

Department: Agriculture, Agribusiness, and Environmental Science
Program: Masters of Plant and Soil Science (PLSS)

Skill Set	Professional Application	Delivery of Skill Set Courses, extracurricular activities, etc. in which the skill set is introduced (I), reinforced (R), or mastered (M)
Core Skill: Strategic Thinking Skills	Students in the program employ critical thinking to evaluate complex crop-production problems, chemical reactions in soils and develop adapted solutions to ensure the sustainability and productivity of row crops, and horticultural crops.	PLSS 6344 Crop Protection, PLSS 5351 Advanced Plant Propagation, PLSS 5390 Soil Fertility and Nutrient Management PLSS 5337 Prac App Plant Biotechnology PLSS 6346 Citrus & Subtrop Fruit Crops
Core Skill: Systems Thinking Skills	Through individual and group research activities, students acquire the critical skills for a system approach analysis of horticultural/agricultural problems and test various solutions through proper experimental designs to propose adapted and grower implementable solutions. Students acquire critical skills via. Journal review discussions and literature review project work on how the system functions in relation to nutrient recycling, chemical reactions in soils, and nutrient availability under different cropping systems.	PLSS 6379 Posthar Physiol of Hort Crops PLSS 5353 Advanced plant Pathology PLSS 5390 Integrated Pest Management, PLSS 5360 Exper. Designs & Data Analysis
Core Skill: Business Management Skills	Through hands-on training, students acquire the technical skills that allow them to identify agricultural pests and diseases and propose integrated management approaches, plant propagation skills that are readily implementable by growers and agricultural companies. Students will develop technical skills on selecting fertilizer sources and application methods based on their production systems.	PLSS 6344 Crop Protection, PLSS 5353 Advanced plant Pathology PLSS 5390 Integrated Pest Management, PLSS 5351 Advanced Plant Propagation ENVS 5310 Sustainable Landuse Decision & Mgmt
Discipline-based Skill: Natural Resource Management Skills	Our graduates acquire the needed skills to manage agricultural pests using agrochemicals while preserving the environment. Students acquire marketable skills on safe use of pesticides in agricultural systems while ensuring the proliferation of beneficial arthropods. Students acquired several marketable skills that are needed to work in plant propagation units or to succeed in the establishment and management of nurseries or other businesses related to plant propagation. Students develop skills on environmental issues related to Agricultural production systems and the use of best management practices to mitigate the impact. Students acquire marketable skills on the efficient and safe use of chemical fertilizers, manures, and poultry litter in row crops and horticultural production systems.	PLSS 6344 Crop Protection PLSS 5351 Advanced Plant Propagation PLSS 5390 Soil Fertility and Nutrient Management PLSS 5330 Adv. Environmental Science PLSS 5352 Advanced Plant Physiology PLSS 5353 Advanced Plant Pathology PLSS 5330 Adv. Environmental Science
Core Skill: Collaboration and teamwork	Through experiential learning, group projects, and journal reviews, students learn the necessary collaborative skills to work as teams to propose solution to complex problems, which prepare them to their active career life.	PLSS 5390 Adv Stud in Plant and Soil Sci, PLSS 5351 Advanced Plant Propagation PLSS 5351.