

3.0 credits	40.0 h + 5.0 h	2q
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Teacher(s) :	Debier Cathy (coordinator) ; Donnay Isabelle ;
Language :	Français
Place of the course	Louvain-la-Neuve
Prerequisites :	Pré-requis: Basis in embryology, physiology, cell and molecular biology as well as biochemistry
Main themes :	The course sets the accent on the physiology of the main rent animals, which are the cow, the hog and the sheep. Three themes are studied: anatomy and physiology of reproduction, anatomy and physiology of digestion and the physiological bases of lactation. A particular attention is set on endocrinology and on the hormonal regulation. The circulatory, respiratory and renal systems are also described. The consequences on the organization of the production are approached in the perspective of the course of animal production.
Aims :	The course of animal physiology follows a double objective. First, the acquisition of basic concepts of animal physiology and second, the preparation to the courses of animal production and zootechny. Through its fundamental dimension, the animal physiology has a major impact on the production, both for quality as for quantity. It also influences the animal's reaction to its environment and the impact of the animal on the latter. The objective of the course is therefore, starting from the fundamental concepts of physiology, to enlighten these different dimensions. <i>The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".</i>
Evaluation methods :	Evaluation: Oral examination with written preparation
Content :	Contenu : 1. Endocrinology and hormonal regulation : description of the structure and mechanisms of action of hormones, hormonal receptors and dosages. Hypothalamus-hypophysis axis: hormones of the adenohipophysis and neurohypophysis. Thyroid hormones. Hormonal regulation of Calcium. Adrenal glands: corticoids and catecholamins. Hormonal regulation of glycemia. 2. Anatomy of the genital tract and physiology of reproduction: Anatomy of the male and female genital tracts. Spermatogenesis. Ovogenesis. Fertilization, embryonic development and implantation. Hormones of reproduction. Oestrous cycles in domestic mammals. Physiology of lactation: control of mammogenesis, lactogenesis and galactopoiesis. 3. Anatomy and physiology of digestion: Comparative digestive physiology (carnivores, omnivores and herbivores). Anatomy and functional morphology of monogastrics and polygastrics (livestock and free-ranging). Digestive functions and annex glands : global overview of secretions, motility and absorption. Forestomachs motility as well as feeding and merycic behaviour of ruminants. 4. Exercises : practical exercises focus on the study of the anatomy of digestive tract of a monogastric and a polygastric as well as on the comparative feeding and merycic behaviour of ruminants.
Other infos :	Support: Powerpoint files accessible on the intranet via iCampus
Cycle and year of study :	> Bachelor in Bioengineering
Faculty or entity in charge:	AGRO