

ACADEMIC YEAR 2023/2024

General Information	
Integrated Teaching	ECONOMICS AND STATISTICS
Teaching Modules	Principles of Agricultural Economics; Statistics and management of data of veterinary interest; Informatics.
Degree Course	Veterinary Medicine (LM42)
Course Year	1
European Credit Transfer and Accumulation System (ECTS)	7 (lectures: 6 ECTS; exercises: 1 ECTS)
Language	Italian
SSD	AGR/01 SECSP/02 INF/01
Academic calendar	I 7- weeks term
Attendance	Mandatory

Professors / Lecturers	E-mail	Telephone
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Paolo Capozza	annamaria.pratelli@uniba.it	080 5443835
Headquarters	Veterinary Medicine Campus, S.P. n° 62 per Casamassima km 3, 70010 Valenzano (BA)	
Virtual rooms	Piattaforma Microsoft Teams Principles of Agricultural Economics (access code v870vwl) Statistics and management of data of veterinary interest (access code aw0m6bo) Informatics (access code 8h0go1h)	
Tutoring (time and day)	Prof. Rocco Roma: from Monday to Friday from 8.30 to 9.30 by appointment both in presence and in remote mode Dr. Monica Cazzolle: in presence or in remote mode by appointment to be agreed by e-mail. Prof. Annamaria Pratelli: in presence or in remote mode by appointment to be agreed by e-mail.	

Syllabus	
Learning Objectives	<p>The general objective of the integrated course is to provide adequate preparation in disciplines useful, on the one hand, to the understanding of physical phenomena that affect the physiology of animals and on the other, basic knowledge of both analysis tools and study of the data collected in veterinary practice and knowledge of the economic environment in which the food chain, and in particular the zootechnical one, operate.</p> <p>As for the educational objectives of the individual courses, the course of Principles of Agricultural Economics aims to offer the student the basic concepts and methodology used in the study of economics to be able to interpret the main economic phenomena. In particular, an in-depth study of consumer and business behaviour will be carried out, the functioning of the economic system as a whole with the specific objective of developing the capacity to identify appropriate</p>

	<p>solutions to improve the competitiveness of products of animal origin. Lectures will also deepen knowledge of the Microeconomics and Macroeconomics basics; the fundamental laws of market balance. The ability to read and analyze the balance sheets of enterprises will develop alongside the study of the evolution and role of Community and local agricultural policies, on their effect on the performance of agricultural holdings.</p> <p>For the Statistics and management of data of veterinary interest module, the course aims to convey to the student the basic knowledge and statistical tools useful for the study of the phenomenon and the interpretation of data.</p> <p>For the Informatics module, the course aims to provide topics of computer literacy with reference to the needs of the scholar of veterinary disciplines. The basic elements of computer architecture, operation and use will be covered. More general application programs will be introduced with hints to the programming elements. The emphasis, placed on practical experience, aims to develop, in compliance with EU recommendations, digital skills that can be spent in the professional field.</p>
Prerequisites	<p>Principles of Agricultural Economics : Required mathematics notions: understanding the concept of function, graphs of functions; derived functions; study of functions (first and second order conditions for maximum and minimum); simple systems of linear equations.</p> <p>Statistics and management of data of veterinary interest: Basic knowledge of elements of mathematics and computer science.</p> <p>Informatics: Familiarity with the use of computers and new technologies in general.</p>
Contents of the Integrated Teaching	<ul style="list-style-type: none"> • Presentation of the Integrated Teaching: Learning objectives, Professors/Lecturers, Teaching Modules, Organization of the lessons, Reference books and additional study material, Learning assessment and evaluation criteria, Biosafety rules for students' participation in the practical lessons
<p>Contents of the Teaching Module of Principles of Agricultural Economics</p> <p>Teacher: Rocco Roma Lectures ECTS:2</p> <p>Hours: 16</p>	<p>The module refers to Basic Science</p> <ul style="list-style-type: none"> • Economy of production and market: demand, supply, elasticity and market forms. • Business administration: Entrepreneur and agricultural production; factors of production. • Policies and Institutions: <ul style="list-style-type: none"> ➤ The agri-food system: characteristics and competitive strategies. ➤ Common Agricultural Policy: lines and instruments of intervention.
<p>Contents of the Teaching Module of Statistics and management of data of veterinary interest</p> <p>Teacher: Monica Cazzolle</p> <p>Lectures: ECTS: 2 Hours: 26</p>	<p>The module refers to Basic Subjects</p> <ul style="list-style-type: none"> • Definition of statistics. • Population and sample (overview of sampling methods). Detection of a statistical phenomenon and application in the field of animal husbandry, experimental protocol. Fasi di un'indagine. • Introduction to descriptive statistics: <ul style="list-style-type: none"> ➤ qualitative and quantitative variables, statistical distributions, tabular and graphical representation, analytical and position averages, measures of variability and variability indices. ➤ association between two characters (dependence and independence), scope of application of simple linear regression models, multiple regression hints, hints at test theory (null hypothesis, alternative hypothesis, area of



<p>Practical activities ECTS: 1 Hours: 10</p>	<p>acceptance and rejection, level of significance).</p> <ul style="list-style-type: none"> • Data sources. <p>The Practical Exercises will be carried out through MS Excel and/or online platforms for data collection or through the use of SPSS (or PSCP) for data processing simulations. Exercises in the classroom are worthy to verify the ongoing learning of the concepts developed and transmitted during the course. The student will be given the opportunity to use a personal computer to work independently</p>
<p>Contents of the Teaching Module of Informatics</p> <p>Teacher: Annamaria Pratelli</p> <p>ECTS:2</p> <p>Hours: 20</p>	<p>The module refers to Basic Subjects:</p> <ul style="list-style-type: none"> • Computer literacy: information and coding, computer architecture and operation and operating system Problem-solving techniques • Use of text editor • Spreadsheet: professional applications • Web networks and services (e.g.: PEC, digital signature, ...)

<p>Biosafety rules for students' participation in the practical lessons</p>	<p>Not applicable</p>
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<p>Study Material for self-study</p>	
<p>Reference Books</p>	<p>Teaching module of Principles of Agricultural Economics: Notes from the lessons and teaching materials distributed during the course. Suggested texts: C. De Vincenti, E. Saltari, R.Tilli Manuale di Economia Politica - Carocci Editore Acemoglu D., Laibson D., List J. Principi di economia politica. Teoria ed evidenza empirica Pearson Ed. N.G.Mankiw Principi di economia – Zanichelli J.B.Taylor Economia – Zanichelli L. Jacoponi e Romiti Economia e Politica Agraria - Edagricole M. De Benedictis, M. Cosentino: Economia della Azienda Agraria – Il Mulino</p> <p>Teaching module of Statistics and management of data of veterinary interest: Notes from the lessons and teaching materials distributed during the course. In-depth texts in the Library of the Dip. of Veterinary Medicine: Analisi statistica dei dati biologici / Michael C. Whitlock, Dolph Schluter; Edizione italiana a cura di Giorgio Bertorelle. - Bologna : Zanichelli, 2010 Biostatistica : concetti di base per l'analisi statistica delle scienze dell'area medico-sanitaria / Wayne W. Daniel. - 2. ed. - Napoli : EdISES, [2007] Ulteriori testi di approfondimento: Elementi di Statistica di Base per le scienze Zootecniche; Giuseppe Conte, Corrado Dimauro, Niccolo Macciotta. Ed. EFG per ASPA - 2018 Fowler Jim, Jarvis Phil, Chevannes Mel – “Statistica per le professioni sanitarie” Ed. EdISES a cura di Corrado Magnani (2011); Other texts chosen by the student after consultation with the teacher.</p> <p>Teaching module of Informatics: C. Frigerio, F. Maccaferri, F. Rajola ICT e società dell'informazione McGraw Hill (2019)</p>

Additional material	Additional teaching material is provided by teachers during the course and is available on the Teams platform
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Work Schedule			
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Total	Lectures	Hands-on (laboratory, working groups, seminars, field trips)	Out-of-class study hours / Self-study hours
175	48	10	117
ECTS			
7	6	1	/

Teaching Strategy	<p>Principles of Agricultural Economics module: The theoretical part of the course is held in classrooms equipped with multimedia tools such as PC, projector, internet connection, using PowerPoint slides. Frontal teaching is the exclusive teaching method, because of the role of module within the course of studies, linked exclusively to the acquisition of knowledge.</p> <p>Statistics and management of data of veterinary interest: The theoretical lessons are held in the classroom, using personal computers connected to a projector to show slides and possibly explanatory videos to support the explanation. The exercises are always held in the classroom with the possibility for each student to use their own PC (possibly setting up small working groups of 2 or 3 students) or the whiteboard for the resolution of the exercises.</p> <p>Informatics: Lectures and practical activities (guided exercises) also in e-learning environments.</p>
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Expected Learning Outcomes	
Knowledge and understanding on:	<p>At the end of the course, the student will acquire knowledge and understanding skills:</p> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics Ability to understand the basic principles of economics that govern the behavior of individuals and markets. ○ Statistics and management of data of veterinary interest: Adequate knowledge to identify the usefulness of statistical analysis as a tool for understanding phenomena. ○ Informatics: Acquire a basic culture in regard to computer methods for information processing.
Applying knowledge and understanding on:	<p>By the end of the teaching period, students are expected to be able to:</p> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics : Ability to interpret the main economic phenomena. Ability to analyze the behavior of individuals and firms. Ability to describe the functioning of agri-food markets. (DOC 2.11) ○ Statistics and management of data of veterinary interest: Ability to build reports, use data and interpret the main phenomena by applying the basic knowledge in the zootechnical field or in pets (in synergy with the skills acquired in other disciplines. (DOC 2.1; 2.11). ○ Informatics: Knowledge of the principles, methodologies and techniques for managing digital documents (DOC 2.1; 2.11).
Transversal Competences	<ul style="list-style-type: none"> ○ <i>Autonomy of judgment</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics : Ability to identify suitable solutions to improve the competitiveness of agri-food products. Ability to identify obstacles and threats to competitive positioning of agri-food companies in the market. ○ Statistics and management of data of veterinary interest: Ability to identify the most suitable statistical techniques in the study of a given phenomenon. ○ Informatics: Collect and evaluate data related to cultural or social phenomena thanks to a correct research methodology, which makes a conscious use of computer tools,

	<p>and acquired data analysis skills.. Critically evaluate processing methodologies and techniques in relation to scope and purpose. Critically assess the implications of technologies and marketability in a professional environment.</p> <ul style="list-style-type: none"> ○ <i>Communicative skills</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics :Ability to describe economic phenomena and mechanisms underlying business choices and market dynamics, using an appropriate technical language. ○ Statistics and management of data of veterinary interest: Ability to describe, represent and interpret data for a more in-depth analysis of the phenomenon. ○ Informatics: Identify tools of communication of cultural content appropriate in relation to real innovative contexts. Interact effectively with device and software for problem solving. ○ <i>Ability to learn autonomously</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics: Ability to deepen and update their knowledge, to acquire data and information on business choices and the optimal allocation of resources. ○ Statistics and management of data of veterinary interest: Ability to understand phenomena in order to extrapolate useful information and carry out insights for the formulation of predictions on repeated events. ○ Informatics: Understanding new technologies and their potential
ECCVT Day One Competences (adopted on 26/3/2015) linked to the present Integrated Teaching	<p>Knowledge: 2.1 2.11</p>

Assessment and Feedback	
Methods of assessment	<p>The exam of the integrated course of "Economics and Statistics" allows the acquisition of 11 of the CFUs provided by the study plan. The exam includes a partial test of the modules of "Statistics and management of data of veterinary interest", and a subsequent one of "Principles of Agricultural Economics" and "Informatics". The two partial tests can be taken in the same session or in different sessions but always in the same order. The ECTS (7) are considered acquired only after passing the two tests and registration on the ESSE3 portal of the report.</p>
Evaluation criteria	<p>During the examination procedure, students will have to demonstrate:</p> <ul style="list-style-type: none"> ○ <i>Knowledge and Understanding:</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics: Ability to clearly describe the basic models of economic phenomena. ○ Statistics and management of data of veterinary interest: Demonstration of having acquired the basic concepts for an adequate statistical analysis of the phenomena. ○ Informatics: knowing the fundamental concepts of the world of information technology; knowing the structure of a computer. ○ <i>Applying knowledge and understanding:</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics: Ability to describe market phenomena and the behaviors of individuals and enterprises in the situations that currently characterize the agri-food sector, bringing them back and interpreting them in the light of previous models ○ Statistics and management of data of veterinary interest: Knowing the

	<p>methodology of data collection and use, tabular and graphic representation, ability to calculate indices, description of the most used statistical distributions.</p> <ul style="list-style-type: none"> ○ Informatics: Acquisition of basic computer skills and competence ability to use IT tools; ability to use spreadsheets, build graphs; ability to navigate websites, use databases and carry out bibliographic searches. ○ <i>Autonomous judgement:</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics: Ability to identify improvement paths and tools to increase the competitiveness of agri-food businesses ○ Statistics and management of data of veterinary interest: Ability to identify the most appropriate statistical tool for the study and interpretation of the phenomenon of interest. ○ Informatics: Demonstrate IT skills and competence, autonomously evaluating the best solution to problems. ○ <i>Communication skills:</i> <ul style="list-style-type: none"> ○ ability to present the topics studied ○ ability to explain their own reasonings and points of view in a clear and logical way ○ ability to use the scientific and technical terminology properly ○ <i>Autonomous and continuous learning:</i> <ul style="list-style-type: none"> ○ Principles of Agricultural Economics: Ability to critically analyze concrete situations in the economic theme, in an autonomous way, also identifying additional sources of deepening and updating ○ Statistics and management of data of veterinary interest: Ability to find sources of available data and make appropriate insights to extrapolate useful information to make comparisons, demonstrating ability to interpret phenomena for the formulation of predictions on repeated events. ○ Informatics: knowing how to communicate with basic IT terminology; demonstrate expository clarity, ability to analyze and synthesis; have command and punctuality of the vocabulary.
<p>Criteria for assessment and attribution of the final mark</p>	<p>The outcomes of the tests in Statistics and Data Management of Veterinary Interest and Informatics, and Principles of Agricultural Economics will contribute to the determination of the final grade of the Economics and Statistics exam.</p> <p>The final grade is the result of the collegial judgment related to the subtests in which the student must demonstrate that he/she has acquired a critical sense with respect to the topics studied. The final grade, expressed in thirtieths, will be considered passed with a grade equal to or higher than 18 and will take into consideration not only the accuracy of the response, but also the ability to communicate, clarity of exposition, the disciplinary competence and the level of thoroughness.</p> <p>Honors will be awarded to the student who obtains the maximum score in the various tests.</p>
<p>Additional information</p>	