Annex 6

SUBJECT OUTLINE

1. Information on the study programme

1.1 Academic institution	**UNIVERSITY OF ORADEA**
1.2 Faculty	**FACULTY OF ENVIRONMENTAL PROTECTION**
1.3 Department	**ANIMAL SCIENCE AND AGRITOURISM**
1.4 Field of study	**ENGINEERING AND MANAGEMENT IN AGRICULTURE AND RURAL DEVELOPMENT**
1.5 Cycle of study	**BACHELOR**
1.6 Study programme/Qualification	**ENGINEERING AND MANAGEMENT IN PUBLIC NUTRITION AND AGRITOURISM / ENGINEER**

2. Information on the discipline

2.1 Name of discipline			**Equipment and Installations for Hospitality Industry and Agritourism I**				
2.2 Course holder			**PhD. Eng. DONCA Gheorghe**				
2.3 Seminar/Laboratory/Project holder			**PhD. Eng. GAVRA Codrin**				
2.4 Year of study	IV	2.5 Semester	VII	2.6 Type of evaluation	E	2.7 Regime of discipline	C

(C) Compulsory; (O) Optional; (E) Elective

3. Total estimate time (hours per semester of didactic activities)

3.1 Number of hours per week	4	out of which: 3.2 course	2	out of which 3.3 seminar/laboratory/project	2
3.4 Total hours in the curriculum	56	out of which: 3.5 course	28	out of which 3.6 seminar/laboratory/project	28

Time allotment	hours
Study assisted by manual, course support, bibliography and notes	24
Additional documentation in the library/ on specialised electronic platforms and in the field	18
Preparation of seminars/laboratories/ topics/reports, portfolios and essays	23
Tutorship	2
Examinations	2
Other activities	

3.7 Total hours of individual study	**69**
3.9 Total hours per semester	**125**
3.10 Number of credits	**5**

4. Prerequisites (where appropriate)

4.1 curriculum	
4.2 competences	

5. Conditions (where appropriate)

5.1. related to course	
5.2. related to seminar/laboratory/ project	Compliance with Labor Safety and Emergency Standards in laboratory.

6. Specific competences acquired	
Professional competences	C1.1. Identifying and describing the concepts, principles, theorems and basic methods in mathematics, chemistry, economics, statistics, accounting and informatics. C1.2. Using basic knowledge specific to the fundamental disciplines for explaining and interpreting theoretical results and phenomena or aspects specific to the field of engineering and management in public catering and agritourism. C1.3. Application of fundamental theorems, principles and methods in order to solve, in conditions of qualified assistance, the problems specific to the field of engineering and management in public alimentation and agritourism. C1.5. Developing models and professional projects specific to the field of license by selecting and using established principles, methods and solutions from the fundamental disciplines. C2.1 Appropriate identification, selection and combination of technical, economic and managerial documentation, basic theories, methods and knowledge of engineering and management in public catering and agritourism.
Transversal competences	CT1. Applying the principles, norms and values of professional ethics responsibly in carrying out the professional tasks and identifying the objectives to achieved, the available resources, the stages of work, the execution times, the implementation deadlines and the related risks.

7. Objectives of discipline (coming from the specific competences acquired)

7.1 General objective	The course aims at familiarizing students with the equipment and installations. The first part summarizes the basics of technical engineering (mechanical and electrical engineering). Students have the opportunity to familiarize themselves with the main types of machines, installations and machines, the practical skills of construction, sizing, operation and possibilities of their execution, maintenance, exploitation and repair.
7.2 Specific objectives	Laboratory work is designed to provide future engineers the practical skills in design, construction, research, operation, repair and maintenance of technical equipment. The contents of the presented works are based on the need to deepen the problems presented in the course. Students have the opportunity to identify component parts and to understand the operation of machines and machines, to familiarize themselves with the modern means of measuring their parameters. They will understand their complexity and usefulness and treat them as such. Knowledge is useful in forming skills to address specific production problems faced by one skilled in the art.

8. Content*/

8.1 Course	Methods of teaching	No. of hours / Remarks
1. Introduction. 1.1. General considerations and requirements to meet by	Oral	2

technological equipment used in public catering and agritourism. Recapitulative of technical drawing. 1.2. Technological processes in public catering and agritourism	presentation, demonstration and discussions	
1.3. Materials used in the construction and operation of technological equipment. 1.4. Machine parts used in the construction of technological equipment	idem	2
2. Sources of energy used in public catering and tourism establishments. 2.1. Classical energy sources (thermal and mechanical energy) used in public catering and tourism establishments	idem	2
2.2. Renewable energy sources (wind, solar, geothermal, hydraulic) used in public catering and tourism	idem	2
2.3. Use of electricity in the operation of technological equipment in public catering and tourism (production, transport and distribution of electricity, electrical appliances and machines)	idem	2
2.4. Hydraulic drive systems	idem	2
2.5. Automation used in public catering and agritourism	idem	2
3. Technological equipment used to ensure microclimate in the public catering and tourism establishments. 3.1. Heating installations	idem	2
3.2. Ventilation installations	idem	2
3.3. Refrigeration installations	idem	2
4. Equipment and facilities for water supply in public catering and tourism. 4.1. Pumps used for water supply. 4.2. Tanks, accessories, power supply systems. 4.3. Water purification equipment and installations	idem	2
5. Machinery for transporting and handling products used in catering and tourism establishments. 5.1. Trailed and self-propelled transport equipment	idem	2
5.2. Machines and installations for loading - unloading operations	idem	2
5.3. Conveyors with flexible traction equipment. 5.4. Conveyors without flexible traction equipment	idem	2

Bibliography

1. Bălan M. – Energii regenerabile, Editura U.T. Pres, Cluj-Napoca, 2007
2. Blaga V. – Motoare pentru automobile şi tractoare, Editura Universităţii din Oradea, 2007
3. Ciocîrlan A., Constantin M. – Asamblarea, întreținerea și repararea maşinilor şi instalațiilor, Editura ALL Educational, Bucureşti, 2002
4. Donca Gh. – Maşini şi instalaţii zootehnice, Editura Universităţii din Oradea, 2015
5. Donca Gh. – Mentenanţa utilajelor şi instalaţiilor agroalimentare, Editura Universităţii din Oradea, 2011
6. Donca Gh., Maşini și instalații zootehnice. Îndrumător lucrări practice de laborator, Editura Universității din Oradea, 2017
7. Donca Gh. – Mic dicţionar de inginerie tehnică pentru domeniul agrozootehnic şi agroturistic, Editura Universităţii din Oradea, 2012
8. Donca Gh. – Baza energetică pentru agricultură, Editura Universităţii din Oradea, 2012
9. Donca Gh. – Utilaje şi instalaţii pentru alimentaţia publică şi turism, Îndrumător de laborator, Editura Universităţii din Oradea, 2008
10. Donca Gh. – Bazele utilajelor şi instalaţiilor pentru alimentaţia publică şi turism, Editura Universităţii din Oradea, 2009
11. Donca Gh. – Utilaje şi instalaţii pentru alimentaţia publică şi agroturism, Editura Universităţii din Oradea, 2010
12. Dumitru M. – Tractoare agricole, Editura Alma Mater, Sibiu, 2006
13. Naghiu Alexandru – Baza energetică pentru agricultură şi silvicultură, Editura Risoprint, Cluj-Napoca, 2008

8.2 Seminar	Methods of teaching	No. of hours / Remarks
8.3 Laboratory	Methods of teaching	No. of hours / Remarks
Training Work Safety. Basics of machine, machine and plant study. 1. Materials used in the construction and operation of machinery and installations	Demonstration, experimentation, discussions, problem-solving and teamwork	2
2. Apparatus used for measuring the parameters of equipment and installations	idem	2
3. Machine organs and mechanisms. Study of chain transmissions, belt and gear wheels	idem	2
4. Dimensioning of lighting installations	idem	2
5. Basic elements of electrical drives	idem	2
6. Study of electrical machines. Short-circuit three-phase asynchronous motor	idem	2
7. Study of temperature transducers	idem	2
8. Component of hydrostatic drive systems	idem	2
9. Constructive-functional analysis of pressure regulating equipment	idem	2
10. Organism of internal combustion piston engines, gas turbines and compressors	idem	2
11. Thermal balances of a four-stroke diesel engine	idem	2
12. Determination of the speed characteristics of the internal combustion piston engines	idem	2
13. Determining the characteristics of a compressor refrigeration plant	idem	2
14. Determination of spiromatic conveyor parameters	idem	2
8.4 Project		

Bibliography

1. Bălan M. – *Energii regenerabile,* Editura U.T. Pres, Cluj-Napoca, 2007
2. Blaga V. – *Motoare pentru automobile şi tractoare*, Editura Universităţii din Oradea, 2007
3. Ciocîrlan A., Constantin M. – *Asamblarea, întreţinerea şi repararea maşinilor şi instalaţiilor*, Editura ALL Educational, Bucureşti, 2002
4. Donca Gh. – *Mentenanţa utilajelor şi instalaţiilor agroalimentare*, Editura Universităţii din Oradea, 2011
5. 6. Donca Gh., Mașini și instalații zootehnice. Îndrumător lucrări practice de laborator, Editura Universității din Oradea, 2017
6. Donca Gh. – *Mic dicţionar de inginerie tehnică pentru domeniul agrozootehnic şi agroturistic*, Editura Universităţii din Oradea, 2012
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9. Donca Gh. – *Utilaje şi instalaţii pentru alimentaţia publică şi agroturism*, Editura Universităţii din Oradea, 2010
10. Farcaş N. – *Utilaje tehnologice,* Editura Cartea Universitară, Bucureşti, 2006
11. Rancov N. – *Utilizarea energiei electrice : Îndrumător de laborator*, Editura Universităţii din Oradea, 2009

* The content, respectively the number of hours allocated to each course / seminar / laboratory / project will be detailed during the 14 weeks of each semester of the academic year.

9. Corroboration of discipline content with the expectations of the epistemic community, professional associations and representative employers from the field corresponding to the study programme

The content of the discipline is adapted and satisfies the requirements imposed by the labour market, is agreed by social partners, professional associations and employers in the field of the bachelor's program. The content of the discipline is in the curriculum of the specialization of engineering and management in public nutrition and agro-tourism and in other university centres in Romania that have accredited this specialization, so knowing the basic notions is a stringent requirement of the employers in the field.

10. Evaluation

Type of activity	10.1 Evaluation criteria	10.2 Evaluation methods	10.3 Share in the final grade
10.4 Course	For the pass mark (5), all subjects must treated to the minimum standards. Larger notes are in proportion to the correctness of the fixes.	Exam written 2 hours (It consists of 4 subjects in the subject of the course. For the passing of the exam, each subject should be treated for minimum 5.).	60%
10.5 Seminar			
10.6 Laboratory	All laboratory work must done. Recovering only an outstanding laboratory (in the last week of the semester) allowed.	Monitoring the activity and the results obtained.	40%
10.7 Project			
10.8 Minimum standard of performance			
Carry out work on study subjects, under conditions of qualified assistance, to solve specific problems in the field and to comply with the requirements regarding the content, norms and standards in force.			

Date of completion	Signature of course holder	Signature of seminar laboratory/project holder
28.09.2020	l. PhD. eng. DONCA Gheorghe donca.gheorghe@gmail.com	l. PhD. eng. GAVRA Codrin gavracodrin@yahoo.com

Date of approval in the department

Signature of the Head of Department
Ass. Prof. PhD. eng. MAERESCU Cristina

Dean signature
Prof. PhD. eng. CHEREJI Ioan

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