

Forest Biomaterials Science and Engineering

Degree Programs:

- Doctoral (~4 yrs)
- Master of Science (~2 yrs)
- Distance Masters, no residency requirements

Admission Requirements:

- Degree in Paper or Wood Science, Chemical Eng., Chemistry or any other related Engineering or Science program.
- All applicants (except distance masters) must take the GRE (www.gre.org)
- 3 letters of recommendation
- TOEFL minimum scores for International Students

Research Areas:

- Chemicals and materials from renewable resources
- Renewable energy sources
- Bioprocessing
- Nanotechnology in the forest industries
- Lignin and carbohydrate chemistry
- Heteronuclear and multidimensional NMR
- Pulping and bleaching chemistry
- Biotechnology in papermaking
- Non-wood agricultural fibers
- Paper and wood recycling
- Physical and colloid chemistry
- Wet end and surface chemistry
- Composite biomaterials
- Paper physics
- Engineered fiber and paper products
- Wood tool design, performance & wear
- Wood-moisture relations and lumber drying
- Wood anatomy
- Wood engineering and mechanics
- Wood processing

Graduate students in the department learn theory and applications of chemistry, biology, physics and engineering as it pertains to biomaterial sciences and engineering. Major areas of activity are in the bioenergy, biopolymers, wood and paper fields. A significant part of their experience is to perform original research and to defend a thesis.

Our graduate students are valued by industry, and obtain challenging, high paying jobs in research, development and manufacturing.

Graduate students in the department typically receive financial support of \$29,000 annually, which includes stipend, tuition, and health benefits.

In addition, five Hofmann Fellowships are available including an extra \$3,000 per year for the recipient's use for professional development. These fellowships also provide the students with increased research opportunities in fields of their choice

For Additional Information:

☆: <http://cnr.ncsu.edu/wps>

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achieve!

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