

The Mission of the Department of Materials Science and Engineering

The mission of the Department of Materials Science and Engineering is to offer the students an environment of excellence in teaching, scholarly research and service to the University community and the community at large that prepares students for successful careers in industry, academia or the government.

Program Educational Objectives

- 1. Graduates who are fundamentally versed in the basic concepts of science, mathematics and engineering and have special knowledge of the various classes of materials in context of processing, structure, properties, characterization and selection.*
- 2. Graduates who are able to effectively communicate both oral and in written form*
- 3. Graduates who are prepared with their materials degree for advanced academic studies as well as the rigors of an industrial career and are prepared to use this education for the improvement of society.*
- 4. The department will instill in the students a desire for a broad based education and a commitment to life-long learning.*

Materials Science & Engineering Program Outcomes A through K Outcomes

- A. Graduates will have the ability to apply basic knowledge of mathematics, science, and engineering to solve materials-related problems*
- B. Graduates will be able to design and conduct experiments, characterize materials, and properly interpret data in order to understand materials behavior*
- C. Graduates will have an understanding of the structure-properties-performance of materials, and will have the ability to select or design a materials based on an application*
- D. Graduates will have the ability to function effectively on multidisciplinary teams*
- E. Graduates will have the ability to identify and solve ideas and concepts effectively through written and oral communications*
- F. Graduates will understand the ethical and professional responsibilities of engineers*
- G. Graduates will be able to convey thoughts, ideas, and concepts effectively through written and oral communication*

H. Graduates will have a broad understanding of societal issues in order to understand the engineer's impact

I. Graduates will understand the evolving nature of technology and society and the need for continuous learning

J. Graduates will have an understanding of current applications and issues in materials engineering specifically and technological issues in general

K. Graduates will have the ability to apply techniques and skills necessary in materials engineering including the use of computing information technology