# AYDIN ADNAN MENDERES UNIVERSITY
# COURSE INFORMATION FORM

| Course Title | Advanced Food Microbiology | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Course Code | VBH603 | | Couse Level | Third Cycle (Doctorate Degree) | | | | |
| ECTS Credit | 6 | Workload | 150 *(Hours)* | Theory | 2 | Practice | 2 | Laboratory | 0 |
| Objectives of the Course | To give the basics of food microbiology then to meet complicated points of food microbiology and to have detailed knowledge about food poisoning cases/infections caused by food borne agents | | | | | | | |
| Course Content | The microbiological ecology of foodstuff, the factors affecting the growth of microorganisms, description of pathogens their features and pathogenesis, food spoilage microorganisms and the mechanism of food spoilage. | | | | | | | |
| Work Placement | N/A | | | | | | | |
| Planned Learning Activities and Teaching Methods | | | Explanation (Presentation), Experiment, Demonstration, Discussion | | | | | |
| Name of Lecturer(s) | Prof. Filiz KÖK | | | | | | | |

## Assessment Methods and Criteria

| Method | Quantity | Percentage (%) |
|---|---|---|
| Midterm Examination | 1 | 40 |
| Final Examination | 1 | 60 |

## Recommended or Required Reading

| | |
|---|---|
| 1 | Erol İ. (2008). Gıda Hijyeni |
| 2 | Jay (1996) Modern Food Microbiology |

| Week | Weekly Detailed Course Contents | |
|---|---|---|
| 1 | Theoretical | Introduction |
| | Practice | Introduction |
| 2 | Theoretical | The definition of food microbiology. |
| | Practice | Demonstration of food microbiology laboratory |
| 3 | Theoretical | Microbiological ecology of foodstuff. |
| | Practice | Detailed explanations related with the equipment used for routine laboratory work , their usage aims and mechanisms. |
| 4 | Theoretical | Microorganisms cause spoilage in foodstuff. |
| | Practice | Culture media, preparation of culture media and plating out methods. |
| 5 | Theoretical | Introduction to the food pathogens. |
| | Practice | Basic staining methods and microscope using techniques. |
| 6 | Theoretical | Food borne bacterial pathogens. |
| | Practice | Basic routine analysis-(Total Viable Count) |
| 7 | Theoretical | Food borne bacterial pathogens. |
| | Practice | Examination of foods for coliforms |
| 8 | Practice | Examination of foods for E. coli |
| | Intermediate Exam | Midterm exam |
| 9 | Theoretical | Food borne bacterial pathogens |
| | Practice | Microbiological analysis of foods for Salmonella |

| 10 | Theoretical | Food borne bacterial pathogens. |
|---|---|---|
| | Practice | Microbiological analysis of foods for Listeria |
| 11 | Theoretical | Food borne bacterial pathogens. |
| | Practice | Examination of foods for Clostridia |
| 12 | Theoretical | Food borne viral pathogens |
| | Practice | Examination of foods for Bacillus |
| 13 | Theoretical | Food borne viral pathogens. |
| | Practice | Examination of foods for Campylobacter |
| 14 | Theoretical | Food borne parasitic pathogens. |
| | Practice | Examination of foods/water for Pseudomonas |
| 15 | Theoretical | Discussion |
| | Practice | Discussion/ Evaluation of the analysis reports |

**Workload Calculation**

| Activity | Quantity | Preparation | Duration | Total Workload |
|---|---|---|---|---|
| Lecture - Theory | 14 | 0 | 2 | 28 |
| Lecture - Practice | 14 | 0 | 2 | 28 |
| Reading | 9 | 0 | 3 | 27 |
| Midterm Examination | 1 | 20 | 1 | 21 |
| Final Examination | 1 | 45 | 1 | 46 |
| | | | Total Workload (Hours) | 150 |
| | | [Total Workload (Hours) / 25*] = **ECTS** | | 6 |

*25 hour workload is accepted as 1 ECTS*

**Learning Outcomes**

| 1 | To gain sufficient knowledge about microbiological ecology of foodstuff. |
|---|---|
| 2 | To know possible health risks of foods from animal origin |
| 3 | To have sufficient knowledge related with pathogenesis of food borne agents |
| 4 | To obtain detailed knowledge related with defence mechanism of body to the food borne agents |
| 5 | To understand mechanism of microbial spoilage. |
| 6 | To develop a better understanding about the prevention from food borne infections/intoxications |
| 7 | To gain sufficient knowledge and practical experience related with isolation identification and enumeration of food pathogens and determination of toxins. |

**Programme Outcomes** *(Food Hygiene and Technology (Veterinary Medicine) Doctorate)*

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| 13 | |

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

|      | L1 | L2 | L3 | L4 | L5 | L6 | L7 |
|------|----|----|----|----|----|----|----|
| P1   | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| P2   | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| P3   | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| P4   | 5  | 5  | 5  | 4  | 5  | 5  | 5  |
| P6   | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| P9   | 4  | 5  | 5  | 5  | 5  | 5  | 5  |
| P10  | 5  | 5  | 5  | 5  | 5  | 5  | 5  |
| P11  |    |    |    |    |    |    | 5  |
| P12  |    |    |    |    |    |    | 5  |
| P13  |    |    |    |    |    |    | 5  |