



Operational Excellence and Assessment Support

Academic Learning Compacts

**College of Engineering and Computer Science  
Academic Learning Compacts**

**Aerospace Engineering - B.S.As.E.**

**Discipline Specific Knowledge, Skills, Behavior and Values**

1. An ability to apply knowledge of mathematics, science, and engineering (ABET a)
2. An ability to design and conduct experiments, as well as to analyze and interpret data (ABET b)
3. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability (ABET c)
4. An ability to identify, formulate, and solve engineering problems (ABET e)
5. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context (ABET h)
6. A recognition of the need for, and an ability to engage in life-long learning (ABET i)
7. A knowledge of contemporary issues (ABET j)
8. An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice (ABET k)

**Critical Thinking**

1. An ability to design and conduct experiments, as well as to analyze and interpret data (ABET b)
2. An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability (ABET c)
3. The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context (ABET h)
4. A knowledge of contemporary issues (ABET j)

### **Communication**

- 1. An ability to function on multidisciplinary teams (ABET d)**
- 2. An understanding of professional and ethical responsibility (ABET f)**
- 3. An ability to communicate effectively (ABET g)**
- 4. A recognition of the need for, and an ability to engage in life-long learning (ABET i)**

### **Assessment of Aerospace Engineering - B.S.As.E. Outcomes**

**These outcomes will be assessed using a variety of assessment methods, including:**

- Data for the assessment is collected from surveys (graduating students, alumni, faculty, industry), capstone (senior design) projects, embedded concept test questions, MMAE Undergraduate committee, curriculum/course improvement reviews, and peer and project mentor reviews.**