



LTH

FACULTY OF
ENGINEERING

Course syllabus

Produktutveckling - förpackat och klart

Product Development - from Idea to Package

YTHA50, 7,5 credits, G1 (First Cycle)

Valid for: 2023/24

Faculty: Faculty of Engineering, LTH

Decided by: PLED LIV

Date of Decision: 2023-04-17

General Information

Main field: Food Science. **Depth of study relative to the degree requirements:**

First cycle, has less than 60 credits in first-cycle course/s as entry requirements.

Language of instruction: The course will be given in Swedish

Aim

The aim of the course is to give insight into how the innovation process and product development is carried out within different types of food companies. This will consider the entire chain of events from idea to finished product, encompassing everything from choice of raw material to choice of packaging and distribution, as well as the various tools available to a product developer to optimize this work. The aim is to also train the student in being able to weigh in ethical and environmental aspect into product their development work.

Learning outcomes

Knowledge and understanding

For a passing grade the student must

- Have knowledge of how the product development / innovation process takes place and how market research and product launches are carried out
- Be able to define the concepts of sensory and sensory analysis and have knowledge of how sensory analysis can be used as a tool on product development and quality assurance work

- Be able to define the concept of logistics, as well as understand how logistic-thinking is associated with choices of packaging material and design, product development, and environmental impact

Competences and skills

For a passing grade the student must

to be able to actively participate in planning and carrying out different types of sensory test and well as analyzing the results

to be able to actively participate in a project group with the purpose of developing a new product

Contents

To develop new products or adapt and improve existing ones is necessary for all companies. To be successful companies must think strategically and this requires an active and creative innovation and product development process. Product development often involves working in a project group with individuals with different competencies and backgrounds. For the food engineer it is necessary to be able to understand what happened in the food product when changes are made to the recipe or production specifications. Food engineers must also be able apply new trends and make use of new research results in the creation of novel products which are able to be produced effectively, be able to be stored and delivered to consumers while maintaining their quality and safety. At the same time it should also be taken into consideration the ethical, environmental and sustainability consequences of these new products. In order to optimise working practices and ensure product quality sensory science is a useful tool in addition to experiment planning and evaluation of results.

Examination details

Grading scale: UG - (U,G) - (Fail, Pass)

Assessment: Written examination, project, laboratory exercise.

The examiner, in consultation with Disability Support Services, may deviate from the regular form of examination in order to provide a permanently disabled student with a form of examination equivalent to that of a student without a disability.

Parts

Code: 0121. **Name:** Laboratory Exercise, Sensory.

Credits: 1. **Grading scale:** UG. **Assessment:** Active participation in the project work, which consists of planning, implementing, evaluating and reporting a sensory test.

Code: 0221. **Name:** Written Examination .

Credits: 2. **Grading scale:** UG. **Assessment:** Passed written exam according to the syllabus objectives for the packaging and sensory section.

Code: 0321. **Name:** Project - Product Development.

Credits: 4,5. **Grading scale:** UG. **Assessment:** Active participation during the project assignment and approved oral and written project presentation.

Admission

Assumed prior knowledge: YTHA30 Food Technology I - Heat and Heat Transfer, YTHF10 Food Technology - Food Preparation Processes, YTHA40 Vegetables, YTHA45 Animal based food products, YTHA60 Methods, YTHF35 Food Microbiological Quality

The number of participants is limited to: No

Reading list

- Birgit Lundgren: Handbok i Sensorisk analys, SIK-rapport 470. 2009, ISBN: 978-91-7290-282-4. <http://www.diva-portal.org/smash/get/diva2:958907/FULLTEXT01.pdf>.
- Cooper, Robert: Winning at new products , create value through innovation. Basic Books, 2011, ISBN: 13:9780465025787.
- Material ges vid kursstart.

Contact and other information

Course coordinator: Olena Prykhodko, olena.prykhodko@food.lth.se

Course homepage: <https://www.ple.lth.se/en/>

Further information: Study visits and guest lectures are compulsory. In case of legal impediment the student has to accomplish an individual assignment with an equivalent content.