

## MSE Student Outcomes

### **ABET, Criterion 3 Program Outcomes**

1. 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.

### **School of MME, MSE Program Outcomes**

8. Ability to apply advanced science (such as chemistry and physics) and engineering principles to materials systems.
9. Integrated understanding of the scientific and engineering principles underlying the above for major elements of the field, viz. structure, properties, processing and performance related to materials systems appropriate to the field.
10. Ability to apply and integrate knowledge from each of the above four elements of the field to solve materials selection and design problems
11. Ability to utilize experimental, statistical, and computational methods consistent with the goals of the program.