The mechanical, materials and aerospace engineering department offers three undergraduate degrees in mechanical engineering (BSME), aerospace engineering (BSAE) and materials science and engineering (BSME).

All three degree programs in aerospace engineering, mechanical engineering and materials science and engineering are accredited by the Engineering Accreditation Commission of ABET Inc., [http://www.abet.org](http://www.abet.org).

The Program Educational Objectives (PEO) and Student Outcomes (SO) for each program is given below along with the enrollment and graduation data for the last five years.

Program Educational Objectives are broad statements that describe the career and professional accomplishments that the program is preparing graduates to achieve.

Student Outcomes describe what students are expected to know and be able to do by the time of graduation. These relate to the skills, knowledge and behaviors that students acquire as they progress through the program.

**BACHELOR OF SCIENCE IN AEROSPACE ENGINEERING (AE)**

**PROGRAM EDUCATIONAL OBJECTIVES (PEO)**

- Graduates will meet the expectations of employers of aerospace engineers.
- Graduates will be prepared to pursue advanced study if they so desire.
- Graduates will be prepared to assume/undertake leadership roles in their communities and/or professions.

**STUDENT OUTCOMES (SO)**

1. Graduates of the AE undergraduate program will have:
   - An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions

7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

### ENROLLMENT AND GRADUATION DATA FOR THE AE PROGRAM

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### BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING (ME)

#### PROGRAM OBJECTIVES

- Graduates will meet the expectations of employers of mechanical engineers.
- Graduates will be prepared to pursue advanced study if they so desire.
- Graduates will be prepared to assume/undertake leadership roles in their communities and/or professions.

#### STUDENT OUTCOMES

1. Graduates of the ME undergraduate program will have:
   - An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.
ENROLLMENT AND GRADUATION DATA FOR THE ME PROGRAM

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BACHELOR OF SCIENCE IN MATERIALS SCIENCE AND ENGINEERING (MSE)

PROGRAM OBJECTIVES

- Graduates will meet the expectations of employers of materials science engineers.
- Graduates will be prepared to pursue advanced study if they so desire.
- Graduates will be prepared to assume/undertake leadership roles in their communities and/or professions.

STUDENT OUTCOMES

1. Graduates of the MSE undergraduate program will have:
   An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors
3. An ability to communicate effectively with a range of audiences
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies.

ENROLLMENT AND GRADUATION DATA FOR THE MSE PROGRAM
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