

Instructors

The course will be led by Greg Aldrich, research associate professor and pet food program coordinator at Kansas State University. Aldrich has been formulating foods for animals for more than 30 years and has been involved with formula development for some of the leading pet food companies as a nutritionist and consultant for more than 20 years.

He will be joined by other faculty to provide input on processing, nutrition, sensory and regulatory affairs. Also, representatives from the major formulation software companies will be on hand to assist students with installation, testing and use of their software.

Teaching assistants for breakouts during formulation exercises: Renan Donadelli, Isabella Alvarenga, Megan Haverkamp, Heeseong Kim, and Logan Kilburn

Registration

Registration information can be found on the IGP Institute website (www.grains.k-state.edu/igp) under current offerings.

[Register here](#)



KANSAS STATE
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IGP Institute
Department of Grain Science and Industry

1980 Kimball Avenue, 102 IGP Institute Conference Center | Manhattan, KS 66506-7000
Tel. 785-532-4070 | Fax 785-532-6080 | www.grains.k-state.edu/igp | igp@ksu.edu

IGP-KSU

Pet Food Formulation for Commercial Production (Virtual)



January 10–14, 2022

**IGP Institute
Kansas State University
Manhattan, Kansas**

KANSAS STATE
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Course Participant Goals

Upon completion of the training, participants will:

- Understand the raw ingredients used to produce pet foods
- Know the fundamental principles of dog and cat nutrition and dietary needs
- Appreciate the processes involved with producing pet foods
- Learn the regulatory constraints regarding claims and requirements
- Understand the transportation and storage factors involved with marketing effective foods for companion animals
- Explore the range of formulation common to the trade.
- Gain skills using computer assisted software for formulating effective dry extruded, baked and canned pet foods and treats.
- Create pet food formulas from “concepts,” “reverse engineer existing pet foods,” and “troubleshoot pet food production and quality control compliance issues using formulation software.

Learning Objective

Students completing this course will become proficient at formulating pet foods and have a working knowledge of ingredients, processes, and the software necessary to create new products. They will also be able to revise existing formulas, and perform business and production analyses.

Schedule

January 10, 2022		
Time	Activity	Instructor
0830	Welcome, Agenda, Introductions	Aldrich
0900	Installing Software; Check-in	Watland, Aldrich
0930	Ingredients – nutrients, sources, and management in the software	Aldrich
1030	Break	
1300	Dry ingredient handling, size reduction, weightment, mixing	Paulk
1400	Labeling regulations and nutritional compliance	Aldrich
1500	Formulation – simple “Hand Calculation”	Aldrich
1630	Adjourn	
January 11, 2022		
0830	Formulation – simple “Spreadsheet Calculation”	Aldrich
0930	Formulation – simple “Software – Least Cost”	Aldrich
1030	Break	
1300	Lonnie w/ Pet Food Industry “Needs” Survey Baking Introduction & Demonstration/Video	Aldrich
1430	Formulation – Baked Treats & Food	Aldrich
1530	Nutrition and Ingredient Constraints in Formulation (Complete and Balanced Diets)	Aldrich
1630	Adjourn	

January 12, 2022		
0830	Introduction to Canning and Demonstration/Video	Aldrich
0930	Formulation – Canned/Wet Loaf based formula	Aldrich
1030	Break	
1300	Group picture	
1315	Formulation – Canned/Wet Chunks & Gravy formula	Aldrich
1400	Raw, Frozen, Freeze Dried Foods & Demonstration/Video	Aldrich
1530	Formulation – New Formats: Raw, Freeze Dried	Aldrich
1630	Adjourn	
January 13, 2022		
0830	Extrusion Introduction, Ingredient functionality & Demonstration/Video	Alavi
0930	Formulation – Kibble with meat slurry	Aldrich
1030	Break	
1300	Formulation – Multi-step formulation	Aldrich
1400	Formulation – Reverse Engineering Products	Aldrich
1500	Formulation – Multi-Component (demonstration)	Aldrich
1630	Adjourn	
January 14, 2022		
0830	Palatability & Sensory Factors in Pet Food	Talavera
0930	Formulation for Claims: Lite, Hairball	Aldrich
1030	Break	
1300	Formulation – Premixes and Supplements	Aldrich
1400	Computing Metabolizable Energy and Feeding Guidelines	Aldrich
1500	Closing session, open Q&A, course evaluation, presentation of certificates	Class
1630	Adjourn	