**Systems for Food Risk Management**

1. **GENERAL**

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| **University** | University of Western Macedonia |
| **DEPARTMENT** | Chemical engineering |
| **LEVEL OF STUDY**  | Postgraduate |
| **Course Unit Code** | FOODQUAL110 | **SEMESTER OF STUDY** | 3rd |
| **Course Title** | Systems for Food Risk Management  |
| **Coursework Breakdown** | **TEACHING WEEKLY HOURS** | **ECTS Credits** |
| Lecture | 3 h | 6.0 |
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| **Course Unit Type***eg. basic, scientific area, etc*  |  |
| **Prerequisites :** | Food Processing and Preservation Food Safety and Quality Integrated Food Safety and Quality Management |
| **Language of Instruction/Exams:** | English |
| **COURSE DELIVERED TO ERASMUS STUDENTS** | YES (in English)  |
| **Module web page (URL)** | https://eclass.uowm.gr/modules/document/index.php?course=FOODQUAL110 |

1. **Learning Outcomes**

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| **Learning Outcomes** |
| *(according to Bologna process)* |
| The aim of this module is to provide upgraded knowledge on the food safety management, risk management of food hazards according ISO 22000:2018, HACCP system and good manufacturing and hygienic practices (GMP-s/ GHP-s) based on principles of food hygiene control regulated by the Codex Alimentarius. After successful completion of the module the students will be able to:* Identify the global standard for food safety management systems - ISO 22000:2018 and to apply it in practice, alone or integrated with other standards such as ISO 9001:2015, ISO 14001: 2015, ISO 45001:2018 and others.
* Know the principles and structure of the HACCP.
* Prepare, maintain and update the documentation of HACCP system and GMP-s/ GHP-s.
* Familiar and use the principles of audit as a scientific approach for food risk management.
* Analyze food hazards and to assess the seriousness and probability of the risk.
* Explain how to manage the food quality and safety.
* Integrate the principles of food quality and safety into the real food processing practices.
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| **General Skills** |
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| * Individual and autonomous work
* Working in a multidisciplinary environment
* Formation of creative, inductive and independent thinking
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1. **Course Contents**

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| * Requirements of ISO 22000: 2018 to the food safety management systems of organizations in Food Chain.
* HACCP - a mandatory system for food safety in the EU.
* Good manufacturing and hygiene practices based on the Codex Alimentarius food hygiene principles - a basis for production and sale of safe food.
* Guidelines of ISO 19011:2018 Auditing management systems <https://asq.org/quality-resources/iso-19011>
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1. **Teaching Methods - Assessment**

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| **Mode of Delivery** *face to face, distance learning, etc* | Face to face |
| **USE OF INFORMATION AND COMMUNICATION TECHNOLOGY** | E-class learning systemE-mail communication |
| **TEACHING METHODS***(eg. Lecture, lab practice, project, homework., etc.* |

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| ***Method description*** | ***ECTS***  |
| Lecture  | 2.0 |
| Homework course assignment | 3.0 |
| Independent Study | 1.0 |
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| ***Total*** | ***6.0*** |

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| **ASSESSMENT METHODS** | * Theoretical background test examinations (60%) by
* Multiple choice questions
* Short answer questions
* Homework course assignment (40%)

Students are notified for the assessment methods at the beginning of the semester by the teacher in oral form. They are able to contact the teacher to discuss their performance. |

1. **Resources**

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| *-**Recommended Literature:*1. Anderson, N. (2008). The Quality Management System - Is Yours up to Standard? Global Service Delivery Group, Corporate Facilities Management, EMEA, CBRE, CBI Richard Ellius, USA. [www.portal.cbre.eu/workspace/documents/QMS\_UPTODATE\_V2.pdf](http://www.portal.cbre.eu/workspace/documents/QMS_UPTODATE_V2.pdf)
2. Beckmerhagen I. A., H. P. Berg, S. V. Karapetrovic, W. O. Willborn (2004). On the Effectiveness of Quality Management System Audits, [The TQM Magazine](http://www.ingentaconnect.com/content/mcb/106;jsessionid=1mbaolj6l0b58.alice), 16 (1): 14-25. <https://doi.org/10.1108/09544780410511443>
3. Codex Alimentarius C.1 Codes and Guidelines 1); C.1.1 General, CAC/RCP 1-1969 (Rev.4-2003), Recommended International Code of Practice - General Principles of Food Hygiene; incorporates Hazard Analysis and Critical Control Point (HACCP) system and guidelines for its application.
4. Food and Agricultural Organization of the United Nations/World Health Organization. (1997). Codex Alimentarius Food Hygiene Basic Texts, Rome.
5. ISO 9001:2015: Quality Management Systems – Requirements.ISO 19011:2018: Auditing Management Systems.
6. Joint FAO/WHO Food Standards Programme. (2011). Codex Alimentarius Commission. Procedural Manual, Twentieth edition. FAO/WHO, Roma. ISSN 1020-8070. http://ftp://ftp.fao.org/codex/Publications/ProcManuals/Manual\_20e.pdf
7. Purwanto, A., Asbar, M., Santoso, P.B. (2019). Influence of Transformational and Transactional Leadership Style toward Food Safety Management System ISO 22000:2018 Performance of Food Industry in Pati Central Java. Inovbiz: Jurnal Inovasi Bisnis, [7 (2):](http://www.sciencedirect.com/science/journal/09567135/7/6) 180-185. <http://ejournal.polbeng.ac.id/index.php/IBP/article/view/1213/563>
8. Walker, H. F., A. K. Elshennawy, B. C. Gupta, M. McShane Vaughn (2009). The Certified Quality Inspector Handbook, American Society for Quality, ASQ Quality Press, Milwaukee, WI, USA. ISBN 978-0-87389-731-0.
9. Lance, B. Coleman, Sr. (2020). The ASQ Certified Quality Auditor Handbook. Fifth Edition, ISBN: 978-1-951058-09-8.
10. Russell, J.P. (2007). The Internal Auditing Pocket Guide Preparing. Performing, Reporting and Follow-up, Second Edition, Spiralbound, ISBN: 978-0-87389-710-5.
11. Mawby, W.D. (2021). The ASQ Auditing Handbook, Navigating Big Data Analytics, Fourth Edition, Contact Quality Press.
12. Coleman, Sr., Lance, B. (2018). Standard Issues: Game, Set, Match. Quality Progress, 51 (7): 44-47.
13. Coleman, L. B. Sr. (2020). Making Remote Work. Advice On Getting the Most Out of Remote Auditing to Minimize Risk and Manage Suppliers. Quality Progress, 53 (9): 16-23.
14. Robitaille, D. (2018). ISO 19011: It's Changing - Who Cares?, Webcast. ASQ.ORG, Robitaille Associates. <https://asq.org/quality-resources/webcasts/iso-19011-its-changing-who-cares-webcast?id=d295ed4773244ef68c42128590ab2415>
15. What is ISO 19011:2018 – Auditing Management Systems? Quality Resources. https://asq.org/quality-resources/iso-19011
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