UNIVERSITATEA DE ŞTIINŢE AGRICOLE ŞI MEDICINĂ VETERINARĂ CLUJ-NAPOCA
Calea Mănăştur 3-5, 400372, Cluj-Napoca
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No._____of _____ **USAMV form CN-0701010215**

SUBJECT OUTLINE

1. Information on the programme

1.1. Higher education institution	University of Agricultural Sciences and Veterinary Medicine of Cluj-Napoca
1.2. Faculty	Food Science and Technologie
1.3. Department	Food science
1.4. Field of study	Food engineering
1.5.Education level	Bachelor
1.6.Specialization/ Study programme	Technology of agricultural products processing
1.7. Form of education	Full time

2. Information on the discipline

2.1. Name of the discipline	Computer programming and programming languages							
2.2. Course coordinator				Lecturer Ancuţa Rotaru				
2.3. Seminar/ laboratory/ project coordinator				Lecturer Ancuţa Rotaru				
2.4. Year of study	I	2.5. Semester	**I**	2.6. Type of evaluation	Summative	2.7. Discipline status	Content[2]	DF
							Compulsoriness [3]	DO

3. Total estimated time (teaching hours per semester)

3.1. Hours per week – full time programme	4	out of which: 3.2. lecture	2	3.3. seminar/ laboratory/ project	2
3.4.Total number of hours in the curriculum	56	Out of which: 3.5. lecture	28	3.6. seminar/laboratory	28
Distribution of the time allotted					hours
3.4.1. Study based on book, textbook, bibliography and notes					13
3.4.2. Additional documentation in the library, specialized electronic platforms and field					5
3.4.3. Preparing seminars/ laboratories/ projects, subjects, reports, portfolios and essays					13
3.4.4.Tutorials					5
3.4.5.Examinations					8
3.4.6. Other activities					
3.7. Total hours of individual study	44				
3.8. Total hours per semester	100				
3.9. Number of credits[4]	4				

4. Prerequisites (is applicable)

4.1. curriculum-related	
4.2. skills-related	The student must have knowledge of the basic use of the computer

5. Conditions (if applicable)

5.1. for the lecture	The course is interactive, students can ask questions regarding the content of lecture. Academic discipline requires compliance with the start and end of the course. We do not allow any other activities during the lecture, mobile phones will be turned off.

5.2. for the seminar/ laboratory/ project	At the practical works it is obligatory to go through the didactic material that contains each topic separately. This teaching material is made available to the student at the beginning of each session During practical works, each student will develop an individual activity with laboratory materials (made available in the book that describes the laboratory work). Academic discipline is imposed throughout the course of practical works.

6. Specific competences acquired

Professional competences	C1. Identify, describe and use appropriately the specific notions of food science and food safety
Transversal competences	CT3: Efficient use of various ways and techniques of learning - training for the acquisition of bibliographic and electronic database information both in Romanian and in a language of international circulation, as well as assessing the need and usefulness of extrinsic and intrinsic motivations of education continue.

7. Course objectives (based on the list of competences acquired)

7.1. Overall course objective	To master the main concepts of databases and SQL programming language. Assimilate knowledge about relational models and design the correct system for data storage.
7.2. Specific objectives	Acquire a complete picture of the syntax of the SQl language, as well as notions of advanced server functionality. To assimilate the necessary skills regarding the practical conversion of conceptual design into logic. Understand new terms such as MySQL Workbench, primary and secondary keys, cursors and triggers, etc.

8. Content

8.1.LECTURE	Teaching methods	Notes
Number of hours – 14		1 lecture = 2 hours
Relational databases - Access Introductory notions: data types, tables, primary key, relationships between tables, queries, forms, reports.	Lecture - Exemplification	3 lectures
Introduction to MySQL Database entry Installing and activating the MySQL server Database design	Lecture – Exemplification	2 lectures
Designing a database Creating the first database Data types Primary and foreign keys	Lecture - Exemplification	2 lectures
Structured query language Introduction to SQL Variables and operators Commands for definition Basic search commands Connecting data from multiple tables Commands to modify data	Lecture - Exemplification	2 lecture

MySQL functionality Indexes Knowledge of the views that make up the functionality of MySQL Stored routines - procedures and functions that represent sets of SQL commands Stored functions Cursors and triggers Transactions	Lecture - Exemplification	2 lecture
Administration and management Users and access rights Security Connection Replication for synchronizing two or more servers Backup and migration	Lecture - Exemplification	3 lecture

8.2. PRACTICAL WORK **Number of hours – 28**	Theoretical presentation of practical works	1 lab work (2 hours / work)
Relational databases - Access Introductory notions: data types, tables, primary key, relationships between tables, queries, forms, reports.	Individual study	3 lab work
Introduction to MySQL Database entry Installing and activating the MySQL server Database design	Individual study	2 lab work
Designing a database Creating the first database Data types Primary and foreign keys	Individual study	2 lab work
Structured query language Introduction to SQL Variables and operators Commands for definition Basic search commands Connecting data from multiple tables Commands to modify data	Individual study Test	2 lab work
MySQL functionality Indexes Knowledge of the views that make up the functionality of MySQL Stored routines - procedures and functions that represent sets of SQL commands Stored functions Cursors and triggers Transactions	Individual study	2 lab work
Administration and management Users and access rights Security Connection	Individual study Test	3 lab work

Replication for synchronizing two or more servers Backup and migration		

Bibliografie Obligatorie:
Notiţe de curs;
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Notite de curs;
http://www.marplo.net/php-mysql/baze_de_date.html
http://www.techit.ro/tutorial_sql.php
http://php.net/manual/ro/security.database.sql-injection.php
http://www.mysql.com/why-mysql/
http://arachnoid.com/MySQL/
http://www.atlasindia.com/sql.htm
http://oit.scps.nyu.edu/~sultans/dbweb/
http://docs.cpanel.net/twiki/bin/view/AllDocumentation/CpanelDocs/MySQLDatabases
http://www.phpmyadmin.net/home_page/index.php
http://www.mysqltutorial.org/mysql-sample-database.aspx
http://www.tutorialspoint.com/mysql/mysql-create-database.htm

http://www.fao.org/forestry/databases/en/
http://nfdp.ccfm.org/index_e.php
http://www.iiasa.ac.at/web/home/research/researchPrograms/EcosystemsServicesandManagement/RussianForests.en.html
http://webarchive.iiasa.ac.at/Research/FOR/forest_cdrom/home_ru.html

9. Corroborating the course content with the expectations of the epistemic community representatives, of the professional associations and of the relevant stakeholders in the corresponding field

The content of the discipline of Computer Science and Computer use is in line with what is done in other university centers in the country and abroad.
In order to better adapt the content of the discipline to the labor market, meetings with representatives of the economic environment and with computer science teachers from the pre-university education took place.

10. Assessment

Type of activity	10.1. Assessment criteria	10.2. Assessment methods	10.3. Percentage of the final grade
10.4. Lecture	Knowing the types of problems presented at the course and exemplified in the laboratory	Oral exam	30%
10.5. Seminar/Laboratory	2 checks during the semester	Ongoing verification	70%
10.6. Minimum performance standards			
Mastery of scientific information transmitted through lectures and practical papers at an acceptable level. Obtaining the passing grade for the ongoing checks is a condition of passability.			

[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 the 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 06.09.2021

Course coordinator
Lecturer
ROTARU ANCUTA

Laboratory work/seminar coordinator
Lecturer
ROTARU ANCUTA

Subject coordinator
Lecturer
ROTARU ANCUTA

Approved by the Department on 22.09.2021

Head of the Department
Prof. SUHAROSCHI RAMONA

Approved by the Faculty Council on

28.09.2021

Dean
Prof. MUDURA ELENA