

Technology for processing products of plant origin (IIIrd Year of study, Vrd Semester)

Credit value (ECTS) 4

Course category

Domain (Imposed)

Course holder:

Assist. Phd. Eng. Otilia Cristina MURARIU

Discipline objectives (course and practicum)

The course aims is to aquire of students the theoretical knowledge necessary for future professional activity, regardless of the link/ location in which it will practice on the organization and management of production processes in order to obtain milling and bakery products, oilseeds, sugar, derived products from fruits and vegetables, etc.

The students learning of the notions regarding the technologies for the processing of vegetable raw materials and their potential for capitalization in the food industry.

The practical works aim to familiarize students with working techniques in the field of organoleptic, physical – chemical indices of vegetable raw materials; Identification and justification of the technological stages, of the technological parameters on the technological flow of the products of vegetale origin; Argumentation of the main physical, biochemical, microbiological processes that take place during the technological phases; Analysis and quality control on the technological flow of manufacturing products from the vegetable products industry.

Contents (syllabus)

Course (chapters/subchapters)
The object of study – Technology for processing products of plant origin
Grain processing technology
Bakery processing technology
Technology for obtaining pastries
Biscuit making technology
Technology for obtaining pasta
Sugar beet processing technology
Technology for obtaining sugar products
The technology of obtaining sunflower oil
The technology of capitalization of the by-products resulted from the industrialization processes of the horticultural products

Practicum
General; work safety rules; Laboratory equipment and ustensils; good practice working in the laboratory of Plant Food Technology. Introduction to general laboratory techniques. Sampling methods techniques.

Qualitative analysis of wheat flour.
Determination of pest infestation of cereals
Determination of quality indices of bakery products.
Determination of soluble dry matter (% sucrose) by the refractometric method of sugar beet.
Determining the qualitative indices of pastry products.
Determination of the quality indices of biscuits
Determining the qualitative parameters of pasta.
Determination of quality indices of sugar products.
Determination of qualitative parameters of oils.
Determination of qualitative parameters of fruit and vegetable products (fresh / frozen / dehydrated / lactofermented / preserved by acidification / concentrated products / juices, etc.)
Final knowledge verification colloquium

References

- Murariu Otilia Cristina, Irimia Liviu Mihai, Robu Teodor, 2017 - Analiza și controlul calității produselor din legume și fructe, Editura Ion Ionescu de la Brad, Iași.
- Constanța Virginia Modoran, 2007 – Tehnologia morăritului și panificației, Editura Risoprint Cluj – Napoca.
- Banu, C. si colab. , 1993 – Progrese tehnice, tehnologice si stiintifice in industria alimentara, vol. I, Editura tehnică, Bucuresti;
- Banu, C. si colab., 1998 -Manualul inginerului din industria alimentara, vol. I, II, Editura tehnica, Bucuresti;
- Beceanu D., 2009 – Tehnologia prelucrării legumelor și fructelor, Ed. I. Ionescu de la Brad, Iași.
- Mironescu V., 1999 – Tehnologia și controlul în industria zahărului. Editura Universității Sibiu.
- Stroia A., Aved. Er., Angelescu M., 1994 – Biochimia și calitatea tehnologică a sfeclei pentru zahăr, Editura Tehnică, București
- Irimia L., 2013. Controlul și expertiza calității legumelor, fructelor și produselor derivate. Ed. *Ion Ionescu de la Brad*, Iași.
- Potec I. și Maria Savu, 1984 – Caiet de lucrări practice la disciplina Tehnologia păstrării și industrializării produselor horticole, Ed. Ion Ionescu de la Brad.
- Mironescu V., 1999 – Tehnologia și controlul în industria zahărului. Editura Universității Sibiu.
- Vizitiu C., 1999 – Tehnologii generale în industria alimentară, Editura Evrika, Brăila.

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Exam	Written examination	60%
Appreciation of the activity during the semester	Oral assessment during the semester, verification tests and final laboratory colloquium.	40%

Contact

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