



Luiz de Queiroz College of Agriculture

Course Offerings

Degree codes:

- 11010 - Agriculture
- 11020 - Forestry
- 11040 - Licentiate Degree in Agriculture
- 11050 - Economics
- 11061 - Food Science
- 11070 - Biological Sciences (104 = Licentiate Degree; 4 = Bachelor Degree)
- 11080 - Environmental Management
- 11090 - Management

ID	Course Name	Professor	Course Content Summary	Total Course Hours	Semester	Degree code
LZT0100	Animal Science	Roberto Sartori Filho	Introduction to basic concepts of animal sciences: types, breeds and production economy; Characterization of the domestic species of economic relevance; Basic principles of production.	60	1 st	11010
LZT0307	Anatomy and Physiology of Vertebrates	Eduardo Francisquine Delgado	Anatomy and histophysiology for vertebrates focusing on epithelial, nervous, conjunctive, bony, cartilaginous, adipose, muscular and blood tissues and their implications on the skeletal, nervous, endocrinal, circulatory, respiratory, digestion, urinary and reproduction systems.	90	2 nd	11061 11070
LZT0310	Biotechnology	Luiz Lehmann Coutinho	Basic molecular biology concepts and application in the following areas: identification of genes of interest, breeding programs, eukaryotic gene expression in bacteria, transgenic plants and animals, paternity identification and genetic diagnoses.	90	2 nd	11070
LZT0313	Animal Anatomy and Physiology	Eduardo Francisquine Delgado Roberto Sartori Filho	Understanding the anatomy and physiology of epithelial, nervous, connective proper, bone, cartilage, adipose, muscle and blood tissues, and their implications on skeletal, nervous, endocrine, circulatory, respiratory, digestive, urinary and reproductive systems.	60	2 nd	11061 11020 11010



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LZT0430	Animal Nutrition	Carla Maris Machado Bittar	The course covers the main topics of animal nutrition, involving the basic concepts and specific themes for the main species of economic interest, ruminants and non-ruminants; Types of feed, nutrients in feed, digestive physiology, requirements and nutritional deficiencies and the formulation of rations are studied.	60	1 st	11010
LZT0443	Non-Ruminant Nutrition	Valdomiro Shigueru Miyada	Anatomy of the gastrointestinal tract, physiology of digestion of non-ruminant animals; Studies of nutrients: water, carbohydrates, lipids, proteins, minerals and vitamins; Protein and energy sources for non-ruminant animals; Vitamin sources and vitamin supplements; Mineral sources and mineral supplements; Feed additives; Nutrient requirements of major non-ruminant species of economic importance for human being: pigs, poultry, equine and fish; Principles of feed formulation for non-ruminant animals.	60	2 nd	11010
LZT0446	Ruminant Nutrition	Alexandre Vaz Pires	The program aims to provide basic notions of ruminant nutrition; It develops studies on nutrient chemical aspects, metabolic and practical application of knowledge; A study of food in relation to nutritional value and use for ruminant production, as well as nutritional requirements, standards of nutrition and ration formulation.	60	1 st	11010



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LZT0460	Animal Endocrinology	Roberto Sartori Filho	Origin, type, classification and mechanism of action of hormones of domestic animals; Factors that regulate and affect the endocrine system; Endocrinology of lactation and reproduction.	60	2 nd	11010
LZT0493	Applied Animal Physiology	Raul Machado Neto	Animal adaptation; Digestion and metabolism; Endocrinology; Reproduction; Body protection; Passive immunity formation and transference; Colostrum supply management.	60	1 st	11010
LZT0520	Forage and Pasture Science	Carlos Guilherme Silveira Pedreira Luiz Gustavo Nussio Sila Carneiro da Silva	During the course general concepts of forage plants use for pasture animal production will be presented and discussed in order to provide students with essential knowledge so that as agronomists, they can work technically in situations where the use of land involves pastures as a production system component.	60	2 nd	11010



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LZT0546	Plant-Animal- Environment Relations in Pastoral Ecosystems	Sila Carneiro da Silva	The main topics covered by this course are: characterization of pastoral ecosystems in general, its components, the interrelationships and the processes of interaction among them; form and function of forage plants; the determining process of herbage production and accumulation; the grazing process and the plant/animal interface; the dynamics of forage plant and animal responses to management; the impact of external forage and concentrate feedstuffs; and the strategic use of forage conservation practices on the general balance and productivity of pastoral systems.	60	1 st	11010
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LZT0547	Planning and Management of Forage Livestock Systems	Carlos Guilherme Silveira Pedreira	The course approaches the components of the production systems of ruminants, primarily discussing their particular characteristics and then how they fit within the system. Interactions between the components emphasizing the structure and quantification of the potential for system manipulation for adjusting one or more components of the production process are also discussed. Aspects of assessment, evaluation, dimensioning and planning the livestock enterprise will be addressed such as the initial survey (establishing soil use capacity, its occupation, physical infrastructure and labor force, herd characteristics, productivity indexes), proposal of an exploration system (level of specialization of the labor force and degree of management that can be achieved), identifying the deficiencies and proposals of improvements for the herd (feeding strategies) and management proposals of the feed production areas.	60	1 st	11010
LZT0550	Sheep and Goat Production	Ivanete Susin	Situation, advantage and limitations of sheep and goat production; Sheep and goat breeding, management, feeding, reproduction and health.	60	1 st	11010



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LZT0551	Forage Crop	Carlos Guilherme Silveira Pedreira Luiz Gustavo Nussio Sila Carneiro da Silva	Forage and pasture production and management; Technical exploration of animal species that use forage in their feeding.	60	2 nd	11010
LZT0570	Quality and Conservation of Forage for Ruminants	Luiz Gustavo Nussio	Chemical, physical and biologic treatment aiming an increase in the nutritional value. Fibrous waste conservation. Non-conventional crops. Sunflower. Millet. Modeling of process related to the fodder conservation. Climate conditions related to the silage process and haymaking. Planning in production of voluminous supplementaries in intensified systems.	90	2 nd	11010
LZT0580	Feed Analysis and Composition	Carla Maris Machado Bittar	The program aims to provide basic methodologies and techniques for feed analysis; During the course main feed analysis methods will be studied, as well as the interpretation of results, with focus on using data for feed formulation; Certification of assurance of nutrient levels and identification of fraud of feed ingredients or animal diets will also be studied.	60	2 nd	11061 11010



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LZT0614	Animal Breeding	Gerson Barreto Mourão	Genetics of qualitative and quantitative characters; Genetic variation; Function of genes; Heritability and genetic correlation; Genotype and environment interaction; Selection of breeding animals, factors that affect the genetic gain; Selection methods: mating system, inbreeding and outbreeding; Crossing in animal production; Animal biotechnology; Aspects of the improvement of the main species of domestic animals.	60	1 st	11010
LZT0615	Supervised Internship in Animal Science I	Ivanete Susin	The supervised internship in Animal Science is set to provide hands-on practice in subjects related to animal production.	105	1 st /2 nd	11010
LZT0635	Supervised Internship in Animal Science II	Carlos Guilherme Silveira Pedreira	The objective of the supervised internship in animal science is to offer the agronomy students practical knowledge in ruminant and non-ruminant production.	105	1 st /2 nd	11010
LZT0643	Poultry Production	José Fernando Machado Menten	Theoretical and practical aspects of modern poultry production, Industrial Poultry in Brazil, especially in São Paulo State; New poultry planning and techniques; Poultry economic importance and its different activity for commercial segments; Poultry reproduction, breeding and genetic improvement; Female poultry management, matrix and food commercial poultry and ration formulation requirements.	60	2 nd	11010



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LZT0644	Swine Production	Valdomiro Shiguero Miyada	This course covers theoretical and practical aspects of the modern swine production (industrial swine production) developed in Brazil, and particularly in Sao Paulo State; It provides resources to develop projects of new swine production units as well as to manage installed production units; It emphasizes the economic importance of swine production, swine breeds and breeding, swine reproduction, housing, general management of the herd, swine feeding and feed formulation.	60	1 st /2 nd	11010
LZT0645	Equine Husbandry	Claudio Maluf Haddad	Introduction to equine husbandry; Animal technology concepts; Evaluating different equine breeding; Equine breeding interest in Brazil; Reproduction and main disease prophylaxis; Food production: pastures, hay, grass, lucerne and winter crops; Rational taming and elementary conditioning; Production system and breeding management; Feeding disorders and behavior; Hoof and horseshoeing; Equine Ethology.	60	2 nd	11010
LZT0648	Reproduction Management and Artificial Insemination	Alexandre Vaz Pires	Concepts of reproduction; Anatomy and physiology of male and female genitals; Function of sex hormones; Reproductive efficiency; Reproduction management; Detection of animal heating; Artificial Insemination; Fertilization and implantation of embryos; Pregnancy.	60	1 st	11010



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LZT0650	Beef Cattle Husbandry	Roberto Sartori Filho	The importance of animal products to feed the population; Body composition; Growth curves; Growth biology knowledge for understanding the actions and promoting growth applications in animal production.	60	1 st	11010
LZT0651	Dairy Cattle Nutrition (not currently available)	Wilson Roberto Soares Mattos	Animal nutrition basic notions; Chemical nutrients metabolism and their practical application; Food nutritious value and its use, nutrition required, food norms and ration formulation for domestic animals.	60	1 st	11010
LZT0652	Dairy Cattle Management	Flavio Augusto Portela Santos	The course covers theoretical and practical aspects of dairy cattle husbandry with emphasis on the manipulation of productive factors, provides grants for the dairy cattle husbandry for the market understanding, emphasizes the need of technology application to achieve economic results, and provides elements for planning and installation of productive farms.	60	1 st	11010
LZT0653	Principles of Animal Growth	Luiz Lehmann Coutinho	The course justifies the importance of animal products in feeding the world's population as well as presents concepts of body composition, growth curves and growth biology; Students learn how growth promoters act as well as their different applications in animal production.	60	1 st	11010



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LZT0693	Scientific Initiation in Biotechnology	Luiz Lehmann Coutinho	Practic laboratory course, that provides to the students a scientific initiation in biotechnology, discussing basic concepts about the scientific methodology, basic and practic knowledge of techniques of molecular biology and its applications.	60	2 nd	11070 11010
LZT0697	Formulation and Optimization of Animal Diets	Dante Pazzanese Duarte Lanna José Fernando Machado Menten	Diet and supplement formulation and processing; Food additive effects and usage; Nutrient requirement tables for different species, development and use; Principles of diet formulation; Use of software for diet formulation at minimum cost; Diet and supplement processing techniques; Final product processing; Computer tools for supplement optimization in a production system with emphasis on beef cattle; New computer models for estimation of nutrient requirements, least cost and maximum return diet formulation.	60	1 st	11010



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LZT1495	Strategic Management of Cattle Husbandry	Paulo Fernando Machado	Study of concepts of quality management; Application of management tools for cattle husbandry (PDCA, 5S, etc.); Development of functional organization chart; Defining roles for employees; Elaboration of protocols for operational processes; Understanding the milk synthesis processes; Understanding the factors that affect the quantity, produced milk composition and quality; Study of factors related to the growth of heifers and mammary gland development; Milking equipment size and evaluation; Study milking installations; Study of mastitis control.	60	2 nd	11061 11010
LZT1696	Fish Culture	Jose Eurico Possebon Cyrino	Principles of biology, physiology, systematics, breeding, feeding and nutrition of suitable species for culture. Production systems, productivity and quality of water for fish culture. Artificial propagation of rheophilic fish in confinement.	60	2 nd	11010