Instructors
The course will be led by Greg Aldrich, associate professor and pet food program director 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 breakout sessions during formulation exercises will include alumni from the class and former graduate students from the Pet Food lab at Kansas State University. Teaching assistants will have real-world practical formulation experience and be able to assist participants with solutions that are real and meaningful.

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

Register here
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
- 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.
- Formulate premixes and supplements to support new formats

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, determine opportunities for cost containment, and explore ingredient options to provide new product competitive advantages.

Schedule

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<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>0830</td>
<td>Welcome, Agenda, Introductions</td>
<td>Aldrich</td>
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<tr>
<td>0900</td>
<td>Installing Software, Check-in</td>
<td>Watland,</td>
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<tr>
<td>0930</td>
<td>Ingredients – nutrients, sources, and management in the software</td>
<td>Aldrich</td>
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<tr>
<td>1030</td>
<td>Break</td>
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<tr>
<td>1245</td>
<td>Dry ingredient handling, size reduction, weighment, mixing</td>
<td>Paulk</td>
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<tr>
<td>1400</td>
<td>Labeling regulations and nutritional compliance</td>
<td>Aldrich</td>
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<tr>
<td>1500</td>
<td>Formulation – simple “Hand Calculation”</td>
<td>Aldrich</td>
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<tr>
<td>1630</td>
<td>Adjourn</td>
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<tbody>
<tr>
<td>0830</td>
<td>Formulation – simple “Spreadsheet Calculation”</td>
<td>Aldrich</td>
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<tr>
<td>0930</td>
<td>Formulation – simple “Software – Least Cost”</td>
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<td>1030</td>
<td>Break</td>
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<tr>
<td>1300</td>
<td>Baking Introduction &amp; Demonstration Video</td>
<td>Aldrich</td>
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<tr>
<td>1430</td>
<td>Formulation – Baked Treats &amp; Food</td>
<td>Aldrich</td>
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<tr>
<td>1530</td>
<td>Nutrition &amp; Ingredient Constraints in Formulation (Complete and Balanced Diets)</td>
<td>Aldrich</td>
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<tr>
<td>0830</td>
<td>Introduction to Canning &amp; Demonstration Video</td>
<td>Alavi</td>
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<tr>
<td>0930</td>
<td>Formulation – Canned/Wet Loaf-Pate Formula</td>
<td>Aldrich</td>
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<td>1300</td>
<td>Group picture (Screen Shot)</td>
<td>Aldrich</td>
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<tr>
<td>1315</td>
<td>Formulation – Canned/Wet Chunks &amp; Gravy Formula</td>
<td>Aldrich</td>
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<tr>
<td>1400</td>
<td>Raw, Frozen, and Freeze-Dried Foods, Demonstration/Video</td>
<td>Aldrich</td>
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<tr>
<td>1530</td>
<td>Formulation – Raw, Frozen, Freeze-Dried</td>
<td>Aldrich</td>
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<tr>
<td>0830</td>
<td>Extrusion Introduction, ingredient functionality, Demonstration Video</td>
<td>Alavi</td>
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<tr>
<td>0930</td>
<td>Formulation – Kibble with meat slurry</td>
<td>Aldrich</td>
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<td>1300</td>
<td>Formulation – Multi-step formulation</td>
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<tr>
<td>1400</td>
<td>Formulation – Reverse Engineering Products</td>
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<tr>
<td>1500</td>
<td>Formulation – Multi-Component (demonstration)</td>
<td>Aldrich</td>
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<tr>
<td>0830</td>
<td>Palatability &amp; Sensory Factors in Pet Food</td>
<td>Talavera</td>
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<td>0930</td>
<td>Formulation for Claims: Lite, Hairball</td>
<td>Aldrich</td>
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<td>1030</td>
<td>Break</td>
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<td>1300</td>
<td>Formulation – Premixes and Supplements</td>
<td>Aldrich</td>
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<td>1400</td>
<td>Computing Metabolizable Energy and Feeding Guidelines</td>
<td>Aldrich</td>
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<tr>
<td>1500</td>
<td>Closing session, open Q&amp;A, course evaluation, presentation of certificates</td>
<td>Class</td>
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