

Swine Science Online Program

What is the Swine Science Online Program?

The Swine Science Online Program is the first ever online undergraduate program in swine science. The courses that have been developed and beta-tested will be delivered through AG*IDEA beginning Fall of 2010. Swine Science Online courses will be delivered via distance education to universities across the country.

What is AG*IDEA?

Through AG*IDEA, member institutions from across the United States will be able to participate in distance education programs and/or courses in agricultural and related sciences with other institutions. In a multi-institution degree program, students apply and are admitted at one university; enroll in courses at that university; and graduate or receive a certificate from that university. Online courses are taught by the best faculty in the discipline from several universities. *To obtain information on partnering with AG*IDEA contact Joelle Pitts, jopitts@ksu.edu or 785-532-6968.*

What are the goals of the Swine Science Online Program?

The ultimate goal of the Swine Science Online Program is to have more academically trained students entering the pork industry. After completing required and elective courses students will be able to apply for a Swine Science Online Certificate that is administered by the U.S. Pork Center of Excellence.

After receiving a Swine Science Online Certificate students will be able to:

- Integrate disciplines and concepts in order to facilitate problem solving, creating a more efficient production system
- Combine scientific principles and management skills involved in pork production for an efficient and sustainable operation
- Recognize available career opportunities within the pork industry.
- Apply personnel, facility, fiscal and livestock management principles involved in swine production
- Perform basic swine husbandry skills
- Understand the impact of societal and industry issues on production management systems
- Explain the pork chain structure and trends, including production, packing, and integration

Who should you contact to participate?

University	AG*IDEA Campus Coordinator	University Faculty
Colorado State University	Nancy A. Irlbeck - nancy.irlbeck@colostate.edu	Nancy A. Irlbeck
Iowa State University	Lori Youngberg - lyoung@iastate.edu	Tom Baas et. al.
Kansas State University	K'La Ruane - gpideacc@ksu.edu	Don Boggs
North Carolina State	Demonica Hicks - demonica_hicks@ncsu.edu	Todd See et. al.
North Dakota State	Karen Murie - karen.murie@ndsu.edu	David Buchanan
South Dakota State	Larissa Kunde - larissa.kunde@sdstate.edu	Chris Hostetler
University of Nebraska	Diane Wasser - dwasser@unl.edu	Duane Reese
University of Missouri	Sandy Sites - sitess@missouri.edu	Tim Safranski

Who should you contact for more information?

Please contact Maggie DenBeste, Swine Science Online Program Coordinator at the U.S. Pork Center of Excellence. 515-294-5231 or mdenbest@iastate.edu .

USPCE Swine Science Online Certificate Requirements

REQUIRED COURSES (7 credits)

Basic Swine Science (2 cr.)

Basic disciplines and concepts involved in swine production including: industry structure, trends and statistics; production phases and buildings; genetic improvement; reproduction; nutrition; health and biosecurity; nutrient management; marketing and meat quality; and career opportunities in the swine industry.

Basic Swine Science Lab (1 cr.)

Basic application of concepts presented in basic swine science course. Including: artificial insemination; handling; semen collection; health and biosecurity; financial analysis; pig flow; buildings and ventilation; and feed management.

Swine Health and Biosecurity (1 cr.)

Overview of standard biosecurity protocols and identification of behavior and clinical signs of illness in pigs. Treatment administration and prevention methods. Introduction to immune system function and basic swine disease transmission.

Employee Management for the Swine Industry (1 cr.)

Effective employee management in swine production units. Assist students in understanding the principles, policies, and practices related to procurement, development, maintenance, and utilization of employees.

Internship in the Swine Industry (1 cr.)

Specialized work on an individual basis, consisting of training and practice and actual service in a swine production operation.

A COURSE IN PRODUCTION MANAGEMENT (CHOOSE ONE)

Swine Breeding and Gestation Management (1 cr.)

Concepts related to: reproductive physiology and endocrinology of boars and sows; genetic selection programs; development programs for future replacement gilts and boars; semen collection, evaluation, and preparation; detection of estrus and artificial insemination; pregnancy diagnosis; feeding and housing programs for gestating sows; environmental management; records; diseases; and development of quality assurance programs for identifying and solving reproductive problems.

Farrowing Management (1 cr.)

Advanced integration and application of reproductive management concepts during farrowing and lactation. Identification of production trends; formulation of strategies to improve productivity; and parturition and neonatal management.

Swine Nursery and Finishing Management (1 cr.)

Overview of the critical management, housing, and financial considerations relevant to the successful operation of a swine nursery, grow-finish, or wean to finish enterprise, including: nutrient requirements; building and facility management; and marketing.

ELECTIVE COURSES (Choose 5 Courses)

Contemporary Issues in the Swine Industry (1 cr.)

Evaluation of issues facing today's swine industry including: welfare, nutrient management, and food safety and security. Development of skills needed for effective community relations such as media interviews and message points.

Swine Business and Records Analysis (1 cr.)

Evaluation of swine operations using farm and enterprise records, budgeting, and financial analysis and benchmarks.

Pork Export Markets (1 cr.)

Introduction to global markets; cultural preferences and customs associated with the pork export markets. International trade regulations and potential impact of foreign animal diseases and bioterrorism affecting the U.S. swine industry.

Marketing and Risk Management in the Swine Industry (1 cr.)

A comprehensive view of industry structure and trends and marketing options available in the swine industry. Management of risk between markets and/or contracts.

Swine Environment Management (1 cr.)

Response of swine to thermal environment, ventilation system design and analysis, heating and cooling systems and examples of various designs for all phases of production. Troubleshooting ventilation systems and energy analysis of production units.

Swine Manure and Nutrient Management (1 cr.)

Function, application, and advantages and disadvantages of nutrient management systems. Manure production rates, manure handling systems, storage and manure management planning for land application and odor mitigation strategies.

Pork Product and Quality Safety (1 cr.)

Pre- and post-harvest factors affecting pork product quality and safety. Overview of pork harvesting process and traits and characteristics of quality pork products.

Swine Feed Mill Management (1 cr.)

Principles of feed manufacturing, equipment operation, feed and ingredient quality assurance and regulatory compliance in a modern feed milling operation. Overview of feed mill regulations and safety.

Advanced Swine Science Lab (1 cr.)

Advanced application of concepts associated with swine production. Including: semen processing; troubleshooting production efficiency; risk management; marketing; buildings and ventilation; and on farm euthanasia and carcass disposal.