### Course Selection Guide

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**Total Required Credits**

34 7 9 9 6 3
Course Descriptions

I. Core Requirements:
BSPM 4+1 students must take all three courses.

BSPM 551 Advanced IPM: 4 credits
Course descr: history of Integrated Pest Management
Prereq: BSPM 302, BSPM 308 OR BSPM 361

BSPM 527 Seminar: 1 credit
Course descr: attend weekly departmental seminar.

BSPM 520 Evolutionary Ecology: 3 credits
Course descr: contributions of disciplines of weed science, invasion ecology.
Prereq: (LIFE 320 OR LIFE/LAND 220) AND BZ 120 AND (LIFE 102 OR LIFE 103).

BSPM 550 Molecular Plant-Microbe Interactions: 3 credits
Course descr: principles of plant-microbe interactions.
Prereq: three credits of 100-, 200-, or 300-level BZ courses, AND (BZ 346 OR SOCR 330).

BSPM 556 Biological Control of Pests: 3 credits
Course descr: management of insect pests of plants using biological control agents.
Prereq: (BZ 120 OR LIFE 103) AND (LIFE 320 OR LAND/LIFE 220)

II. Degree-supporting (or non-departmental) electives
Courses from outside the BSPM department may be substituted, but should total 9 credits for this category.

BSPM 502B Topics in Plant Path: Bacteriology: 1 credit
Course descr: an overview of bacteria-plant interactions.
Prereq: At least three credits of any 300- or 400-level courses within BIO, BSPM, or LIFE.

BSPM 507 Insect Behavior: 3 credits
Course descr: behavior of insects & related arthropods.
Prereq: BSPM 308 OR BZ 440

BSPM 509 Herbicide Selectivity & Action: 3 credits
Course descr: selectivity of major photosynthetic & growth inhibitor herbicides.
Prereq: BSPM 308 OR BZ 440

BSPM 510 Insect Plant Disease Relationships: 3 credits
Course descr: relationships between insects & various plant pathogens.
Prereq: BSPM 302 OR BSPM 361

BSPM 521 Forest Health Issues: 2 credits
Course descr: an in-depth study & discussion of current topics related to forest health.

BSPM 523 Advanced Evol, Class of Insects: 4 credits
Course descr: major groups of insects, living & fossilized.
Prereq: LIFE 320 OR LIFE 220 OR LAND 220

BSPM 526 Evolutionary Ecology: 3 credits
Course descr: Adaptation to abiotic & biotic environments.
Prereq: LIFE 320 OR LIFE 220 OR LAND 220

BSPM 527 Seminar: 1 credit
Course descr: attend weekly departmental seminar.

BSPM 528 Inv Plants, Weeds: Ecosys to Mol: 3 credits
Course descr: contributions of disciplines of weed science, invasion ecology.
Prereq: (LIFE 320 OR LIFE/LAND 220) AND BZ 120 AND (LIFE 102 OR LIFE 103).

BSPM 550 Molecular Plant-Microbe Interactions: 3 credits
Course descr: principles of plant-microbe interactions.
Prereq: three credits of 100-, 200-, or 300-level BZ courses, AND (BZ 346 OR SOCR 330).

BSPM 556 Biological Control of Pests: 3 credits
Course descr: management of insect pests of plants using biological control agents.
Prereq: (BZ 120 OR LIFE 103) AND (LIFE 320 OR LAND/LIFE 220)

III. BSPM Core Electives
BSPM 4+1 students take 9 credits from the courses listed below, or those from the previous section not already counted towards other electives.

BSPM 300/ANEQ 300B Livestock Entomology: 1 credit
Course descr: identification, biology, management of arthropod pests of livestock.
Prereq: At least one, 3-credit BZ100 OR LIFE100 course

BSPM 302 Applied & General Entomology: 2 credits
Course descr: insect evolution, diversity; structure & function.
Prereq: BSPM 302 (may be taken concurrently)

BSPM 303A General Entomology Lab: 2 credits
Course descr: biology & taxonomy of insects.
Prereq: BSPM 302

BSPM 303B Horticultural Entomology Lab: 1 credit
Course descr: biology & recognition of immature, adult forms of 13 insect orders.
Prereq: BSPM 302 (may be taken concurrently)

BSPM 303C Agricultural Entomology Lab: 1 credit
Course descr: biology, recognition, control of pests.
Prereq: BSPM 302 (may be taken concurrently)

BSPM 304 Ecology & Management of Weeds: 3 credits
Course descr: weed classification, characteristics, biology & ecology.
Prereq: (BZ 120 OR LIFE 103) AND (CHEM 107 OR CHEM 111)

BSPM 310 Understanding Pesticides: 3 credits
Course descr: identification, use of classes of pesticides.

BSPM 361 Elements of Plant Pathology: 3 credits
Course descr: major concepts & principles of plant pathology.
Prereq: BZ 104 OR BZ 120 OR HORT 100 OR LIFE 102

BSPM 365 Integrated Tree Health Management: 4 credits
Course descr: insects & diseases in forest & urban ecosystems.
Prereq: BZ 120 OR LIFE 102

IV. Additional Requirements:
BSPM 698 Professional Paper: 6 credits
Instructor: advisor

BSPM 587/594 Internship: 3 credits
Instructor: advisor

BSPM/BZ 424 Principles of Systematic Zoology: 3 credits
Course descr: principles & methods of classification, zoological nomenclature.
Prereq: BZ 111 AND (BZ 110 OR LIFE 103)

BSPM 445 Aquatic Insects: 4 credits
Course descr: Biology & recognition of major orders & families of aquatic insects.
Prereq: BZ 111 OR LIFE 103

BSPM/MIP/BZ 462 Parasitology & Vector Biology: 5 credits
Course descr: Protozoa, helminthes, & insects & related arthropods of medical importance.
Prereq: (BZ 110 OR LIFE 103) AND (BZ 212 OR LIFE 206 OR MIP 302)

BSPM 500 Foundations of Bioagricultural Sciences: 2 credits
Course descr: an introduction to graduate school; covers time management, advisor, research, and a survey of topics encompassed by the BSPM department.

BSPM 508 Environmental Fate of Pesticides: 3 credits
Course descr: processes that affect fate of pesticides & their metabolites.
Prereq: BZ 440 OR CHEM 245 SOCR 240

BSPM/BZ 520 Advanced Systematics: 3 credits
Course descr: Theory and practice of modern systematics.
Prereq: BSPM 424 OR BZ 424 OR BZ 325

BSPM 555 Immature Insects: 3 credits
Course descr: characteristics of immature forms of orders & families of insects.
Prereq: BSPM 303A OR BSPM 303B OR BSPM 303C

BSPM 575 Molecular and Genomic Evolution: 3 credits
Course descr: molecular, biological mechanisms of evolutionary change.
Prereq: BZ 220 AND BZ 350

BSPM/MIP 576 Bioinformatics: 3 credits
Course descr: technical computing using bioinformatics tools in molecular analysis.
Prereq: one of the following: BC 463, BZ 310, BZ 350, CM 501, CS 155, ERHS 332, MIP 275, MIP 300, MIP 450, STAT 307, ERHS 307

Summer, yearly