



# **ABU DHABI POLYTECHNIC**

## **ACADEMIC SUPPORT DEPARTMENT**

### **Program Educational Objectives**

### **Program Educational Objectives (PEOs):**

Program education objectives were aligned with AD Poly Strategic Plan. The ASD curriculum designed to assure the implementation of the department mission and vision which based on offering general education, life-long learning, and variety of academic services in applied sciences and engineering technology are in alignment with AD Poly Strategic Plan and Abu Dhabi Economic Vision 2030 by the following educational objectives:

- **PEO1:** Provide students with knowledge and skill in science, mathematics, fundamentals of engineering technology, information literacy, and communication that will help them succeed in their studies, lives and careers.
- **PEO2:** Provide students with critical thinking skills that promoting innovation, creativity and entrepreneurship.
- **PEO3:** Provide students with a common core of understanding such as in Islamic culture and studies that enhancing their awareness of their role as a responsible citizens of UAE, who know and value their religion and culture, and also appreciate and participate in the multicultural diversity of the modern world.
- **PEO4:** Create learning environment that produce competency in the use of resources and in research methodologies to promote life-long learning.
- **PEO5:** Provide students with teamwork and leadership experiences while demonstrating effective communication skills and knowledge that will help them successfully guide the economic, social and cultural development of the UAE.

### **Program Learning Outcomes (SLOs)/Students Learning Outcomes (SLOs):**

(taken from ABET Educational Objectives 1 through 5 for Engineering Technology)

***For baccalaureate degree programs, these student outcomes must include, but are not limited to, the following learned capabilities:***

- 1) an ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
- 2) an ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
- 3) an ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- 4) an ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes; and
- 5) an ability to function effectively as a member as well as a leader on technical teams.

## Mapping Courses to SLOs (1-5)

| Course Code | Course Title                                | C.H | SLO1 | SLO2 | SLO3 | SLO4 | SLO5 |
|-------------|---|-----|------|------|------|------|------|
| MATH1001    | Precalculus                                 | 3   | ■    |      |      |      |      |
| MATH1010    | Calculus I                                  | 3   | ■    |      |      |      |      |
| MATH1020    | Calculus II                                 | 3   | ■    |      |      |      |      |
| MATH2114    | Calculus III                                | 3   | ■    |      |      |      |      |
| MATH2011    | Linear Algebra                              | 3   | ■    |      |      |      |      |
| MATH2012    | Probability and Statistics                  | 3   | ■    |      |      |      |      |
| MATH2013    | Differential Equations                      | 3   | ■    |      |      |      |      |
| MATH2015    | Applied mathematics                         | 3   | ■    |      |      |      |      |
| PHYS1011    | Physics I                                   | 3   | ■    |      |      |      |      |
| PHYS1012    | Physics I Lab                               | 1   | ■    |      |      | ■    |      |
| PHYS1013    | Physics II                                  | 3   | ■    |      |      |      |      |
| PHYS1014    | Physics II lab                              | 1   | ■    |      |      | ■    |      |
| PHYS1015    | Physics I for Aviation                      | 3   | ■    |      |      |      |      |
| PHYS1016    | Physics I Lab for Aviation                  | 1   | ■    |      |      |      |      |
| PHYS1017    | Physics II for Aviation                     | 3   | ■    |      |      |      |      |
| CHEM1011    | Chemistry I                                 | 3   | ■    |      |      |      |      |
| CHEM1012    | Chemistry I Lab                             | 1   | ■    |      |      | ■    |      |
| CHEM1013    | Chemistry II                                | 3   | ■    |      |      |      |      |
| CHEM1014    | Chemistry II Lab                            | 1   | ■    |      |      | ■    |      |
| CHEM4011    | Environmental Science and Analyses          | 3   | ■    |      | ■    | ■    |      |
| ENGL1001    | English Skills                              | 0   |      |      | ■    |      |      |
| ENGL1011    | Academic English I                          | 3   |      |      | ■    |      |      |
| ENGL1012    | Academic English II                         | 3   |      |      | ■    |      |      |
| ENGL2011    | Public Speaking                             | 1   |      |      | ■    |      | ■    |
| ENGL2012    | Literature Review                           | 1   |      |      | ■    |      | ■    |
| ENGL2013    | Report Writing                              | 1   |      |      | ■    |      | ■    |
| HUM1011 c   | Islamic Culture                             | 3   |      |      | ■    |      | ■    |
| HUM1012     | Emirates Society & Culture                  | 3   |      |      | ■    |      | ■    |
| HUM1013     | Arabic Communication Skills                 | 3   |      |      | ■    |      | ■    |
| HUM3011     | Creativity, Innovation and Entrepreneurship | 3   |      |      | ■    |      | ■    |
| ENG1002     | Engineering Drawing                         | 2   | ■    |      | ■    | ■    |      |
| ENG1001     | Industrial Safety and Professional Ethics   | 2   | ■    | ■    |      |      |      |
| ENG1003     | Mechanical Workshop                         | 1   | ■    |      |      | ■    |      |
| ENG1011     | Introduction to Computer Electronics        | 3   | ■    |      |      | ■    |      |
| ENG2011     | Thermodynamics                              | 3   | ■    |      |      | ■    |      |
| ENG2012     | Statics & Strength of Materials             | 3   | ■    |      |      | ■    |      |
| ENG2013     | Fluid Flow & Heat Transfer                  | 3   | ■    |      |      | ■    |      |
| HUM1000     | Lifelong Learning Skills                    | 3   |      |      | ■    |      | ■    |

| Course Code | Course Title                                    | C.H | SLO1 | SLO2 | SLO3 | SLO4 | SLO5 |
|-------------|---|-----|------|------|------|------|------|
| HUM2012     | Applied Research and Development Skills         | 3   | ■    |      |      | ■    | ■    |
| HUM401      | Leadership Skills                               | 3   |      |      | ■    |      | ■    |
| HUM3012     | Personal Development Planning                   | 2   |      |      | ■    |      | ■    |
| HUM3013     | Applied Research Methods                        | 3   | ■    |      |      | ■    | ■    |
| ICT1011     | Introduction to Programming and Problem Solving | 3   | ■    | ■    |      |      |      |

**Mapping Program Educational Objectives (PEOs) to SLOs (1-5):**

| C.H  | PEO1 | PEO2 | PEO3 | PEO4 |
|------|------|------|------|------|
| SLO1 | ■    | ■    | ■    | ■    |
| SLO2 |      | ■    |      |      |
| SLO3 | ■    | ■    | ■    |      |
| SLO4 |      | ■    | ■    |      |
| SLO5 | ■    | ■    |      |      |