Code: 1507 **Milk and Meat Production Systems**
Degree: 2nd cycle – Food Science and Engineering
Stream: Food Processing
Curricular Year: 1st **Semester Course: 1st**
Credits: 6 ECTS **Optional**
Language: Portuguese/English
Responsible: Fernando Baltazar Santos Ortega
Other lecturer(s): João Pedro Bengala Freire and Maria Madalena dos Santos Lordelo
Web Site: http://www.isa.utl.pt/home/node/3848

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

2. Objectives:

It is our goal that the master's students acquire a broad view of several production systems that lead to meat and milk production, not only in Portugal but also in the world. Another goal is how those systems work and their limitations, and also the kind and the quality of products they give to the consumer. To achieve these goals, it is required to know the animal species that is associated to each of the productions and final products.

3. Programme:

1. Food safety and animal welfare in each of the production systems: Factors contributing to food safety and animal welfare.
2. Poultry meat production systems. Breeding and selection in poultry. Characteristics and methods of selection and breeding. Production cycle of broilers and other meat producing poultry. Broiler breeders: Management and feeding in the starting, growing and laying period. Main Characteristics. Incubation and hatching: Care and management.
3. Sheep and goat milk and cheese production systems. Production cycle of the sheep and goat in the several production systems and production characteristics. Lamb and kid meat: meat and carcass quality – classification grids. Sheep and goat milk for cheese production: milk composition and factors of variation.
4. Pork meat production systems. Reproductive swine: production cycle of the female pig. The piglets. The growing pigs and finishing pigs: economical stratagies. Pig farming in each of the production systems.
5. Dairy and cattle production systems. Cattle growth and development: body composition evolution. Growth curves in several of the production systems. Dairy cows: basic parameters. Dairy cow and reproduction: milk synthesis and release; lactation curves and factors affecting milk production and composition.

4. Bibliography:

Main Bibliography

Coop, I.E., 1992. Sheep And Goat Production (Word Animal Science. C. 1) Ed. I.E. Coop, Elsevier Scientific Publishing Company, Amsterdam.
Whittemore C.T., 1993. The Scieence and Practice of Pig Production. Longman Scientific and Technical, Longman Group Essex CM20 2JE. England.
WEBSTER, J. (1993) Uderstanding the Dairy Cow, second edition. BSP Professional books, Oxford OX2 0EL, 357 pp.
Poultry Production, 1995. (World Animal Science C. 9). Ed. P. Hunton. Elsevier scientific Publishing Company, Amesterdam.

Other Bibliography

Haresign, H., 1983. Sheep Production. Ed. Butterworths, Dorough Green, Sevenoaks, Kent TN 158 PH, England
EAAP Publication N.º 71, 1995. Goat Production Sistems in the Mediterrenean. Ed. A. El Aich, S. Landau, A. Bourbouze, R. Rubino and P. Morand-Fehr. Wageningen.

5. Assessment:

Final examination

6. Estimated Workload: 168 Hours

7. Last Update: 19/7/2010