Soils

LOWER DIVISION

SOIL 104. Introduction to Sustainable Agriculture (3). The course provides an understanding of the complex relationships among crop plants, domesticated animals, and their abiotic and biotic environment, and the requirements for sustainable agriculture. [Weekly: 2 hrs lect, 3 hrs lab. B-LD.]

SOIL 260. Introduction to Soil Science (3). Soil’s physical, chemical, and biological properties. Implications for land management. Identify soil parent materials; use soil survey reports. [Prereq: CHEM 107 or CHEM 109 or IA. Weekly: 2 hrs lect, 3 hrs lab.]

SOIL 285 / RRS 285. Wildland Soils Seminar (1). Current topics in wildland resources (range & soils) assigned, presented, and discussed. Guest presentations from practicing professionals & scientists. Student oral & written presentations required. [Rep once.]

UPPER DIVISION

SOIL 360. Origin & Classification of Soils (3). Factors of soil genesis; their interactions. Soil morphology/description; classification, emphasizing wildland soils. [Prereq: SOIL 260 or equivalent. Weekly: 2 hrs lect, 3 hrs lab.]

SOIL 363. Wetland Soils (3). The morphology, chemistry, hydrology, formation and function of mineral and organic soils in wet environments. Topics include identification, estuaries, peatlands, preservation, regulation and mitigation. [Prereq: SOIL 260 or equivalent. Rec: SOIL 360. Weekly: 2 hrs lect, 3 hrs lab.]

SOIL 460. Forest & Range Soils Management (3). Soil interpretations for forest, range, and recreational use of wildlands. Soil properties affecting such interpretations. Soil fertility management on wildlands. [Prereq: SOIL 260 or equivalent. Weekly: 2 hrs lect, 3 hrs lab.]

SOIL 461. Forest Soils Capstone (1). Research a forest soils problem, complete a project, write a report, and give a public presentation. Demonstrate breadth and depth of knowledge, ability to integrate knowledge, adaptability, and critical thinking. [Coreq: SOIL 460.]

SOIL 462. Soil Fertility (3). Methods of evaluating/managing soil fertility, nutrient availability and cycling in terrestrial ecosystems; soil test methods and interpretation of results. [Prereq: SOIL 260, or IA. Weekly: 2 hrs lect, 3 hrs lab. Offered alternate years.]

SOIL 465. Soil Microbiology (3). Interrelationships between soil, microorganisms, and plants, especially in context of wildland soils. Isolate/identify microorganisms. [Prereq: SOIL 260 or equivalent, and BIOL 105. Weekly: 2 hrs lect, 3 hrs lab. Offered alternate years.]

SOIL 467. Soil Physics (3). State/transport of matter and energy in soil; physical processes governing soil/water energy relationships. [Prereq: SOIL 260 or equivalent, and PHYX 106 or PHYX 109; or IA. Weekly: 2 hrs lect, 3 hrs lab. Offered alternate years.]

SOIL 468. Introduction to Agroforestry (3). Objectives and socioeconomic contexts. Multipurpose tree species; soil/tree/crop/livestock interactions; soil conservation; soil fertility effects. [Prereq: BOT 105 and SOIL 260 or equivalent.]

SOIL 480. Selected Topics (1-3). Lecture as appropriate. [Rep with different topics.]

SOIL 485. Senior Seminar (1-2). Topics of current interest. Lectures, guest speakers, discussions, and/or student presentations. [Prereq: junior or senior standing or IA. Rep.]

SOIL 499. Directed Study (1-3). Individual research/project. [Prereq: IA. Rep.]

GRADUATE

SOIL 685. Seminar (1-2). Topics of current interest. Lectures, guest speakers, discussions, and/or student presentations. [Prereq: grad standing or IA.]