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*PEO*

*PO*

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## *Outcome-Based Education at AUST*

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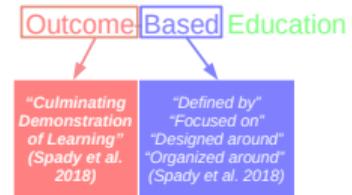
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## *What is OBE?*

*"Outcome-based Education (OBE) is an educational theory that bases each part of an educational system on goals (outcomes)" [2]*

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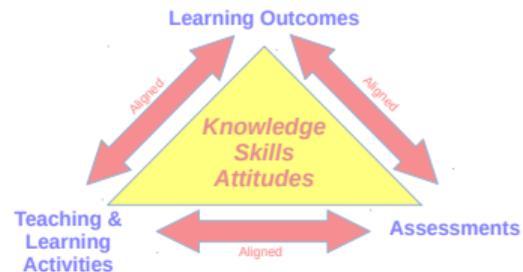
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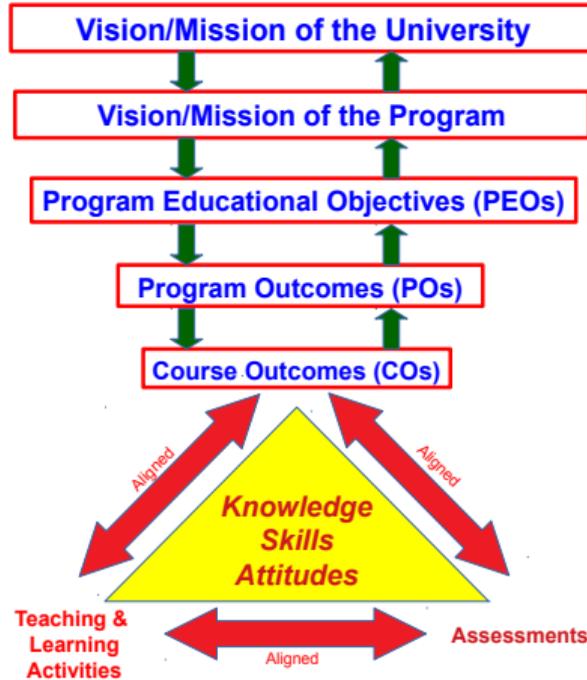
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# OBE Implementation at AUST: The Big Picture



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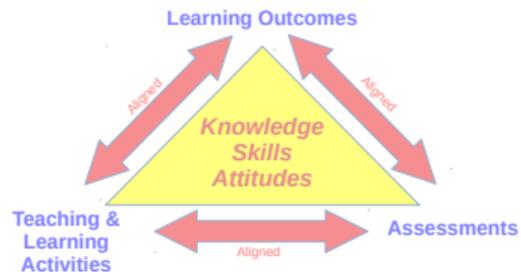
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## *Program Educational Objectives (PEOs)*

"broad statements that describe  
the career and professional  
accomplishments that the program  
is preparing graduates to  
achieve"  
[1, Section 4.7]

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# *The Three PEOs for the ME Program at AUST*

## **PEO1 - Professionalism**

Graduates will demonstrate sound professionalism in mechanical engineering or related fields.

## **PEO2 - Continuous Personal Development**

Graduates will engage in life-long learning in multi-disciplinary fields for industrial and academic careers.

## **PEO3 - Sustainable Development**

Graduates will promote sustainable development at local and international levels.

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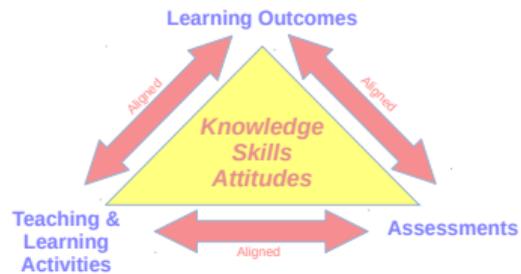
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## *Program Outcomes (POs) or Graduate Attributes*

"describe what students are expected to know and be able to do by the time of graduation"  
[1, Section 4.8]

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*POs related to "Analysis of Problems & Synthesis of Solutions" [3, Slide 18]*

- 1 P01 - Engineering Knowledge
- 2 P02 - Problem Analysis
- 3 P03 - Design/development of Solutions
- 4 P04 – Investigation
- 5 P05 - Modern Tool Usage

**CORE ENGINEERING SCIENCE**

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## *POs related to "RESPONSIBILITIES" [3, Slide 18]*

- 1 PO6 - The Engineer and Society
- 2 PO7 - Environment and Sustainability
- 3 PO8 – Ethics

PROFESSIONAL DUE DILIGENCE

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*POs related to "Required in Workplace" [3, Slide 18]*

- 1 PO9 - Individual Work and Teamwork
- 2 PO10 - Communication
- 3 PO11 - Project Management and Finance
- 4 PO12 - Life-long Learning

PROFESSIONAL ENGINEERING  
PRACTICES

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*"Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems"*

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*"Identify, formulate, research and analyze complex engineering problems and reach substantiated conclusions using the principles of mathematics, the natural sciences and the engineering sciences"*

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*"Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for public health and safety as well as cultural, societal and environmental concerns"*

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*"Conduct investigations of complex problems, considering design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions"*

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*"Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations"*

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*"Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice"*

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*"Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development"*

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*"Apply ethical principles and  
commit to professional ethics,  
responsibilities and the norms of  
engineering practice"*

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*"Function effectively as an individual and as a member or leader of diverse teams as well as in multidisciplinary settings"*

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*"Communicate effectively about complex engineering activities with the engineering community and with society at large. Be able to comprehend and write effective reports, design documentation, make effective presentations and give and receive clear instructions"*

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*"Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work as a member or a leader of a team to manage projects in multidisciplinary environments"*

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*"Recognize the need for and have the preparation and ability to engage in independent, life-long learning in the broadest context of technological change"*

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## I

- [1] BAETE (2017). Accreditation Manual for Undergraduate Engineering Programmes.
- [2] BAETE (2019). Accreditation Manual for Undergraduate Engineering Programmes.
- [3] Hamzah, S. H. and Pao, L. C. (2019). Workshop on the Implementation of Complex Engineering Problem Solving (WP) and Complex Engineering Activities (EA). url: <http://www.baetebangladesh.org/download/2019%20BAETE%20WPEA%20WORKSHOP%2018\protect\discretionary{\char\hyphenchar\font}{\ }19June.pdf>.

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# THANK YOU

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