

Code: 1517 Meat and Fish Technology**Degree:** 2nd cycle – Food Science and Engineering**Stream:** Food Processing**Curricular Year:** 2nd**Semester Course:** 1st**Credits:** 6 ECTS**Optional****Language:** Portuguese/English**Responsible:** Teresa de Jesus da Silva Matos**Other lecturer(s):** -**Web Site:** <http://www.isa.utl.pt/home/node/3850>**1. Contact hours:****Lectures 42 Lecture/Practicals 32 Others 10 Total 84****2. Objectives:**

Main goal of this course is to provide competences in order that the student:

- i) knows and distinguishes the composition and the characteristics of several products of animal origin;
- ii) formulates meat products and calculates meat dissection operations yield;
- iii) interprets the lay-out of the meat and fish processing industries;
- iv) understands the functioning of the slaughter houses and slaughter operations;
- v) learns which technologies of production are applied to meat and fish products and to fish capture and,
- vi) knows and interprets the legislation of the sector.

3. Programme:

- Muscle structure and biochemistry.

Meat properties. Water holding capacity. Meat quality and processing properties. Meat “emulsions”. Meat preservation. The role of postmortem biochemical and structural changes.

- Production control and management in slaughterhouses.

Slaughter operations and production costs determination. Electric stimulation. Meat pieces and dissection operations. Legal scope.

- Meat processing.

Food additives and casings. Meat products formulation and production costs Meat processing industries, lay-out and design. Meat packaging. Industrial equipments. Legislation.

- Fish technology.

Capture and processing. By products. Legal scope.

4. Bibliography:**Main Bibliography**

Prandl, O., Fischer, A., Schmidhofer, T., Sinel, H. 1994. *Tecnología e Higiene de la Carne*. Editorial Acribia, S.A., Zaragoza, Espanha.

Hall, G.M. 2001. *Tecnología del procesado del pescado*. Editorial Acribia, S.A. Zaragoza, Espanha. Matos, T.J.S., Barreto, A.S.F.H., Bernardo, F.M.A. 2004. *Demonstração e interesse da aplicação de um modelo para determinação de custos de produção nas indústrias de transformação de carnes*. Revista Portuguesa de Ciências Veterinárias, 99, 117-122.

Puolanne, E. (1999). *Cooked meat products*. Proceedings of 45th ICoMST, Yokohama, Japan, 116-120.

Other Bibliography

Effenberger, G. 1980. *Tripas Artificiales*. Editorial Acribia S.A., Zaragoza, Espanha.

Genot, C. 2003. *Congelación y Calidad de la Carne*. Editorial Acribia, S.A. Zaragoza, Espanha.

Koohmaraie, M.; Geesink, G.H. (2006). *Contribution of postmortem muscle biochemistry to the delivery of consistent meat quality with particular focus on the calpain system*. Meat Science 74: 34-43.

Huff-Lonergan, E.; Lonergan S. M. (2005). *Mechanisms of water-holding capacity of meat: The role of postmortem biochemical and structural changes*. Meat Science 71: 194-204.

5. Assessment:

Scientific papers discussions and two short exams or a final exam. Minimum score: 10/20 scale.

6. Estimated Workload:

168	Hours
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7. Last Update:

19/7/2010
