Code: 1793 **Poultry and Swine Production**
Degree: 1st cycle – Animal Production Engineering; 2nd cycle – Agriculture
Stream: Agriculture – Agriculture and Animal Production
Curricular Year: 3rd (APE) / **1st** (Agr) **Semester Course: 2nd**
Credits: 6 ECTS **Compulsory** (Animal Production Engineering)
Language: Portuguese/English **Optional** (Agriculture)
Responsible: João Pedro Bengala Freire
Other lecturer(s): Maria Madalena dos Santos Lordelo
Web Site: http://www.isa.utl.pt/home/node/3959

1. Contact hours:
Lectures 52 **Praticals/Laboratory** 18 **Others** 14 **Total** 84

2. Objectives:

Understanding of the swine production systems.
Zootechnical knowledge of swine breeds.
Improvement of the swine production efficiency.
Factors controlling the swine carcass composition.
Understanding the unique qualities of poultry as livestock species.
Comprehension and knowledge of the main poultry segments – meat and eggs.
Understanding the management of breeding and reproductive flocks.

3. Programme:

Swine production in the world, international trading. Swine breeds: Chinese, European and American breeds. Improvement of pigs by genetic selection. Breeding plans. Reproductive cycle of the sow: Puberty, ovulation, fertilization, artificial insemination, pregnancy, parturition, lactation, weaning-to-conception interval. Performance of the breeding sows: expression and calculation. The weaning pig: physiological particularities and feeding programs. The growing-finishing pig: growth and development, feeding programs. Carcass quality: grading and standards, killing-out percentage, choice of carcass weight and carcass fatness, problems of variation. Project of intensive pig units. Oral presentations of scientific articles. Field trips to swine farms.
Overview of the situation of poultry production in the world. Breeding and selection in egg- and meat-type birds. General notions of the classification, anatomy and physiology of birds. Broilers: breeds and strains; feeding and nutrition of broilers; separate sex feeding; broiler production; broiler processing; broiler breeders; egg incubation. Layers: breeds and strains; feeding and nutrition of layers; pullet growing; laying; lighting programs; forced molting of layers; egg classification; eggshell quality; nutritional value of eggs; egg products. Laboratory: Necropsies of laying hens; broiler nutrition project; oral presentations of scientific articles; field trips to poultry farms.

4. Bibliography:

Main Bibliography

Lewis, A. J., Lee Southern, L. 2001. *Swine Nutrition 2nd edition*. CRC Press. USA.
Whittemore, C. T. 1993. *The science and practice of pig production*. Longman Scientific and Technical, Longman Group Essex CM202JE, England
Hunton, P. (Ed). 1995 *Poultry Production*. Elsevier, Amsterdam
Leeson, S. and J. D. Summers. 2001. *Scott's Nutrition of the Chicken* (4th ed). University Books. Guelph, Canada.

Other Bibliography

Institut Technique du Porc. 2000. *Mémento de l'éleveur de Porc*. 5éme édition. Institut Technique du Porc, Paris.
NRC. 1998. *Nutrient requirements of swine*. 10th edition. National Academy Press, Washington DC.
Etches, R. J. 1996. *Reproduction in Poultry*. CAB International. Guelph, Ontario, Canada.
National Research Council, 1994. *Nutrient Requirements of Poultry* (9th ed).
Crawford, R. D. 1990. *Poultry Breeding and Genetics*. Elsevier. Canada.

5. Assessment:

Presentations of scientific articles: 30% Final exam: 70%

6. Estimated Workload:	168	Hours
7. Last Update:	15/7/2010	