

# AGRICULTURAL OPERATIONS MANAGEMENT

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Not all courses are offered every semester. Refer to the schedule of courses for each term's specific offerings.

More Info (<https://one.ufl.edu/soc/>)

*Unless otherwise indicated in the course description, all courses at the University of Florida are taught in English, with the exception of specific foreign language courses.*

## Courses

### **AEB 4085 Agricultural Risk Management and the Law 3 Credits**

**Grading Scheme:** Letter Grade

Develops an understanding of the basic concepts of common and statutory law. Identifies and addresses current legal issues of importance at the personal and professional levels. Develops an understanding of risk and the solutions for managing risk and relates the concepts of risk management and law in limiting exposure to legal liability.

### **ALS 3133 Agricultural and Environmental Quality 3 Credits**

**Grading Scheme:** Letter Grade

Analysis of effects of agriculture on environmental quality; emphasis on agricultural wastes and practices; potential for using agricultural systems for disposal of other wastes; effects of pollution on the agricultural environment. (P)

**Attributes:** General Education - Physical Science

### **AOM 2520 Global Sustainable Energy: Past, Present and Future 3 Credits**

**Grading Scheme:** Letter Grade

Explore the global history of energy sources; investigate new energy sources and analyze international solutions to future needs.

### **AOM 3220 Agricultural Construction and Maintenance 3 Credits**

**Grading Scheme:** Letter Grade

Selection and use of materials and tools used in planning, constructing, and maintaining buildings. Participate in class lectures and hands-on laboratory activities to build full-scale projects involving framing, plumbing, electrical, windows, etc. Combines building codes and building science to introduce the changing world of construction.

### **AOM 3333 Pesticide Application Techniques 3 Credits**

**Grading Scheme:** Letter Grade

Equipment and methods used to apply pesticides in agriculture. Emphasizes techniques used to avoid misapplication, a common cause of pesticide failures.

### **AOM 3734 Irrigation Principles and Practices in Florida 3 Credits**

**Grading Scheme:** Letter Grade

Irrigation practice related to Florida agriculture. The course deals with irrigation system characteristics, management, maintenance and economics.

**Prerequisite:** MAC 1147.

### **AOM 4060 Agri-food Systems Innovation 3 Credits**

**Grading Scheme:** Letter Grade

Explore the role of innovation in food systems from a reverse chain perspective. Gain knowledge of the food system framework from a multilevel (i.e., individual, organizational, etc.) perspective, identify current, innovative business and technological practices, as well as present and think critically about future trends in food.

**Prerequisite:** (Any AOM, ABE, or PKG course) or (junior standing or higher).

### **AOM 4062 Principles of Food Engineering 4 Credits**

**Grading Scheme:** Letter Grade

The functional requirements and principles of operation of systems for handling and processing food and agricultural products.

**Prerequisite:** MAC 1147 and 3 credits of physics.

### **AOM 4314C Power and Machinery Management 3 Credits**

**Grading Scheme:** Letter Grade

Functional requirements, operating principles, performance, safety and economic application of agricultural power units and field machines for citrus, vegetable and field crop production.

### **AOM 4434 Precision Agriculture 3 Credits**

**Grading Scheme:** Letter Grade

Principles and applications of technologies supporting precision farming and planning for natural resource data management. Global positioning systems (GPS), geographic information systems (GIS), variable rate technologies (VRT), data layering of independent variables, automated guidance, Internet, information access and computer software for management.

**Prerequisite:** Junior standing or higher.

**AOM 4444C Electrical Power and Instrumentation for Agricultural Operations Management 3 Credits**

**Grading Scheme:** Letter Grade

Fundamental concepts of electricity, power, instrumentation, computer control operations and selected transducers. Foundation to aid in management of agricultural processing operations.

**AOM 4455 Agricultural Operations and Systems 3 Credits**

**Grading Scheme:** Letter Grade

Quantitative and managerial techniques for management and planning of technical resources in agriculture. Applications of queuing theory, project scheduling, optimization and expert decision systems.

**Prerequisite:** MAC 1147 and a computer course.

**AOM 4461 Sustainable Agricultural Systems 3 Credits**

**Grading Scheme:** Letter Grade

Minimizing energy and costs in agricultural and natural resource systems and industries. Students explore ways to enhance sustainable systems by improving efficiency. Topics include agricultural machinery, pumps, motors, fans, refrigeration, lights and construction methods.

**Prerequisite:** senior standing and PHY 2004 or the equivalent.

**AOM 4510C Instrumentation and Climate Management in Controlled Environment Agriculture 3 Credits**

**Grading Scheme:** Letter Grade

Sensors and instruments for monitoring growing environment in controlled environment agriculture will be introduced. Learn how to evaluate production systems, monitor environmental variables, control growing conditions, and design experiments.

**Prerequisite:** Junior status or higher.

**AOM 4521 Introduction to Biofuels 3 Credits**

**Grading Scheme:** Letter Grade

An overview of biofuel production related to technologies and feedstocks, economics of producing biofuels and impact on the environment and the local economy. Dealing specifically with liquid and gaseous biofuels and bioenergy produced from renewable resources, it provides a summary of the past, present and future production technologies and applications.

**Prerequisite:** BSC 2010 and PHY 2004 and CHM 2045 or the equivalents.

**AOM 4642 Environmental Systems for Agricultural Structures 3 Credits**

**Grading Scheme:** Letter Grade

Effects of the environment on plant and animal production, processing operations and quality of stored produce. Selection of building materials and sizing of components of environmental systems in agricultural structures to enhance more efficient agricultural production, processing and storage.

**Prerequisite:** MAC 1147 and 3 credits of physics.

**AOM 4643 Environmental Hydrology: Principles and Issues 3 Credits**

**Grading Scheme:** Letter Grade

This is a basic course in environmental hydrology intended for agricultural and natural resource managers. The first half of the course covers scientific principles of the hydrologic cycle while the second half investigates case studies of current water quality and water management issues.

**AOM 4900 Supervised Extension Experience in Agricultural Operations Management 0-3 Credits**

**Grading Scheme:** S/U

Firsthand, authentic extension experiences in agricultural operations management under the supervision of a faculty member. Projects may involve program planning, development, implementation, and evaluation.

**AOM 4905 Special Problems in Agricultural Operations Management 1-4 Credits**

**Grading Scheme:** Letter Grade

Selected problems or projects in the student's major field of mechanized study.

**Prerequisite:** permission of department chair or advisor.

**AOM 4911 Supervised Research in Agricultural Education and Communication 0-3 Credits**

**Grading Scheme:** S/U

Firsthand, authentic research in Agricultural Education and Communication under the supervision of a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

**AOM 4915 Honors Thesis Research in Agricultural Operations Management 0-3 Credits**

**Grading Scheme:** S/U

Independent research in agricultural operations management leading to an honors thesis. Student will be mentored by a faculty member. Projects may involve inquiry, design, investigation, scholarship, discovery or application.

**Prerequisite:** junior standing, upper division GPA of 3.75 or higher and completed honors thesis proposal on file.

**AOM 4932 Special Topics in Agricultural Operations Management 1-4 Credits**

**Grading Scheme:** Letter Grade

Variable topics provide content for the study of mechanized agriculture topics not offered in other courses.

**Prerequisite:** instructor permission.

**AOM 4933 Professional Practices in Agricultural Operations Management 1 Credit**

**Grading Scheme:** Letter Grade

Professionalism and interfacing of technical skills. Topics include ethics, continuing education, placement skills and professional development in agricultural operations management.

**Prerequisite:** junior standing in agricultural operations management.

**AOM 4941 Full-Time Practical Work Experience in Agricultural Operations Management 1-4 Credits**

**Grading Scheme:** S/U

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