Materials Engineering

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Academic Program

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<tr>
<th>Program name</th>
<th>Program type</th>
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<tr>
<td>Materials Engineering</td>
<td>BS</td>
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Materials engineering is a field in which engineers use their knowledge of the relationship between a material’s structure and its properties to alter the material to get the performance needed. Materials engineers contribute their expertise in virtually all areas of technology: from the nano-sized materials found in biomedical and microelectronic applications to the large-scale composites found in aerospace applications.

Because engineered products are often limited by materials issues (such as performance and manufacturability), materials engineers play a vital role on engineering design teams, working closely with other engineers. As part of these teams, they apply their knowledge of science, engineering, and state-of-the-art analytical instruments.

The majority of our graduates find employment in the biomedical, electronic, aerospace and petroleum industries. Some work as consultants for large or small organizations. Others become executives. A significant number of materials engineers are involved in research and development. Some of our graduates are entrepreneurs who have started their own consulting or manufacturing companies. Others are attorneys or physicians. Because of our broad-based curriculum, our graduates are able to excel in professions of their choosing.

The curriculum in materials engineering emphasizes practical applications as well as principles. The laboratories are constantly evolving, and our students benefit from frequent exposure to a wide variety of materials testing and analysis equipment. The program is accredited by the Engineering Accreditation Commission ABET, http://www.ABET.org. Our students have a reputation for being immediately productive in industry, and they are also actively sought by graduate programs throughout the country.

Vision
To collaboratively overcome the intertwined grand challenges of sustainability and transformative learning through our materials engineering program.

Mission
To be a vibrant, creative and effectual learning community that cultivates the unique capabilities of each individual to thrive in a complex, interconnected and ever-changing world.

Program Education Objectives
1. Holistically address complex challenges, drawing from materials engineering understanding and life experiences;
2. Live meaningful, socially-beneficial lives, enriched by their engineering education;
3. Exemplify proactive adaptive capacity throughout their lives; and
4. Communicate effectively in different contexts

Undergraduate Program
BS Materials Engineering

The Materials Engineering curriculum has received national recognition for its innovative structure and will provide both breadth and depth in your understanding of science and engineering principles and practices. The curriculum in materials engineering emphasizes practical applications as well as principles. The laboratories are constantly evolving, and our students benefit from frequent exposure to a wide variety of materials testing and analysis equipment. The program is accredited by the Engineering Accreditation Commission ABET, http://www.ABET.org. Our students have a reputation for being immediately productive in industry, and they are also actively sought by graduate programs throughout the country.