THE UNIVERSITY OF MAINE

COLLEGE OF EARTH, HEALTH, AND LIFE SCIENCES

Sustainable Materials and Technology

UMaine's ADVANTAGE

- Opportunities to work with field experts who have diverse backgrounds and experiences
- Accredited degrees by the Society of Wood Science and Technology
- Opportunity for Internships with industry leaders
- Hands-on lab experience with the latest technology (i.e., 3D printing, Cross-Laminated Timer)
- NEBHE rate for students from Connecticut, Rhode Island, and Vermont

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To apply: umaine.edu

Connect with us:
umaine.edu/socialnetwork

WHY STUDY SUSTAINABLE MATERIALS AND TECHNOLOGY (SMT) AT THE UNIVERSITY OF MAINE?

The Bachelor of Science in Sustainable Materials and Technology (SMT) involves multiple academic disciplines and aims to produce professionals with strong abilities to assess and communicate the technical foundations of how forest and other plant- based materials can be sustainably produced and converted for a variety of applications ranging from traditional wood products to emerging sustainable materials and bioenergy systems throughout the entire life-cycle of the products.

Renewable and sustainable feed stocks will increasingly be used to meet societal demands for materials ranging from traditional applications in construction and paper to packaging, composites, electronics, textiles, plastics and bioenergy development. This change is rooted in benefits of using sustainably grown renewable materials, which can replace non-renewable materials produced from petroleum and mining sources. Benefits of this rapidly emerging 21st century circular bioeconomy include positive contribution to climate change mitigation attributable to the take-up of carbon dioxide fom the atmosphere inherent in the growing of trees and plants, lower embodied energy attained from the production of bio-based products, less dependency on fossil fuel- based energy due to the supplementary bioenergy and the co-location of manufacturing enterprises with human communities which provide local jobs and a beneficial environment.

The SMT program outcomes provide a holistic approach to the understanding and application of concepts necessary for product design and the conversion of renewable feed stocks to a wide variety of materials and products. Graduates of the program will gain a mastery of a broad set of skills necessary for success in this broad and rapidly evolving field. Extensive indoor laboratory facilities are used for undergraduate education and research. Excellent ties with research units at the university (Advanced Structures and Composites Center, and the Forest Bioproducts Research Institute) provide employment opportunities for interested students to learn cutting-edge science while gaining practical skills.

WHAT CAN I DO WITH A DEGREE IN SUSTAINABLE MATERIALS TECHNOLOGY?

Graduates of the SMT program are prepared for careers in the administration and supervision of sustainable material processing facilities. Specific career areas include: mill supervision and quality control; sustainable material business/marketing, new product development, life-cycle analysis and sustainable material procurement. Opportunities also exist for graduate education at both the M.S. and Ph.D. levels in the Bioproducts Engineering graduate concentration offered by the School of Forest Resources.

OUR UNDERGRADUATE PROGRAM

The UMaine SMT program at the University of Maine has been developed in response to the need to educate and train necessary workforce for the state and beyond and builds upon the long- lasting reputation of the University of Maine in sustainability-related disciplines. Maine's vibrant sustainable materials industry in combination with large areas of forestland near the University provide additional opportunities for a field-based and industry- oriented education. Students are strongly encouraged to take advantage of the numerous opportunities for summer employment with the bioproducts industry.

ABOUT UMAINE

The University of Maine, founded in Orono in 1865, is the state's premier public university. It is among the most comprehensive higher education institutions in the Northeast and attracts students from across the U.S. and more than 65 countries. It currently enrolls 11,000 total undergraduate and graduate students who can directly participate in groundbreaking research working with world-class scholars. The University of Maine offers doctoral degrees in 35 fields, representing the humanities, sciences, engineering and education; master's degrees in roughly 70 disciplines; 90 undergraduate majors and academic programs; and one of the oldest and most prestigious honors programs in the U.S. The university promotes environmental stewardship on its campus, with substantial efforts aimed at conserving energy, recycling and adhering to green building standards in new construction. For more information about UMaine, visit umaine.edu.

Explore

Bachelor of Science in

Sustainable Materials and Technology

Minors in

Renewable Energy & Technology
Business Administration

Graduate Certificate in

Composite Materials and Structures Certificate

Master of

Forestry

Master of Science in

Forest Resources

Ph.D. in

Forest Resources

Students in the SMT program have an opportunity to study, interact and work with the large number and diverse group of graduate students from around the world who have been attracted to sustainable materials- related studies at the University of Maine. The SMT faculty have active externally funded research programs, and they are involved in various outreach activities for their professions. Students learn from faculty who continually explore and extend the latest knowledge in their areas of expertise, and students meet directly with these faculty for academic advising.

OUR GRADUATE PROGRAM

Our graduate students work closely with leading experts in their field and conduct research in state-of- the-art laboratories or at a number of locations around the world. Nearly all of our graduate students are financially supported with graduate assistantships and paid tuition. Students may choose from a range of specialties, including bioproducts and technology; wood composites and forest-based biofuels under the newly developed graduate concentration of Bioproducts Engineering.

OUR FACULTY

UMaine's School of Forest Resources faculty is known as a source of objective scientific information. They have an international reputation for cutting-edge research innovation and are committed to educating the next generation of leaders on forest resources issues.

In a typical year, our faculty receives $5 million in research grants and authors over 40 papers in peer-reviewed journals. They also provide leadership regionally and nationally to professional organizations.

OPPORTUNITIES TO EXCEL

Undergraduates in Sustainable Materials and Technology have an opportunity to study, interact and conduct research and laboratory work with graduate students from around the world. Students work closely with active faculty researchers who explore and extend the latest knowledge in sustainable materials. Students are encouraged to join the UMaine chapter of the Forest Products Society. They also have opportunities to attend conferences and meetings organized by the Society of Wood Science and Technology and other professional organizations. Special recognition includes the university chapter of the national forest resources honor society, Xi Sigma Pi. Summer work and internships are readily available for students. The professional experience and contacts gained through summer activities provide a real advantage when our graduates apply for jobs. An annual jobs fair also provides students an opportunity to find internships and jobs.

HOW DO I APPLY?

Visit umaine.edu for an application, as well as information about academics and life at UMaine.

SCHOOL OF FOREST RESOURCES
forest.umaine.edu

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School of Forest Resources