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|  |  | Ahsanullah University of Science and Technology (AUST)Bangladesh |

# COURSE OUTLINE

**1. Title**:

**2. Code**:

**3. Credit hours**:

**4. Level**:

**5. Faculty**: **Engineering**

**6. Department**:

**7. Programme**:

**8. Synopsis from the Approved Curriculum**:

**9. Type of course (core/elective)**:

**10. Prerequisite(s) (if any)**:

**11. Name of the instructor(s) with contact details and office hours**:

***Name of the Instructor***

***Room:***

***Phone:***

***E-mail:***

***Consultation hour:***

**12. Semester Offered**:

**13. Mapping of Course Outcomes (COs) with Program Outcomes (POs) and Bloom’s Taxonomy Level**

After completion of the course, the students will be expected to:

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| --- | --- | --- | --- | --- | --- |
| Sl. No. | COs | POs | Bloom’s Taxonomy | | |
| C | A | P |
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**14. Mapping of COs with Knowledge Profiles, Complex Engineering Problem Solving and Complex Engineering Activities**

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| Course Outcome | Knowledge Profile | Complex Problem Solving | Complex Engineering Activities |
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**15. Percentages of Assessment Methods**

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| Method | Percentage |
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**16. Week wise distribution of contents and assessment methods**

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| Week | Topics | Assessment Method(s) |
| ***1*** |  |  |
| ***2*** |  |  |
| ***3*** |  |  |
| ***4*** |  |  |
| ***5*** |  |  |
| ***6*** |  |  |
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| ***10*** |  |  |
| ***11*** |  |  |
| ***12*** |  |  |
| ***13*** |  |  |
| ***14*** |  |  |

**17.** **References**

17.1. Required (if any)

17.2. Recommended (if any)

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| **Prepared by:**  Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name: ***{Name of the Instructor}***  Department:  Date: | **Checked by:**  Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name: ***{Name of the Program coordinator}***  OBE Program Coordinator,***Name of the Department***  Date: | **Approved by:**  Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Name:  HOD, ***Name of the Department***  **Date:** |

# Annex-1: Generic PEOs for Engineering Programs at AUST

**PEO1 - Professionalism**

Graduates will demonstrate sound professionalism in 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.

# Annex-2: Mapping of PEO-PO

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|  | PEO1 | PEO2 | PEO3 |
| PO1 - Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems. | **√** |  |  |
| PO2 - Problem analysis: Identify, formulate, research and analyze complex engineering problems and reach substantiated conclusions using the principles of mathematics, the natural sciences and the engineering sciences. | **√** |  |  |
| PO3 - Design/development of solutions: 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. | **√** |  |  |
| PO4 – Investigation: Conduct investigations of complex problems, considering design of experiments, analysis and interpretation of data and synthesis of information to provide valid conclusions. | **√** |  |  |
| PO5 - Modern tool usage: 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. | **√** |  |  |
| PO6 - The engineer and society: Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice. | **√** |  | **√** |
| PO7 - Environment and sustainability: Understand the impact of professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of, and need for sustainable development. | **√** |  | **√** |
| PO8 – Ethics: Apply ethical principles and commit to professional ethics, responsibilities and the norms of engineering practice. | **√** |  |  |
| PO9 - Individual work and teamwork: Function effectively as an individual and as a member or leader of diverse teams as well as in multidisciplinary settings. | **√** | **√** |  |
| PO10 – Communication: 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. | **√** |  |  |
| PO11 - Project management and finance: 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. | **√** |  |  |
| PO12 - Life-long learning: Recognize the need for and have the preparation and ability to engage in independent, life-long learning in the broadest context of technological change. |  | **√** |  |

# Annex-3: Blooms Taxonomy \*

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| 1. Level | 1. Cognitive Domain – Revised Version | 1. Affective Domain | 1. Psychomotor Domain |
| 1. 1 | 1. Remember (1) | 1. Receiving Phenomena (1) | 1. Perception (1) |
| 1. 2 | 1. Comprehend (2) | 1. Responding to Phenomena (2) | 1. Set (2) |
| 1. 3 | 1. Apply (3) | 1. Valuing (3) | 1. Guided Response (3) |
| 1. 4 | 1. Analyse (4) | 1. Organizing Values (4) | 1. Mechanism (4) |
| 1. 5 | 1. Evaluate (5) | 1. Internalising Values (5) | 1. Complex Overt Response (5) |
| 1. 6 | 1. Create (6) |  | 1. Adaption (6) |
|  |  |  | 1. Origination (7) |

1. \* Based on “REVISED BLOOM’S TAXONOMY INDICATOR v3.31” , available at http://adept.mmu.edu.my/wp-content/uploads/2018/09/Blooms-Taxonomy-Indicator-v3.31.xls