# Food quality assurance and international certifications

PROF. MARTIN HOLLE

## COURSE AIMS AND INTENDED LEARNING OUTCOMES

Today, more than ever, the demand for safety and quality in the food and beverage industry is exponentially increasing. Traditionally focused on food safety, EU law increasingly is also taking a look at fraudulent practices that cause financial losses rather than health damages to consumers. Therefore, all food chain stakeholders are required to demonstrate their commitment to safe and authentic food by implementing a Food Safety and Quality Management System (FSQMS). EU Regulations legally require every food business operator to put in place, implement and maintain a permanent procedure or procedures based on the HACCP principles. HACCP is therefore an indispensable and integral part of any FSQMS.

Next to the legal requirements, many food business operators are facing contractual obligations by their clients to subscribe to one of the GFSI recognized private Food Safety Standards such as BRC, IFS, FSSC 22000.

The aim of this course is to provide the participants with the fundamental knowledge and understanding on food quality assurance according to the most relevant requirements of European Food Law Regulation and International Standards; the course aims to introduce students to the framework for safety and quality management and its impact on agri-food enterprises and to illustrate the main product and system certification standards.

At the end of the course, students are expected to have acquired the knowledge, approaches, methods, and techniques used to implement an efficient Food Safety and Quality Management System. Moreover, students are supposed to possess the relevant information to manage the fundamental requirements of EU food law and the main international standards in order to assure food quality and food safety. They will be able to gather information on relevant issues of quality and can interpret it in a way that will help them to come to autonomous judgements.

## COURSE CONTENTS

ECTS

# Regulatory framework for Agri-food sector 2.00

The integrated approach to food safety “from farm to fork”. White Paper on Food Safety. Regulation (EC) No 178/2002. Risk analysis principle: risk assessment, risk management, risk communication. European Food Safety Authority (EFSA). Rapid Alert System for Food and Feed (RASFF). Precautionary principle. Food traceability. Transparency of decision-making.

Regulation (EU) 2017/625 on official controls. Rules on contaminants, pesticides and veterinary drug residues: Regulation (EC) No. 1881/2006, Regulation (EC) No. 396/2005 and Regulation (EU) No 37/2010. Regulation (EC) No 2073/2005 on microbiological criteria for foodstuffs. Regulation (EU) No 1169/2011 on the provision of food information to consumers. Regulation (EU) 2018/775 on the provision of food information to consumers, as regards the rules for indicating the country of origin or place of provenance of the primary ingredient of a food. Regulation (EC) No 1829/2003 on genetically modified food and feed.

# Key principle of the Food hygiene rules 1.00

Hygiene package: Regulation (EC) 852/2004 on the hygiene of foodstuffs, Regulation (EC) 853/2004 on the specific hygiene rules for food of animal origin. Regulation (EC) No 2074/2004.

Basic of food processing hygiene criteria:

The Good Manufacturing and Hygiene Practices (GMP-GHP). The Hazard Analysis and Critical Control Point (HACCP): principle and application according to the Codex Alimentarius. Examples of HACCP plans. The HARPC approach.

# International certifications: the most relevant system 1.00

# standards

ISO 9001:2015 - Quality Management System.

ISO 22000:2018 – Food Safety Management System.

# International certifications: the most relevant product 1.00

**standards**

BRC Global Standard for Food Safety Issue 8/9

IFS Food 7/8

FSSC 22000 Scheme Version 5.1

## READING LIST

EU Food Law handbook, Bernd Van der Meulen/Bart Wernaart (Ed.), 2020, Wageningen Academic Publishers.

Food Safety for the 21st Century – Managing HACCP and Food Safety throughout the Global Supply Chain, Wallace, Carol A/Sperber, William H./Mortimore, Sara E., 2011, Wiley.

Lecturer’s notes, additional bibliographic material, web resources, E-books, technical standards, and PDF documents on Food Law, Food Quality Assurance and International Certifications will be provided during the course.

## TEACHING METHOD

1. Theoretical frontal and dialogue-based lectures aimed at presenting the key concepts of the subject.

2. Assignment of working groups for the resolution of specific case-studies related to the course topics and presentation of the results by students.

## ASSESSMENT METHOD AND CRITERIA

## The assessment is based on an oral exam (PowerPoint presentation + discussion) and a short paper. Group work will be carried out during the course, with an illustration of the topics and aims of the work, and the requirements of the final report (PowerPoint presentation + short paper) given at the start of the course. Normally, the group work involves a literature research on specific topics covered in the course or resolution of assigned case-studies. The work groups may consist indicatively of a maximum of 5 students, and the contribution and role of each individual member must be explicitly indicated in the final report. The PowerPoint presentation, discussion and short paper will be assessed with a mark out of 30. The final mark will be taken as a weighted arithmetic mean of the mark obtained in the PowerPoint presentation + discussion (with an 80% weight) and that obtained in the short paper (with a 20% weight). In the case of working students or students unable to participate in the group work, this must be communicated to the lecturer at the beginning of the course, who will then be able to provide appropriate alternative ways to cover this part of the programme.

## NOTES AND PREREQUISITES

## The course does not require any prerequisites on the contents. Some basic knowledge on food production is useful.

## OFFICE HOURS FOR STUDENTS

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## Prof. Martin Holle is available for the students after the lectures. In addition, he is available to receive students through remote meetings by appointment. In any case, it is suggested to write an e-mail (martin.holle@unicatt.it) in order to agree on the day and time of reception.