DEPARTMENT OF AGRICULTURAL BIOLOGY

Courses

Subjects in this department include: Agricultural Biology (AB) and Bioagricultural Sciences and Pest Management (BSPM)

Agricultural Biology (AB)

AB 120 Agricultural Biology--Freshman Orientation Credit: 1 (1-0-0)
Course Description: Introduction to information and skills necessary to succeed in the agricultural biology major.
Prerequisite: None.
Restriction: Must be a: Undergraduate.
Registration Information: This is a partial semester course.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AB 130 Working with Agricultural Biology Data Credit: 1 (1-0-0)
Course Description: Introduction to the scientific method and systems thinking in terms of agricultural biology. Develop a hypothesis based on field observations, collect and analyze data to determine if findings align with the hypothesis. Results are communicated in a written report, and oral presentation.
Prerequisite: AB 120, may be taken concurrently.
Restriction: Must be a: Undergraduate.
Registration Information: This is a partial semester course.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AB 230 Becoming an Agricultural Biology Professional Credit: 1 (1-0-0)
Course Description: Design professional resumes, and develop interpersonal skills to succeed in a professional environment. Develop criteria to write a report from internships, and develop skills in interpretation of qualitative and quantitative agricultural biology data.
Prerequisite: AB 130.
Registration Information: Agricultural biology majors only. This is a partial semester course. Credit not allowed for both AB 230 and AB 270.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AB 270 Agri. Biology Orientation for Transfers Credits: 2 (2-0-0)
Course Description: Introduction to the scientific method and systems thinking in terms of agricultural biology. Develop a hypothesis based on field observations, collect and analyze data. Prepare to become agricultural biology professionals by designing resumes and practicing skills to succeed in a professional environment.
Prerequisite: None.
Registration Information: Agricultural biology majors only. Written consent of instructor. Credit not allowed for both AB 230 and AB 270.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AB 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.
Registration Information: Junior standing. Sections may be offered: Online. Credit not allowed for both AB 310 and BSPM 310.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AB 330 Applications in Agricultural Biology I Credits: 2 (2-0-0)
Course Description: Knowledge, skills, and abilities to propose sustainable solutions to biological problems in natural or managed ecosystems. Collectively discuss a diverse set of case studies that incorporate systems approach in solving agricultural biology issues. Hone career plans and professional skills.
Prerequisite: (AB 230 or AB 270) and (BSPM 302).
Restriction: Must be a: Undergraduate.
Registration Information: Agricultural biology majors only.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AB 340 Insect Biotechnology Credits: 3 (3-0-0)
Course Description: Introduction to concepts, terminology, and applications of molecular biology techniques as it relates to the entomology. Learn about the use of whole insects, as well as their cells, tissues, and associated bacteria in medical, pharmaceutical, and agricultural applications.
Prerequisite: LIFE 102.
Registration Information: Credit not allowed for both AB 340 and BSPM 280A1.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

AB 430 Applications in Agricultural Biology II Credits: 3 (3-0-0)
Course Description: Apply systems thinking and dynamic systems modeling to case studies and a capstone project that poses sustainable solutions to biological problems in natural or managed ecosystems. Hone career plans and professional skills.
Prerequisite: AB 330.
Restriction: Must be a: Undergraduate.
Registration Information: Agricultural biology majors only.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

AB 509 Herbicide Selectivity and Action Credits: 3 (3-0-0)
Course Description: Explores the physicochemical properties of herbicides, their selectivity (through placement and metabolism), their mechanism of action, uses in weed management, visual symptoms of herbicide treatment, how plants can evolve resistance to these compounds, and controversial topics related to the use of herbicides.
Prerequisite: None.
Registration Information: Sections may be offered: Online.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.
AB 511 Microbiome of Plant Systems Credits: 3 (3-0-0)
Course Description: Emphasizes interdisciplinary and cross curricular education with training in disciplines that support an increased understanding of plant associated microbiome and their optimization.
Prerequisite: None.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.
AB 515 Plant Biochemistry in Agriculture Credits: 3 (3-0-0)
Course Description: Experiential learning environment leading to mastery of principles of protein homology modeling, metabolic network analysis, and important plant biochemical pathways. Structure and function of enzymes in metabolic pathways and the contributions of these pathways to plant growth and development.
Prerequisite: HORT 576.
Restriction: Must be a: Graduate.
Registration Information: Graduate standing. Sections may be offered: Online. Credit allowed for only one of the following: AB 515, BSPM 515 or BSPM 581A2.
Term Offered: Fall (odd years).
Grade Mode: Traditional.
Special Course Fee: No.
AB 529 Pesticide Resistance Evolution and Management Credits: 3 (3-0-0)
Course Description: Examines pesticide resistance, including principles of resistance evolution; resistance mechanisms in arthropods, weeds, and plant pathogens; management approaches; communication strategies; and new developments in technology for pest management, including RNAi and gene drive.
Prerequisite: (LIFE 102 or LIFE 103) and (BZ 346 or SOCR 330).
Restriction: Must be a: Graduate.
Registration Information: Sections may be offered: Online. Credit not allowed for both AB 529 and BSPM 580A4.
Term Offered: Spring (even years).
Grade Mode: Traditional.
Special Course Fee: No.
AB 554 Biology of Fungal Plant Pathogens Credits: 2 (2-0-0)
Course Description: Introduction to fungal biology, including ecology, physiology, genetics and diversity of fungal pathogens. Explore fungal lifecycles, modes and genetics of fungal mating and sources of genomic variation, and fungal pathogenesis.
Prerequisite: BSPM 361 or BSPM 365.
Restriction: Must not be a: Freshman, Sophomore, Junior.
Registration Information: Senior standing. This is a partial semester course. Credit not allowed for both AB 554 and AB 580A1.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.
AB 555 Topics in Plant Pathology--Plant Virology Credits: 2 (2-0-0)
Course Description: Learn about the molecular mechanisms behind plant virus transmission, replication, translation, and movement, as well as the drivers for emerging plant viral diseases and methods of biotechnological control. Features that make viruses unique from other plant pathogens are the focus. The differences and similarities between plant viruses and viruses that infect other hosts (e.g. mammals and microbes) are also highlighted.
Prerequisite: (BSPM 361 or MIP 250 or MIP 300 or MIP 303) and (BZ 350).
Restriction: Must not be a: Freshman, Sophomore.
Registration Information: Junior standing. This is a partial semester course. Credit not allowed for both AB 555 and AB 580A2.
Term Offered: Fall (even years).
Grade Mode: Traditional.
Special Course Fee: No.

Bioagricultural Sciences and Pest Management (BSPM)

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.
Restriction: Must be a: Graduate.
Registration Information: Credit not allowed for both BSPM 102 and BSPM 356A.
Terms Offered: Fall, Spring, Summer.
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 (3-0-0)
Course Description: Basic overview of weeds and weed control.
Prerequisite: None.
Restriction: Must be a: Graduate.
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.
Prerequisite: BZ 100 to 199 between 3 and 5 credits - at least 3 credits. Credit not allowed for both BSPM 300 and ANEQ 300B.
Term Offered: Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 356A Applied and General Entomology Credits: 2 (2-0-0)
Course Description: Biology and management of insects.
Prerequisite: None.
Restriction: Must be a: Graduate.
Registration Information: Credit not allowed for both BSPM 302 and BSPM 356A.
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: No.

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 (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.
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: No.

BSPM 355A  Horticulture Pathology: General Pathology  Credit: 1 (1-0-0)
Course Description: A 5-week course consisting of General Plant Pathology; identification of the organisms that can cause plant diseases.
Prerequisite: HORT 100 to 199 or LIFE 100 to 199.
Registration Information: Written consent of instructor. This is a partial semester course. Offered as an online course only. Credit not allowed for both BSPM 355A and BSPM 381A2.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 355B  Hort Pathology: Turf and Ornamental Disease  Credit: 1 (1-0-0)
Course Description: Turf and ornamental plant diseases, their management and control.
Prerequisite: BSPM 355A.
Registration Information: Written consent of instructor. This is a partial semester course. Offered as an online course only. Credit not allowed for both BSPM 355B and BSPM 361.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 355C  Horticulture Pathology: Vegetable and Greenhouse Disease  Credit: 1 (1-0-0)
Course Description: Diseases in the Greenhouse and Vegetable crops, management and control.
Prerequisite: BSPM 355A.
Registration Information: Offered as an online course only. This is a partial semester course. Written consent of instructor.
Term Offered: Fall.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 356A  Horticultural Entomology Introduction  Credit: 1 (1-0-0)
Course Description: Basic biology, identification and management of insects and mites affecting horticultural crops.
Prerequisite: HORT 100 to 199 or LIFE 100 to 199.
Registration Information: Written consent of instructor. This is a partial semester course. Offered as an online course only. Credit not allowed for both BSPM 102 and BSPM 356A. Credit not allowed for both BSPM 302 and BSPM 356A.
Term Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 356B  Horticultural Entomology: Food Crops  Credit: 1 (1-0-0)
Course Description: Insect and mite pests of fruits, vegetables and other garden grown food crops.
Prerequisite: BSPM 102 or BSPM 302 or BSPM 356A, may be taken concurrently.
Registration Information: This is a partial semester course. Offered as an online course only.
Term Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: No.

BSPM 356C  Horticultural Entomology: Landscape Plants  Credit: 1 (1-0-0)
Course Description: Insect and mite pests of ornamentals (woody plants, flowers) and turfgrass and their management.
Prerequisite: BSPM 102 or BSPM 302 or BSPM 356A, may be taken concurrently.
Registration Information: Written consent of instructor. This is a partial semester course. Offered as an online course only.
Term Offered: Fall, Spring.
Grade Mode: Traditional.
Special Course Fee: Yes.

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. Required field trips.
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 302 or BSPM 308 or BSPM 361.
Term Offered: Spring (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
Prerequisite: HORT 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 487 Internship Credits: Var[1-18] (0-0-0)
Course Description: 
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 492 Seminar Credits: Var[1-3] (0-0-0)
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] (0-0-0)
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] (0-0-0)
Course Description: 
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 500 Foundations of Bioagricultural Sciences Credits: 2 (2-0-0)
Course Description: Introduction to graduate school covering managing time, advisor and research, plus a survey of topics encompassed by the department of BSPM.
Prerequisite: None.
Restriction: Must be a: Graduate.
Term Offered: Fall.
Grade Mode: Traditional.
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: Spring (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 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.
Prerequisite: 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 Mode: Traditional.
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."
Prerequisite: (LIFE 320 or LAND 220 or LIFE 220) and (BZ 120) and (LIFE 102 or LIFE 103).
Term Offered: Spring (even 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.
Prerequisite: (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.
Prerequisite: (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.
Prerequisite: 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] (0-0-0)
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 587  Internship  Credits: Var[1-18] (0-0-0)
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 592  Seminar  Credits: Var[1-3] (0-0-0)
Course Description: Major questions and theory pertinent to understanding current and relevant science topics.
Prerequisite: None.
Terms Offered: Fall, Spring.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 594  Independent Study  Credits: Var[1-3] (0-0-0)
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 596  Group Study  Credits: Var[1-3] (0-0-0)
Course Description:
Prerequisite: None.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.
BSPM 698 Research Credits: Var[1-18] (0-0-0)
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] (0-0-0)
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.
Prerequisite: 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] (0-0-0)
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] (0-0-0)
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] (0-0-0)
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] (0-0-0)
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] (0-0-0)
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] (0-0-0)
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.

BSPM 892 Seminar Credits: Var[1-2] (0-0-0)
Course Description:
Prerequisite: None.
Restriction: Must be a: Graduate, Professional.
Terms Offered: Fall, Spring, Summer.
Grade Mode: Instructor Option.
Special Course Fee: No.