

COURSE DETAIL

FOOD MICROBIOLOGY

Country

Netherlands

Host Institution

Wageningen University and Research Center

Program(s)

Wageningen University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences Agricultural Sciences

UCEAP Course Number

125

UCEAP Course Suffix**UCEAP Official Title**

FOOD MICROBIOLOGY

UCEAP Transcript Title

FOOD MICROBIOLOGY

UCEAP Quarter Units

5.00

UCEAP Semester Units

3.30

Course Description

Knowledge of foodborne microorganisms is essential for supplying safe and wholesome foods with a long shelf life. This course offers an introduction to the basics of food microbiology and discusses both the negative aspects of micro-organisms, such as spoilage and disease and the positive effects of fermentative processes. Characteristics of food that influence growth and inactivation of micro-organisms (e.g. water activity, pH, preservatives, heating, modified atmosphere packaging) are reviewed. The course provides a detailed introduction to the main bacterial foodborne pathogens (e.g. *Campylobacter*, *Salmonella*, *E. coli* O157, *Listeria monocytogenes*) and methods for microbial examination, but also deals with foodborne viruses, parasites, and fungi. Moreover, good manufacturing practices, personal hygiene, and the principles of cleaning and disinfection are explained. In a three-week lab class, spoilage organisms and pathogens are isolated from food products and environments using traditional and molecular methods. In the tutorial classes, molecular identification methods are explored, and the effect of several bactericidal treatments is investigated.

Language(s) of Instruction

English

Host Institution Course Number

FHM20306

Host Institution Course Title

FOOD MICROBIOLOGY

Host Institution Campus

Wageningen University

Host Institution Faculty

Host Institution Degree

Host Institution Department

Food Microbiology

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