**No_____from _____** **Form code USAMV–CN-0701040110**

# SUBJECT OUTLINE

## 1. Information on the programme

| | |
|---|---|
| 1.1. Higher Education Institution | **University of Agricultural Sciences and Veterinary-Medicine Cluj-Napoca** |
| 1.2. Faculty | **Food Science and Technology** |
| 1.3. Department | **Food Engineering** |
| 1.4. Study field | **Food Engineering** |
| 1.5. Level field[1)] | **Level 1.Bachelor** |
| 1.6. Specialization/ Study Program | **Technology of Agricultural Products Processing** |
| 1.7. Form of education | IF |

## 2. Information on the discipline

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|---|---|---|---|---|---|---|---|---|
| 2.1. Name of the course | **Quality control over vegetal originating products 3** | | | | | | | |
| 2.2. Course leader | | | | **Assoc. Prof.PhD. Mureșan Crina** | | | | |
| 2.3. Coordinator of seminary/laboratory activity/project | | | | **Lectures PhD Marc Romina** | | | | |
| 2.4. Year of study | **IV** | 2.5. Semester | **VIII** | 2.6. Type of evaluation | sumative | 2.7. Course regime | Content [2] | DS |
| | | | | | | | Level of compulsory [3] | DI |

## 3. Total estimated time (teaching hours per semester)

| | | | | | |
|---|---|---|---|---|---|
| **3.1. Number of hours/week – frequency form** | 4 | of which : 3.2. course | 2 | 3.3. seminary/ laboratory/ project | 2 |
| **3.4. Total hours in the curricula** | 56 | of which: 3.5.course | 28 | 3.6.seminary/laboratory | 28 |
| **Distribution of time** | | | | | Hours |
| **3.4.1.. Study based on handbook, notes, bibliography** | | | | | 10 |
| **3.4.2. Extra documentation in the library, on specific electronic platforms and on field** | | | | | 9 |
| **3.4.3. Preparation of seminaries/ laboratories/ projects, themes, papers, portfolies and essays** | | | | | 10 |
| **3.4.4.Tutorial** | | | | | 9 |
| **3.4.5. Examination** | | | | | 6 |
| **3.4.6. Other activities** | | | | | |
| **3.7. Total hours of individual study** | 44 | | | | |
| **3.8. Total hours per semester** | 100 | | | | |
| **3.9. Number of ECTS[4]** | 4 | | | | |

## 4. Prerequisites (if applicable)

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| 4.1. of curriculum | Biochemistry, Vegetal raw materials, Rheology, Extraction technologies, Fermentation technologies. |
| 4.2. of competences | The student must have knowledge regarding the chemical composition of food products, the technology for obtaining vegetal origin food products, changes that occur during processing, rheology terms. |

## 5. Conditions (if applicable)

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| 5.1. of course development | Projector, presentation<br>In the case of carrying out didactic activities online, the teaching methods will be |

| | |
|---|---|
| | adapted |
| 5.2. of seminary/laboratory/ project development | Computer, projector, standards<br>In the case of carrying out didactic activities online, the teaching methods will be adapted |

**6. Specific competences acquired**

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|---|---|
| Professional competences | C5.1 Identify the specialized terminology regarding quality management, standards and good practices, in order to collaborate and cooperate with the responsible institutions in the field of food quality and safety.<br>C5.3 Identify the problems specific to quality management and the responsibilities related to solving them. |
| Transversal competences | CT1.Applying strategies of perseverance, rigor, efficiency and responsibility at work, punctuality and accountability for the results of personal activities, creativity, common sense, analytical and critical thinking, solving matters etc, by principles, norms and values of the professional ethics code in food area. |

**7. Subject objectives** (as a result of the specific acquired competences)

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|---|---|
| 7.1. Subject general objectives | Knowing the concepts regarding the quality of vegetal products. |
| 7.2. Specific objectives | To understand the importance of the obtaining process (technological parametres) over the quality parametres of vegetal origin products.<br>To know the quality parametres for vegetal origin products.<br>To know the machines and methods for determining the quality of vegetal origin products. |

**8. Contents**

| **8.1.COURSE**<br>**Number of hours – 28** | Methods of teaching | Observations |
|---|---|---|
| Order and the importance of quality technical control in the food industry. | Lecture, Heuristic conversation, Explanation | 1 Lectures |
| The quality and its' features. The factors that have an influence over the quality of vegetal origin food products. | | |
| The pastry quality control. Fabrication faults. | Lecture, Heuristic conversation, Explanation | 1 Lecture |
| The sweet products control. | Lecture, Heuristic conversation, Explanation | 1 Lectures |
| The fermentative drinks control. The wine quality control. The alcohol and alcoholic products quality control. The beer quality control. The vinegar quality control. Fabrication faults. | Lecture, Heuristic conversation, Explanation | 4 Lectures |
| The oil and margarine quality control. | Lecture, Heuristic conversation, Explanation | 1 Lectures |
| The mixed and vegetal origin cans quality control. | Lecture, Heuristic conversation, Explanation | 1 Lectures |
| The vinegar and spices quality control. | Lecture, Heuristic conversation, Explanation | 1 Lectures |
| Management system of quality control in accordance with SR EN ISO 9001; Standard presentation, | | 4 Lectures |

| | | |
|---|---|---|
| documents | Lecture, Heuristic conversation, Explanation | |

| | | |
|---|---|---|
| **8.2. PRACTICAL WORK**<br>**Number of hours – 14** | | |
| Work safety measures. First care norms. The preparing of samples for the physico-chemical analysis. Sampling. | Heuristic conversation, working group | 1 laboratory work |
| The strong alcoholic drinks and ethyl alcohol quality control. | Heuristic conversation, working group | 1 laboratory work |
| The wine quality control. | Heuristic conversation, working group | 1 laboratory work |
| The beer quality control. | Heuristic conversation, working group | 1 laboratory work |
| The mixed and vegetal origin cans quality control. | Heuristic conversation, working group | 1 laboratory work |
| The oil quality control. | Heuristic conversation, working group | 1 laboratory work |
| The sweet products quality control. | Heuristic conversation, working group | 1 laboratory work |
| The pastry products quality control. | Heuristic conversation, working group | 1 laboratory work |
| The vinegar and spices quality control. | Heuristic conversation, working group | 1 laboratory work |
| Documents elaboration in accordance with SR EN ISO 9001 | Heuristic conversation, working group | 4 seminars |
| Final test to check acquired knowledge | Heuristic conversation, working group | 1 laboratory work |

*Compulsory Bibliography:*

1. Muresan Crina 2021- Lecture notes
2. Vlaic Romina, Muresan Crina, 2019, *Controlul calitatii produselor de origine nonanimala-indrumator de laborator*,Mega Cluj-Napoca
3. Tofana Maria , Muresan Crina, 2012, *Controlul calitatii produselor de origine vegetala,- Caiet de lucrari practice,* Editura AcademicPres

*Facultative Bibliography:*

1. Muresan Crina, Marc Romina, 2021, *Siguranta alimentara –trecut si prezent*, Editura Risoprint, Cluj
2. Banu, C., col., 2002, *Calitatea şi controlul calităţii produselor alimentare*, Editura Agir, Bucureşti
3. Apostu S. , 2009, Managementul calitatii totale, Editura Risoprint, Cluj

**9. Correlations between the subject against the expectations of the epistemic community representatives, of the professional associations and employers' representatives in the domain**

Course content is consistent with national professional associations specific applications.

**10. Evaluation**

| Type of activity | 10.1. Evaluation criteria | 10.2. Evaluation methods | 10.3. Percent of the final grade |
|---|---|---|---|
| **10.4. Course** | Knowing the factors that influence the quality parametres of vegetal origin food products.<br>Quality parametres for vegetal origin food products.<br>Quality parametres methods of analysis.<br>SR EN ISO 9001 requirements | Exam | 50 % |
| **10.5. Seminary/Laboratory** | Knowing the principles for determining the physico-chemical characteristics of vegetal origin food products.<br>The usage of quality parametres determining machines.<br>Documents elaboration in accordance with SR EN ISO 9001 | Portfolio presentation | 50 % |
| **10.6. Minimal standard of performance** | | | |
| Preparation of a technical specification for a finished product of plant origin. Completion of a test report for a finished product of plant origin.<br>Mastering the scientific information transmitted through lectures and creating the portfolio at an acceptable level. | | | |

[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 hours of study (didactical and individual study).

**Filled in on**
06.09.2021

**Course coordinator**
Assoc. Prof.PhD. Mureșan Crina

**Laboratory work/seminar coordinator**
Lectures PhD Marc Romina

**Subject coordinator**
Assoc. Prof.PhD. Mureșan Crina

Approved by the Department on
22.09.2021

**Head of the Department**
Prof. univ. dr. Sevastiţa Muste

Approved by the Faculty Council on
28.09.2021

**Dean**
Prof. univ. dr. Elena Mudura