ROMÂNIA

MINISTERUL EDUCAŢIEI ŞI CERCETĂRII

UNIVERSITATEA DIN CRAIOVA

FACULTATEA DE AGRONOMIE

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PACKAGE OF COURSES

Bachelor study program:
CONTROL AND FOOD EXPERTISE

This is the package of course of bachelor study program from the Universityof Craiova/the Faculty of Agronomy/
The Department of Land surveys – Management - Mechanization

1ST YEAR OF STUDY

SPECIAL MATHEMATICS I

CREDITS: 3
YEAR / SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 1 hour of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Determination of lengths, areas and volumes of geometric objects. Solving specific problems of linear programming, such as crop distribution, setting feed ration for animal feed and working technology, based on matrix computing techniques. Knowledge of the fundamental concepts of probability theory, probabilistic computation rules, the main probability schemes, the notion of random variable. Knowledge of the main classical distribution laws. Statistical analysis of the phenomenon. Graphical representation of a statistical series. The distribution of statistical data and graphical representation, the synthesis of data with an indicator representing them, the determination of statistical indicators of populations and samples (for example, indi-cators of the variations and moments).
TOPICS: Measurement of lengths, areas and volumes. Linear programming. The calculus of probabilities. Elements of mathematical statistics
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60%, final answers to works and homework 40%
ASSESSMENT TYPE: verification

APPLIED INFORMATICS

CREDITS: 4
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Acquiring the knowledge and skills necessary to use the computer as a working tool; Creating skills in using program packages dedicated to specific tasks: word processing, tables, charts, databases; Ability to solve problems specific to the specialization by using dedicated IT packages; Creating computer models for solving horticultural problems
TOPICS: Windows operating systems - overviewMicrosoft WORD: Create/save/open /close file; Page Setup: page margins, page sizes, page orientation header and footer options View Print Preview; Move/copy/paste; Select text; Search and replace, move to document; View Document; Header and footer preview - header and footer creation, ruler, toolbars; Insert to file: page numbers; Page breaks/section breaks; Footnotes; Insert and edit a drawing, diagram, object, text box; Text formatting - specifying all formatting attributes; Create lists numbered/ with bullets/hierarchies; Application borders and shadows; Formatting text in columns, specifying TAB positions and leader characters; Insert table, work with tables. Creating drawings: Drawing toolbar; Inserting equations in the document.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam: answers to final examination 50%, final answers to Laboratory works 50%
ASSESSMENT TYPE: exam

PHYSICS

CREDITS: 4
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS/WEEK: 2 hours of lecture, 2 hours of practical work
NUMBER OF WEEKS: 14
TYPE DISCIPLINE: Fundamental discipline
COURSE OBJECTIVES: Knowing notions, concepts, laws and principles of physics with implications specific phenomena that determine the structure of environment, living organism and particularly for the safety of food. Knowledge of physical methods for monitoring and physical techniques of investigation and exploration of the environment, living matter and food.
Gaining knowledge about physical activities in environmental and food technology assessment.
THEME: Matter structure and their organization. Elements of spectroscopy. Interaction of radiation with matter. Molecular biophysics. Contact phenomena between liquid and solid. Molecular transport phenomena. Diffusion and osmosis. Introduction in biological thermodynamics. Radiant energy, characteristics of thermal energy.
LANGUAGE TEACHING: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, periodic answers to practical work 30%, results to periodic control works 10 %.
VERIFICATION FORM: exam

GENERAL MICROBIOLOGY I

CREDITS: 4
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
TYPE DISCIPLINE: Fundamental discipline
COURSE OBJECTIVES: COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional, functional characteristics of the food product. Evaluating the organoleptic, physicochemical and microbiological properties of raw materials and food products. Performing specific calculations according to analysis methods, evaluating the quality of food products based on knowledge of sensory analysis, determining the nutritional (nutritional and energy) values of food products. Managing production processes in order to optimize and reduce production losses and overall manufacturing costs. In addition, it determines how harmless a food is.
TOPICS: Introduction to Microbiology. Bacteria and Archea. Growth and nutrition of prokaryotes. Metabolism of prokaryotic cells. Eukaryotic cell structure and functions. Yeasts. Viruses. Pathogenic microorganisms. Microorganisms of medical importance. Influence of physical and chemical factors on microorganisms. Ecology of microorganisms.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Final theoretical exam 60%, final practical exam 40%.
ASSESSMENT TYPE: exam

CHEMESTRY I (ANORGANIC AND ANALYTICAL)

CREDITS: 5
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Familiarity with the concepts related to atomic structure and classification; Understanding the electronic configuration of the elements, their respective valence. Acquiring knowledge needed to understand the types of chemical bonds;

TOPICS: Atoms. Atomic Structure. Clasificasion of elements. Molecules. Chemical bonds. Chemical thermodynamics. Chemical balances. Solutions. The ionic balance. Colloidal state of matter; Oxidation and reduction.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 60%, answers at practical course during semester 40%.
ASSESSMENT TYPE: exam

CHEMESTRY II (COLLIODAL PHYSIC AND CHEMISTRY I)

CREDITS: 4
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: defining the basic principles of food science and the nutritional, functional characteristics of the food product. evaluating the organoleptic, physico-chemical and microbiological properties of raw materials and food products. performing specific calculations according to analysis methods, evaluating the quality of food products based on knowledge of sensory analysis, determining the nutritional values (nutritional and energetic) of food products. managing production processes in order to optimize and reduce production losses and overall manufacturing costs.
TOPICS: Pre-wave atomic models. Quantum atomic models Rotational and vibrational spectra of diatomic molecules. Introductory notions of chemical thermodynamics. Principle I of thermodynamics. Principle II of thermodynamics. Principle III of thermodynamics. Colloids. Classification. Properties Interfaces in colloidal systems. Lyophobic colloidal systems. Surfactants
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 70%, 15% continuous evaluation and 15% report / project
ASSESSMENT TYPE: exam

ENGLISH LANGUAGE I

CREDITS: 2
YEAR / SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours of seminar
NUMBER OF WEEKS: 14
COURSE TYPE: complementar discipline
COURSE OBJECTIVES: Improving the ability to understand spoken English and specific vocabulary texts written in English, using a reference material especially designed for students of the Faculty of Agriculture, but also for those who want to learn ESP vocabulary in context. Practice of important vocabulary and grammar practice, tackle four skills, reading, listening, speaking and writing, explain specific vocabulary, and grammar lessons which are thought in detail, with exercises that give students useful practice in this particular area. True or false exercises, gap filling, matching the words with their definition, translations, in context dialogues and lessons with key bolded words are really selected for students to understand and use it correctly. Deepening the main grammar rules of English in a modern way, problematic, requiring students to learn but also to think. Consolidation of skills to dialogue, describe, report. Emphasizing the practical nature of learning, the course is meant to stimulate students' interest in written and spoken language, to improve knowledge and communication in English.
TOPICS: Focus on language: Present Tense Simple/ Continuous, Vocabulary: Agriculture is the branch of agriculture that deals with the art, science, technology, and business of growing plants. It also is the study of plants. It includes the cultivation of medicinal plants, fruits, vegetables, nuts, seeds, herbs, sprouts, mushrooms, algae, flowers, seaweeds and non-food crops such as grass and ornamental trees and plants.
TEACHING LANGUAGE: English
KNOWLEDGE ASSESSMENT: answers to final examination 60%, theoretical and practical checking 40%

ASSESSMENT TYPE: verification

FRENCH LANGUAGE I

CREDITS: 2
YEAR / SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours of seminar
NUMBER OF WEEKS: 14
COURSE TYPE: complementar discipline
COURSE OBJECTIVES: Improving the ability to understand spoken French and specific vocabulary texts written in French, using a reference material especially designed for students of the Faculty of Agriculture, Agriculture Specialization, but also for those who want to learn vocabulary in context. Practice of important Agriculture vocabulary and grammar practice, tackle four skills, reading, listening, speaking and writing, explain specific vocabulary, and grammar lessons which are thought in detail, with exercises that give students useful practice in this particular area. True or false exercises, gap filling, matching the words with their definition, translations, in context dialogues and lessons with key bolded words are really selected for students to understand and use it correctly. Deepening the main grammar rules of French in a modern way, problematic, requiring students to learn but also to think.
Consolidation of skills to dialogue, describe, report. Emphasizing the practical nature of learning, the course is ment to stimulate students' interest in written and spoken language, to improve knowledge and communication in French.
TOPICS: Focus on language, Vocabulary: Landscape.Scale and heterogeneity (incorporating composition, structure, and function). Patch and mosaic. Boundary and edge. Ecotones, ecoclines, and ecotopes. Disturbance and fragmentation. Theory. Application. Research directions.
TEACHING LANGUAGE: French
KNOWLEDGE ASSESSMENT: answers to final examination 60%, theoretical and practical checking 40%
ASSESSMENT TYPE: verification

PHYSICAL EDUCATION I

CREDITS: 1
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 1 hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: complementary discipline
COURSE OBJECTIVES: Discipline aims at forming the theoretical, practical and methodical skills for individual or group practice for a healthy lifestyle; Awareness of students about the role and importance of practicing physical exercise.
TOPICS: Gymnastics: Front and Band Exercises; Gymnastics Aerobics / Fitness; Application trails combined with treadmills; Application paths combined with equilibrium, escalation, climbing exercises; Sports games: basketball; Sports game: football; Bilateral games under similar competition conditions.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Assessment through practical tests 80%, continuous assessment throughout semester 20%
ASSESSMENT TYPE: A/R

GENERAL MICROBIOLOGY II

CREDITS: 4
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hourS practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional, functional

characteristics of the food product. Evaluating the organoleptic, physicochemical and microbiological properties of raw materials and food products. Performing specific calculations according to analysis methods, evaluating the quality of food products based on knowledge of sensory analysis, determining the nutritional (nutritional and energy) values of food products. Managing production processes in order to optimize and reduce production losses and overall manufacturing costs. In addition, it determines how harmless a food is.
TOPICS: Introduction to Microbiology. Bacteria and Archea. Growth and nutrition of prokaryotes. Metabolism of prokaryotic cells. Eukaryotic cell structure and functions. Yeasts. Viruses. Pathogenic microorganisms. Microorganisms of medical importance. Influence of physical and chemical factors on microorganisms. Ecology of microorganisms.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 50 %, final answers for workshops 50%,
ASSESSMENT TYPE: verification

ECOLOGY AND ENVIRONMENT PROTECTION

CREDITS: 4
YEAR/SEMESTER: Ist Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hourS practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Knowledge of the structure, functions and relations of natural and anthropic ecosystems, knowledge of the impact of anthropogenic activities on the environment, knowledge of environmental protection
TOPICS: Laws and ecological principles, ecosystem (structure, functions, dynamics), environmental degradation, nature protection
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 50 %, final answers for workshops 50%,
ASSESSMENT TYPE: verification

SPECIAL MATHEMATICS II

CREDITS: 4
YEAR / SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 2hour of course, 2 hours of seminar
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Determination of lengths, areas and volumes of geometric objects. Solving specific problems of linear programming, such as crop distribution, setting feed ration for animal feed and working technology, based on matrix computing techniques. Knowledge of the fundamental concepts of probability theory, probabilistic computation rules, the main probability schemes, the notion of random variable. Knowledge of the main classical distribution laws. Statistical analysis of the phenomenon. Graphical representation of a statistical series. The distribution of statistical data and graphical representation, the synthesis of data with an indicator representing them, the determination of statistical indicators of populations and samples (for example, indi-cators of the variations and moments).
TOPICS: Measurement of lengths, areas and volumes. Linear programming. The calculus of probabilities. Elements of mathematical statistics
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final
examination 60%, final answers to works and homework 40%
ASSESSMENT TYPE: verification

CHEMESTRY III (COLLIODAL PHYSIC AND CHEMISTRY II)

CREDITS: 5
YEAR/SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: defining the basic principles of food science and the nutritional, functional characteristics of the food product. evaluating the organoleptic, physico-chemical and microbiological properties of raw materials and food products. performing specific calculations according to analysis methods, evaluating the quality of food products based on knowledge of sensory analysis, determining the nutritional values (nutritional and energetic) of food products. managing production processes in order to optimize and reduce production losses and overall manufacturing costs.
TOPICS: Introduction to chemical kinetics. Kinetics of elementary reactions. Kinetics of complex reactions. Kinetics of catalytic reactions. Conducted electrochemical systems. Electrochemical techniques used in chemical analysis.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 60%, 20% continuous evaluation and 20% report / project
ASSESSMENT TYPE: exam

MATHEMATICAL ANALYSIS

CREDITS: 5
YEAR/SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours seminar
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: description of technological operations on the food manufacturing flow, principles and operating instructions of food industry machinery. use of technological calculations to establish specific consumption and manufacturing efficiency. carrying out and/or planning engineering activities to obtain the desired products in an optimized way in terms of costs, resources and time.
TOPICS: Real number sequences. Topological elements. Numerical series. Limits. Differential calculus.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 60%, 20% continuous evaluation and 20% report / project
ASSESSMENT TYPE: exam

COMPUTER-ASSISTED GRAPHICS I

CREDITS: 4
YEAR/SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: presentation and understanding of the basic rules regarding the representations in technical drawings, which will be used in topographic and cadastral design software applications. students' skills in using the interface offered by the AutoCAD application. correct use of the drawing and design commands offered by AutoCAD. students' acquisition of the skills of representing various elements through drawing, so that they can represent objects in two-dimensional or three-dimensional space on the drawing board, in accordance with the real object. analysis and processing of graphic information, in order to obtain correct final results. use of the AutoCAD application to create a graphic project
TOPICS: Overview of the AutoCAD application and how to get started. Starting new projects with AutoCAD. Building drawings using the AutoCAD application. Creating and using polylines, splines, blocks and their attributes. Methods for making changes to a graphic project. . Working with texts in AutoCAD. . Methods for correcting possible errors in a drawing. Building complex objects using the AutoCAD

application. Stages of building graphic projects in AutoCAD.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 60%, 20% continuous evaluation and 20% report / project
ASSESSMENT TYPE: exam

FOOD INDUSTRY MACHINERY

CREDITS: 5
YEAR/SEMESTER: Ist year / IInd semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: description of technological operations in the food manufacturing flow, principles and operating instructions for food industry machinery, definition of processes and procedures regarding quality, food safety, standards and hygiene of food products.
TOPIC: Students gain knowledge about the main processes that take place in the food industry (washing raw materials, fractionation of solids, sorting, calibrating, sieving, transporting materials, crushing, sedimentation, filtering, mixing, heating-cooling, fermentation, pasteurization-sterilization, condensation, crystallization, drying, refrigeration and freezing) through the perspective of the transformations undergone and through the presentation of the equipment and machinery that are used to carry out the respective operations.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: exam

ENGLISH LANGUAGE II

CREDITS: 3
YEAR / SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 1 hour course and 2 hours of seminar
NUMBER OF WEEKS: 14
COURSE TYPE: Optional
COURSE OBJECTIVES: Improving the ability to understand spoken English and specific vocabulary texts written in English; using a reference material especially designed for students of the Faculty of Agriculture, but also for those who want to learn ESP vocabulary in context. Practice of important vocabulary and grammar practice, tackle four skills, reading, listening, speaking and writing, explain specific vocabulary, and grammar lessons which are thought in detail, with exercises that give students useful practice in this particular area. True or false exercises, gap filling, matching the words with their definition, translations, in context dialogues and lessons with key bolded words are really selected for students to understand and use it correctly. Deepening the main grammar rules of English in a modern way, problematic, requiring students to learn but also to think. Consolidation of skills to dialogue, describe, report. Emphasizing the practical nature of learning, the course is meant to stimulate students' interest in written and spoken language, to improve knowledge and communication in English.
TOPICS: Plant conservation, landscape restoration, landscape and garden design, construction, and maintenance, and arboriculture. Inside agriculture, horticulture contrasts with extensive field farming as well as animal husbandry.
TEACHING LANGUAGE: English
KNOWLEDGE ASSESSMENT: answers to final examination 60%, theoretical and practical checks 40%
ASSESSMENT TYPE: verification

FRENCH LANGUAGE II

CREDITS: 3
YEAR / SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 1 hour course and 2 hours of seminar
NUMBER OF WEEKS: 14
COURSE TYPE: Optional

COURSE OBJECTIVES: Improving the ability to understand spoken French and specific vocabulary texts written in French; using a reference material especially designed for students of the Faculty of Agriculture, Agriculture Specialization, but also for those who want to learn vocabulary in context. Practice of important Agriculture vocabulary and grammar practice, tackle four skills, reading, listening, speaking and writing, explain specific vocabulary, and grammar lessons which are thought in detail, with exercises that give students useful practice in this particular area. True or false exercises, gap filling, matching the words with their definition, translations, in context dialogues and lessons with key bolded words are really selected for students to understand and use it correctly. Deepening the main grammar rules of French in a modern way, problematic, requiring students to learn but also to think. Consolidation of skills to dialogue, describe, report. Emphasizing the practicalnature of l earning, the course is ment to stimulate students' interest in written and spoken language, to improve knowledge and communication in French.
TOPICS: Topological ecology Organism-centred. Analysis of social-ecological systems using the natural and social sciences and humanities. Ecology guided by cultural meanings of lifeworldly landscapes.
TEACHING LANGUAGE: French
KNOWLEDGE ASSESSMENT: answers to final examination 60%, theoretical and practical checks 40%
ASSESSMENT TYPE: verification

PHYSICAL EDUCATION II

CREDITS: 1
YEAR/SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 1 hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: complementary discipline
COURSE OBJECTIVES: Discipline aims at forming the theoretical, practical and methodical skills for individual or group practice for a healthy lifestyle; Awareness of students about the role and importance of practicing physical exercise.
TOPICS: Gymnastics: Front and Band Exercises; Gymnastics Aerobics / Fitness; Application trails combined with treadmills; Application paths combined with equilibrium, escalation, climbing exercises; Sports games: basketball; Sports game: football; Bilateral games under similar competition conditions.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Assessment through practical tests 80%, continuous assessment throughout semester 20%
ASSESSMENT TYPE: A/R

ELEMENTS OF ELECTRICAL ENGINEERING

CREDITS: 4
YEAR/SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Presenting concepts related to electric and magnetic phenomena: electrostatics; stationary power; the magnetic field of electricity; electromagnetic induction; alternating current.
TOPIC: The electrostatic field; stationary power; the magnetic field of electricity; induction electromagnets; alternating current
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

ELEMENTS OF MECHANICAL ENGINEERING

CREDITS: 4
YEAR/SEMESTER: Ist Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVE(S): Exposition of notions regarding: the principles of Newtonian mechanics; mechanical energy of the material point and the system of material points; the structure of mechanical systems; machine elements.
COURSE CONTENTS: motion and rest, principles of Newtonian mechanics, motion of a material point under the action of certain types of forces, mechanical energy of the material point and the system of material points, structure of a mechanical system, mechanisms with articulated bars, mechanisms with gear wheels, transmissions through belts, shafts, bearings.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

2ND YEAR OF STUDY

PRINCIPLES AND METHODS OF FOOD PRESERVATION I

CREDITS: 4
YEAR/ SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Acquiring theoretical and practical knowledge for keeping fresh food of plant origin (vegetables, fruits and their derivatives) and methods of processing and preserving their
TOPICS: Storage and recovery technologies of food products of plant origin (fruit and vegetables) - semiconservare technologies and preservation of food products of plant origin (fruit and vegetables)
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to practical works 40%
ASSESSMENT TYPE: exam

MANAGEMENT

CREDITS: 4
YEAR / SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowledge of the notions of the economic agent in terms of its organization, its functionality, the way of implementation of the modern management techniques and methods.
TOPICS: The role of the food industry in the production of food for human consumption, Introductory management, Running management in modern management, Production capacity and optimal ways of use in the food industry, Creation and development of technical-material basis in the food industry, Organization and management of production Nutrition, Organization of food industry production by types of enterprises, Technical and economic forecasting in the food industry, Human resource management in the food industry, Labor normalization in the food industry
TEACHING LANGUAGE: Romanian

KNOWLEDGE ASSESSMENT: answers to final examination 60%, final answers to practical works 40%
ASSESSMENT TYPE: verification

ADDITIVES AND INGREDIENTS IN FOOD

CREDITS: 5
YEAR / SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowledge and use of additives in food
TOPICS: Terms of use of food additives. International regulations regarding the uses and doses maximum permitted food additives
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60%, final answers for workshops 25%, Testing practical skills along the semester15%
ASSESSMENT TYPE: verification

UNIT OPERATIONS IN FOOD INDUSTRY

CREDITS: 3, 2
YEAR/ SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 1 hour of practical works, 1 hour project
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Students will learn the basics on unit operations, forming processes of the food industry. On the basis of theoretical knowledge in the course of practical work aimed at carrying out specific tests and measurements for determining and characterizing the technological performance of each type of unit operation.
TOPICS: Unit operation is discipline which forms the theoretical basis of technology and technological equipment in the food industry. The laboratory are studied fundamental aspects on: - transport of solids, liquids and gases; - separation of heterogeneous systems by sedimentation, filtration, centrifugation; - the processing of mixtures homogenous by evaporation, crystallization, pasteurisation, sterilization, distillation, rectification - the separation of useful components from vegetable products by solid-liquid extraction - to ensure preservation challenge final processing and drying of foodstuffs.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Answers at the exam 60%, final answers at practical laboratory works 40%, project 100%
ASSESSMENT TYPE: exam, project

FOOD SAFETY

CREDITS: 5
YEAR / SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: defining the basic principles of food science and the nutritional, functional characteristics of the food product. evaluating the organoleptic, physico-chemical and microbiological properties of raw materials and food products. performing specific calculations according to analysis methods, evaluating the quality of food products based on knowledge of sensory analysis, determining the nutritional values (nutritional and energetic) of food products. managing production processes in order to optimize and reduce production losses and overall manufacturing costs.
TOPICS: Natural contaminants affecting food safety. Effect of chemical contaminants on food safety. Effect of processing on food safety. Foodborne infections. Microbiological contamination of food with

viruses, protozoa and parasites. Effect of food additives
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 final answers at practical laboratory works 40%
ASSESSMENT TYPE: exam

COMPUTER-ASSISTED GRAPHICS II

CREDITS: 4
YEAR/SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 2 hours course, 1hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: presentation and understanding of the basic rules regarding the representations in technical drawings, which will be used in topographic and cadastral design software applications. students' skills in using the interface offered by the AutoCAD application. correct use of the drawing and design commands offered by AutoCAD. students' acquisition of the skills of representing various elements through drawing, so that they can represent objects in two-dimensional or three-dimensional space on the drawing board, in accordance with the real object. analysis and processing of graphic information, in order to obtain correct final results. use of the AutoCAD application to create a graphic project
TOPICS: Presentation of the work facilities offered by the AutoCAD application. Presentation of the universal coordinate system WCS. Types of coordinates used in computer-aided graphic representation activity. Methods of graphical representation of the desired objects. Creation and use of polylines, spline curves and mixed segment-arc paths. Editing and selecting objects in AutoCAD. Using the AutoCAD application to obtain complex graphic projects by organizing drawings on layers. Using all the facilities offered by the AutoCAD application in computer-aided graphic design activities.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 50%, final answers for workshops 35%, Testing practical skills along the semester15%
ASSESSMENT TYPE: verification

PRINCIPLES OF HUMAN NUTRITION

CREDITS: 4
YEAR / SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK:2 hours of course, 2 hours of seminar
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Obtaining complex knowledge, stimulate thinking integrative and synthetic capacity of the students to integrate knowledge and theoretical knowledge transfer in the field of theory in practice. Knowledge of the factors and conditions that and food preferences of consumers.
TOPICS: Upon completion of the subject the student (a) will be able (a): • identify factors principles related food preferences of consumers, factors auun role hotator in generating food policies • to participate in discussions on key issues related to human nutrition • to can interpret the results of market studies and • can make recomdari privindtendintele market and consumer preferences
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 50%, seminar skills along the semester50%
ASSESSMENT TYPE: verification

LEGISLATION IN THE FOOD INDUSTRY

CREDITS: 4
YEAR / SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK:2 hours of course, 2 hours of seminar
NUMBER OF WEEKS: 14

COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Detailed knowledge of the concepts regarding the rules applicable in the food sector in Romania and in the EU, as well as regarding consumer protection
TOPICS: Efficient use various ways and techniques of learning - training for acquiring information from bibliographic databases and electronic, both in Romanian and in a foreign language and to assess the need and utility incentives extrinsic and intrinsic continuing education.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 50%, seminar skills along the semester50%
ASSESSMENT TYPE: verification

PHYSICAL EDUCATION III

CREDITS: 1
YEAR/SEMESTER: IInd Year / Ist Semester
HOURS PER WEEK: 1 hour practical course
NUMBER OF WEEKS: 14, 14
COURSE TYPE: main subject
COURSE OBJECTIVES: Discipline aims at forming the theoretical, practical and methodical skills for individual or group practice for a healthy lifestyle; Awareness of students about the role and importance of practicing physical exercise.
TOPICS: Fitness - optimization of physical condition; utilitarian-applicative skills; Exercises for the development of general strength; Exercises for speed development; Exercises for the development of coordination capacity; Sports games: handball, table tennis; Bilateral games under similar competition conditions.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Assessment through practical tests 80%, continuous assessment throughout semester 20%
ASSESSMENT TYPE: A/R

POLICIES AND STRATEGIES IN GLOBAL FOOD SECURITY

CREDITS: 3
YEAR / SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: Course – 2 hours / Seminar - 2 hours
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Understanding the processes underlying the development of agri-food sector, whose performance is reflected ultimately in the degree of food security of the population and its participation in the structuring and harmonization of national economic development.
TOPICS: Understanding the processes underlying the development of agri-food sector, whose performance is reflected ultimately in the degree of food security of the population and its participation in the structuring and harmonization of national economic development.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 50%, seminar skills along the semester50%
ASSESSMENT TYPE: Exam (60% written examination, 40% reference (project).

PRINCIPLES AND METHODS OF FOOD PRESERVATION II

CREDITS: 4 exam, 2 project
YEAR/ SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 2 hours of course, 1 hour of practical works, 2 hours of project
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Acquiring theoretical and practical knowledge for keeping fresh food of animal origin (milk, meat, eggs, honey, fish, etc. and their derivatives) and methods of processing and preserving their
TOPICS: Storage and recovery technologies of food products of plant origin (milk, meat, eggs, honey, fish, etc.) - technologies and preservation of food products of animal origin (milk, meat, eggs, honey, fish, etc.)
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, Active participation in courses. 25%
written assessment (during the semester): project 100%,
ASSESSMENT TYPE: exam, project

PACKAGING, LABELING AND DESIGN IN THE FOOD INDUSTRY

CREDITS: 3
YEAR/SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 2 hours of course, 1 hour of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Product design and packaging in the food industry, food industry packaging design, composition and physico-chemical control of packaging to avoid any risk of food spoilage, involvement in the development of new products design, reflection design activity in manufacturing costs.
TOPICS: Designing packaging in the food industry, chemical composition and physical control of packaging to avoid any risk of food spoilage design, involvement in the development of new products, Reflection design activity in manufacturing costs
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers at the final
examinations 60 %, Testing practical skills along the semester
10%, final answers at practical laboratory works 30 %
ASSESSMENT TYPE: verification

MARKETING

CREDITS: 4
YEAR/SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours seminar
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowledge of the concepts of market, product, price, distribution, advertising,
TOPICS: Understand the organization of specific marketing activities, technically and organizationally

specific marketing concepts, Explanation: the market, the consumer, individual variable, segment, economic, etc., Presentation of the report available on the market supply and demand, product, price, distribution, sales, communication, advertising, politics, marketing strategy
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60 %, answers to seminar works 40 %
ASSESSMENT TYPE: Exam

GENERALE TECHNOLOGIES IN THE FOOD INDUSTRY I

CREDITS: 4
YEAR / SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowledge of the main technological sequence, which makes the production and quality crops câmp.Cunoaşterea and explanation of biological, morphological and anatomical characteristics specification, the quality of plant products plante.Aprecierea groups based upon the physical, chemical and methods tehnologice.Utilizarea practical elements for setting the parameters of productivity and quality technical plants studiate.Proiectarea a seed production program for the main crops, in compliance with legislation. Developing a positive attitude towards the scientific community, promoting training teams in establishing various specific programs studied field.
TOPICS: rotation, fertilizer, soil works, establishment of nursery box for the production of seedlings, planting seedlings, installation of the support, the establishment of the culture seed and the sowing, the material preparation for planting, planting, maintenance work, harvest, production in wheat, barley, barley, corn, beans, soybean, sunflower, canola, flax fiber, hemp, sugar beet, potato, tobacco, hops.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Exam answers 60% final answers to practical works 40%.
ASSESSMENT TYPE: exam

ETHICS AND ACADEMIC INTEGRITY

ECTS CREDITS: 2
YEAR/SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 1 hour of course
NUMBER OF WEEKS: 14
TYPE OF COURSE: complementary discipline
COURSE OBJECTIVE(S): presenting and explaining the concepts and defining elements of ethics and academic integrity through a quantitative and qualitative analysis of the phenomena specific to this discipline; initiating students in the field of ethics and academic integrity; quantitative and qualitative analysis of phenomena specific to ethics and academic integrity; integrating knowledge acquired in other disciplines in the training system of this master's degree in the development of individual reports and case studies.
COURSE CONTENTS: The legislative framework and ethical standards applicable to professional ethics specific to the academic environment and good conduct in scientific research; Plagiarism, self-plagiarism and other deviations from the norms of good conduct in scientific research, technological development and

innovation; Ethics in the teaching process in academia. Ethics in research; conflict of interest. Code of Honor of academic integrity. Instruments of judicial governance of students. Incidents of racial and sexual harassment; Corruption – concept, prevention, fight; The hidden cost of favors - conflict of interest; Transparency – a panacea? Ethical careers; whistleblowers vs. ethics counselors; Professional codes of ethics; Errors, mistakes and sanctions; Ethical issues of teaching one's own discipline; Ethical problems between colleagues, Ethical issues related to money; Confidentiality, Relationship with the client; Code of Ethics and Professional Dentistry of the UCV.
LANGUAGE OF INTRUCTION: Romanian
ASSESSMENT METHOD(S): final examination (answers to final examinations 60%, evaluation during the semester 40%).
ASSESSMENTTYPE: verification

BIOCHEMISTRY

CREDITS: 4
YEAR/ SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: fundamental
COURSE OBJECTIVES: The course aims to study the main classes of biochemical compounds and their properties; Identifying and studying biochemical indices and parameters of quality. food products
TOPICS: Introduction. The composition of living matter. Carbohydrates: General. Monoglucidelor derivatives. Metabolic roles. Oligoglucide natural biochemical role. Poliglucide: classification, structure, biochemical role. Lipids: classification, structure, biochemical role. Complex lipids: classification, structure, biochemical role. Natural Amino Acids: classification structure. Aminoacii protein, biochemical role. Holoproteide: structure, classification, own, biochemical role. Peptide.Heteroproteide: classification, structure, properties. Their role in metabolic processes. Vitamins: generalities. Fat-soluble vitamins: water-soluble structure biochimic. Vitamine role: classification, structure, biochemical role. Pesudovitamine. Nucleic acids: structure nitrogenous bases. Nucleoside and nucleotide structure, structure polynucleotide chain. Metabolic roles. Enzymes: structure, classification, general mechanisms of action
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examinations 60%, Active participation in courses. 25% written assessment (during the semester): project 15%,
ASSESSMENT TYPE: verification

FOOD CHEMISTRY

CREDITS: 4
YEAR/ SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: Fundamental discipline
COURSE OBJECTIVES: Knowledge and study of the main classes of biochemical compounds in foods • Identifying and studying biochemical indices and quality of food

TOPICS: Introduction. Understanding the physical and chemical properties of different classes of biochemicals in food Explain and correct interpretation of the theoretical knowledge acquired in the course and for individual study Using modern methods of scientific investigation in biochemistry food Use of methods and specific processes laboratory biochemistry for the qualitative and quantitative determination of biochemical compounds from food. Developing skills and experimental skills right on the approach and problem solving specialist
TEACHING LANGUAGE: Romanian
ASSESSMENT METHOD(S): final examination (answers to final examinations 60%, evaluation during the semester 40%).
ASSESSMENTTYPE: verification

PRACTICE

CREDITS: 3
YEAR/ SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 90 hours of practical works
NUMBER OF WEEKS: 3
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: The purpose of practical training is to develop skills and competences appropriate to the activities of the food science.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: the practice book and the exam answers 100 %
ASSESSMENT TYPE: verification

PHYSICAL EDUCATION IV

CREDITS: 1
YEAR/SEMESTER: IInd Year/ IInd Semester
HOURS PER WEEK: 1 hour practical course
NUMBER OF WEEKS: 14, 14
COURSE TYPE: main subject
COURSE OBJECTIVES: Discipline aims at forming the theoretical, practical and methodical skills for individual or group practice for a healthy lifestyle; Awareness of students about the role and importance of practicing physical exercise.
TOPICS: Fitness - optimization of physical condition; utilitarian-applicative skills; Exercises for the development of general strength; Exercises for speed development; Exercises for the development of coordination capacity; Sports games: handball, table tennis; Bilateral games under similar competition conditions.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Assessment through practical tests 80%, continuous assessment throughout semester 20%
ASSESSMENT TYPE: A/R

3RD YEAR OF STUDY

QUALITY CONTROL OF PRODUCTS OF ANIMAL ORIGIN

CREDITS: 5
YEAR/SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: description, knowledge and practice of specific techniques for the evaluation and control of the quality of food of animal origin, with particular reference to the categories of examinations applicable to verifying the conformity, quality and healthiness of products and food of animal origin, both those that constitute raw materials and those that are processed. The specific objectives are directly correlated with the requirements of current legislation relating to the quality and safety of food of animal origin.
TOPICS: Food quality. Overall food quality. Nutrient/nutritional quality of food. Hygienic quality/safety of food of animal origin. Sensory quality of food. Nutritional/nutritional quality of the main groups of food of animal origin. Physico-chemical and microbiological processes affecting food quality.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final
examinations course 60 % and answers to Laboratory works 40%
ASSESSMENT TYPE: exam

TECHNOLOGY OF FOOD PRODUCTS OF VEGETABLE ORIGIN I

CREDITS: 5
YEAR/SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Learning technologies for processing different types of crops: cereals, oilseeds, industrial crops, vegetables and fruits, etc. promoting the principles and norms of sustainable agricultur
TOPICS: Knowledge of modern methods of production processing plant to ensure safety and food security; knowledge of screening methods processed plant product quality; knowledge of equipment and facilities processing plant production.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final
examinations course 60 % and answers to Laboratory works 15%, Checks 10%, colloquy 15%
ASSESSMENT TYPE: Verification

GENERALE TECHNOLOGIES IN THE FOOD INDUSTRY II

CREDITS: 4
YEAR / SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowledge of the main technological sequence, which makes the production and quality crops câmp.Cunoaşterea and explanation of biological, morphological and anatomical characteristics specification, the quality of plant products plante.Aprecierea groups based upon the physical, chemical and methods tehnologice.Utilizarea practical elements for setting the parameters of productivity and quality technical plants studiate.Proiectarea a seed production program for the main crops, in compliance with legislation. Developing a positive attitude towards the scientific community, promoting training teams in establishing various specific programs studied field.
TOPICS: rotation, fertilizer, soil works, establishment of nursery box for the production of seedlings, planting seedlings, installation of the support, the establishment of the culture seed and the sowing, the material preparation for planting, planting, maintenance work, harvest, production in wheat, barley, barley, corn, beans, soybean, sunflower, canola, flax fiber, hemp, sugar beet, potato, tobacco, hops.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: Exam answers 60% final answers to practical works 40%.
ASSESSMENT TYPE: exam

TECHNOLOGY OF FOOD PRODUCTS OF ANIMAL ORIGIN I

CREDITS: 4
COURSE COORDINATOR:
YEAR/SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Addressing modern processing technologies main products achieved in the area of livestock to customize and optimize production processes in order to adopt effective management approaches for profitable production
TOPICS: Knowledge processing technologies of animal products. • Knowledge of the influence of biotic and abiotic factors have on the quality of marketed production obtained. • Know the importance of practical technologies teoreticeşi processing of animal products to ensure high quality commodity production under food safety and economic efficiency. • How to establish technologies to obtain finished products after processing animal production according to the final product required.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: final examinations answers 40%; test results for course 20 %,
test results for practical works 20%, of the final grade the answers to laboratory tests 20%
ASSESSMENT TYPE: Verification

SENSORY ANALYSIS I

CREDITS: 4
YEAR/SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of laboratory
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: The development of competence for the characterization of the relationship between physico-chemical and sensory properties of food. The development of the sensory analysis of the ability to use as a tool to evaluate the typical food naturalness.
TOPICS: Recognizing the sensory characteristics that define the quality and naturalness of foodstuffs. Recognition of sensory defects affecting food quality. Knowledge of technology elements influence the sensory characteristics of food
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT 60% of the final grade represent the response to the written theoretical questions and 40% of the final grade the answers to laboratory tests.
ASSESSMENT TYPE: exam

CONSUMER BEHAVIOR

CREDITS: 4
YEAR/SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of laboratory
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: familiarizing students with how consumer behavior can be known and with the essential aspects of its use in the field of marketing. providing basic skills regarding the use of knowledge obtained within the discipline in the development of marketing actions.
TOPICS: Consumer needs, motivation and involvement. Personality, personal values, lifestyle and consumer behaviour. Influence of culture on consumer behaviour. Social class and consumer behaviour. Influence of reference groups on consumer behaviour. Family influences. Situational influences.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT 60% of the final grade represent the response to the written theoretical questions and 40% of the final grade the answers to laboratory tests.
ASSESSMENT TYPE: exam

ENZYMATIC AND IMMUNOLOGICAL ANALYSIS METHODS

CREDITS: 4
YEAR/SEMESTER: IIIrd Year / Ist Semester
HOURS PER WEEK: 2 hours of course, 2 hours of laboratory
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety,

standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the food chain based on knowledge related to traceability and food safety.
TOPICS: Introductory notions regarding enzymatic and immunological methods of analysis. Enzymes: definition, categories of enzymes, sources of enzymes, obtaining enzyme preparations. Use of enzymes in analytical determinations. Classification of immunological reactions. Serological methods for identifying pathogenic microorganisms with impact in the food industry.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT 60% of the final grade represent the response to the written theoretical questions and 40% of the final grade the answers to laboratory tests.
ASSESSMENT TYPE: verification

QUALITY CONTROL OF PRODUCTS OF PLANTS ORIGIN

CREDITS: 3
YEAR / SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours of course, 1 hour of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety, standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the food chain based on knowledge related to traceability and food safety.
TOPICS: Quality and components of food quality. Quality of flour and bakery products. Quality of bread. Quality of groats and pasta. Quality of processed fruit and vegetable products. Quality of sugar and sugar products. Quality of vegetable oils. Quality of beer. Quality of wine.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to Laboratory works 40%
ASSESSMENT TYPE: exam

EXPERTISE AND FOOD SAFETY

CREDITS: 3
YEAR / SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours of course, 1 hour of practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: familiarizing students with the concepts, influencing factors and specific approaches, in order to produce safe products. knowledge of safety measures and food security on the food chain, in order to produce safe products.
TOPICS: Defining fundamental concepts: quality management, food safety. Food security/safety – definition, principles. The importance of management systems within the food chain. Process

standardization; Typology of standards. Process approach to the management system; Process map. Product quality prescription documents. Product quality certification documents.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to Laboratory works 40%
ASSESSMENT TYPE: exam

GASTRONOMY AND CATERING

CREDITS: 3
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours course, 1 hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: description of technological operations on the food manufacturing flow, principles and operating instructions of food industry machinery. use of technological calculations to establish specific consumption and manufacturing efficiency. application of artificial intelligence to increase production efficiency of food industry machinery. carrying out and/or planning engineering activities to obtain the desired products in an optimized way in terms of costs, resources and time.
TOPIC: Technological arrangement of the kitchen of public catering units and catering activity. Technology of culinary semi-prepared foods. Technology of appetizers and salads. Technology of liquid preparations. Technology of side dishes and steaks. Technology of breakfast preparations.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

TECHNOLOGY OF FOOD PRODUCTS OF VEGETABLE ORIGIN II

CREDITS: 3
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Learning technologies for processing different types of crops: cereals, oilseeds, industrial crops, vegetables and fruits, etc. promoting the principles and norms of sustainable agricultur
TOPICS: Knowledge of modern methods of production processing plant to ensure safety and food security; knowledge of screening methods processed plant product quality; knowledge of equipment and facilities processing plant production.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam course 60% and project (reference) 40 %
ASSESSMENT TYPE: Exam

TECHNOLOGY OF FOOD PRODUCTS OF ANIMAL ORIGIN II

CREDITS: 3
YEAR/SEMESTER: IIIrd Year / IInd Semester

HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Addressing modern processing technologies main products achieved in the area of livestock to customize and optimize production processes in order to adopt effective management approaches for profitable production
TOPICS: Knowledge processing technologies of animal products. • Knowledge of the influence of biotic and abiotic factors have on the quality of marketed production obtained. • Know the importance of practical technologies teoreticeşi processing of animal products to ensure high quality commodity production under food safety and economic efficiency. • How to establish technologies to obtain finished products after processing animal production according to the final product required.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 60%; project (reference) 40%
ASSESSMENT TYPE: Exam

SENSORY ANALYSIS II

CREDITS: 3
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours of course, 2 hours of laboratory
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: The development of competence for the characterization of the relationship between physico-chemical and sensory properties of food. The development of the sensory analysis of the ability to use as a tool to evaluate the typical food naturalness.
TOPICS: Recognizing the sensory characteristics that define the quality and naturalness of foodstuffs. Recognition of sensory defects affecting food quality. Knowledge of technology elements influence the sensory characteristics of food
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT 60% of the final grade represent the response to the written theoretical questions and 40% of the final grade the answers to laboratory tests.
ASSESSMENT TYPE: exam

ELECTROPHORETIC AND CHROMATOGRAPHIC METHODS ANALYSIS OF FOODS

CREDITS: 3
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours of course, 1 hour of practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowledge and understanding of the concepts of chromatography and electrophoresis
TOPICS: Learning methods in the paper chromatographic analysis, thin-layer, gas chromatography, liquid chromatography and electrophoresis

TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examinations 60%, final answers for workshops 40%
ASSESSMENT TYPE: verification

TECHNOLOGICAL PROJECT

CREDITS: 2
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours practical works
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: leguminous plants, meat products, fruit juices and vegetables, fish products, milk and fats.
TOPICS: The nutritional value of cereals, dried leguminous vegetables nutritional value, nutritional value of vegetables and fruits, fruit juices and vegetables. Soft drinks, nutritional value of fish and fish products, nutritional value of milk and milk products, nutritional value: Fats food, sugar and eggs, Influence of technological processing on the nutritional value
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: 50% of the final grade represent the response to the written theoretical questions and 50% of the final grade the answers to practical laboratory questions.
ASSESSMENT TYPE: Exam

PRACTICE

CREDITS: 3
YEAR / SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 90 hours
NUMBER OF WEEKS: 3
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: The practical training aims to apply the theoretical knowledge acquired in specialized courses in the food Science;
TEACHINGLANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: examination practice - 90% and the drawing - completing the specification of the practice - 10%.
ASESSMENT TYPE: practical examination.

MINIMUM THERMAL AND ATHERMAL PROCESSING OF FOOD PRODUCTS

CREDITS: 4
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: description of technological operations in the food manufacturing flow,

principles and operating instructions for food industry machinery, definition of processes and procedures regarding quality, food safety, standards and hygiene of food products.
TOPIC: principles of food preservation, food preservation through minimal athermal processing, food preservation through thermal processing.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

SPECIALS BIOTECHNOLOGY

CREDITS: 3
YEAR/SEMESTER: IIIrd Year / IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: To acquire knowledge about food quality appearance of plants and animals obtained by biotechnological processes; Understand and acquire knowledge from existing food biotechnology industry at this time.
TOPICS: To understand the role that it has enzymes and microorganisms in biotechnological processes processing of raw materials in the food industry and in the finished product; To know microorganisms of interest in obtaining food biotechnology; Know and understand the steps biotechnological processes for obtaining food.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examinations
60%, periodical assessment through practical tests 40%.
ASSESSMENT TYPE: verification

4TH YEAR OF STUDY

FOOD RHEOLOGY

CREDITS: 4
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Knowing main textural properties of the food and the types of tests to be performed to characterize them
TOPICS: Food rheology specific technical terms; Techniques for measuring the rheological and textural properties of foods, liquid and solid; General principles of operation of the machines used in rheological and textural measurements.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam answers 60%, final answers of test for practical laboratory

work 40%.
ASSESSMENT TYPE: exam

QUALITY CONTROL AND ASSURANCE IN THE FOOD INDUSTRY

CREDITS: 4
YEAR / SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 2 hours course, 2 hours practical work
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: defining processes and procedures regarding quality, food safety, standards and hygiene of food products; assessing the conformity of products, processes and technological projects to guarantee food safety; assessing the food chain based on knowledge related to traceability and food safety; developing standard operating procedures along the food chain based on feedback from production;
TOPICS: The modern concept of quality. The concept of quality management. Components of food quality. Basic problems of modern food quality. Peculiarities and functions of food products. The relationship between food quality and consumer protection. Calimetry. Evaluation of food quality. Organization of activities related to food quality control.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESMENT: answers to exam - 60%, final answears to practical laboratory work - 40%.
ASSESMENT TYPE: EXAM

ZOONOSES

CREDITS: 4
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Study of the main zoonoses transmissible through etiological agents of bacterial, viral, prion and parasitic nature. Knowledge of the physiology, morphology, resistance of microorganisms to environmental conditions.
TOPIC: general notions regarding zoonoses, zoonoses common to humans and animals transmitted through food, food poisoning
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

AGR-FOOD PRODUCTS ANALYSIS

CREDITS: 5
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course

NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety, standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the food chain based on knowledge related to traceability and food safety.
TOPIC: Nutritional value and functions of food products. Legislative regulations in the food industry in order to meet consumer demand for safe food. Physico-chemical methods for the analysis of agri-food products. Enzymatic and immunological methods for the analysis of agri-food products. Chromatographic methods for the analysis of agri-food products. Principles of analysis of plant agri-food products from the point of view of the presence of toxins and food additives. Principles of analysis of animal agri-food products from the point of view of the presence of antibiotics. Detection of falsification of agri-food products. Presentation of physico-chemical methods used to detect falsification.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam: to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: exam

PHYTOSANITARY CONTROL

CREDITS: 5
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: defining processes and procedures regarding quality, food safety, standards and hygiene of food products; assessing the conformity of products, processes and technological projects to guarantee food safety; assessing the food chain based on knowledge related to traceability and food safety; developing standard operating procedures along the food chain based on feedback from production;
TOPICS: Phytosanitary control - generalities. Forecast and Warning in Phytosanitary Control. Diagnosis in Phytosanitary Control. Types of symptoms caused by the attack of pathogens and pests in agricultural crops and in warehouses. Epidemiology of plant diseases. Establishment and lifting of Phytosanitary Quarantine. Conducting a phytosanitary inspection. Phytosanitary passport. Phytosanitary certificate. Measures established following phytosanitary control. Phytosanitary monitoring and the Integrated Plant Protection System. Security in Phytosanitary Control.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam: to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: exam

COUNTERFEIT AN PREVENTION CONTROL
IN FOOD INDUSTRY I

CREDITS: 4 exan
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 2 hours course, 1hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: description of technological operations on the food manufacturing flow, principles and operating instructions of food industry machinery. use of technological calculations to establish specific consumption and manufacturing efficiency. application of artificial intelligence to increase production efficiency of food industry machinery. carrying out and/or planning engineering activities to obtain the desired products in an optimized way in terms of costs, resources and time.
TOPICS: general aspects of food adulteration and authenticity. authentication and adulteration of milk and milk products. authentication and adulteration of meat and meat products. authentication and adulteration of fish and fish products. authentication of eggs and egg derivatives. authentication of honey. techniques for carrying out official controls.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam: to final examination 60 %, final answers for workshops 40%
ASSESSMENT TYPE: exam

COUNTERFEIT AN PREVENTION CONTROL
IN FOOD INDUSTRY I - PROJECT

CREDITS: 2 project
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 1 hour project
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: description of technological operations on the food manufacturing flow, principles and operating instructions of food industry machinery. use of technological calculations to establish specific consumption and manufacturing efficiency. application of artificial intelligence to increase production efficiency of food industry machinery. carrying out and/or planning engineering activities to obtain the desired products in an optimized way in terms of costs, resources and time.
TOPICS: Presentation of the project framework and preparation methodology. Presentation of the themes and selection of project themes. Recommendations regarding bibliographical references. Guidance on project preparation. Simulation of project presentation.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: exam: to final examination to project 100%
ASSESSMENT TYPE: project

SPECTROSCOPIC METHODS FOR FOOD ANALYSIS

CREDITS: 2
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 1 hour course, 1 hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety, standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the food chain based on knowledge related to traceability and food safety.
TOPIC: Introduction to spectroscopy. UV-Vis spectroscopy, Near-IR spectroscopy, Fluorescence spectroscopy, RES technique, NMR technique, Raman technique - applications in food analysis.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

DATA MANAGEMENT SYSTEMS

CREDITS: 2
YEAR/SEMESTER: IVth Year/ I th Semester
HOURS PER WEEK: 1 hour course, 1hour practical course
NUMBER OF WEEKS: 14
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: evaluates the organoleptic, physicochemical and microbiological properties of raw materials and food products, performs specific calculations according to analysis methods, evaluates the quality of food products based on knowledge of sensory analysis, determines the nutritional values (nutritional and energy) of food products.
TOPIC: database systems, relational data module, SQL language, data manipulation, data querying.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

STATISTICAL CONTROL OF FOOD

CREDITS: 3
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours of course, 2 hours of practical works
NUMBER OF WEEKS: 10
COURSE TYPE: Specializon discipline
COURSE OBJECTIVES: Discipline study aims overview of statistical concepts and their use in food quality control winemaking; Knowledge of the main statistical methods used in quality control of

foodstuffs.
TOPICS: Description and use of concepts, theories and basic methods used in the design, implementation and monitoring of quality management systems and food safety. Explanation and interpretation of concepts, methods and models based on the design and use of quality management systems and safety alimentare. Efficient use various ways and techniques of learning - training for acquiring information from bibliographic databases and electronic, both in Romanian and in a foreign language and to assess the need and utility incentives extrinsic and intrinsic continuing education
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to Laboratory works and 40%
ASSESSMENT TYPE: exam

HYGIENE OF COMPANIES IN THE FOOD INDUSTRY

CREDITS: 4
YEAR / SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours of course, 2 hours of seminar
NUMBER OF WEEKS: 10
COURSE TYPE: Specializon discipline
COURSE OBJECTIVES: Knowledge and understanding. The importance of knowing and understanding hygiene staff in food, controls being put staff in the food industry, the requirements for the location, construction and landscaping industry, food, hygiene industry, food, protection rules vicinal medium enterprises food industry.
TOPICS: Training future engineers in the food industry on scientific basis of specific hygiene rules food companies and deepening knowledge and modern techniques and methods of cleaning personnel, equipment, plant and machinery used in the food industry.
KNOWLEDGE of the application of EU legislation on hygiene food business, food industry personnel and regulations relating to environmental protection in the food industry (new hygiene package, GHP)
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to Laboratory works and 40%
ASSESSMENT TYPE: exam

FOOD PRODUCTS COMMERCEOLOGY

CREDITS: 3
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours seminar
NUMBER OF WEEKS: 10
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety, standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the food chain based on knowledge related to traceability and food safety.
TOPIC: The object and functions of food commodity science. Coding of food commodities. Reception of

food commodity batches. Ensuring and attesting the quality of food commodities. The notion of sample and batch of goods. Defects of food commodities. Preservation and guaranteeing the quality of food commodities. Concepts of certification and assessment of conformity of consumer goods. Normative and legislative basis in the field of food commodity expertise. Principles and sources of litigation.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

COUNTERFEIT AN PREVENTION CONTROL
IN FOOD INDUSTRY II

CREDITS: 4 exan
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 10
COURSE TYPE: Specialization discipline
COURSE OBJECTIVES: description of technological operations on the food manufacturing flow, principles and operating instructions of food industry machinery. use of technological calculations to establish specific consumption and manufacturing efficiency. application of artificial intelligence to increase production efficiency of food industry machinery. carrying out and/or planning engineering activities to obtain the desired products in an optimized way in terms of costs, resources and time.
TOPICS: authentication and adulteration of cereals and cereal products. authentication and adulteration of vegetable oils. authentication and adulteration of vegetables and vegetable products. authentication and adulteration of fruit and fruit products. authentication of grapes and grape products. authentication of sugar and sugar products. authentication of tobacco and tobacco products. techniques for performing official controls.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

VETERINARY AND FOOD SAFETY CONTROL

CREDITS: 5
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: Course – 2 hours/Seminar – 2 hours
NUMBER OF WEEKS: 10
COURSE TYPE: specialization discipline
COURSE OBIECTIVES:
Acquiring theoretical and practical knowledge regarding food safety, animal health, animal food sanitation, veterinary medicinal products, nutrition and residues in animal products
TOPICS: Food safety; Animal Health (diseases, identification and registration of animals, animal welfare and protection, veterinary medicinal products, animal nutrition, waste neutralization products of animal origin intended for human consumption); hygiene and veterinary public health.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to Laboratory works and 40%

ASSESSMENT TYPE: exam

QUALITY MANAGEMENT

CREDITS: 5
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours course, 2 hours practical course
NUMBER OF WEEKS: 10
COURSE TYPE: specialization discipline
COURSE OBIECTIVES: Applying the principles and requirements of the management system solving technological problems and Engineering. Providing and implementation techniques, methods and tools of quality management.
TOPICS: Designing, implementing and monitoring quality management systems and food safety; design, implementation and monitoring of quality management systems and food safety.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to exam 60%, final answers to Laboratory works and 40%
ASSESSMENT TYPE: exam

PRACTICE FOR THE PREPARATION OF DIPLOMA PROJECT

CREDITS: 3
YEAR / SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 15 hours/Week = 60 hours
NUMBER OF WEEKS: 4
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Performance of scientific multidisciplinary / interdisciplinary research projects using innovative methods with significant impact on the development of food and food sector; Ability of drawing conclusions and suggesting solutions / recommendations for academic research and practice in food and expertise food sectors, based on the research studies performed.
TOPICS: Finalisation of thesis plan and references; Specialty literature reviews based on academic specialty resources recommended by the research supervisor or other sources considered as being relevant by the student; Finalisation and implementation of the research methodology intended for the achievement of objectives; Preparation and drafting of the Licence's thesis; Presentation of results and conclusions of the research studies.
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: thesis presentation and defense - 100%
ASSESSMENT TYPE: A/R

ELABORATION OF DIPLOMA PROJECT

ECTS CREDITS: 4
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 6 hours of project
NUMBER OF WEEKS: 10
TYPE OF COURSE: specialization discipline

COURSE OBJECTIVE(S): Performance of scientific multidisciplinary / interdisciplinary research projects using innovative methods with significant impact on the development of agriculture sector; Ability of drawing conclusions and suggesting solutions / recommendations for academic research and practice in agriculture sectors, based on the research studies performed.
COURSE CONTENTS:
Finalisation of Diploma, Project plan and references; Specialty literature reviews based on academic specialty resources recommended by the research supervisor or other sources considered as being relevant by the student; Finalisation and implementation of the research methodology intended for the achievement of objectives; Preparation and drafting of the Diploma Project; Presentation of results and conclusions of the research studies.
LANGUAGE OF INTRUCTION: Romanian
ASSESSMENT METHOD(S): admitted / rejected, thesis presentation and defense - 100%

INSTRUMENTAL ANALYSIS METHODS AND TECHNIQUES

CREDITS: 3
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours course, 1 hour practical course
NUMBER OF WEEKS: 10
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety, standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the food chain based on knowledge related to traceability and food safety.
TOPIC: Introduction to electroanalytical methods. Potentiometric methods of analysis, Voltammetric and polarographic methods of analysis - Use in the Food Industry. Accreditation of Physico-Chemical and Microbiological Testing Laboratories used in the Food Industry
TEACHING LANGUAGE: Romanian
KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,
ASSESSMENT TYPE: verification

SPECIAL MICROBIOLOGY

CREDITS: 3
YEAR/SEMESTER: IVth Year/IInd Semester
HOURS PER WEEK: 2 hours course, 1hour practical course
NUMBER OF WEEKS: 10
COURSE TYPE: specialization discipline
COURSE OBJECTIVES: Defining the basic principles of food science and the nutritional and functional characteristics of the food product. Defining processes and procedures regarding quality, food safety, standards and hygiene of food products. Identifying legislation in the field of the food industry. Assessing the organoleptic, physicochemical and microbiological properties of raw materials and food products. Applying the principles and methods of control, execution and production in integrated food systems. Assessing the

food chain based on knowledge related to traceability and food safety.

TOPIC: The main groups of bacteria involved in the food industry. The main genera of yeasts involved in the food industry. The main genera of molds involved in the food industry. Food modifications produced by microorganisms.

TEACHING LANGUAGE: Romanian

KNOWLEDGE ASSESSMENT: answers to final examination 60 %, final answers for workshops 40%,

ASSESSMENT TYPE: verification