SOIL SCIENCE, PH.D.

PEOPLE

FACULTY

Assistant Professor Francisco Arriaga

Applied Soil Physics, Soil and Water Management and Conservation: Conservation agriculture systems; development of conservation tillage practices that enhance soil quality, soil hydraulic properties, and plant water use through the adoption of cover crops and non-inversion tillage for traditional cropping systems.

Associate Professor Nicholas Balster

Soil Ecology, Plant Physiological Ecology, and Education: Energy and material cycling in natural and anthropogenic soils including forests, grasslands, and urban ecosystems; stable isotope ecology; environmental education; nutrition management of nursery soils; tree physiology, production and response; ecosystem response to global change; urban ecosystem processes; invasive plant ecology; biodiversity.

Professor Phillip Barak

Soil Chemistry and Plant Nutrition: Nutrient cycling; nutrient recovery from wastewater; molecular visualization of soil minerals and molecules; soil acidification.

Professor Alfred Hartemink

Pedology, Digital Soil Mapping: Pedology; soil carbon; digital soil mapping; tropical soils; history and philosophy of soil science.

Assistant Professor Jingyi Huang

Soil Physics, Proximal and Remote Sensing, Soil Monitoring and Management, Digital Soil Mapping: Application of proximal and remote sensing technologies for understanding the movement of water, heat, gas, and solutes in soils across different spatial and temporal scales; application of physical and empirical models for monitoring, mapping, and managing soil changes due to natural processes and human activities.

Professor Carrie Laboski

Soil Fertility and Nutrient Management: Sustaining agricultural production and environmental quality; elucidate the biogeochemistry and subsequent best management practices for N, P, and K fertilizers and animal manures; soil fertility related to lime, secondary, and micronutrients; evaluation of soil and plant diagnostic tests; development of tools to assist producers, ag. professionals, and regulatory agencies to sustain economically sound production of grain and forage crops.

Associate Professor Matthew Ruark

Soil Fertility and Nutrient Management: Soil fertility and management of grain biofuel, and vegetable crops; cover crop management; agricultural production and water quality; sustainability of dairy cropping systems; soil organic matter management.

Professor Douglas Soldat

Turfgrass and Urban Soils—Turfgrass, urban soils, nutrient management, water resources, soil testing, landscape irrigation; soil contamination.

Professor Stephen Ventura

Geographic Information Systems (Joint with Nelson Institute for Environmental Studies): Geographic information systems (GIS), biofuels and production on marginal lands, public participation GIS, urban agriculture, land-scape process modeling, soil survey and soil information systems, land and resource tenure, GIS and land use planning.

Assistant Professor Thea Whitman

Soil Ecology, Microbiology, and Biogeochemistry: Soil microbial ecology; organic matter decomposition and carbon stabilization; global environmental change; stable isotopes; linking functional significance of microbial communities with ecosystem processes; fire effects on soil carbon and microbes; management and policy.