

FOREST AND SUSTAINABLE PRODUCTS (FSP)

FSP 100 Introduction to Forest and Sustainable Products (2 credits)

Examination of the forest and sustainable materials industries and bioenergy products. Discovery laboratory in the use of forest and sustainable materials, including waste streams, to create marketable products. One lecture and one three-hour lab per week.

FSP 201 Forest and Sustainable Products for a Green Planet (3 credits)

This course is designed to help students understand how forest and sustainable products contribute to sustainability from an environmental, social, and economic point of view. Specifically, the course introduces various bioproducts derived from forest, plant, agriculture, and marine sources that could meet increasing human beings' daily needs, which range from clothing, food, shelter, and transportation to bioenergy, bioplastics and bioproducts that help combat environmental pollutions (i. e. , plastic pollution) while extending the carbon storage in the built environment. The course also covers how biobased sustainable alternatives affect human physical and mental health, as well as the social, environmental, and economic effects and benefits of these biobased alternative solutions. Course also addresses impacts of sustainable use natural resources on society and introduces green jobs by exploring Forest and Sustainable Products careers. Typically Offered: Fall.

FSP 203 (s) Workshop (1-16 credits)

Credit arranged

FSP 204 (s) Special Topics (1-16 credits)

Credit arranged

FSP 299 (s) Directed Study (1-16 credits)

Credit arranged

FSP 321 Properties of Forest and Sustainable Products (3 credits)

Physiology, structure, and physical and mechanical properties of wood and other natural cellulosic fibers.

FSP 400 (s) Seminar (1-16 credits)

Credit arranged

FSP 401 Undergraduate Research (1-3 credits, max 3)

Directed undergraduate research at the upper division level.

Prereqs: Junior or Senior standing.

FSP 403 (s) Workshop (1-16 credits)

Credit arranged

FSP 404 (s) Special Topics (1-16 credits)

Credit arranged

FSP 405 (s) Professional Development (1-16 credits)

Credit arranged. Credit earned in this course will not be accepted toward graduate degree programs.

FSP 425 Forest Products Marketing (3 credits, max 3)

Introduction to business-to-business and industrial marketing management from a forest products perspective in domestic and international markets, including marketing research and contemporary issues within the industry. Typically Offered: Fall and Spring.

FSP 436 Biocomposites (3 credits)

Joint-listed with FSP 536

Raw material, processes, properties, and their applications for a number of natural fiber and wood composites made of veneers, particles, and fibers. Additional projects and assignments required for graduate credit. Two half-day field trips. Two lectures and one 3-hour lab per week. (Fall only)

Prereqs: CHEM 101 and FSP 321; and CHEM 275 or CHEM 277.

FSP 438 Lignocellulosic Biomass Chemistry (1 credit)

The chemistry of lignocellulosic fiber (natural fiber and wood) formation and structure. Two lectures a week for the first half of the semester. Typically Offered: Varies.

Prereqs: CHEM 101 or CHEM 111; and CHEM 275 or CHEM 277.

Cooperative: open to WSU degree-seeking students.

FSP 444 Primary Forest Products Manufacturing (3 credits)

Raw materials, procurement, production methods, drying product specifications, and grading for primary products made from wood and cellulosic fiber including lumber, plywood, poles, and energy products; plant layout, machines, and systems analysis; plant tours. Two lectures and one 5-hour lab per week.

Prereqs: FSP 321

FSP 450 Biomaterials Deterioration and Protection (3 credits)

Joint-listed with FSP 550

Biotic and abiotic agents that deteriorate biomaterials; biocidal and nonbiocidal methods used to protect biomaterials from deterioration; biodegradable materials and their applications. Additional projects and assignments required for graduate credit. Two one-hour lectures and one three-hour lab per week. Recommended preparation: FSP 321.

Prereqs: Permission

FSP 473 ECB Senior Presentation (1 credit)

General Education: Senior Experience

Cross-listed with FISH 473, FOR 473

, NRS 473, REM 473, WLF 473. Reporting and presenting the senior project (thesis or internship); taken after or concurrently with REM 497. Serves as the senior capstone course for Ecology and Conservation Biology (ECB).

Prereqs: Instructor Permission

FSP 491 Biomaterial Product and Process Development Lab (2 credits)

General Education: Senior Experience

Lab to accompany FSP 495. One 3-hour lab per week. (Spring only)

Prereqs: ECON 201 or ECON 202; and FSP 495.

FSP 495 Product Development and Brand Management (3 credits)

General Education: Senior Experience

Cross-listed with MKTG 495

This course examines product development strategy and the management of brands. Topics will include strategic intent of product development, the process of product development (ideation through post product launch evaluation), market and financial feasibility of product development, trends in product development, and managing brands (strategic brand management and managing brand equity). Typically Offered: Fall, Spring and Summer.

Prereqs: ECON 201, ECON 202, or ECON 272; and MKTG 321.

Coreqs: MKTG 321

FSP 498 Forest and Sustainable Products Internship (1-16 credits)

Credit arranged. Supervised field experience with an appropriate organization. Graded P/F.

FSP 499 (s) Directed Study (1-16 credits)

Credit arranged. For the individual student; conferences, library, field, or lab work.

FSP 500 Master's Research and Thesis (1-16 credits)

Credit arranged

FSP 501 (s) Seminar (1-16 credits)

Credit arranged. Major philosophy, management, and research problems of forest products industries; presentation of individual studies on assigned topics.

FSP 502 (s) Directed Study (1-16 credits)

Credit arranged

FSP 503 (s) Workshop (1-16 credits)

Credit arranged. Selected topics in the conservation and management of natural resources.

FSP 504 (s) Special Topics (1-16 credits)

Credit arranged

FSP 505 (s) Professional Development (1-16 credits)

Credit arranged. Credit earned in this course will not be accepted toward graduate degree programs.

FSP 536 Biocomposites (3 credits)

Joint-listed with FSP 436

Raw material, processes, properties, and their applications for a number of natural fiber and wood composites made of veneers, particles, and fibers. Additional projects and assignments required for graduate credit. Two half-day field trips. Two lectures and one 3-hour lab per week. (Fall only)

Prereqs: CHEM 101 and FSP 321; and CHEM 275 or CHEM 277.

FSP 538 Lignocellulosic Biomass Chemistry (3 credits)

The chemistry of lignocellulosic fiber (natural fiber and wood) formation and structure. Two lectures a week for the first half of the semester. Typically Offered: Varies. Cooperative: open to WSU degree-seeking students.

FSP 550 Biomaterials Deterioration and Protection (3 credits)

Joint-listed with FSP 450

Biotic and abiotic agents that deteriorate biomaterials; biocidal and nonbiocidal methods used to protect biomaterials from deterioration; biodegradable materials and their applications. Additional projects and assignments required for graduate credit. Two one-hour lectures and one three-hour lab per week. Recommended preparation: FSP 321.

Prereqs: Permission

FSP 598 (s) Internship (1-16 credits)

Credit arranged

FSP 599 (s) Research (1-16 credits)

Credit arranged. Research not directly related to a thesis or dissertation.

FSP 600 Doctoral Research and Dissertation (1-45 credits)

Credit arranged

Prereqs: Admission to the doctoral program in Natural Resources and Department Permission.