UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
Facultatea de Agricultură
Calea Mănăştur 3-5, 400372, Cluj-Napoca, România
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SUBJECT OUTLINE

1. General data

1.1. Higher Education Institution	University of Agricultural Sciences and Veterinary Medicine Cluj-Napoca
1.2. Faculty	Agriculture
1.3. Departament	Plant culture
1.4.Domain of study	Environmental engineering
1.5.level of study[1]	Master
1.6.Specialization/ Program of study	Protection of Natural and Anthropic Systems
1.7. Form of teaching	IF

2. Characteristics of the course

2.1. Name of the course	Biosystems in environmental engineering							
2.2. Course leader				Lect. dr. Vlad Stoian				
2.3. Coordinator of the laboratory/seminars activity				Lect. dr. Vlad Stoian				
2.4. Year of study	II	2.5. Semester	I	2.6. Type of Evaluation	Sumative	2.7. Course regime	Content[2]	DF
							Level of complulsory[3]	DI

3. Total estimated time (hours/semester for the teaching activities)

3.1. Number of hours/week– frequency form	3	of which: 3.2. course	2	3.3. seminar/ laboratory/ project	1
3.4.Total hours in the teaching curricula	42	Of which: 3.5.course	28	3.6.seminar/laboratory	14
Distribution of the time allotted					ore
3.4.1. Study based on books, textbooks, bibliography and notes					25
3.4.2. Additional documentation in the library, electronic platforms and field experiences					25
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					22
3.4.4. Tutorials					16
3.4.5. Examinations					10
3.4.6. Other activities					
3.7. Total hours of individual study	98				
3.8. Total hours per semester	140				
3.9. Number of credits[4]	5				

4. Prerequisites (if applicable)

4.1. curriculum-related	Ecology, Elements of biology and microbiology, Biodiversity management, Soil resource management, Water resource management,
4.2. skills-related	The student must possess knowledge regarding the existing biosystems in the environment, the transformation of matter, the flows of information and substance, the management of ecosystems and resources.

5. Conditions (if applicable)

5.1. for the course	The course is interactive, students can ask questions regarding the content of the exposure. Academic discipline require compliance Time start and end of the course. Will not be tolerated any other activities during the lecture and mobile phones must be closed.

Compulsoru bibliography: 1. *VIDICAN ROXANA, (2007) – Microbiologie.*
Facultative bibliography:

9. Corroboration of the subject content with teh expectations of the epistemic communities` representatives,of the proffesional associations and representatives employers in the domain

In order to identify ways of modernization and continuous improvement of teaching and course content with the current issues and practical problems the teachers participate in symposiums organized by University of Agricultural Sciences and Veterinary Medicine in the country, Symposiums in areas of interest organized by universities in the country and abroad, the annual meeting of Societies working in areas of interest where they meet with farmers being discussed current and future aspects of the dynamics of Microbial Ecology in Romania and Europe

10. Evaluation

Type of activity	10.1. Evaluation criteria	10.2. Evaluation methods	10.3. Percent of the final grade
10.4. Course	Knowledge of the fundamental concepts of biosystems. Acquisition of knowledge regarding monitoring and modeling methodologies. Knowledge of methods of control and monitoring of vegetation house systems. Acquiring knowledge on how to collect data.	Sumative Theoretical exam + Activity at course and interest shown	70%
10.5. Seminar/Laborator	Acquiring knowledge about parameter estimation. Deepening the methods and techniques for identifying patterns and creating models. Knowledge of the functioning of biological processes and the production of renewable materials.	Practical activity and verification results	30%
10.6. Minimal standard of performance			
Knowing of scientific information transmitted through lectures and practical work at an acceptable level. Obtaining the pass mark in continuous assessment is a condition of graduation.			

[1] level of study – to be chosen one of the following – Bachelor /Post graduate/Doctoral
[2] Course regime (content)- for bachelor level it will be chosen one of the following - **DF** (fundamental subject), **DD**
(subject in teh domain), **DS** (specific subject), **DC** (complementary subject).
[3] Course regime (compulsory level)- to be chosen one of the following – **DI** (compulsory subject) **DO** (Optional subject) **DFac** (Facultative subject).
[4] One ECTS is equivalent with 25-30 de hours of study (didactical and individual study).

Filled in on 04.09.2019

Course coordinator
Lect. dr. Vlad Stoian

Laboratory work/seminar coordinator
Lect. dr. Vlad Stoian

Approved by the department on 05.092019

Head of the Department
Prof. dr. Marcel Duda