



# INSTITUTE OF AERONAUTICAL ENGINEERING

(Autonomous)

Dundigal, Hyderabad-500043

## Department of Electrical and Electronics Engineering Electrical Power Systems

### Attainment of Program Outcomes (POs) and Program Specific Outcomes (PSOs) of 2019- 2021 batch (IARE- R18)

Course Code	Course Title	PO1	PO2	PO3	PO4	PO5	PO6
BCSB30	Waste To Energy	0	0	0	2	2	3
BCSB31	Research Methodology & IPR	2.7	2	1	1	1	2
BCSB32	English For Research Paper Writing	0	3	0	0	0	3
BCSB33	Disaster Management	0	0	0	2	2	3
BPSB01	Modern Power System Analysis	1.4	2	3	3	0	2
BPSB02	Economic Operation of Power Systems	1.2	2	1.8	1.2	0	2
BPSB03	HVDC Transmission	1	2	1	2.2	0	2
BPSB07	Reactive Power Compensation and Management	1.5	0	2.3	2.5	1	2
BPSB09	Power System Computational laboratory	3	0	3	3	2	3
BPSB10	Internet of things laboratory	2.2	1	2	1.2	3	3
BPSB11	Digital protection of power system	1	2	1.8	1.5	0	2
BPSB12	Power system dynamics	2	2	1.3	0	1.5	2
BPSB15	Industrial load modelling and control	2.3	1.5	1.8	2	0	0
BPSB16	Ai techniques in power systems	1.7	0	3	3	1.7	1.7
BPSB19	Artificial intelligence laboratory	2	1	2	1.8	3	2.3
BPSB20	POWER SYSTEMS LABORATORY	2	2	2	3	3	3
BPSB21	MINI PROJECT WITH SEMINAR	3	3	3	3	3	3
BPSB23	FLEXIBLE AC TRANSMISSION SYSTEMS	2.5	0	3	3	0	1.5
BPSB40	PHASE - I DISSERTATION	3	2	3	3	3	3
BPSB41	PHASE - II DISSERTATION	2.3	3	2.2	2.7	3	3
<b>Direct Attainment</b>		<b>2.05</b>	<b>2.04</b>	<b>2.19</b>	<b>2.28</b>	<b>2.25</b>	<b>2.45</b>



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## Overall Attainment

S No.	Assessment Component (Direct + Indirect)	Program Outcomes					
		PO1	PO2	PO3	PO4	PO5	PO6
1.	Direct Assessment (CIA + SEE+ CourseEndSurvey)(a)	2.5	2.5	2.5	2.5	2.7	2.4
2.	Student Program exit surveys(b)	2.7	2.7	2.4	2.5	2.4	2.1
3.	Employer surveys(c)	2.6	2.6	2.3	2.4	2.5	2.4
4.	Alumni Survey(d)	2.2	2.3	2.6	2.5	2.6	2.5
<b>Overall attainment = <math>a*0.8 + b*0.1 + c*0.05 + d*0.05</math></b>		<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.5</b>	<b>2.7</b>	<b>2.4</b>



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## Action taken to improve the attainment of Pos and PSOs:

POs	Target Level	Attainment Level	Observations
<b>PO1: An ability to independently carry out research/investigation and development work to solve practical problems.</b>			
<b>PO1</b>	<b>1.8</b>	<b>2.5</b>	Target is achieved. The following actions were taken to enhance the target level.
<p>The following measures have been initiated to enhance the PO1 attainment level:</p> <p>Additional research facilities, gradually making a significant contribution for better attainment of PO1</p> <ul style="list-style-type: none"> <li>• Mini projects related to advanced topics in the area of Power Systems domain will enhance the attainment</li> <li>• The program has made it mandatory to publish a paper related to the domain of project work.</li> <li>• Continuing efforts through literature and courses in lifelong learning</li> <li>• Knowledge about the application of the subject.</li> </ul>			
<b>PO2: An ability to write and present a substantial technical report/document</b>			
<b>PO2</b>	<b>1.8</b>	<b>2.5</b>	Target is achieved. The following actions were taken to enhance the target level.
<p>The following measures have been initiated to enhance the PO2 attainment level:</p> <p>The program decided to have a very strong focus on improving student publications, and also on quality publications.</p> <ul style="list-style-type: none"> <li>• The focus on publications enabled students to improve their technical report writing skills significantly.</li> <li>• The program has made it mandatory to publish a paper related to the project.</li> <li>• Mini Project with seminar was introduced as separate course in the revised curriculum.</li> <li>• This has enabled students to improve their technical report/document writing skills.</li> </ul>			
<b>PO3: Student 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 of higher than the requirements in the appropriate bachelor program.</b>			
<b>PO3</b>	<b>1.8</b>	<b>2.5</b>	Target is achieved. The following actions were taken to enhance the target level.
<p>The following measures have been initiated to enhance the PO3 attainment level:</p> <ul style="list-style-type: none"> <li>• Using modern tools in the laboratory, such as MATLAB, PSCAD, enhances the demonstration levels of the program.</li> <li>• Improving curriculum by introducing topics related to research.</li> <li>• The elective courses provide breadth of experience in the area of Power systems and its real time applications and courses.</li> </ul>			
<b>PO4: Identify, formulate and solve complex problems on modern-day issues of Power Systems using advanced technologies with a global perspective and envisage advanced research in thrust areas</b>			
<b>PO4</b>	<b>1.8</b>	<b>2.5</b>	Target is achieved. The following actions were taken to enhance the target level.



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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 to improve practical skills of the students

**PO5:** ioModel and apply appropriate techniques and modern tools on contemporary issues in multidisciplinary environment.

<b>PO5</b>	<b>1.8</b>	<b>2.5</b>	Target is achieved. The following actions were taken to enhance the target level.
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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 digital communication and digital signal processing courses.

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

<b>PO6</b>	<b>1.8</b>	<b>2.7</b>	Target is achieved. The following actions were taken to enhance the target level.
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The following measures have been initiated to enhance the PO6 attainment level:

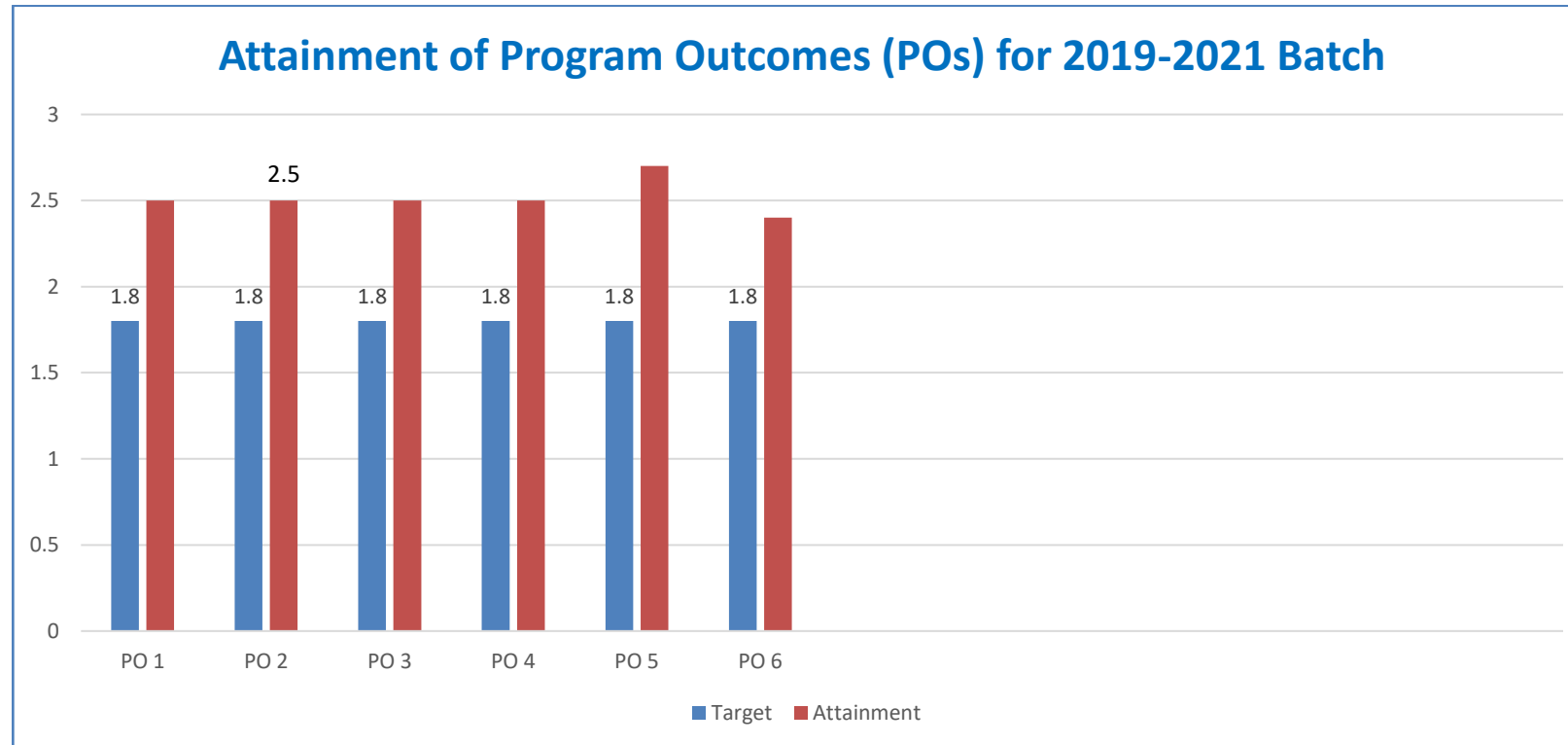
- Students were motivated to do the research in advanced areas in premier institution
- Students were motivated to take up NPTEL certification courses.



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**HOD - EEE**