MINOR IN AGRICULTURAL DATA ANALYTICS FOR DECISION MAKING

Strategies for the management of agricultural, food, and natural resources systems (including business, non-profits, government) using an evidence based – data driven approach. Their focus will be on learning how to find and analyze data satisfying the needs of decision makers to implement practical improvements that benefit food security and safety, as well as human and ecosystem well-being. The bulk of their coursework in classes related to data analysis for decision making; the use of real-world data will result in a skillset that will provide data-informed technical advice for actors operating in agricultural, food and natural resource systems. The primary needs for using data in agricultural decision making include crop management, risk assessment, animal health, livestock management, soil health, agricultural environmental protection, climate change mitigation and adaptation, supply chain management, food access, food and nutrition security, and urban farming.

Learning Objectives

Upon successful completion, students will be able to:

1. Describe data needs and requirements for decision making in agricultural, food and natural resource systems.
2. Describe agricultural, food, and natural resource systems, and business environments through data and data analytics.
3. Use data analytics to identify and solve problems related to the management of agricultural, food and natural resource systems and business.
4. Develop plans to identify, collect, analyze, and store data related to agricultural, food, and natural resource systems decision making.

Requirements Effective Spring 2025

Students must satisfactorily complete the total credits required for the minor. Minors and interdisciplinary minors require 12 or more upper-division (300- to 400-level) credits.

Additional coursework may be required due to prerequisites.

Code	Title	Credits
AREC 230	Agricultural Data Management and Analysis	3
AREC 330	Data-Driven Ag and Res Econ Decision Making	3
STAT 204	Statistics With Business Applications (GT-MA1)	3
Select 4 or more upper-division elective courses from the list below. At least 6 credits must be AREC.		12
Program Total Credits:		**21**

Electives

Code	Title	Credits
AB 330	Applications in Agricultural Biology I	2
AB 415	Agricultural Data Science	3
AB 420	Horticultural Entomology	2
AB 430	Applications in Agricultural Biology II	3
AB 451	Integrated Pest Management	3
ANEQ 313	Prevention and Control of Livestock Diseases	3
ANEQ 330	Principles of Animal Breeding	3
ANEQ 346	Equine Disease Management	4
ANEQ 470	Meat Processing Systems	4
ANEQ 472	Sheep Systems	3
ANEQ 473	Dairy Systems	3
ANEQ 474	Swine Systems	3
ANEQ 476	Feedlot Systems	3
ANEQ 478	Beef Systems	3
AREC 305	Agricultural and Resource Enterprise Analysis	3
AREC 310	Food and Agricultural Markets	3
AREC 311	Agricultural and Resource Product Marketing	3
AREC 335/ECON 335	Introduction to Econometrics	3
AREC 405	Agricultural Production Management	3
AREC 408	Agricultural Finance	3
AREC 428	Agricultural Business Management	3
BSPM 302	Applied and General Entomology	2
HORT 310	Greenhouse Management	4
HORT 321	Nursery Production and Management	4
HORT 451	Vegetable Crop Management	3
HORT 453	Principles of Fruit Crop Management	3
HORT 454	Horticulture Crop Production and Management	2
HORT 462	Viticulture Practices in Grape Production	3
HORT 464A	Arboriculture	3
SOCR 350	Soil Fertility Management	3
SOCR 370	Climate-Smart Irrigation Principles	2
SOCR 371	Climate-Smart Irrigation Management	1
SOCR 377/AB 377	Geographic Information Systems in Agriculture	3
SOCR 405/ESS 405	Global Agriculture and Environmental Change	3
SOCR 425	Internet of Ag Things--Sensors and Data Lab	2
SOCR 460/HORT 460	Plant Breeding and Biotechnology	3
SOCR 401	Greenhouse Gas Mitigation, Land Use, and Mgmt	3