Code: 11-2-03

TECHNOLOGIES IN MEAT PRODUCTION AND PROCESSING

ECTS: 5

Course coordinator: Prof. Dr. Božidar Žlender

Lecturers: Prof. Dr. Božidar Žlender

No. of hours: 125

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2. Entry requirements:
General conditions for enrolment in doctoral studies.

3. Objectives of the course and intended learning outcomes:
(competences)
Educational aims: The aim is to familiarise students with the complexity of specific technological processes and machinery in the technologies of producing, conserving and distributing meat of various animal species and with processes and contemporary technological equipment for production and distribution of meat products.
Intended learning outcome: The intended learning outcome is to obtain a sound basis for recording research problems within the framework of the technological processes dealt with, connected with specific machinery and for planning and carrying out research work in this field.

4. Syllabus outline:
Pre-slaughter technologies – antistress principles (gathering, loading, transport, stabling of animals)
Primary processing of slaughtered animals and poultry – principles and technological lines for drugging, slaughter, butchering, control of carcasses.
Primary conservation of meat – principles and technological procedures – cooling, freezing (convection, conduction, immersion, cryogenic procedures)
Conserving meat – processes and technological lines (heat procedures – pasteurisation, sterilisation; salting, smoking, radiation, biological conservation, dehydration, packaging – VP, ECTS MAP).
Contemporary thermal means of processing meat (omic heating, radiofrequency dielectric heating, IR-heating, UHT process, high pressure heating).
New equipment and technological lines for processing meat: dismembering a carcase (cutter, microcutter), mechanical separators, mixers, fillers, closers, lines for mincing, smoking (pyrolisic, flowing, electrostatic smoke) and maturation chambers.
Contemporary methods of packing meat and meat products – modified atmosphere (MAP), active packing, intelligent packing.
Robotisation of quality control of slaughtered carcases – instrumental methods.
Instrumental analysis of sensoric parameters of meat and meat product quality – colour, smell, taste (aroma), texture.
5. Literature (in the case of books and monographs, study sources are only selected chapters from them):

6. Teaching methods:
Lectures, independent study and preparation of project task.

7. Assessment methods:
Seminar, oral/written examination.
Students prepare a seminar task on a selected theme, which is a precondition for taking the examination.

8. References:

Žlender Božidar