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| Course: | *MILK PRODUCTION AND MILK PRODUCTS* |
| Course id: 3OST8O34 |
| Number of ECTS: 5 |
| Teacher:  | PhD full professor Anka Popović-Vranješ |
| Course status | Mandatory |
| Number of active teaching classes (weekly) |
| Lectures:4 | Practical classes:3 | Other teaching types: | Study research work: | Other classes: |
| Precondition courses | None |
| 1. Educational goal

Theoretical and practical knowledge and skills in the field of production of milk and milk products. |
| 1. Educational outcomes

The formation of professionals with academic qualifications, who has expanded the knowledge necessary for understandingthe scientific basis of livestock production - the production of milk and milk products. This knowledge provides the student withexpertise for independent management of milk production on the farm, the agricultural advisory service and the like. |
| 1. Course content

*Theory lessons*The development of dairy industry. Biosynthesis of milk. Lactation. Chemical composition of milk. Physical and physico-chemical properties of milk.Micro-organisms in milk and dairy products. The inhibitory properties of milk. Pollution and falsification of milk.The composition and properties of certain types of milk. Hygiene in the dairy industry. Milking. Milk as food. Dairy-legal provisions. The primary treatment of milk. Milk as a raw material. Reception of milk, heat treatment of milk, separation, homogenization and deodorising. Production of consumer milk (pasteurized and sterilized) . Production of fermented products, the production of cheese and processed cheese, ice cream and milk powder. Whey, a by-product. Utilization of whey. Whey as a pollutant. Projecting in the dairy industry.*Practical lessons*a) Labs: Sampling of milk and dairy products. Determination of chemical composition of milk content fat, nitrogen materials. Lactose. Mineral substances. Determination of physico-chemical properties of milk. Acidity. Density. Dry matter of milk. Determination of hygienic quality of milk. Bio test. Antibiotics. Preservatives. Rennet-fermentation test. Making products under laboratory conditions: yogurt, kefir, production of cheese (soft, semi-hard and hard) and melted sira. Sistem of milk payments. Quality rating of dairy products.b) Terrain exercises: Visiting dairies and getting to know the process, equipment and machines for the reception of milk, to produce pasteurized and sterilized milk, fermented milk products, cheese and ice cream. |
| 1. Teaching methods

Lectures, presentations, demonstrations, consultations, work in dairies and laboratories |
| Knowledge evaluation (maximum 100 points) |
| Pre-examination obligations | Mandatory | Points | Final exam (izabrati) | Mandatory | Points |
| Lecture attendance | Yes | 10 | *Theoretical part of the exam/Oral part of the exam/Written part of the exam-tasks and theory* | Yes | 45 |
| Test | Yes | 15 |  |
| Exercise attendance | Yes | 15 |
| *Term paper* | Yes | 15 |
| Literature  |
| Ord. | Author | Title | Publisher | Year |
|  | Popović-Vranješ Anka, Vujičić, I.: | Tehnologija surutke | Univerzitet u Novom Sadu, Poljoprivredni fakultet | 1997 |
|  | Ivica Vujičić | Mlekarstvo | Univerzitet u Novom Sadu, Poljoprivredni fakultet | 1985 |
|  | Ramet, J.P. | Comparing ripening technology of the varios types of cheese | London, Paris, New York | 2000 |
|  | Havranek Jasmina, Rupić, V.: | Mlijeko od farme do mljekare | Hrvatska mljekarska udruga, Zagreb | 2003 |
|  | Mioč, B., Pavić Vesna | Kozarstvo | Hrvatska mljekarska udruga, Zagreb | 2002 |
|  | Carić, M., Milanović, S., Vucelja, D.: | Standardne metode analize mleka i mlečnih proizvoda | „Prometej“Novi Sad | 2000 |
|  | Popović-Vranješ Anka | Tehnologija-proizvodnje mleka i mlečnih proizvoda | Univerzitet u Novom Sadu, Poljoprivredni fakultet | 2006 |

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| Znak univerziteta | UNIVERSITY OF NOVI SADFACULTY OF AGRICULTURE 21000 NOVI SAD, TRG DOSITEJA OBRADOVIĆA 8 | Znak fakulteta2 |
| Study Programme AccreditationUNDERGRADUATE ACADEMIC STUDIES *ANIMAL SCIENCE* |