College of Agriculture

Feed Science and Management

Overview
A feed science and management degree within the feed production or pet food production emphasis will position you to be in demand upon graduation. World demand continually grows for meat and alternative fuels. A feed science degree, offered only at Kansas State University, prepares you to meet that demand. High-paying starting salaries are typical. Graduates tend to progress quickly to higher levels of responsibility in their careers.

Professional options
The degree includes a combination of disciplines built around the study of the animal and pet food business with emphasis on manufacturing management.

Career possibilities include plant operations and management in:
- Feed, pet food and related industries
- Corporate management
- Quality control
- Research and development
- Ingredient procurement
- Sales
- Processing facility design
- Equipment design and manufacturing
- Regulatory affairs

Employers
- Commercial feed companies
- Feedlots
- Pet food companies
- Large integrated food companies
- Ingredient suppliers
- Exporting companies
- Equipment manufacturers
- Government

Job experience
Internships help students gain valuable real-world knowledge. This experience gives students a chance to work with different companies, practice skills and learn more about the industry. Internships often lead to full-time job offers.

Academics

Degree options
Students who complete the program will have a Bachelor of Science degree in feed science and management through the Department of Grain Science and Industry.

Feed production
This area of emphasis is for those wishing to follow the conventional feed science program to prepare for careers in the feed manufacturing and animal nutrition fields, including pet food manufacturing and other allied industries.

Pet food production
This area of emphasis offers students many opportunities in the growing pet food industry. Courses cover all aspects of pet food nutrition, from raw material procurement, milling and mixing to extrusion, regulations, packaging, animal validation and new product scale-up.

Pre-veterinary medicine students
Students may complete pre-vet professional requirements while attaining a feed science and management degree.

Minors
The Department of Grain Science and Industry also offers minors in pet food production and feed production. These minors can be combined with any major taken at K-State. A minor from the Department of Grain Science and Industry will take you one step closer to understanding the needs of the specialized agriculture industry.

Faculty
The feed science faculty members are a valuable resource. They draw from firsthand industry experiences and are experts in their respective fields. In addition to teaching, faculty members conduct cutting-edge research, speak regularly at professional meetings, and serve on government and industry advisory boards. All these activities allow faculty to bring the latest topics, problems and solutions directly into the classroom.

Advising
Faculty work with students to help them choose classes, determine strengths and weaknesses, and help them improve. Because a select number of students major in feed science, advisors and students often are on a first-name basis.

Transferring
Students interested in transferring into feed science should contact Hulya Dogan at 785-532-2628 or dogan@k-state.edu.

Facilities
Feed science students are fortunate to be exposed to state-of-the-art equipment. An extrusion center with the latest technology and grain storage research center are also available. The O.H. Kruse Feed Technology Innovation Center opened in 2013 as the premier research and teaching feed mill in the country.

Points of pride
Kansas State University is the only institute in the world to offer a four-year degree in feed science and management.
Activities
Activities in the Department of Grain Science and Industry add to the K-State experience by helping develop leadership abilities create friendships and explore new ideas.

Clubs
The Feed Science Club brings feed science students together in a group that promotes professional and social activities while providing hands-on opportunities to manufacture and market feed products.
Top students in feed science are invited to be a member of Alpha Mu, the grain science honorary.

Financial assistance
The department of grain science awards more than $200,000 in scholarships annually to students majoring in milling, feed and bakery science. Scholarships are awarded based on academic achievement and financial need, along with donor specifications.

Suggested coursework
Feed Science and Management (B.S.)

Natural Sciences (29 credit hr)
ASI 318 - Fundamentals of Nutrition (3)
BIOL 198 - Principles of Biology (4)
BIOL 455 - General Microbiology (4)
CHM 210 - Chemistry I (4)
CHM 230 - Chemistry II (4)
BIOCH 265 - Introductory Organic and Biochemistry (5)
or CHM 350/531 - General Organic Chemistry/Lab (5)
PHYS 113 - General Physics I (4)
PHYS 114 - General Physics II (4)

Quantitative Studies (6 credit hr)
MATH 205 - General Calculus and Linear Algebra (3)
STAT 325 - Introduction to Statistics (3)

Communications (11 credit hr)
COMM 105 - Public Speaking IA (2)
ENGL 100 - Expository Writing I (3)
ENGL 200 - Expository Writing II (3)
Communication elective (3)

Business and Economics (15 credit hr)
ECON 110 - Principles of Macroeconomics (3)
ACCTG 251 - Accounting for Business Operations (3)
AGEC 120 - Agricultural Economics/Agribusiness (3)
or ECON 120 - Principles of Macroeconomics (3)

Management Electives (6)
ACCTG 241
AGEC: 202, 220, 300 or above
ECON: 500 or above
ENTRP 340
FINAN 450
LEAD: 212, 350
MANGT: 300 or above
MKTG: 390 or above
Core Requirements (54 credit hr)
ASI 318 - Fundamentals of Nutrition (3)
GRSC 100 - Freshman Orientation in Grain Science (1)
GRSC 101 - Intro to Grain Science and Industry (3)
GRSC 210 - CAD Flow Sheets for Grain Processes (3)
GRSC 310 - Materials Handling (3)
GRSC 510 - Feed Technology I (3)
GRSC 612 - Feed Technology II and Laboratory (4)
GRSC 530 - Management Appl in the Grain Proc Ind (3)
GRSC 561 - Qualities of Feed Ingredients (4)
GRSC 591 - Internship in Grain Science (1)
GRSC 620 - Extrusion Proc in the Food and Feed Ind (4)
GRSC 651 - Food and Feed Product Protection (4)
GRSC 615 - Animal Food Safety (3)
Feed Production Emphasis (18)
or Pet Food Emphasis (18)
Feed Production Emphasis
Grain Science Electives (9)
Specialization Electives (9)

Pet Food Emphasis
ASI 520 - Companion and Laboratory Animal Mgmt (3)
GRSC 645 - Pet Food Processing (4)
GRSC 677 - Companion Animal Nutrition (1)
Grain Science Electives (6)
Specialization Electives (4)

Grain Science Electives:
GRSC 150 - Principles of Milling (2)
GRSC 151 - Principles of Milling Laboratory (1)
GRSC 491 - Faculty-Led Study Abroad (1-3)
GRSC 499 - UG Research in Grain Science (0-3)
GRSC 555 - Cereal Food Plant Design (3)
GRSC 560 - Electricity/Industrial Power Distribution (3)
GRSC 592 - Extended Internship in Grain Science (1)
GRSC 602 - Cereal Science (3)
GRSC 645 - Pet Food Processing (4)

Specialization Electives:
ASI: 102, 300 or above
ENTOM: 300 or above
FDSCI: 300 or above
BIOCH 521, 522
CHM : 531, 532
FNDH 711

Free Electives (6 credit hr)
Social Sciences and Humanities (6 credit hr)
Total credit hours required for graduation: 127