

Producing new sustainable food ingredients - processes and utilizations

University:	DTU
Level:	MA all years, PhD
Teaching mode:	hybrid: some students participate online, other students attend real-life
Instructor(s):	Susan Løvstad Holdt and Ditte Baun Hermund

Short description

The overall aim of this course is to give a theoretical background within production of food ingredients with a specific focus on adding value to raw materials and waste/side streams for production of new food ingredients and supplements in a sustainable manner. Cases will be used as illustrations of applied technologies, production and utilization concepts. The aim is also to give an introductory background on the quality and functionality of the ingredients and their utilization.

Full description

<https://kurser.dtu.dk/course/2022-2023/23211>

Learning outcomes

A student who has met the objectives of the course will be able to:

1. Explain and compare common processes and technologies used for production of food ingredients and discuss their advantages/disadvantages
2. Discuss how new ingredients can be produced, utilized and create value from raw materials and waste/side streams from food industries in a sustainable manner
3. Describe the quality parameters and functionalities of the different categories of food ingredients
4. Create theoretical concepts for practical challenges of (multi-)extraction of the different raw materials described in the lectures by identifying, validating and applying the theoretical knowledge
5. Identify and define the most suitable process, case by case
6. Justify and evaluate principles of processes across different cases
7. Describe, justify, present and discuss the (multi-)extraction concepts concisely in posters, pitches and at the oral exam
8. Evaluate and give constructive feedback to posters and pitches from other course participants

Recommended in particular for students of the following study programmes

It is recommended to have a background in food engineering and food chemistry

General information

Contact hours per week:	4
Total workload:	150 (in student hours for the whole course)
ECTS credits:	5
Language:	English
Course start date:	01 February 2023
Course end date:	10 May 2023
Add. info about start date:	
Weekly teaching day/time:	Wednesdays 8-12
Time zone:	CET (Denmark, Germany, France, Netherlands, Switzerland, Czech Republic)
Further information:	
Prerequisites:	only recommended pre-requisites
Activities and methods:	Lectures, Group work, Self-study
Presence on campus:	Not required

Final examination

Form:	oral
Date:	
Location/format:	on campus of home institution
Re-sit possibility:	no
Transcript available:	end of semester
Add. info/requirements:	Oral examination (50 %) and evaluation of the final version of all posters (50 %). 4 posters must be submitted. Individual examination based on one of the submitted posters plus answer to general questions of the theoretical aspects. All aids allowed

Registration

To register for this course, follow the registration requirements of your **home university** as specified here: www.euroteq.eu/courses-registration.

Administration

Number of places:	10
Minimum participants:	3
Internal course code:	23211
Contact:	suho@food.dtu.dk

This course is part of the EuroTeQ Engineering University joint course catalogue 2023. This is a collaborative activity of the partner universities DTU, L'X, TU/e, TalTech, CTU, TUM as well as Technion. Students from these universities can participate in the offered courses. It is the responsibility of the student to check if you fulfil the requirements to participate in a specific course. Students are also advised to check with their home institution how to get recognition of the ECTS credits gained in courses of the EuroTeQ course catalogue. For further information about EuroTeQ Engineering University, visit www.euroteq.eu or get in touch with the above-mentioned point of contact.