

Study Programme: Animal Production
Course Unit Title: Quality and Safety of Animal Products
Course Unit Code: 19.ANM037
Name of Lecturer(s): Igor M. Jajić, PhD, Full Professor
Type and Level of Studies: Undergraduate Academic Studies
Course Status (compulsory/elective): compulsory
Semester (winter/summer): winter
Language of instruction: Serbian
Mode of course unit delivery (face-to-face/distance learning): face-to-face
Number of ECTS Allocated: 5
Prerequisites: None
<p>Course Aims:</p> <p>To familiarize students with the most important factors of livestock products quality. Introducing students to the field of food safety, understanding of prerequisite programs (GMP and GHP), which are the basis of efficient food safety management through the application of HACCP. Acquiring knowledge about the negative influence of the major animal products contaminants.</p>
<p>Learning Outcomes:</p> <p>Acquired knowledge level ensures participation in the production of livestock products that are safe for human health, through strict compliance with applicable laws and regulations. Independently, finding and using resources needed to solve the problem of health safe food production. Acquired basic knowledge of different chemical and microbiological pollutants in raw materials, food and water, their sources and consequences to the health and quality, as well as measures to be taken to avoid such contaminants in produced livestock products.</p>
<p>Syllabus:</p> <p><i>Theory</i></p> <p>Quality, definitions, history. Quality factors: sensory, technological, nutritional, hygienic, toxicological and ethical. Meat: importance, technological and nutritional quality of meat. Biochemical processes in muscle postmortem, post mortal glycolysis and maturation of meat. Eggs: structure and chemical composition, preserving the quality of eggs, processing. Honey: chemical composition, antibacterial properties, honey types according to their origin and method of obtaining. The most important contaminants of honey. Good manufacturing practice (GMP), good hygiene practices (GHP), hazard analysis and critical control points (HACCP). Legislation regarding food safety. The European Food Law (EC 178/2002), EFSA, RASFF. ISO standards series 9000 and 22000. Food Safety Law of the Republic of Serbia (41/2009). Toxicological quality food. Food contaminants: pesticides, polychlorinated biphenyls, heavy metals, dioxins, mycotoxins.</p> <p><i>Practice</i></p> <p>Determination of the water holding capacity of meat. Determination of glycogen, the amount of connective tissue and total pigments in meat. Food color, determination of meat color. Determination of egg freshness. The quality of honey: determination of pH in honey, proving honey fraudulation with starch and determination of hydroxymethyl furfural in honey. Toxicological food quality, determination of mycotoxins and heavy metals. Application of prerequisite programs and HACCP in animal feed production.</p>

Required Reading:

Rede, R., Petrović, Lj.: Tehnologija mesa inauka o mesu, Tehnološkifakultet, Novi Sad, 1997.

Vuković, I.: Osnovetehnologije mesa, 2006.

D’Mello, J.P.F. Ed: Food Safety: Contaminants and Toxins, Cab International, 2003.

Igor Jajić: Kvalitetibezbednoststočarskihproizvoda (Praktikum), 2013.

Šarkanj, B., Delaš, F., Klapac, T., VasićRački, Đ.: Kemijskeifizikalneopasnosti u hrani, Hrvatska agencija za hranu, 2010.

Havranek, J., Tudor Kalit, M. isar.: Sigurnosthrane - od polja do stola, 2014.

Milićević, D.: Mikotoksini u lancuhrane - hemijski, biološkiizdravstveniaspekt, Institut za higijenuitehnologiju mesa, Beograd, 2016.

WeeklyContact Hours:

Lectures:3

Practical work:2

Teaching Methods:

Lectures, Practical classes, Consultations, study, research work

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	20
Practical work	5	oral exam	30
Preliminary exam(s)	40	
Seminar(s)			

The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.