PSPP 516. Research Design and Analysis. 3 Credits. (3 Lec) F
PREREQUISITE: STAT 401. Data analysis and interpretation of problems unique
to agricultural and biological research. Topics include: sample size determination,
asumptions and transformation of data scale, completely random, randomized
block and Latin square designs, comparisons among means, factorial experiments
with restricted randomization and analysis of covariance, analysis of counts, and
non-parametric methods.
PSPP 521. Plant Science for Teachers: It Grows on You. 1 Credit. (1 Lec) Su
PREREQUISITES: Two years of successful teaching experience; graduate
standing. In this course you will learn about the characteristics of plants, how
abiotic factors influence plant growth and development, and experimental design
and data collection methods. You will be challenged to create innovative lessons to
deliver this content in your particular classroom setting.
PSPP 522. Insectology for Teachers. 3 Credits. (3 Lec) Su
PREREQUISITE: Graduate standing, 2 years successful teaching experience. This exciting course is designed for elementary, middle school and high school teachers.
The course provides an effective way to integrate instructional scientific strategies
for teachers. Students will share cross-level instruction and constructive ideas. The
goal of this course is to promote the study of insects and applications of insects.
This eight-week course is intended for teachers enrolled in the Masters of Science in
Science Education degree program, the NTEN Certificate Program, and other
teachers with a minimum of two years teaching experience seeking professional
development.
PSPP 524. Adv Plant Pathology. 3 Credits. (3 Lec) F alternate years, to be
offered odd years.
This course is designed to give graduate students in the This course will serve
as a companion to Genetic Plant Improvement (PSPP 542) taught in Spring odd
alternate years by the plant breeding faculty.
PSPP 530. Crop Physiology. 3 Credits. (3 Lec) F
PREREQUISITE: BIOC 433; CHMY 211. This online offering examines
interactions between plants and the environment. Light, environment, plant canopy
development, photosynthesis, source-sink relations, growth analysis, growth
regulation, water relations, and environmental stresses are addressed.
PSPP 541. Advanced Plant Genetics. 3 Credits. (3 Lec) F alternate years, to be
offered even years.
Genome and genetic analysis of flowering plants, including structure of the
genome, methods of genetic analysis and the genetic basis of plant morphology and
development. A familiarity with current and classical literature is stressed.
PSPP 542. Genetics of Plant Improvement. 3 Credits. (3 Lec) S odd years
PREREQUISITE: AGSC 441, STAT 401. The past, present and future of plant
improvement. Emphasis on genetic principles underlying classical plant breeding,
and on molecular biological principles underlying plant genetic engineering.
PSPP 546. Herbicide Physiology. 3 Credits. (3 Lec) F
Offered Even Years PREREQUISITE: BCH 380 and BIOC 433 or equivalents.
A team-taught, distance delivery course on the biochemistry and physiology of
herbicide action in plants. Herbicide discovery, classification, and mechanisms of
action and resistance are explored.
PSPP 547. Biomimicry for Teachers. 2 Credits.
PSPP 548. Flowering Plants of the Northern Rocky Mountains. 2 Credits. (2
Lec) Su
A field oriented study of the flowering plants of Montana with an emphasis on plant
keying skills. Objectives are: 1) to identify the parts of flowering plants and become
familiar with botanical terms; 2) to learn morphological characteristics of common
plant families; 3) to learn how to use a plant key to successfully identify flowering
plants; application of these skills and botanical texts to the classroom. Mon - Tues
are class/lecture days; Wed - Fri are day field trips to local trail heads.
PSPP 549. Plants, People, Health for Teachers. 2 Credits. (1 Lec. 1 Lab) Su
PREREQUISITES: Teacher of science with two year minimum teaching
experience. This interdisciplinary course investigates how plants and people
interact, with a focus on the current popular and scientific interest in using plants
and their compounds for health and medicine. The subject will be applied to
ethnobotany, botany, and phytochemistry. The last day will be spent with hands-on
experience making some herbal products to enhance the learning opportunity.
PSPP 565. Plant-Pathogen Interaction. 3 Credits. (3 Lec) S
Alternate Even years PREREQUISITE: BIOB 160. Co-convened with AGSC 455. This course teaches the molecular mechanisms by which plants and pathogens/insects interact during the progress of pathogenesis or resistance, and the methods to study and visualize intercellular interactions during pathogenesis and defense. Co-convened with BIOM 465.
PSPP 589. Graduate Consultation. 1-3 Credits. (1-3 Ind) F,S,Su
PREREQUISITE: Master's standing and approval of the Dean of Graduate Studies. This course may be used only by students who have completed all of their coursework (and thesis, if on a thesis plan), but who needs additional faculty or
staff time help.
PSPP 590. Master's Thesis. 1-10 Credits. (1-10 Ind; max cr unlimited) F,S,Su
PREREQUISITE: Master's standing.
PSPP 591. Special Topics. 1-4 Credits. (1-4 Lec; 12 cr max) On Demand
PREREQUISITE: Upper division courses and others as determined for each
offering. Courses not required in any curriculum for which there is a particular one
need, or given on a trial basis to determine acceptability and demand.
PSPP 592. Independent Study. 1-3 Credits. (1-3 Lec; 6 cr max) On Demand
PREREQUISITE: Graduate standing, consent of instructor, approval of Department
Head and Dean of Graduate Studies. Directed research and study on an individual
basis.
PSPP 594. Seminar. 1 Credit. (1 Sem) F
PREREQUISITE: Graduate standing or seniors by petition. Course prerequisites as
determined for each offering. Students prepare, present, and critique scientific
presentations.
PSPP 598. Internship. 2-4 Credits. (2-4 Ind; 12 cr max) F,S,Su
PREREQUISITE: Graduate standing, consent of instructor and approval of Department Head, and Dean of Graduate Studies. An individualized assignment
arranged with an agency, business or other organization to provide guided experience in the field.
PSPP 642. Structural and Functional Genomics. 3 Credits. (2 Lec, 1 Lab) F
Alternate Odd Years The objective of this course is to understand the genome
analysis and basic approaches in functional genomics underlying forward and
reverse genetics, transposon insertion, RNA interference (RNAi) and micro
RNA (miRNA), gain of function (activativation tagging) mutagenesis, TILLING
(Targeted Induced Local Lession IN Genomes) and fine structure genetics
(Modifier screens, Enhancer trap, GAL4 mediated over expression) and methods
for transcriptome analysis (cDNA microarrays, Oligonucleotide arrays, Rapid
Analysis of Gene Expression (RAGE) and Serial analys#s of gene express#on
(SAGE) will also be covered in detail.
PSPP 690. Doctoral Thesis. 1-10 Credits. (1-10 Ind; max cr unlimited) F,S,Su
PREREQUISITE: Doctoral standing.
Font Notice

This document should contain certain fonts with restrictive licenses. For this draft, substitutions were made using less legally restrictive fonts. Specifically:

Times was used instead of Adobe Garamond Pro.

The editor may contact Leepfrog for a draft with the correct fonts in place.