FOOD BIOCHEMISTRY
(IInd Year of study, IIIrd Semester)

Credit value (ECTS) 4

Course category
Specialized (Imposed)

Course holder:
Prof. Dr. Lucia Carmen TRINCĂ

Discipline objectives (course and practical works)

The aim of the course is to have students acquire the basic knowledge of the main transformations suffered by the biochemical components during food processing & storage as well as the main metabolic reactions of food components in human organism.

Practical works seek to familiarize students with technical work in food biochemistry laboratories and formation of practical skills necessary for the laboratory investigation of the main components of food substrates & biological fluids.

Contents (syllabus)

Course (chapters/subchapters)
The subject, history and importance of food biochemistry
The main biochemical processes of food substrates containing predominantly glucids (vegetables, fruits, sugar, honey bee, bread, pasta) during processing and storage. General metabolic (anabolic and catabolic) processes of glucids in the body. The metabolism of the main mono-, di- and poli- food's glucids.
The main biochemical processes of food substrates containing predominantly lipids (fats,oils) during storage. General metabolic (anabolic and catabolic) processes of lipids in the body. The metabolism of the main food's lipids.
The main biochemical processes of food substrates containing predominantly proteins (fats,oils) during storage. General metabolic (anabolic and catabolic) processes of proteins in the body corresponding to deamination reactions, decarboxylation and transamination of alfa-amino acids. Metabolic processes of the main food proteins, peptides and amino acids.
Practical works
Presentation of the laboratory. Getting safety rules.
Freshness checking of the food substrates / products containing predominantly glucids and their derivatives (vegetables, fruits, sugar, honey-bee, bread, pasta).
Determination of glucose concentration in the food substrates &biological fluids.
Freshness checking of the food substrates / products containing predominantly lipids and their derivatives (fats and oils).
Determination of TAG/ Cholesterol concentration in the food substrates & biological fluids.
Freshness checking of the food substrates / products containing predominantly proteins and their derivatives (meet, fish, eggs, milk).
Determination of total proteins concentration in the food substrates & biological fluids.

Bibliography

1. **S. Nielsen –Food Analysis, Plenum Press, 2003, 557pag**
2. **Specific Standards & Analysis Methods for Food Substrates**

Evaluation

Evaluation form	Evaluation Methods	Percentage of the final grade
Examen	**Writing Examen**	**60%**
Ongoing Evaluation	**Test**	**20%**
Presence Course+ Laboratory	**Others**	**10%**
Laboratory Activity	**Practical evaluation**	**10%**

Contact

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