


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. GE.]


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. Rep.]