Bioag'l Sci + Pest Mgmt- BSPM (BSPM)

Courses

BSPM 102 Insects, Science, and Society (GT-SC2) Credits: 3 (3-0-0)
Course Description: How insects develop, behave, and affect human activity. What every student should know about the most diverse life form on Earth.
Prerequisite: None.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.
Additional Information: Biological & Physical Sciences 3A, Natural & Physical Sciences w/o lab (GT-SC2).

BSPM 201 Weed Management and Control Credits: 3 (0-0-3)
Course Description: Basic overview of weeds and weed control.
Prerequisite: None.
Registration Information: Offered as an online course only.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 300 Topics in Livestock Entomology Credit: 1 (1-0-0)
Also Offered As: ANEQ 300B.
Course Description: Identification, biology, and management of insect, tick, and mite pests.
Prerequisites: BZ 100 to 199 between 3 and 5 credits - at least 3 credits or LIFE 100 to 199 between 3 and 5 credits - at least 3 credits.
Registration Information: Credit not allowed for both BSPM 300 and ANEQ 300B.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 302 Applied and General Entomology Credits: 2 (2-0-0)
Course Description: Biology and management of insects.
Prerequisite: None.
Term Offered: Fall.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

BSPM 303A Entomology Laboratory: General Credits: 2 (0-4-0)
Course Description: Biology and recognition of insects.
Prerequisite: BSPM 302, may be taken concurrently.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

BSPM 303B Entomology Laboratory: Horticultural Credit: 1 (0-2-0)
Course Description: Biology and recognition of insects.
Prerequisite: BSPM 302, may be taken concurrently.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

BSPM 303C Entomology Laboratory: Agricultural Credit: 1 (0-2-0)
Course Description: Biology and recognition of insects.
Prerequisite: BSPM 302, may be taken concurrently.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 308 Ecology and Management of Weeds Credits: 3 (2-3-0)
Course Description: Classification, characteristics; weed biology and ecology; control by cultural, mechanical, chemical, and biological means; successional management.
Prerequisites: (BZ 120 or LIFE 103) and (CHEM 107 or CHEM 111).
Registration Information: Must register for lecture and laboratory. Required field trips.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 310 Understanding Pesticides Credits: 3 (3-0-0)
Course Description: Identification, properties, use, labeling, environmental interactions, and application of major classes of pesticides.
Prerequisite: BZ 100 to 199 - at least 3 credits or CHEM 100 to 199 - at least 3 credits.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 350 Science Illustration Credits: 2 (1-2-0)
Course Description: Fundamentals of science illustration, emphasizing observational and drawing skills.
Prerequisite: None.
Term Offered: Spring.
Grade Modes: S/U within Student Option, Trad within Student Option.
Special Course Fee: No.

BSPM 361 Elements of Plant Pathology Credits: 3 (2-2-0)
Course Description: Diseases of economic plants.
Prerequisite: BZ 104 or BZ 120 or HORT 100 or LIFE 102.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

BSPM 365 Integrated Tree Health Management Credits: 4 (3-3-0)
Course Description: Insects and diseases in forest and urban ecosystems. Effects, diagnosis, prevention, and interactions.
Prerequisite: BZ 120 or LIFE 102.
Registration Information: Must register for lecture and laboratory. Required field trips.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

BSPM 384 Supervised College Teaching Credits: Var[1-3]
Prerequisite: None.
Registration Information: A maximum of 10 combined credits for all 384 and 484 courses are counted towards graduation requirements.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: Yes.
BSPM 451  Pollinator Management in Agroecosystems. Credit: 1 (1-0-0)
Also Offered As: SOCR 415.
Course Description: Fundamental concepts of pollinator management, sustainable crop-pollinator interactions, global issues on pollinator conservation.
Prerequisite: None.
Registration Information: Must register for lecture and laboratory. Credit not allowed for both BSPM 415 and SOCR 415. This is a partial-semester course. Required field trips.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 423  Evolution and Classification of Insects Credits: 3 (1-4-0)
Course Description: Major groups of insects, living and fossil; major evolutionary trends in structure and behavior.
Prerequisite: None.
Registration Information: Must register for lecture and laboratory. Credit not allowed for both BSPM 423 and BSPM 523.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 445  Aquatic Insects Credits: 4 (2-4-0)
Course Description: Biology and recognition of major orders and families of aquatic insects; a collection is required.
Prerequisite: BZ 111 and BZ 110 or LIFE 103.
Registration Information: Must register for lecture and laboratory.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: Yes.

BSPM 450  Molecular Plant-Microbe Interaction Credits: 3 (3-0-0)
Course Description: Principles of plant-microbe/insect interactions, physiological and molecular aspects of plant defense, genomics approaches to study plant defense.
Prerequisites: (BZ 100 to 499 - at least 3 credits) and (BZ 346 or SOCR 330).
Registration Information: Credit not allowed for both BSPM 450 and BSPM 550.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 451  Integrated Pest Management Credits: 3 (3-0-0)
Course Description: Concepts of integrated pest management and the strategies and tactics employed in the application of these concepts.
Prerequisite: BSPM 302 or BSPM 308 or BSPM 361.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 452  Integrated Pest Management in Agroecosystems Credit: 3 (3-0-0)
Also Offered As: BZ 452.
Course Description: Concepts of integrated pest management and the strategies and tactics employed in the application of these concepts.
Prerequisites: None.
Registration Information: Credit not allowed for both BSPM 450 and BSPM 452.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 462  Parasitology and Vector Biology Credits: 5 (3-4-0)
Also Offered As: BZ 462 and MIP 462.
Course Description: Protozoa, helminths, and insects and related arthropods of medical importance; systematics, epidemiology, host damage and control.
Prerequisites: (BZ 110 or LIFE 103) and (BZ 212 or LIFE 206 or MIP 302).
Registration Information: Must register for lecture and laboratory. Credit allowed for only one of the following: BSPM 462, BZ 462, MIP 462.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 478  Internship Credits: Var[1-18]
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 492  Seminar Credits: Var[1-3]
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 495  Independent Study Credits: Var[1-3]
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 496  Group Study Credits: Var[1-3]
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 502A  Topics in Plant Pathology: Plant Viruses Credit: 1 (1-0-0)
Course Description:
Prerequisite: BIO 300 to 499 - at least 3 credits or BSPM 300 to 499 - at least 3 credits or BZ 300 to 499 - at least 3 credits or LIFE 300 to 499 - at least 3 credits.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 502B  Topics in Plant Pathology: Plant Bacteriology Credit: 1 (1-0-0)
Course Description:
Prerequisite: BIO 300 to 499 - at least 3 credits or BSPM 300 to 499 - at least 3 credits or BZ 300 to 499 - at least 3 credits or LIFE 300 to 499 - at least 3 credits.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.
BSPM 502F  Topics in Plant Pathology: Plant Disease Epidemiology  Credit: 1 (1-0-0)  
Course Description:  
Prerequisite:  BSPM 361.  
Term Offered: Fall (even years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 507  Insect Behavior  Credits: 3 (3-0-0)  
Course Description: Behavior of insects and related arthropods with special attention to social behavior.  
Prerequisite: None.  
Term Offered: Spring (odd years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 508  Environmental Fate of Pesticides  Credits: 3 (3-0-0)  
Course Description: Processes that affect fate of pesticides and their metabolites in the environment with emphasis on soil and water.  
Prerequisite: BZ 440 or CHEM 245 or SOCR 240.  
Term Offered: Spring (odd years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 509  Herbicide Selectivity and Action  Credits: 3 (3-0-0)  
Course Description: Selectivity of major photosynthetic and growth inhibitor herbicides based on herbicide transport, metabolism, and mode of action.  
Prerequisite: BSPM 308 or BZ 440.  
Term Offered: Fall (even years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 510  Insect-Plant Disease Relationships  Credits: 3 (3-0-0)  
Course Description: Relationships between insects and various plant pathogens as they affect survival and transmissions of pathogens.  
Prerequisite: BSPM 302 or BSPM 361.  
Term Offered: Fall (odd years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 520  Advanced Systematics  Credits: 3 (3-0-0)  
Also Offered As: BZ 520.  
Course Description: Theory and practice of modern systematics.  
Prerequisite: BSPM 424 or BZ 424 or BZ 325.  
Registration Information: Credit not allowed for both BSPM 520 and BZ 520.  
Term Offered: Spring (even years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 521  Forest Health Issues  Credits: 3 (3-0-0)  
Course Description: Current topics related to forest and shade tree health from ecosystems to tree defense physiology.  
Prerequisite: None.  
Term Offered: Fall (even years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 523  Advanced Evolution/Classification of Insects  Credits: 4 (1-4-1)  
Course Description: Major groups of insects, living and fossil; major evolutionary trends in structure and behavior.  
Prerequisite: None.  
Registration Information: Must register for lecture, laboratory, and recitation. Credit not allowed for both BSPM 523 and BSPM 423.  
Term Offered: Fall (odd years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 525  Insect Physiology  Credits: 3 (3-0-0)  
Course Description: Principles of insect function.  
Prerequisite: BSPM 302.  
Term Offered: Spring (even years).  
Grade Mode: Traditional.  
Special Course Fee: No.  

BSPM 526  Evolutionary Ecology  Credits: 3 (3-0-0)  
Also Offered As: BZ 526.  
Course Description: Adaptation to abiotic and biotic environments; how current ecological processes interact with evolutionary history.  
Prerequisites: LIFE 320 or LIFE 220 or LAND 220.  
Registration Information: Credit not allowed for both BSPM 526 and BZ 526.  
Term Offered: Fall (odd years).  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.  

BSPM 528  Invasive Plants/Weeds: Ecosystems to Molecules  Credits: 3 (3-0-0)  
Course Description: Contributions of disciplines of weed science and invasion ecology to understanding the biology, ecology and management of “problem plants.”  
Prerequisites: (LIFE 320 or LAND 220 or LIFE 220) and (BZ 120) and (LIFE 102 or LIFE 103).  
Term Offered: Fall (odd years).  
Grade Modes: S/U within Student Option, Trad within Student Option.  
Special Course Fee: No.  

BSPM 530  Scientific Writing  Credit: 1 (1-0-0)  
Also Offered As: SOCR 530.  
Course Description: Skills necessary to prepare complete scientific journal articles including writing, editing, and literature searching and assessment.  
Prerequisite: None.  
Registration Information: Credit not allowed for both BSPM 530 and SOCR 530.  
Term Offered: Spring.  
Grade Mode: Instructor Option.  
Special Course Fee: No.  

BSPM 540  Understanding Genomes  Credits: 3 (3-0-0)  
Course Description: Harnessing genome information and related -omics level technologies for use in answering biological questions.  
Prerequisite: None.  
Term Offered: Fall.  
Grade Mode: Traditional.  
Special Course Fee: No.
BSPM 550  Molecular Plant-Microbe Interactions  Credits: 3 (3-0-0)
Course Description: Principles of plant-microbe interactions, physiological and molecular aspects of plant defense, genomic approaches to study plant defense.
Prerequisites: (BZ 100 to 499 - at least 3 credits) and (BZ 346 or SOCR 330).
Registration Information: Credit not allowed for both BSPM 550 and BSPM 450.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 551  Advanced Integrated Pest Management  Credits: 4 (3-0-1)
Course Description: Concepts of integrated pest management and the strategies and tactics employed in the practical application of these concepts.
Prerequisite: BSPM 302 or BSPM 308 or BSPM 361.
Registration Information: Must register for lecture and recitation.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 555  Immature Insects  Credits: 3 (1-4-0)
Course Description: Characteristics of immature forms of orders and families of insects emphasizing those important to man.
Prerequisite: BSPM 303A or BSPM 303B or BSPM 303C.
Registration Information: Must register for lecture and laboratory.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 556  Biological Control of Plant Pests  Credits: 3 (3-0-0)
Course Description: Management of insect pests of plants and weeds using biological control agents such as insects, bacteria, viruses, and fungi.
Prerequisites: (BZ 120 or LIFE 103) and (LIFE 320 or LAND 220 or LIFE 220).
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 570  Chemical Ecology  Credits: 3 (3-0-0)
Course Description: Chemical interactions among animals, plants, fungi, and microorganisms.
Prerequisite: None.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 571  Techniques in Chemical Ecology  Credit: 1 (0-2-0)
Course Description: Practical experience with chemical techniques for separation, analysis, and synthesis of natural products together with biological assays for activity.
Prerequisite: None.
Term Offered: Spring (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 575  Molecular and Genomic Evolution  Credits: 3 (3-0-0)
Also Offered As: BZ 575.
Course Description: Molecular, biological mechanisms of evolutionary change: mutation; selection; gene expression/regulation; changes in whole-genome architecture.
Prerequisites: BZ 220 and BZ 350.
Registration Information: Credit not allowed for both BSPM 575 and BZ 575.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 576  Bioinformatics  Credits: 3 (3-0-0)
Also Offered As: MIP 576.
Course Description: Technical computing across platforms using bioinformatics tools in molecular analysis.
Prerequisite: BC 463 or BZ 310 or BZ 350 or CM 501 or CS 155 or ERHS 332 or MIP 275 or MIP 300 or MIP 450 or STAT 307 or ERHS 307.
Registration Information: Credit not allowed for both BSPM 576 and MIP 576.
Terms Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 584  Supervised College Teaching  Credits: Var[1-3]
Course Description: None.
Term Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 587  Internship  Credits: Var[1-18]
Course Description: Major questions and theory pertinent to understanding current and relevant science topics.
Prerequisite: None.
Term Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 592  Seminar  Credits: Var[1-3]
Course Description: None.
Term Offered: Fall, Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 594  Independent Study  Credits: Var[1-3]
Course Description: None.
Term Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 596  Group Study  Credits: Var[1-3]
Course Description: None.
Term Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.
BSPM 698 Research Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 699 Thesis Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 710 Techniques in Molecular Biology and Genetics Credits: 3 (0-4-1)
Also Offered As: CM 710.
Course Description: Genetic manipulation of bacteria, bacteriophage, and yeast including experiments in molecular cloning and gene expression.
Prerequisite: BC 463 or BZ 346 or BZ 350 or MIP 450 or SOCR 330.
Restriction: Must be a: Graduate, Professional.
Registration Information: Must register for laboratory and recitation. Credit not allowed for both BSPM 710 and CM 710.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 740 Plant Molecular Genetics Credits: 3 (3-0-0)
Also Offered As: SOCR 740.
Course Description: Advances in study of organization and function of nuclear and organellar genomes, gene expression in higher plants, and plant-microbe interactions.
Prerequisites: BC 351 and SOCR 330.
Restriction: Must be a: Graduate, Professional.
Registration Information: Credit not allowed for both BSPM 740 and SOCR 740.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 784 Supervised College Teaching Credits: Var[1-3]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 787 Internship Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 792 Seminar Credits: Var[1-2]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 794 Independent Study Credits: Var[1-3]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 798 Research Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 799 Dissertation Credits: Var[1-18]
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.