Course Specifications
Valid as from the academic year 2017-2018

Course size

<table>
<thead>
<tr>
<th>Credits</th>
<th>Study time</th>
<th>Contact hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0</td>
<td>135 h</td>
<td>60.0 h</td>
</tr>
</tbody>
</table>

Course offerings and teaching methods in academic year 2017-2018

A (semester 2)
- seminar: coached exercises 15.0 h
- group work 15.0 h
- guided self-study 5.0 h
- lecture 25.0 h

Lecturers in academic year 2017-2018

Van Camp, John
LA07 lecturer-in-charge

Offered in the following programmes in 2017-2018

<table>
<thead>
<tr>
<th>Programme</th>
<th>crds</th>
<th>offering</th>
</tr>
</thead>
<tbody>
<tr>
<td>Master of Science in Nutrition and Rural Development (main subject Human Nutrition)</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Master of Science in Bioscience Engineering: Chemistry and Bioprocess Technology</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Master of Science in Food Technology</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Master of Science in Bioscience Engineering: Food Science and Nutrition</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Master of Science in Nutrition and Rural Development</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Exchange Programme in Bioscience Engineering: Cell and Gene Biotechnology (master's level)</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Exchange Programme in Bioscience Engineering: Chemistry and Bioprocess Technology (master's level)</td>
<td>5</td>
<td>A</td>
</tr>
<tr>
<td>Exchange Programme in Bioscience Engineering: Food Science and Nutrition (master's level)</td>
<td>5</td>
<td>A</td>
</tr>
</tbody>
</table>

Teaching languages

English

Keywords

Human nutrition and health, food science, functional foods

Position of the course

To study the relationship between nutrition and health in humans. The principles to evaluate nutrient requirements and nutritional status of humans (for individuals as well as for populations) are given. Techniques to formulate diets are explained and applied to protein, fat and micronutrient mixtures. In a more theoretical part, 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. The development of functional foods and their mechanism of action in humans is explained. A group discussion on a nutritional subject is included.

Contents

1. Introduction
2. The nutritional status in Belgium and Europe: 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

(Approved)
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 athletes

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

Final competences
1. The student has knowledge about 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.

Conditions for credit contract
Access to this course unit via a credit contract is determined after successful competences assessment.

Conditions for exam contract
This course unit cannot be taken via an exam contract.

Teaching methods
Guided self-study, group work, lecture, seminar: coached exercises

Extra information on the teaching methods
Theory: oral lectures Exercises: theoretical exercises are performed with the whole group while tasks are performed in smaller groups

Learning materials and price
There is an English syllabus with literature references available. Cost: 12 EUR

References

Course content-related study coaching
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.

Evaluation methods
end-of-term evaluation and continuous assessment

Examination methods in case of periodic evaluation during the first examination period
Written examination, open book examination, oral examination

Examination methods in case of periodic evaluation during the second examination period
Written examination, open book examination, oral examination

Examination methods in case of permanent evaluation
Assignment

Possibilities of retake in case of permanent evaluation
examination during the second examination period is possible

Extra information on the examination methods
Theory: written examination for foreign students. Partly written and partly oral examination for Dutch-speaking students
Exercises: written examination (open book)
For the non-period aligned examination a case-study needs to be presented and defended, and a report has to be submitted

Calculation of the examination mark
Theory: period aligned evaluation (60%) Exercises: period aligned evaluation (20%) and non-period aligned evaluation in the case of group works (20%)

(Approved)
Students who eschew period aligned and/or non-period aligned evaluations for this course unit may be failed by the examiner.