

Botany

LOWER DIVISION

BOT 105. General Botany (4). Structure, function, reproduction, life cycles, and phylogenetic relationships of major plant groups. Relationships of plants to other organisms and to human activities. [Weekly: 3 hrs lect, 3 hrs lab. GE.]

BOT 198. Supplemental Instruction (1). Collaborative work for students enrolled in introductory botany. [CR/NC. Rep.]

UPPER DIVISION

 **BOT 300. Plants & Civilization** (3). Plants that have played important roles in our economic, social, and cultural development. Ethnobotanical aspects of edible, medicinal, and psychoactive plants. [Prereq: completed lower division life science GE. Cannot be used to satisfy major requirements of biological sciences majors. GE.]

BOT 310. General Plant Physiology (4). Plant growth, development, reproduction, metabolism, photosynthesis, soil/water relations, inorganic nutrition, and translocation. Quantitative analysis of physiological functions. [Prereq: BIOL 105, BOT 105, and PHYX 106, or their equivalents. All with a grade of C- or higher. Weekly: 2 hrs lect, 6 hrs lab.]

BOT 322 / BOT 522. Developmental Plant Anatomy (4). Plant structure and development, emphasis on seed plants; cells, tissues, and organs. Cell fate determination tissue patterning. Descriptive anatomy and molecular mechanisms. Applications of plant anatomy. Primary literature surveys, scientific communication. [Prereq: BOT 105 and BIOL 105.]

BOT 330. Plant Ecology (2). Principles governing structure and dynamics of plant populations and communities. Topics include community sampling, interspecific interactions, population viability analysis, and conservation issues. [Prereq: BIOL 330 or WLDF 301 or WLDF 310 or FOR 131 with a grade of C- or higher.]

BOT 330L. Plant Ecology Lab (1). Apply concepts and methods from BOT 330. [Prereq: BOT 330 (C).]

BOT 350. Plant Taxonomy (4). Identify ferns, gymnosperms, and flowering plants. Recognize families and key plants in the local flora. [Prereq: BIOL 105 and BOT 105, or their equivalents. Both with a grade of C- or higher. Weekly: 2 hrs lect, 6 hrs lab or field trip.]

BOT 354. Agrostology (4). Taxonomy, identification, and relationships of grasses of North America. [Prereq: BIOL 105 and BOT 105, or their equivalents. Weekly: 2 hrs lect, 6 hrs lab.]

BOT 355. Lichens & Bryophytes (4). Biology, ecology, natural history, and taxonomy of lichens, liverworts, hornworts, and mosses. Emphasis: epiphytic habitats. [Prereq: BOT 105 with a grade of C- or higher. Weekend field trips. Weekly: 2 hrs lect, 6 hrs lab.]

BOT 356 / BOT 556. Phycology (4). Biology and evolution of photosynthetic eukaryotes. Marine algal ecology. Field trips, identification skills, micro-

and macroalgal sampling, data analysis, scientific writing. [Prereq: BIOL 105, BOT 105, STAT 108 or STAT 109. Weekly: 2 hrs lect, 6 hrs lab.]

BOT 358. Biology of the Microfungi (2). Morphology, genetics, classification, ecology, and economic importance of yeasts and molds. Emphasis on isolation, culture, and lab techniques. [Prereq: BOT 105 with a grade of C- or higher or IA. Weekly: 1 hr lect, 3 hrs lab.]

BOT 359. Biology of the Ascomycetes & Basidiomycetes (2). Morphology, anatomy, classification, genetics, ecology, physiology, and economic importance of ascomycetes and basidiomycetes. [Prereq: BOT 105 with a grade of C- or higher or IA. Weekly: 1 hr lect, 3 hrs lab/fieldwork.]

BOT 360. Biology of the Fleshy Fungi (2). Systematics, ecology, toxicity, biological interactions, and culturing of mushrooms, polypores, chanterelles, boleti, and puffballs. Emphasis: Northern California fungi. [Prereq: BOT 105 with a grade of C- or higher or IA.]

BOT 360L. Biology of the Fleshy Fungi Lab (2). [Prereq: BOT 360 (C) or IA. Weekly: 6 hrs lab/fieldwork.]

BOT 372 / BOT 572. Evolutionary Morphology of Plants (4). Organismal biology, phylogeny, and evolution of vascular plants. Morphology, anatomy, development of extant and fossil plants. Cladistic theory and data analysis, survey of primary literature, scientific communication. [Prereq: BOT 105 and BIOL 105.]

BOT 394. Forest Pathology (3). Biology of diseases affecting trees in the forest and forest nursery. Emphases: fungi, mistletoes. [Prereq: BOT 105 with a grade of C- or higher or IA. Weekly: 1 hr lect, 6 hrs lab/fieldwork.]

BOT 399. Supplemental Work in Botany (1-3). For transfer student whose prior coursework is not equivalent to corresponding courses at HSU. Directed study. [Prereq: DA. Rep once.]

BOT 458. Pollination Biology (3). Pollinator diversity and behavior; plant mating systems; coevolution. Basic lab and field methods. Develop plans for senior thesis. [Prereq: BIOL 330 with a grade of D or higher; plus any taxonomy course. Weekly: 2 hrs lect, 3 hrs lab.]

GRADUATE

BOT 521. Paleobotany (3). Principles of reconstructing past terrestrial landscapes, environments, and plant communities. Techniques for finding, analyzing, and interpreting fossil evidence. [Prereq: BOT 105, GEOL 109; plus at least one of the following: FOR 130, FOR 131, BOT 350, GEOL 332, GEOL 350, GEOL 423, or IA.]

BOT 522 / BOT 322. Developmental Plant Anatomy (4). Plant structure and development, emphasis on seed plants; cells, tissues, and organs. Cell fate determination tissue patterning. Descriptive anatomy and molecular mechanisms. Applications of plant anatomy. Primary literature surveys, scientific communication. [Prereq: BOT 105 and BIOL 340 (C).]

BOT 553. Marine Macrophyte Ecology (3). Ecology of marine algae and seagrasses. Lectures: from evolutionary ecology to diversity and ecosystem health. Labs: methods, student projects. [Prereq: BIOL 330 and BOT 356.]

BOT 556 / BOT 356. Phycology (4). Biology and evolution of photosynthetic eukaryotes. Marine algal ecology. Field trips, identification skills, micro- and macroalgal sampling, data analysis, scientific writing. [Prereq: BOT 105; BIOL 330. Weekly: 2 hrs lect, 6 hrs lab.]

BOT 572 / BOT 372. Evolutionary Morphology of Plants (4). Organismal biology, phylogeny, and evolution of vascular plants. Morphology, anatomy, development of extant and fossil plants. Cladistic theory and data analysis, survey of primary literature, scientific communication. [Prereq: BOT 105 and BIOL 307 (C).]

BOT 580 / BOT 580L. Selected Topics in Botany (1-3). Topics on current advances as demand warrants. [Prereq: grad standing and IA. Rep once.]