

FOOD SAFETY, CONTROL AND HACCP

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| 1 | Course Title: | FOOD SAFETY, CONTROL AND HACCP | |
| 2 | Course Code: | VET5405 | |
| 3 | Type of Course: | Optional | |
| 4 | Level of Course: | First Cycle | |
| 5 | Year of Study: | 5 | |
| 6 | Semester: | 9 | |
| 7 | ECTS Credits Allocated: | 4.00 | |
| 8 | Theoretical (hour/week): | 2.00 | |
| 9 | Practice (hour/week): | 2.00 | |
| 10 | Laboratory (hour/week): | 0 | |
| 11 | Prerequisites: | None | |
| 12 | Language: | Turkish | |
| 13 | Mode of Delivery: | Face to face | |
| 14 | Course Coordinator: | Prof. Dr. AYŞEGÜL EYİGÖR | |
| 15 | Course Lecturers: | Prof.Dr.Recep ÇIBIK | |
| 16 | Contact information of the Course Coordinator: | e-posta: aeyigor@uludag.edu.tr Telefon: 02242941334 Adres: Uludağ Üniversitesi Veteriner Fakültesi Besin Hijyeni ve Teknolojisi Anabilim Dalı 16059 Görükle Kampusu Bursa | |
| 17 | Website: | http://veteriner.uludag.edu.tr | |
| 18 | Objective of the Course: | To teach students basic food safety management | |
| 19 | Contribution of the Course to Professional Development: | | |
| 20 | Learning Outcomes: | | |
| | | 1 | Learns basic definitions related to system management and its requirements. |
| | | 2 | Learns about prerequisite programs and their use. |
| | | 3 | Learns requirements to establish a food safety team. |
| | | 4 | Learns product specifications, processing steps, intended use, and to draw production flow chart. |
| | | 5 | Able to perform hazard analysis (define hazard, determine acceptable limits, determine and evaluate preventive action) |
| | | 6 | Able to determine critical control points and critical limits for these points. |
| | | 7 | Learns about monitoring systems in critical control points |
| | | 8 | Able to determine actions when critical limits are exceeded. |
| | | 9 | Able to plan for process verification. |
| | | 10 | Able to update knowledge on documentation requirements, prerequisite programs, and system management plans. |
| 21 | Course Content: | | |
| | | Course Content: | |
| Week | Theoretical | Practice | |

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| 1 | Introduction to course, history of HACCP and relation to ISO 22000 principles of HACCP, advantages and constraints of HACCP | Uygulamalarda uygulanacak stratejinin öğrenciye tanıtımı. Ürün belirlenmesi. |
| 2 | International HACCP standards, HACCP and international trade, codex and other committees, legal sanctions, certification | Study product label information: intended shelf life, production date, expiration date, composition, search on material used as ingredients. |
| 3 | Food safety management: terms and definitions | Comparison of product label information of same/similar products in same/different brands: production date, expiration date, composition, nutritional value, packaging. |
| 4 | Food safety management: general requirements, genel gereksinimler ve dokümantasyon, yönetimin sorumlulukları, kaynakların kullanımı, personel eğitimi | Examination of different processing flow charts, introduction of generic HACCP models to students. Distribution of Project subjects among students |
| 5 | Planning and realization of safe food, prerequisite programs and determination of actual status of plant, types of structuring in HACCP system, Project planning techniques | Determination of specific potential health hazards: identify/list hazards from production to consumption in selected product |
| 6 | Appointment of a food safety team, determination of product characteristics, process steps, control measures; intended use and groups of users, preparation of flow diagrams | Examination of potential hazards and legal regulations related to food safety management system and prerequisite programs 1 |
| 7 | Hazard analysis: hazard identification and determination of acceptable levels | Examination of potential hazards and legal regulations related to food safety management system and prerequisite programs 2 |
| 8 | Hazard assessment, selection and assessment of control measures, identification of critical control points, determination of critical limits for critical control points 1 | Determination of critical control points |
| 9 | Hazard assessment, selection and assessment of control measures, identification of critical control points, determination of critical limits for critical control points 2 | Determination of control measures and tolerance/target limits |
| 10 | Hazard assessment, selection and assessment of control measures, identification of critical control points, determination of critical limits for critical control points 3 | Determination of actions when monitoring results exceed critical limits |
| 11 | Systems for the monitoring of critical control points | Determination of verification procedures |
| 12 | Actions when monitoring results exceed critical limits | Documentation Assembly of project parts in team, preparation of presentation |
| 13 | Verification planning | Presentation of projects and evaluation 1 |
| 14 | Documentation requirements, updating information in prerequisite programs and in HACCP plan | Presentation of projects and evaluation 2 |

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| 22 | Textbooks, References and/or Other Materials: | 1. HACCP: A practical approach, 2nd ed. (S. Mortimore, C. Wallace, 1998) 2. The HACCP Training Resource Pack (S. Mortimore, C. Wallace, 2001) 2. HACCP in the Meat Industry (Ed. Martyn Brown, 2002) 3. HACCP in Meat, poultry and fish processing (Ed. A. M. Pearson, T. R. Dutson, 1999) 4. Principles of Food Sanitation (N. G. Marriott, 1999) 5. http://www.fsis.usda.gov/OA/haccp/imphaccp.htm 6. http://www.nal.usda.gov/fnic/foodborne/haccp/index.html 7. http://vm.cfsan.fda.gov/~lrd/haccp.html 8. http://www.ag.ndsu.nodak.edu/media/haccp/haccp.html 9. TS EN ISO 22000 Food safety management systems — Requirements for any organization in the food chain 10. Food safety management systems - ISO 22000: 2005 application guideline |
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| 23 | Assesment |
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| TERM LEARNING ACTIVITIES | NUMBER | WEIGHT |
|--|--------|--------|
| Midterm Exam | 1 | 30.00 |
| Quiz | 0 | 0.00 |
| Home work-project | 1 | 10.00 |
| Final Exam | 1 | 60.00 |
| Total | 3 | 100.00 |
| Contribution of Term (Year) Learning Activities to Success Grade | | 40.00 |
| Contribution of Final Exam to Success Grade | | 60.00 |
| Total | | 100.00 |
| Measurement and Evaluation Techniques Used in the Course | | |

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| 24 | ECTS / WORK LOAD TABLE |
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| Activites | Number | Duration (hour) | Total Work Load (hour) |
|----------------------------|--------|-----------------|------------------------|
| Theoretical | 14 | 2.00 | 28.00 |
| Practicals/Labs | 14 | 2.00 | 28.00 |
| Self study and preperation | 14 | 4.00 | 56.00 |
| Homeworks | 1 | 5.00 | 5.00 |
| Projects | 0 | 0.00 | 0.00 |
| Field Studies | 0 | 0.00 | 0.00 |
| Midterm exams | 1 | 1.00 | 1.00 |
| Others | 0 | 0.00 | 0.00 |
| Final Exams | 1 | 1.00 | 1.00 |
| Total Work Load | | | 119.00 |
| Total work load/ 30 hr | | | 3.97 |
| ECTS Credit of the Course | | | 4.00 |

| 25 | CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS | | | | | | | | | | | | | | | |
|---|---|-----|-----|-------|-----|-----|----------|-----|-----|--------|------|------|-------------|------|------|------|
| | PQ1 | PQ2 | PQ3 | PQ4 | PQ5 | PQ6 | PQ7 | PQ8 | PQ9 | PQ10 | PQ11 | PQ12 | PQ13 | PQ14 | PQ15 | PQ16 |
| ÖK1 | 3 | 2 | 1 | 3 | 1 | 1 | 3 | 3 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| ÖK2 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| ÖK3 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 4 | 1 | 1 | 1 | 0 | 0 | 0 | 0 |
| ÖK4 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| ÖK5 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| ÖK6 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| ÖK7 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| ÖK8 | 3 | 2 | 1 | 3 | 4 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| ÖK9 | 3 | 2 | 1 | 3 | 1 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| ÖK10 | 3 | 2 | 1 | 3 | 1 | 1 | 5 | 5 | 5 | 1 | 2 | 1 | 0 | 0 | 0 | 0 |
| LO: Learning Objectives PQ: Program Qualifications | | | | | | | | | | | | | | | | |
| Contribution Level: | 1 very low | | | 2 low | | | 3 Medium | | | 4 High | | | 5 Very High | | | |