INSTITUTE OF AERONAUTICAL ENGINEERING
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Department of Electronics and Communication Engineering
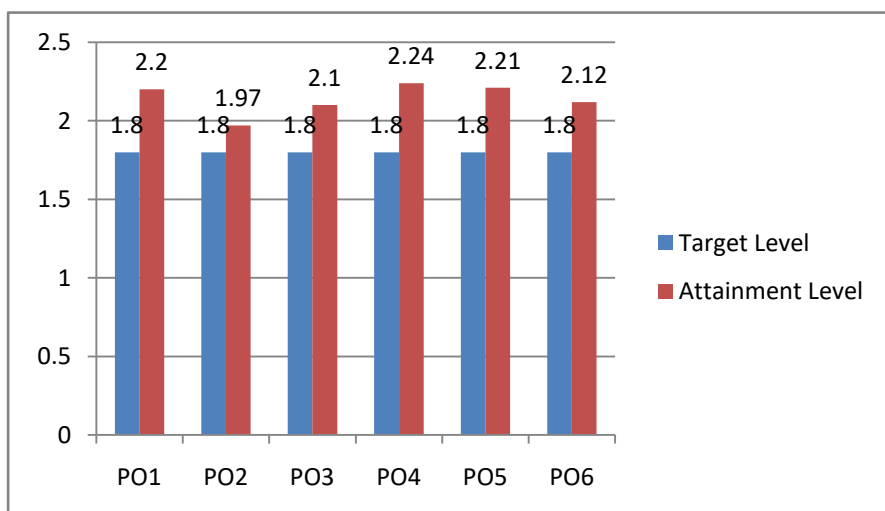### Attainment of Program Outcomes (POs) of 2019 - 2021 batch (IARE-R18)

Subject Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6
BESB01	Embedded System Design	--	--	2.00	2.00	--	2.00
BESB02	Micro Controllers and Programmable Digital Signal Processing	2.50	--	2.40	2.40	--	--
BESB03	Wireless LAN and Pans	1.90	2.00	2.20	2.00	--	1.80
BESB06	Principles of Distributed Embedded Systems	--	--	2.40	2.40	--	--
BESB09	Embedded Programming Laboratory	2.30	--	2.30	2.30	2.30	2.30
BESB10	Microcontrollers and Programmable Digital Signal Processors Laboratory	2.40	--	2.40	2.40	--	--
BESB11	Embedded System Architecture	--	--	2.20	2.30	--	1.80
BESB12	Internet of Things	2.10	1.70	1.70	--	--	--
BESB14	Embedded Wireless Sensor Networks	1.70	0.60	2.30	1.80	1.60	--
BESB16	Microcontrollers for Embedded System Design	2.00	--	2.00	2.00	--	--
BESB19	Embedded Systems Laboratory	1.70	--	1.70	--	1.70	--
BESB20	Internet of Things Laboratory	2.70	--	2.70	2.70	--	--
BESB21	Mini Project with Seminar	2.70	2.70	2.70	2.70	2.70	2.70
BESB22	Embedded Real Time Operating Systems	1.40	1.30	0.50	1.20	1.30	1.50
BCSB30	Waste to Energy	2.50	2.90	0.70	--	2.90	2.90
BCSB31	Research Methodology & IPR	1.20	1.60	--	--	--	1.10
BESB40	Phase - I Dissertation	3.00	3.00	3.00	3.00	3.00	3.00
Direct Attainment Value		**2.2**	**2**	**2.1**	**2.2**	**2.2**	**2.1**

Overall Attainment

S No.	Assessment Component(Direct + Indirect)	Program Outcomes					
		PO1	PO2	PO3	PO4	PO5	PO6
1.	Direct Assessment (CIA + SEE + Course End Survey) (a)	2.2	2	2.1	2.2	2.2	2.1
2.	Student Program exit surveys (b)	2.4	2.8	2.7	2.2	2.7	2.7
3.	Employer surveys (c)	2.5	2.7	2.2	2.7	2.3	2.1
4.	Alumni 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		**2.2**	**2.1**	**2.2**	**2.2**	**2.3**	**2.2**

Table: POs Attainment Levels and Actions for improvement

POs	Target Level	Attainment Level	Observations
PO1: Independently carry out research / investigation and development work to solve practical problems.			
PO1	1.8	2.2	Target is achieved. The following actions were taken to enhance the target level.
The following measures have been initiated to enhance the PO1 attainment level: • Additional research facilities, gradually making a significant contribution for better attainment of PO1. • Mini projects related to advanced topics in the area of Embedded domain will enhance the attainment • The program has made it mandatory to publish a paper related to the domain of project work. • Continuing efforts through literature and courses in lifelong learning			
PO2: Write and present a substantial technical report / document.			
PO2	1.8	1.97	Target is achieved. The following actions were taken to enhance the target level.
The following measures have been initiated to enhance the PO2 attainment level: • The program decided to have a very strong focus on improving student publications, and also on quality publications. • The focus on publications enabled students to improve their technical report writing skills significantly. • The program has made it mandatory to publish a paper related to the project. • Mini Project with seminar was introduced as separate course in the revised curriculum. This has enabled students to improve their technical report/document writing skills.			
PO3: Demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level of higher than the requirements in the appropriate bachelor program.			
PO3	1.8	2.10	Target is achieved. The following actions were taken to enhance the target level.
The following measures have been initiated to enhance the PO3 attainment level: • Using modern tools in the laboratory, such as MATLAB, Keil, enhances the demonstration levels of the program. • Improving curriculum by introducing topics related to research. • The elective courses provide breadth of experience in the area of embedded systems and its realtime applications.			
PO4: Apply the skills and knowledge needed to serve as a professional engineer skilful at designing embedded systems for effective use in communications, IoT, medical electronics and signal processing applications			
PO4	1.8	2.24	Target is achieved. The following actions were taken to enhance the target level.
The following measures have been initiated to enhance the PO4 attainment level: • Enriched the curriculum by including new courses as Program Electives. • New labs have been introduced with the use of state-of-the-art modern tools like PSOC simulator, Keil and MATLAB. • Students are encouraged to carry the mini projects in the multi domain areas			
PO5: Function on multidisciplinary environments by working cooperatively, creatively and responsibly as a member of a team.			
PO5	1.8	2.21	Target is achieved. The following actions were taken to enhance the target level.
The following measures have been initiated to enhance the PO5 attainment level: • Some course coordinators introduced mini projects / seminars in their courses, for which students had to work independently. This contributed to the increase in PO5 attainment • Mini Project with Seminar and Project work also helps to work cooperatively in a team and individually.			
PO6: Recognize the need to engage in lifelong learning through continuing education and research.			
PO6	1.8	2.12	Target is achieved. The following actions were taken to enhance the target level.
The following measures have been initiated to enhance the PO6 attainment level: • Students were motivated to do the research in advanced areas in premier institutions • Students were motivated to take up NPTEL certification courses.			

HOD, ECE