Study Programme: Food Engineering

Course Unit Title: Technology of Liquid Milks and Desserts

Course Unit Code: 06TKH01

Name of Lecturer(s): Full Professor Mirela Iličić, Associate Professor Katarina Kanurić

Type and Level of Studies: Undergraduate Academic Degree

Course Status (compulsory/elective): Compulsory

Semester (winter/summer): Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to face

Number of ECTS Allocated: 6

**Prerequisites:** None

#### **Course Aims:**

Students are trained to understand theoretical and practical base of technology and quality control of the liquid milks, fermented dairy products and dairy desserts.

## **Learning Outcomes:**

The objective of this course is to form highly skilled experts for work in the dairy industry, project, scientific, professional and educational institutions dealing with similar problems.

#### Syllabus:

Theory

Milk - species, composition and properties. The importance of milk in the diet. Milk components - proteins, milkfat, lactose, minerals, vitamins, enzymes and other microcomponents. Production and consumption of milk. Physicochemical properties of milk. Manufacture of liquid dairy products and desserts: pasteurized milk; sterilized milk; milk beverages; fermented milks (yoghurt, kefir, kumis and other feminted dairy products); sour cream; butter; milk desserts; ice cream and frozen desserts. Process of production of traditional dairy products. Quality of liquid dairy products and desserts, national legislation.

# Practice

Methods of sampling and sensory evaluation of milk and dairy products. Qualitative and quantitative analysis of milk components. Reductase test. Physico - chemical analysis of milk. Control pasteurization and sterilization of milk. Production of fermented milk drinks, ice cream and milk pudding. Methods of quality analysis: fermented milk drinks, sour cream, butter, milk pudding, ice cream and frozen dessert. Material balances in the technological process of yogurt, sour cream, butter and ice cream production.

### **Required Reading:**

- 1. Carić, M., Milanović, S., Vucelja, D.: Standardne metode analize mleka i mlečnih proizvoda, Prometej, Novi Sad, 2000.
- 2. Milanović, S., Iličić, M., Carić, M.: Fermentisani mlečni proizvodi, Tehnološki fakultet Novi Sad, Univerzitet u Novom Sadu 2017.
- 3. Tamime, A.Y., Robinson, R.K.: Yoghurt-Science and Technology, Woodhead Publishing Limited, Cambridge, England, 2004.
- 4. Tamime, A.Y.:Fermented Milks, Blackwell Science Ltd, 262, 2006.

| Weekly Contact Hours: Lectures: 3 | Practical work: 3 |
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| Teaching Methods:                             |                   |                                    |   |  |
|---|-------------------|------------------------------------|---|--|
| Lectures and students gr                      | oup work.         |                                    |   |  |
| Knowledge Assessment (maximum of 100 points): |                   |                                    |   |  |
| Pre-exam obligations                          | points            | Final exam                         | points  |  |
| Active class participation                    | 5                 | written exam                       |   |  |
| Practical work                                | 15                | oral exam                          | 30  |  |
| Preliminary exam(s)                           | 25+25             |                                    |   |  |
| Seminar(s)                                    |                   |                                    |   |  |
| The methods of knowled                        | lge assessment ma | ay differ; the table presents only | y some of the options: written exam, oral exam, |  |
| project presentation, sen                     | ninars, etc.      |                                    |   |  |