

BIORENEWABLE SYSTEMS (BRS)

BRS 500: Research Methods

3 Credits

Foundation in research philosophies, methodologies, issues and policies; measures of research quality; critical thinking and discourse; research report writing; professional development; research ethics. A B E (BRS) 500 Research Methods (3) A B E/BRS 500 is a course designed to assist students entering and advancing in their research career to: better investigate and practice the art of scientific investigation; openly explore and discuss what it means to be a part of the scientific and research enterprise at a major academic setting; gain skills and experiences in critical evaluation and discourse; learn the process of developing and preparing a research proposal from initial concept to near-final written product; better understand the expectations for responsible and ethical conduct as a scientist/student/individual; and further develop their philosophies and capabilities as future scientists and professionals. During this course students will continually read, think, discuss, write, critique, re-read, re-think, re-write, and communicate with other students, faculty, and professionals. The course will provide a setting to allow them to further develop their personal, professional, academic, and scientific goals and capabilities.

Cross-listed with: ABE 500

BRS 501: Biobased Polymers

3 Credits

The chemistry, structure-property relationships, and industrial applications of biobased polymers from plant and agricultural feedstocks.

BRS 502: Human Behavior and ethics in Management and Technology

3 Credits

Ethical leadership continues to be a key issue in our society and is a topic of growing interest to the public and researchers alike. Our world more than ever needs ethical leadership to address critical sociotechnological problems such as climate change, sustainable energy and materials, quality food and water, population growth, prejudice, and global conflict to name just a few. This course will provide students with an improved mechanistic understanding of basic human behavior foundational to ethical leadership and decision making. Specifically, a series of important psychological studies will be examined which provide insights into human needs, personality, individual and social behavior, and leader-follower dynamics which are needed to identify new approaches for developing and managing leadership. Students will explore the literature themselves and share their findings and insights with the larger group. Students will apply what they learn by proposing new management processes for ensuring ethical leadership and decision making and share those with their peers.

BRS 511: Structural BioComposites

3 Credits

Manufacture and practices related to the production of engineered biocomposites processed from lignocellulosic materials.

BRS 550: Applied Bioproducts Marketing

3 Credits

Bioproduct marketing applications for solid and engineered wood products and biorefinery value chain output including environmental services, energy, fuels, and co-products.

BRS 551: Sustainable Business Strategies

2 Credits

Coverage of business strategies that relate to sustainability and environmental issues.

BRS 590: Colloquium

1-6 Credits/Maximum of 12

Continuing seminars which consist of a series of individual lectures by faculty, students, or outside speakers.

BRS 595: Internship

1-9 Credits/Maximum of 12

Supervised, research-oriented, off-campus, nongroup instruction, including field experiences, practicums, or internships. Written and oral critique of activity required.

BRS 596: Individual Studies

1-9 Credits

Creative projects, including nonthesis research, which are supervised on an individual basis and which fall outside the scope of formal courses.

BRS 600: Thesis Research

1-15 Credits/Maximum of 999

No description.

BRS 601: Ph.D. Dissertation Full-Time

0 Credits/Maximum of 999

No description.

BRS 602: Supervised Experiences in College Teaching

1-3 Credits/Maximum of 6

Provides an opportunity for supervised and graded teaching experience in undergraduate biorenewable systems courses.

BRS 610: Thesis Research Off Campus

1-15 Credits/Maximum of 999

No description.