

COURSE DETAIL

FOOD CHEMISTRY

Country

Netherlands

Host Institution

Wageningen University and Research Center

Program(s)

Wageningen University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Chemistry Agricultural Sciences

UCEAP Course Number

105

UCEAP Course Suffix**UCEAP Official Title**

FOOD CHEMISTRY

UCEAP Transcript Title

FOOD CHEMISTRY

UCEAP Quarter Units

5.00

UCEAP Semester Units

3.30

Course Description

This course is an introduction to the chemistry of foods, specifically the chemistry of groups of compounds present in food: carbohydrates, lipids, proteins, phenolic compounds, and enzymes. Students learn about the chemical changes that take place during storage and processing of agricultural crops and food. In addition, during the laboratory classes, students learn about the design of experiments and the analysis of the composition of food products. Food technologists should be able to estimate the relevance of various chemical and enzymatic processes by making calculations. To gain experience with this part of food chemistry, students practice the quantification of specific reactions in calculation cases. After successful completion of this course, students are able to recognize the molecular structures of the most common food components and their reaction products; recognize and understand the generic functional and chemical properties of the most common food components; understand the chemical reactions occurring during food processing; understand how reactive groups of food components play an important role in chemical reactions; describe the influence of processing conditions on chemical reaction and on the properties of food components; describe the effect of chemical reactions on the characteristics of food in a qualitative sense; apply generic mathematical concepts on experimental data to make quantitative judgments of the effect of reactions on the quality of food; choose between the most common analytical methods and techniques to analyze specific food compounds; and conduct experiments to analyze the effect of processing on food compounds and be able to interpret and report on the results of these experiments.

Language(s) of Instruction

English

Host Institution Course Number

FCH-20806

Host Institution Course Title

FOOD CHEMISTRY

Host Institution Campus

Food Technology

Host Institution Faculty

Host Institution Degree

Host Institution Department

Food Chemistry

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