Code: 1642 **Animal Feeding**
Degree: 1st cycle – Animal Production Engineering
Curricular Year: 3rd **Semester Course: 1st**
Credits: 6 ECTS **Compulsory**
Language: Portuguese/English
Responsible: Luísa Almeida Lima Falcão e Cunha
Other lecturer(s): -
Web Site: http://www.isa.utl.pt/home/node/3963

1. Contact hours:
Lecture/Practicals 70 **Others** 14 **Total** 84

2. Objectives:

Diet formulation for ruminants and non-ruminants animals

3. Programme:

Energy and specific nutrient requirements for maintenance and for various productions. Different energy systems for monogastric and ruminants animals. Different protein systems for monogastric and ruminants animals. Requirements of vitamins and their inclusion on diets. Requirements of minerals and their inclusion on diets. Voluntary intake of feed. Feed intake in monogastric animals. Feed intake in ruminants; factors affecting intake: feed characteristics, animal factors and environmental factors. Prediction of feed intake. Feeds – energy and nutritive value and importance for various classes of farm animals. Technologic process of conservation and improvement of nutritive value of feeds. Dietary interactions: positive and negative effects. Lipids in animal nutrition. Water in animal feeding. Water requirements, factors affecting the water requirements. The animal feeding and the quality of animal products. Animal feeding and the environment.
Feeding systems for dairy cows. Feeding Systems for beef cattle. Feeding systems for pigs. Feeding systems for poultry. Feeding systems for rabbits.

4. Bibliography:

Main Bibliography

AFRC, 1993. *Energy and Protein Requirement of Ruminants*. CAB UK
Blas C. Gonzalez G, Argamenteria A 1987. *Nutrition y Alimentation del Ganado*. Ed Mundi-Prensa
Cheeke P.R., 2004. *Applied Animal Nutrition – Feeds and Feeding*. Macmillan Pub C., NY.
McDonald P, Edwards RA, Greenhalgh JFD., Morgan, C.A., 2001. *Animal Nutrition*. London.
Sauvant D, Perez JM, Tran G (eds) 2002. *Tables de composition et de valeur nutritive des matières premières destinées aux animaux d´élevage*. INRA Ed
INRA 2007. Alimentation des bovins ovins et caprins Besoin des animaux Valeurs des aliments. Ed Quae.

Other Bibliography

Blas C. Wiseman J. (eds). 1998. The nutrition of the rabbit. CABI Publishing
Leeson, S., Summers J.D., 1991. *Commercial Poultry Nutrition*. University Books, Guelph, Canada,
Lewis A. J , Southern L. L., 2001. Swine Nutrition. CRC Press
NRC, 2001. *Nutrient Requirements of Dairy Cattle*. 7th Ed., National Academy Press, Washington,
NRC, 1998. *Nutrient Requirements of Swine*. 10th Ed., National Academy Press, Washington

5. Assessment:

Assessment of the practical work and report of: (1) diet formulation with all feeds to the choice of the student for a specie animal (usually growth rabbits) and his manufacture in our plant (2) determination of growth performance during two weeks A report about energy and nutritive value of a FEED and his importance in the different animal diets. This work must be presented
Final examination.

6. Estimated Workload:	168	Hours
7. Last Update:	13/7/2010	