Materials Science

[At UW-Eau Claire]

Every day we come into contact with hundreds of manufactured objects that are essential to modern life: vehicles, clothes, machines in our homes and offices, sport and leisure equipment, computers and phones, and medical technology. Everything we see and use is made from materials derived from the earth: metals, polymers, ceramics, semiconductors and composites. Materials Science majors study structure, properties and behavior of all materials, develop processes to manufacture useful products from them, and research environmentally friendly materials.

Fast-growing industry

Materials are evolving faster today than any time in history, enabling scientists and engineers to improve the performance of existing products and to develop innovative technologies that will enhance every aspect of our lives. Materials Science has become a key discipline in the competitive global economy and is recognized as one of the technical disciplines with the most exciting career opportunities.

Great facilities

Students have the opportunity to use excellent on-campus state-of-the-art materials science facilities including instrumentation housed in the Materials Science Center. Instrumentation includes: a scanning Auger nanoprobe, a transmission electron microscope, a scanning electron microscope, an x-ray photoelectron spectrometer, a scanning tunneling electron microscope, atomic force microscopes, a high resolution inductively coupled plasma mass spectrometer, x-ray diffractometer, x-ray fluorescence spectrometer

and a molecular beam epitaxial growth chamber.

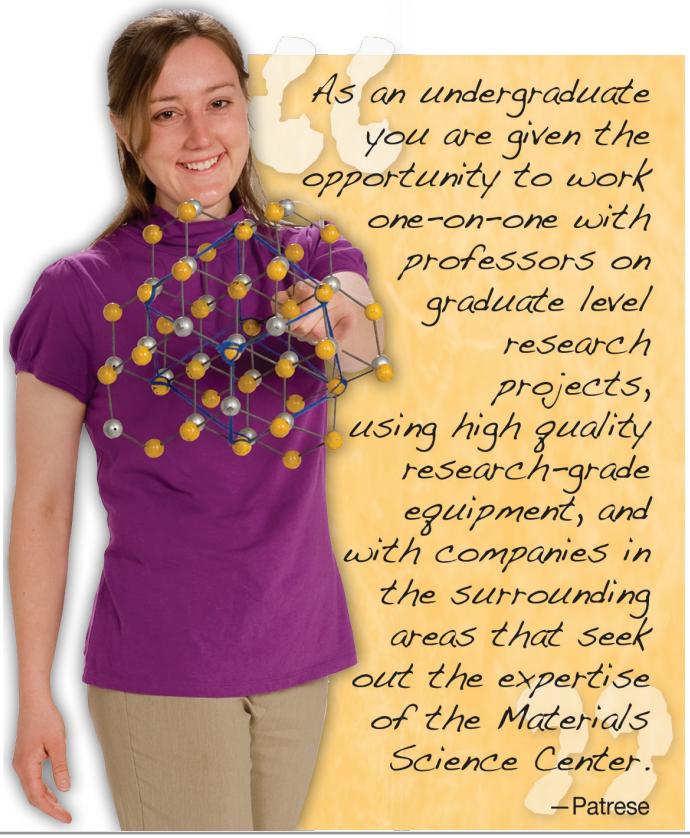
Research opportunities

Students have summer and academic year research opportunities at UW-Eau Claire and other locations across the United States.

Great faculty

Our outstanding faculty are proud of the individual attention they give their students. You'll learn in small class settings and get lots of one-on-one attention from professors who inspire learning and truly want you to succeed. Faculty draw from several areas of expertise, including, chemistry, physics, materials science, and have experience in polymer engineering, metallurgy, industry and working with super conductors.

To learn more about the Eau Claire Advantage go to www.uwec.edu/advantage



[our graduates]

Typical positions held by materials science graduates include materials science engineer, technical journalism, forensic science, technical sales and marketing, research and development, design and manufacture, quality assurance, production management; continued education at the graduate level in the areas of materials science, engineering, chemistry or physics.

[Majors]

Materials Science
Comprehensive major (requires no minor) with a choice of 7 emphases:

- Nanoscience
- Physics of Materials
- Chemistry of Materials
- Applied Materials
- Geomaterials
- Biomaterials
- Liberal Arts

[Suggested freshman curriculum]

Intro to Nanoscience and Materials Science

Precalculus and Calculus I

Chemical Principles or General Chemistry I and II

University Physics 1

Social Science/Humanities Elective

Intro to College Writing

Wellness or Physical Activity

note:

Unusual and unique

The field of materials science and engineering is the study of "condensed matter" (that is, solids and liquids), and how that understanding can be applied to fabricating devices and structures of utility. A relatively young discipline, materials science is an outgrowth of two traditional areas: the study of matter (and its structure-property relationship) that originated in chemistry and physics and developments in various "materials" engineering fields (notably, microelectronics, metallurgy, and plastics).

The major is designed to give students a strong foundation in fundamental sciences and mathematics. The absence of engineering courses in a materials science major is unusual and integrating it into a liberal arts and sciences degree is unique. The structure of the major is deliberately interdisciplinary and broadly defined, consistent with a liberal education approach. **www.uwec.edu/msci**.

for more information

For more information about the materials science program:
MATERIALS SCIENCE
Phillips 177, mcellimt@uwec.edu, Marc McEllistrem
715-836-5504 • **www.uwec.edu/msci**

For more information about campus:
ADMISSIONS
Schofield Hall 111
UW-Eau Claire Eau Claire, WI 54702-4004
715-836-5415 • **www.uwec.edu/admissions**