

TECHNOLOGY FOR FOOD SAFETY

- **Mod. Principles of Food Hygiene**

[Prof. Pier Sandro COCCONCELLI](#)

COURSE AIMS

The learning objectives are: (i) to illustrate the European approach to food risk analysis and (ii) to provide the basic and technical knowledge on food processing and hygiene

COURSE CONTENT

	CFU
The Food Safety concept. The European risk analysis approach: risk assessment and risk management. The steps of risk assessment. The risk management in the food chains: the concept of ALARA, ALOP and FSOs. The RASFF (<i>Rapid Alert System for Food and Feed</i>) system in EU. The food risks. Biological and chemical hazards.	1.0
Food born infections and intoxication. The EFSA Report on Trends and Sources of Zoonoses. Food-borne pathogens and control measures. Microbiological Quantitative Risk Assessment. Risk Management in the food chain: the regulation on Microbiological Criteria. The microbial food spoilage: bacteria and fungi	1.0
Basic terms and concepts of food technology. Thermal preservation of food. Non-thermal processes for food processing: the cold chains, acidification and fermentation.	1.0
Basic of food processing hygiene criteria: the Good Manufacturing and Hygiene Practices (GMP-GHP). The HACCP: concept and application. Prerequisites, the decisional tree for CCP identification, the corrective measures. Examples of HACCP plans.	1.0
TUTORIALS.	1.0

READING LIST

The bibliographic material, web sites, E-books and pdf documents on food hygiene will be provided during the course.

TEACHING METHOD

The course will consist of lectures presenting the theoretical and conceptual aspects of the subject, coupled with case studies and practical work.

ASSESSMENT METHOD

The assessment is based on cases study discussion and on an oral examination. The active participation at the case studies and the quality of the final report is assessed. Oral examination evaluates the knowledge of food microbiology and critical reasoning. The final result also takes into account the report of the practical activities, documenting the work done.

Professor Pier Sandro Coconcelli is available to meet with students after class at C.R.B..



- **Mod. Principles of Food Protection**

[Prof. Vittorio ROSSI](#)

COURSE AIMS

Students will gain an understanding of the implications of certain plant-protection issues on the management of crops and agri-food products at the farm and supply-chain level, within the national and international regulatory context.

COURSE CONTENT

	CFU
Definition of disease, classification of diseases, damage caused by diseases, primary (direct and indirect) and secondary damage. Crop protection. Plant protection products and problems related to their use.	1
Principles of crop protection in conventional, integrated and organic farming systems. Evolution of integrated crop protection towards sustainable agriculture. Methods for integrated production and integrated farming. The sustainable use of plant protection products in the current Italian and European regulatory framework.	2,5
Harmful organisms of relevance from a plant protection perspective. The international regulatory framework under the IPPC (International Plant Protection Convention). Analysis of risks arising from the introduction of harmful organisms (Pest Risk Analysis) and the attendant plant protection regulations. Role of national plant protection organisations, of the EPPO (European Plant Protection Organisation) and of the EFSA (European Food Safety Agency). Illustration of some case studies.	1
Mycotoxins and food safety. Supply-chain approach to managing the problem of mycotoxins; case-study of autumn-winter cereals.	0,5

READING LIST

There is no course textbook; a reading list will be supplied during the course.

TEACHING METHOD

Lectures and discussions of case-studies.

ASSESSMENT METHOD

The test consists of two parts:

- In the first part the student will have to give written answers to 30 questions in a maximum of 60 minutes;
- In the second part the commission will assign a score from zero to one to each of the written replies given by the student, also in relation to specific questions designed to clarify the written answers provided by the student, to deepen specific topics and assess the capacity of reasoning and analysis on the course topics, as well as the properties of language and communication skills.

NOTES

Further information can be found on the Faculty notice board.

Professor Vittorio Rossi will receive students at the time posted.