COURSE DETAIL

MATHEMATICAL CONCEPTS FOR FOOD TECHNOLOGY
Country Netherlands
Host Institution Wageningen University and Research Center
Program(s) Wageningen University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Mathematics
UCEAP Course Number 125
UCEAP Course Suffix
UCEAP Official Title MATHEMATICAL CONCEPTS FOR FOOD TECHNOLOGY
UCEAP Transcript Title MATH FOR FOOD TECH
UCEAP Quarter Units 5.00
UCEAP Semester Units 3.30

Course Description
In order to create a good food, food technologists meet many challenges in various fields, such as mass and heat transfer, reactions, etc. To cope with all these aspects of food production, a food technologist should be able to translate these challenges into mathematical expressions, solve them, quantify the outcomes, and subsequently translate this into practical solutions. This course starts with the basic principles of food technology like mass, energy balances, and reaction kinetics. This theory is applied widely to practical problems in food technology during exercise sessions on various topics such as food preservation, reactor design for enzyme reactions, and sterilization of food. At the end of this course a student is expected to be able to translate practical problems in food technology to mathematical expressions; make educated guesses of unknown parameters; solve the equations and formulate a quantitative answer; evaluate this answer within a food technology context. Students work on three case studies in groups of 2 or 3.

Language(s) of Instruction
English

Host Institution Course Number
FPE20806

Host Institution Course Title
MATHEMATICAL CONCEPTS FOR FOOD TECHNOLOGY

Host Institution Course Details
https://wur.osiris-student.nl/onderwijscatalogus/extern/cursus

Host Institution Campus
Wageningen University and Research Center

Host Institution Faculty
Food Technology

Host Institution Degree

Host Institution Department

Food Process Engineering

Course Last Reviewed
2024-2025

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