<table>
<tr><td colspan="5">Academic subject: EPIDEMIOLOGY and FOOD BORNE ZOONOSES</td></tr>
<tr><td colspan="2">Degree Class:
LM-86</td><td colspan="2">Degree Course: Safety and Health of Food of Animal Origin</td><td>Academic Year:
2020/2021</td></tr>
<tr><td colspan="2"></td><td colspan="2">Kind of class:
mandatory</td><td>Year:
I
Period:
II semester</td></tr>
<tr><td colspan="2"></td><td colspan="2"></td><td>ECTS: 8
divided into
ECTS lessons: 7
ECTS exe/lab/tutor: 1</td></tr>
<tr><td colspan="5">Time management, hours, in–class study hours, out–of–class study hours
lesson: 84 exe/lab/tutor: 25 in–class study: 0 out–of–class study: 91</td></tr>
<tr><td>Language:
Italian</td><td>Compulsory Attendance:
No</td><td colspan="3"></td></tr>
<tr><td>Subject Teacher:
Alessandra Cavalli</td><td>Tel: 080/4679833
e–mail:
alessandra.cavalli@uniba.it</td><td>Office:
Department of Veterinary Medicine

Room Floor</td><td colspan="2">Office days and hours:
Tuesday, 10-11,30
Wednesday, 14,30-16,30</td></tr>
<tr><td>Vito Martella</td><td>Tel: 080/4679805
e-mail:
vito.martella@uniba.it</td><td>Room Floor</td><td colspan="2">Tuesday, 10-11,30
Wednesday, 14,30-16,30</td></tr>
<tr><td colspan="5">Prerequisites: although no official prerequisite exists, the student must have knowledge and skills in microbiology, hygiene of livestock farms for the prevention of infectious diseases of animals.</td></tr>
<tr><td colspan="5">Educational objectives: knowledge of the main zoonoses caused by viruses, bacteria and non-conventional agents. Acquisition of the principles and methodologies of both basic epidemiology and applied to infectious diseases of livestock animals, with particular attention to those subject to mandatory notification and zoonoses. Notions of prevention, control and eradication of infectious diseases of animals with reference to prophylaxis measures aimed at promoting human health</td></tr>
<tr><td>Expected learning outcomes (according to Dublin Descriptors)</td><td colspan="4">Knowledge and understanding: knowledge on the main infectious foodborne zoonotic diseases. Basic concepts of epidemiology, information on modes of infectious disease transmission and on the tools to control their spread.

Applying knowledge and understanding: ability to apply the principles and strategies for disease prevention and health promotion. The student must be able to choose and apply interventions for infectious disease control and prevention with reference to foodborne zoonotic diseases.

Making judgements: through the epidemiological analysis and the assessment of health risks deriving from animal husbandry, the student will acquire the ability to choose and propose with great autonomy, preventive interventions according to international guidelines and other available scientific evidence.

Communication: students will be required to demonstrate an adequate technical and scientific lexical richness to discuss the main topics of the subject and understand scientific papers, with emphasis on language and terminology of the epidemiological methodologies and infectious diseases. The development of communication skills, both oral and written, will be stimulated during the class discussion, tutoring and the examinations..

Lifelong learning skills: the students will be able to describe the key features and applications of descriptive and analytical epidemiology; calculate and interpret ratios, proportions, prevalence, incidence and mortality rates; describe the processes of public health surveillance; describe the stages of an outbreak investigation. Students who successfully complete this course will be able to effectively manage their own learning, both individually and in groups. They will be able to use and apply the knowledge and</td></tr>
</table>

	skills acquired in the context of many healthcare activities.

Course program:

Epidemiology
Introduction to epidemiology: training objectives and teaching methods. Definition and historical evolution of epidemiology. Principles of infectious disease epidemiology. The concepts of health and disease. Human-animal health interactions and the role of "One Health". Descriptive, analytic and experimental epidemiology. Frequency, distribution and determinants of health / disease in populations. Measures of disease frequency: prevalence, incidence, morbidity, mortality, survival and lethality. Epidemics, pandemics, endemics and sporadic diseases. Mode of transmission of infectious agents. The fight against zoonoses and infectious diseases of animals according to Italian and European legislation: prevention, control and eradication measures. Epidemiological investigations: cohort and case-control studies. Statistical significance. Measures of association: relative risk and odds ratio. Sampling methods involving population: probability and non-probability sampling. Diagnostic testing accuracy: sensitivity, specificity and predictive values.

Foodborne zoonoses
Introduction to the course: training objectives and teaching methodologies. General: historical notes, definitions. Health agencies and bodies at international and national level. Foodborne zoonoses sustained by viral agents: calicivirus, rotavirus, astrovirus, picornavirus, arenavirosis, human hepatotropic viruses (A, B, C, D, E). Foodborne zoonoses sustained by bacterial agents: tuberculosis, brucellosis, listeriosis, salmonellosis, campylobacteriosis, anthrax, coxiellosis, infections with verocytotoxic Escherichia coli, vibriosis, yersiniosis. Zoonoses sustained by unconventional agents: TSE.

Teaching methods: face-to-face lessons and practical laboratory training. During the emergency phase the teaching, lessons will be held mainly by videoconference using Microsoft Teams.

Auxiliary teaching: lectures will be presented through digital tools (PowerPoint presentation, video). The PowerPoint slides will be made available to students in pdf format

Assessment methods:
Periodically, during the course, the main concepts of the topics addressed are summarized and classroom discussion with students is stimulated to assess learning progress. In addition, a self-assessment questionnaire of the acquired skills is administered to the students during the course. The final assessment of Epidemiology is carried out through a written test. The student may opt for oral examination. Final assessment of the course of Foodborne Zoonoses is made with an oral exam. During the final exam, the student must demonstrate knowledge of the topics covered in class. Students must be able to use correct scientific terminology and must show clarity in formulating written replies to answers.

The overall assessment will take in account the candidate's ability to use the knowledge and skills acquired to solve the problems posed. The vote of the courses of Epidemiology and of Foodborne Zoonoses will be the arithmetic mean between the two courses.

Bibliography:
- M. Thrusfield (2007), Veterinary epidemiology, Blackwell Science Ltd, Oxford, III edition.
- Bottarelli, Ostanello. Epidemiologia, 2011, edizioni Edagricole. Appunti di epidemiologia veterinaria, a cura del Prof. E. Bottarelli (Università di Medicina Veterinaria di Parma). (htpp://www.unipr.it/~bottarel/epi/)
- Farina -Scatozza "Trattato di Malattie Infettive degli Animali Domestici", 2006 UTET
- Divulgation and didactic material used during the lectures (powerpoint and illustrative DVDs)
Siti Web
- CDC (inglese) http://www.cdc.gov/
- ECDC (inglese) https://www.ecdc.europa.eu/en
- EFSA (inglese) https://www.efsa.europa.eu/
- Epicentro, il portale dell'epidemiologia per la sanità pubblica (italiano)
http://www.epicentro.iss.it/default.asp
- Office international des Epizooties http://www.oie.int/