# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

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|---|---|---|---|---|---|---|---|---|---|
| Course Title | Advances in Dairy Technology | | | | | | | | |
| Course Code | GMP526 | | Couse Level | Second Cycle (Master's Degree) | | | | | |
| ECTS Credit | 8 | Workload | 200 *(Hours)* | Theory | 3 | Practice | 0 | Laboratory | 0 |
| Objectives of the Course | New techniques used in dairy technology, new production schemes of products, new developments in thermal processing, new equipment, membrane filters, ultrafiltration and evaporation methods, new techniques for the packaging of the product, to learn about in cleaning system. | | | | | | | | |
| Course Content | Classic private purposes except dairy products produced and used in many industries and raw material milk are casein, whey powder and milk sugar and diabetic, therapeutic, etc. definition of dairy products, varieties, production technologies and applications, and some of the probiotic properties of fermented dairy products (milk, biogard milk, bifidus, etc acidofillus) production and properties. | | | | | | | | |
| Work Placement | N/A | | | | | | | | |
| Planned Learning Activities and Teaching Methods | Explanation (Presentation), Discussion, Case Study, Individual Study | | | | | | | | |
| Name of Lecturer(s) | Lec. Selda BULCA | | | | | | | | |

| Assessment Methods and Criteria | | |
|---|---|---|
| Method | Quantity | Percentage (%) |
| Midterm Examination | 1 | 25 |
| Final Examination | 1 | 55 |
| Quiz | 2 | 20 |

| Recommended or Required Reading | |
|---|---|
| 1 | 1. Dairy Chemistry and Biochemistry. P.F. Fox and P.L.H. McSweeney, 1998 |
| 2 | 2. Belitz, H. D, Grosch, W, Schieberle, P, 2009. Food Chemistry, Springer Verlag Berlin, Heidelberg |
| 3 | 3. Varnam, A. H., Sutherland J. P. 1994. Milk and Milk Products Technology, chemistry and microbiology (is available as e-book in ADU-library) |
| 4 | 4. Walstra, P., Wouters, J.T.M., Geurts, T.J. 2006. Dairy Science and Technology. 2nd Edition, CRC Press (is available as e-book in ADU-library) |
| 5 | 5. Dairy Processing Handbook, Tetra Pak Processing Systems AB, Second, revised edition, 2003 |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | Süt üretimi ve kullanımı |
| 2 | Theoretical | Sütün bileşimi |
| 3 | Theoretical | Laktoz |
| 4 | Theoretical | Süt Yağı |
| 5 | Theoretical | Süt proteinleri |
| 6 | Theoretical | Sütün mineral maddeleri |
| 7 | Theoretical | Süt ve süt ürünlerinde vitaminler |
| 8 | Theoretical | Süt ve süt ürünlerinde su |
| 9 | Intermediate Exam | İşlenen konuların değerlendirilmesi |
| 10 | Theoretical | Süt ve süt ürünleri enzimolojisi |
| 11 | Theoretical | Sütte sıcaklığın meydana getirdiği değişimler |
| 12 | Theoretical | Peynir ve fermente süt ürünlerinin kimyası ve biyokimyası |
| 13 | Theoretical | Sütün fiziksel özellikleri |
| 14 | Theoretical | Süt Teknolojisinde Starter Kültürü kullanımı |
| 15 | Final Exam | Dersin genel değerlendirilmesi |

| Workload Calculation | | | | |
|---|---|---|---|---|
| Activity | Quantity | Preparation | Duration | Total Workload |
| Lecture - Theory | 14 | 9 | 2 | 154 |
| Quiz | 2 | 6 | 1 | 14 |
| Midterm Examination | 1 | 15 | 1 | 16 |

| | | | | |
|---|---|---|---|---|
| Final Examination | 1 | 15 | 1 | 16 |
| | | | Total Workload (Hours) | 200 |
| | | | [Total Workload (Hours) / 25*] = **ECTS** | 8 |
| **25 hour workload is accepted as 1 ECTS* | | | | |

| **Learning Outcomes** | |
|---|---|
| 1 | 1. Sütün bileşimi hakkında bilgi sahibi olur |
| 2 | 2. Sütün fiziksel ve kimyasal özelliklerini bilir |
| 3 | 3. Sütün temel biyomoleküllerinin yapı ve özellikleri ve bileşenlerin teknolojik açıdan önemleri konularını öğrenmiş olur |
| 4 | |
| 5 | |

| **Programme Outcomes** *(Food Engineering Master)* | |
|---|---|
| 1 | To provide further training and research opportunities to food engineers to meet the needs of the food industry |
| 2 | To develop and deepen the current and advanced knowledge in the field of food engineering with original thought and / or research at the level of expertise, based on the qualifications of the master |
| 3 | To identify, define, formulate and solve problems in applications related to Food Engineering and gain the ability to select and apply appropriate analytical methods and modeling techniques |
| 4 | To gain the ability to evaluate the accuracy of the data obtained from food analysis |
| 5 | To educate students having research, entrepreneur qualifications |

**Contribution of Learning Outcomes to Programme Outcomes** *1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High*

| | L1 | L2 | L3 | L4 | L5 |
|---|---|---|---|---|---|
| P1 | 3 | 3 | 3 | 1 | 1 |
| P2 | 2 | 2 | 2 | | |
| P3 | 3 | 4 | 4 | | |
| P4 | 4 | 4 | 5 | | |
| P5 | 4 | 3 | 4 | | |