00	2.30
BCSB06	DATA SCIENCE	1.20		1.20	1.20	1.20	1.20
BCSB09	ADVANCED DATA STRUCTURES LABORATORY	3.00		3.00	3.00	3.00	
BCSB10	DATA SCIENCE LABORATORY	3.00		3.00	3.00	3.00	3.00
BCSB11	CYBER SECURITY	2.80		2.70	2.80	2.80	2.80
BCSB12	SOFT COMPUTING	2.80			2.80	2.80	
BCSB13	DATA PREPARATION AND ANALYSIS	2.30			2.30	2.30	
BCSB16	HUMAN AND COMPUTER INTERACTION	2.20		2.20	2.20	2.20	2.20
BCSB19	SOFT COMPUTING LABORATORY	3.00	3.00	3.00	3.00	3.00	3.00
BCSB20	DATA PREPARATION AND ANALYSIS LABORATORY	3.00	3.00	3.00	3.00	3.00	3.00
BCSB21	MINI PROJECT WITH SEMINAR	3.00	3.00	3.00	3.00	3.00	3.00
BCSB31	RESEARCH METHODOLOGY & IPR	1.70	1.70	1.80	1.90	1.60	1.70
BCSB22	MOBILE APPLICATIONS AND SERVICES	2.40		2.40	2.20	2.20	2.40
BCSB30	WASTE TO ENERGY	2.80				2.70	
BCSB40	PHASE - I DISSERTATION	2.00	2.00	2.00	2.00	2.00	2.00
BCSB41	PHASE - II DISSERTATION	3.00	3.00	3.00	3.00	3.00	3.00
Attainment Value		2.4	2.6	2.5	2.4	2.4	2.3

PO Attainment Overall

S.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	2.6	2.5	2.4	2.4	2.3
2	Program Exit Survey (b)	2.7	2.3	2.2	2.0	2.5	2.1
3	Alumni Survey (c)	1.6	2.3	1.9	2.2	1.7	2.0
4	Employer Survey (d)	2.2	2.3	2.6	2.5	2.6	2.5
Final attainment = a*0.8 + b*0.1 + c*0.05 + d*0.05		**2.4**	**2.5**	**2.4**	**2.4**	**2.4**	**2.3**

POs Attainment Levels and Actions for improvement:

S No.	POs	Target value for 2018-2020 PO Attainment	Overall PO Attainment Value from Direct and Indirect Assessment	Status
1	PO 1	2.1	2.4	**Attained**
2	PO 2	2.1	2.5	**Attained**
3	PO 3	2.1	2.4	**Attained**
4	PO 4	2.1	2.4	**Attained**
5	PO 5	2.1	2.4	**Attained**
6	PO 6	2.1	2.3	**Attained**

All POs are attained.

Sustained efforts are made to ensure continuous attainment by monitoring the resources and processes. The following actions were taken to enhance the target level. The attainment of POs and action taken for improvements in attainments for 2018-2020 isillustrated in table

POs	Target Level	Attainment Level	Observations
PO1: Independently carry out research/investigation and development work to solve practical problems			
PO1	**2.1**	**2.4**	Overall attainment of PO1 Target is Achieved. Computer Science and Engineering curriculum has a strong foundation of practical and theoretical knowledge of own engineering principles. However, students need to know in correlating the theoretical concepts with practicalapplications in courses like Mathematical foundations on computer science, Advanced data structures, data science and research methodology and IPR. The following actions were taken to enhance the target level.
Action 1: Critical thinking problems are incorporated in the courses like Mathematical foundations on computer science, Advanced data structures, data science and research methodology and IPR. **Action 2:** Improving curriculum by introducing topics related to research and research (academia and industry) projects leading to publications.			
PO2: Write and present a substantial technical report/document			
PO2	**2.1**	**2.5**	Overall attainment of PO2 reached to the target level. The communication, presentation, and report writing skills need to be more focused on respective theory and laboratory tasks. More focus on research methodology and IPR course is required. The following actions were taken to enhance the target level.
Action 1: Soft skills training is imparted to enhance various aspects of communication by group discussions, presentations and new learning outcomes. **Action 2**: Demonstration of experiment and viva are incorporated in laboratory day to day assessment.			
PO3: Demonstrate a degree of mastery in computer science and engineering emerging areas such as data science, cyber security, and application development.			
PO3	**2.1**	**2.4**	Overall attainment of PO3 reached to the target level in most of the core courses. Students are encouraged to learn, practice and make use of appropriate modern tools in emerging areas of Computer Science and Engineering through trainings, workshops and internships. More focus on data science and research methodology and IPR is required. The following actions were taken to enhance the target level.

Action 1:
Workshops and training programs are conducted in the courses data science and research methodology and IPR courses.
Action 2:
Faculty are encouraged to identify course specific modern tools and encouraged to use in their regular course work in order to reflect recent trends of CSE.

PO4: Apply advanced-level knowledge, techniques, skills, and modern tools in the field of computer science and engineering and its allied areas for solving real-time problems.

PO4	**2.1**	**2.4**	Overall attainment of PO4 reached to the target level in most of the core courses. The focus on usage of research-based methods in solution for complex engineering problems with innovations are needed in the courses includes Mathematical foundations on computer science, Advanced data structures, Wireless sensor Networks, data science and research methodology and IPR. The following actions were taken to enhance the target level.

Action 1:
Critical thinking problems are incorporated in the courses like Mathematical foundations on computer science, Advanced data structures, data science and research methodology and IPR.
Action 2:
Students are motivated to participate actively in project expos, ideation and product development to nurture theirideas along with complex problem-solving skills.

PO5: Function effectively in multidisciplinary environments with the knowledge of frontier technologies by working cooperatively, creatively, and responsively as a member or leader in diverse teams.

PO5	**2.1**	**2.4**	Overall attainment of PO5 reached to the target level in all the courses. The focus on courses like Mathematical foundations on computer science, Advanced data structures, Wireless sensor networks, data science and research methodology and IPR required. The following actions were taken to enhance the target level.

Action 1:
Students are advised to participate STTPs, hackathons and project expos on courses includes Mathematical foundations on computer science, Advanced data structures, Wireless sensor networks, data science and research methodology and IPR.
Action 2:
Students are encouraged to develop projects, in which global and environmental issues are addressed.

PO6: Engage in life-long learning for continuing education in doctoral-level studies and professional development.

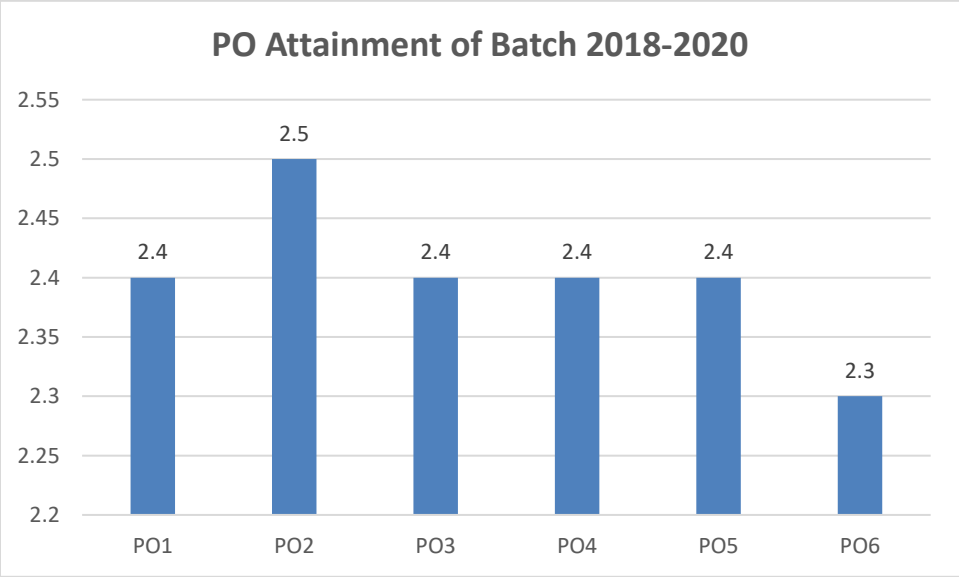
PO6	**2.1**	**2.3**	Overall attainment of PO6 reached to the target level. Mathematical foundations on computer science, Advanced data structures and data science and research methodology and IPR required. The following actions were taken to enhance the target level.

Action 1:
Students are recognized the importance of self-learning and completed certifications and MOOC courses (NPTEL, CISCO, Udemy etc.) on the courses like Mathematical foundations on computer science, Advanced data structures and data science.
Action 2:

Faculty are utilizing the available digital learning facilities in the form of videos (NPTEL, ELRV, Coursera etc.), software tools, to be on par with the recent trends.

Action 3:

Students are encouraged to take topics from magazines and journals for seminar and video topics, research-oriented projects, referresearch literature and present or publish their work.



HOD, CSE

Head of the Department
Computer Science and Engineering
INSTITUTE OF AERONAUTICAL ENGINEERING
Dundigal, Hyderabad - 500 043