Canine and Feline Nutrition Course Outline

Southern Illinois University Carbondale

This certificate course is designed to give pet nutritionists, veterinarians and vet techs, pet breeders, pet shop owners, and pet enthusiasts the opportunity to take advanced training and rigorous science-based education on the various aspects of canine and feline nutrition. After the completion of this program, participants will receive a certificate in Canine and Feline Nutrition from Southern Illinois University.

Program Focus

The program focuses on covering the different aspects of canine and feline nutrition with focus on canine and feline nutrient requirements; nutrients metabolism, nutrition, and disease; pet food ingredients; diet formulation; and many other topics.

The course also presents the principles and practices of scientifically based pet clinical nutrition. For example, this course examines the occurrence, treatment, and management of nutritionally responsive disorders in dogs and cats such as diabetes, urolithiasis, dermatoses, chronic kidney failure, cancer, hepatic lipidosis, gastrointestinal disease, heart diseases, dental or skeletal disorders, and obesity.

At the completion of the course, a student will:

1. Define the basic nutrients in dogs and cats diets and their importance
2. Describe and compare the digestion and metabolism of nutrients in dogs and cats
3. Identify the specific nutrient requirements for dogs and cats
4. Analyze and understand pets foods
5. Understand nutrients requirements as affected by the physiological state of animal
6. Make a home-made diet for cats/dogs
7. Be able to effectively assess sick cats and dogs nutritional status and needs
8. Be able to make evidence-based dietary recommendations for sick cats/dogs
9. Be able to make evidence-based home-made diets for sick cats/dogs

Class Materials

- Textbook Canine and Feline Nutrition, A Resource for Companions Animal Professional, 3rd Edition (Case, Hayek, Daristotle, Raash)
- Power Point Slides with audio clips
- Quizzes and take-home assignments

Course Syllabus

Class ANS-215: Intro to Nutrition

1: Water

2: Digestive System of monogastric animals

3: Carbohydrates Structures, Types and Functions

4: Carbohydrates Digestion and Metabolism

5: Proteins Structures, Types and Functions

6: Proteins Digestion and Metabolism

7: Lipids Structures, Types and Functions

8: Lipids Digestion and Metabolism

9: Minerals and their Importance to the Body

10: Vitamins and their Importance to the Body

Class AND-365: Canine and Feline Nutrition

1: Energy and Water

2: Carbohydrates

3: Fats

4: Proteins

5: Vitamins

6: Minerals

7: Digestion and Absorption

9: Energy Balance

10: Carbohydrates Requirements and Metabolism

11: Fat Requirements and Metabolism

12: Protein Requirements and Metabolism

13: Minerals and Vitamins Requirements

14: History and Regulation of Pet foods

15: Pet Food Labels

16: Nutrient Content of Pet Foods 160

17: Types of Pet Foods

18: Evaluation of Pet Foods

19: Feeding Regiments for Dogs and Cats

20: Nutrition during Pregnancy and Lactation

23: Nutrition during Adult Maintenance

21: Nutritional Care of Neonatal Puppies and Kittens

22: Nutrition and Feeding during Growth

24: Nutrition and Performance

25: Nutrition of Senior Pets

26: Homemade diet and diet formulation (practical assignments)

- Diet formulation
- Grain free and gluten free diet formulation

Class ANS-445: Canine and Feline Clinical Nutrition

1. Development and Treatment of Obesity
2. Nutrition and Mobility
3. Nutritional Management of Cancer

4 Nutritional Management of Cardiovascular Diseases

5. Critical Care Nutrition
6. Nutritional Management of Urolithiasis
7. Nutritional Management of Diabetes
8. Nutritional Management during Chronic Renal Disease
9. Nutritional Management of Feline Pancreatitis
10. Nutritional Management of Liver disease
11. Nutritional Management of Dermatitis
12. Nutritional Management of Gastrointestinal Disease
13. Homemade Diet Preparation and Formulation for Sick Cats/Dogs (practical assignments)