UNIVERSITEIT GENT

Studiefiche

Academiejaar 2025-2026

Functional Foods (I002717)

Cursusomvang *(nominale waarden; effectieve waarden kunnen verschillen per opleiding)*

Studiepunten 5.0 **Studietijd 150 u**

Aanbodsessies en werkvormen in academiejaar 2025-2026

A (semester 2)	Engels	Gent	werkcollege
			hoorcollege
			zelfstandig werk

Lesgevers in academiejaar 2025-2026

Van Camp, John	LA23	Verantwoordelijk lesgever

Aangeboden in onderstaande opleidingen in 2025-2026	**stptn**	**aanbodsessie**
Master of Science in Biology	5	A
Master of Science in de bio-ingenieurswetenschappen: levensmiddelenwetenschappen en voeding	5	A
Master of Science in de biowetenschappen: voedingsindustrie	5	A
Master of Science in Food Technology	5	A
Master of Science in Nutrition and Food Systems	5	A
Uitwisselingsprogramma bio-ingenieurswetenschappen: cel- en genbiotechnologie (niveau master-na-bachelor)	5	A
Uitwisselingsprogramma bio-ingenieurswetenschappen: chemie en bioprocestechnologie (niveau master-na-bachelor)	5	A
Uitwisselingsprogramma bio-ingenieurswetenschappen: Food Science and Nutrition (niveau master-na-bachelor)	5	A

Onderwijstalen

Engels

Trefwoorden

Human nutrition and health, food science, functional foods

Situering

The relationship between nutrition and health in humans, and the principles to evaluate nutritional status and nutrient requirements of humans (for individuals as well as for populations) are given. Food aid during emergency situations is discussed. The development of functional foods and their mechanism of action in humans is explained. An overview is given of the nutritional composition of vegetable products, dairy products, oils and fats, meat and meat products, and stimulants. The influence on human health of bio-active compounds present in these products is discussed. In a practical session, techniques to formulate diets are explained and applied to protein, fat and micronutrient mixtures. Also, a group discussion on a nutritional subject is included.

Inhoud

1. Introduction
2. The nutritional status: general overview, methods for determination of body composition
3. The nutritional requirements (for energy, protein, vitamins and anorganic nutrients)
4. The world hunger: current situation, causes, interventions
5. Functional foods: definition, legislation, claims
6. Vegetable products, dairy products, oils and fats, meat- and meat products, stimulants: nutritional composition and effects on human health

7. Alternative nutrition, nutrition for atletes, stimulants

Begincompetenties

Functional Foods builds on certain learning outcomes of course unit Human Nutrition and Health; or the learning outcomes have been achieved differently.

Eindcompetenties

1 The student has knowledge on the nutritional value of foods.
2 The presence of bio-active compounds in foods, as well as the mechanisms by which they influence human health, is understood.
3 Knowledge is obtained about techniques to evaluate nutrient recommendations and nutrient status of humans.
4 Principles for development of foods in relation to specific needs of humans are understood.
5 The student can present and defend a case-study related to nutrition and health.

Creditcontractvoorwaarde

Toelating tot dit opleidingsonderdeel via creditcontract is mogelijk na gunstige beoordeling van de competenties

Examencontractvoorwaarde

Dit opleidingsonderdeel kan niet via examencontract gevolgd worden

Didactische werkvormen

Groepswerk, Werkcollege, Hoorcollege, Zelfstandig werk

Toelichtingen bij de didactische werkvormen

Theory: oral lectures
Exercises: theoretical exercises are performed with the whole group while tasks are performed in smaller groups

Studiemateriaal

Type: Syllabus

Naam: Functional Foods
Richtprijs: € 15
Optioneel: nee
Taal : Engels
Aantal pagina's : 177
Oudst bruikbare editie : 2023-2024
Beschikbaar op Ufora : Nee
Online beschikbaar : Nee
Beschikbaar in de bibliotheek : Ja
Beschikbaar via studentenvereniging : Ja
Bijkomende info: Slides getoond tijdens de lessen zijn samen met bijkomende informatie (wetenschappelijke artikels) beschikbaar via Ufora.

Referenties

Human Energy Requirements. W.P.T. James and E.C. Scholield (eds.). Oxford University Press, Oxford, 1990
Functional foods: biochemical and processing aspects. Mazza, G. (ed.) Technomic Publishing Company, Inc., 1998
Introduction to Functional Food Science. Martirosyan, M. (ed.) Food Science Published Dallas, 4th Edition, 2020

Vakinhoudelijke studiebegeleiding

For the theory and the theoretical exercises, contact hours are available in which the student can ask additional information and/or clarification.
A case-study is made on a topic of functional foods which is supervised by a scientific co-worker.

Evaluatiemomenten

periodegebonden en niet-periodegebonden evaluatie

Evaluatievormen bij periodegebonden evaluatie in de eerste examenperiode

Mondelinge evaluatie, Peer en/of self assessment, Schriftelijke evaluatie

Evaluatievormen bij periodegebonden evaluatie in de tweede examenperiode

Mondelinge evaluatie, Schriftelijke evaluatie

Evaluatievormen bij niet-periodegebonden evaluatie

Werkstuk

Tweede examenkans in geval van niet-periodegebonden evaluatie

Examen in de tweede examenperiode is mogelijk

Toelichtingen bij de evaluatievormen

Theory: written examination
Exercises: written examination with calculation exercises (open book)
For the non-period aligned examination a case-study needs to be presented and defended, and a report has to be submitted

Eindscoreberekening

Theory: period aligned evaluation (60%)
Exercises: period aligned evaluation for calculation exercises (20%) and non-period aligned evaluation in the case of group works (20%)
The student needs to participate to all assignments and exams that are part of the evaluation (period aligned and non-period aligned). A quotation “absent” on the exam or practical parts will be calculated as score 0. The calculation of the final score is done using the % contribution of the individual parts. Students who eschew period aligned and/or non-period aligned evaluations for this course unit, or when one obtains a score lower than 8/20 (not rounded up) on one of the three parts (period aligned or non-period aligned evaluation), they will fail for this course unit. In that case the end score is set to 9/20 even when the calculation indicates a score of 10/20 or more. When the student wants to repeat the examination in a new examination period, an exemption for the non-period aligned evaluation can only be given in case minimum 50% of the marks were obtained.