Hochschule Niederrhein

University of Applied Sciences

Faculty of Food and Nutrition Sciences

Course Handbook

International Minor in Food and Nutrition Sciences

Short description

Aim of the programme

The International Minor in Food and Nutrition Sciences is designed to enable international students and students from the Faculty of Food and Nutrition Sciences to broaden their knowledge of food and nutrition sciences and to gain experience in using English as a working language.

Content and structure

Course title (module number)	Type of class (Credit points)	Page
Food Biotechnology (MI 01)	Seminar course (3 CP)	3
Nutrition Science (MI 02)	Seminar course (3 CP)	4
Food Analysis (MI 03)	Seminar course (3 CP)	5
Applied Dietetics (MI 04)	Seminar course (3 CP)	6
Laboratory Alignment Course (MI 05)	Project (3 CP)	7
Research Project (MI 06)	Project (3 CP)	8
Intercultural (MI 07)	Seminar course (6 CP)	9
Language Course (MI 08)	Exercise (6 CP)	10
Total	30 CP	

Food Biotechnology

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 01	81 h	3	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Seminar Food Biotechnology	SL	30	51	8 students	3

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Graduates of the course have a basic theoretical understanding of food biotechnology topics. They have basic knowledge of biotechnological and microbiological cultivation and fermentation processes in food production and are familiar with the most important microorganisms relevant to food biotechnology. Students understand enzymatic systems and gain knowledge about the use of enzymes in food technology processes. Using selected examples, students learn about specific, relevant (fermentation) processes and regulatory mechanisms. They assess these mechanisms particularly with regard to the industrial production of food and market requirements.

Content

Current topics will be discussed and practised, e.g.

- Fundamentals of food biotechnology
- Fermentation processes in food production
- Relevance of microorganisms in industrial processes
- Extraction and characterization of bioactive ingredients, e.g. from fungi
- Use of enzymes in the food industry
- Introduction to genetic engineering

Form of examination

Written exam

Prerequisite for the awarding of credit points

Grade in the examination at least 4.0

Applicability of the course

- Bachelor of Science *Food Science*: Assignment as compensation for the module part "Lebensmittelbiotechnologie " of the module " Lebensmitteltechnologie "
- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

Prof. Dr. Miriam Sari

Other information

- Literature recommendation will be provided at the beginning of the course.

Nutrition Science

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 02	81 h	3	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Nutrition Science	SL	30	51	14 students	3

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Students are familiar with guidelines, statements of professional societies and current studies, reviews and meta-analyses on relevant topics in the field of nutrition science.

Students are able to conduct literature searches, assess sources and interpret their results from an evidence-based perspective.

They know guideline processes and understand evidence-based research work. They are able to evaluate and critically discuss findings.

Content

Current topics in nutrition science will be discussed, e.g.

- Nutrition recommendations and their scientific background and practical implementation
- Bioactive substances in food
- Critical nutrients, vulnerable populations
- Dietary supplements - benefits and risks
- Selected aspects of dietetics and clinical nutrition

Form of examination

Oral examination

Prerequisite for the awarding of credit points

Grade in the examination at least 4.0

Applicability of the course

- Bachelor of Science *Nutrition Science*: Assignment as compensation for the course "Spezialseminar Ernährungsforschung "
- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

Prof. Dr. Michaela Noreik

Other information

Literature recommendation will be provided at the beginning of the course.

Food Analysis

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 03	81 h	3	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Food analysis 1	SL	30	51	8 students	3

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Students are able to assess food by applying general and analytical methods to determine their ingredients (nutrient analyses). Students acquire knowledge of analytical approaches and principles in order to be able to characterise and evaluate the quality and composition of food.

Content

- Carrying out analytical tests on commercially available foods to analyse nutrients
- Analytical determination of individual nutrients in solid semi-solid and liquid foods
- In-depth study of the methods in seminars

Form of examination

Written term paper (analyses report)

Prerequisite for the awarding of credit points

Grade in the examination at least 4.0

Applicability of the course

- Bachelor of Science *Food Science*: Assignment as compensation for the module part "Lebensmittelanalytik 1" of the module " Lebensmittelanalytik "
- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

Dr. Christina Rehagel

Other information

Literature recommendation will be provided at the beginning of the course.

Applied Dietetics

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 04	81 h	3	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Specific food preparation	P	30	51	14 students	3

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Students know the basics of food processing in the household, have skills in the production of food and beverages. They learn various processing methods with regard to a healthy diet. They prepare and evaluate dietary concepts as well as

calculate nutritional values and plan menus.

Content

Current topics will be discussed and practised, e.g.

- Special food preparation
- Practical implementation of nutritional recommendations and dietary guidelines
- One focus is on the application of preparation, cooking, and processing techniques

Form of examination

Regular attendance

Prerequisite for the awarding of credit points

Regular attendance

Applicability of the course

- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

Annemarie Cormann

Other information

Literature recommendation will be provided at the beginning of the course.

Laboratory Alignment Course

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 05	135 h	3	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Laboratory alignment course	P	30	51	1-4 students	3

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

The laboratory alignment course is tailored to provide students with a foundation in laboratory work practices essential for conducting experiments and analyses in the field of food science and nutrition. The course includes individual contents about working in the laboratory, depending on the choice of the semester project.

In practical and individual laboratory sessions, students will gain proficiency in using equipment, apparatus and methods to successfully work safely and independently.

Content

- Safety when working in laboratories for food and nutrition sciences
- Learning of use of equipment and apparatus for chemical, (bio)technological or analytical laboratories
- Basic chemical testing and sample preparation methods
- Calibration and validation of test methods
- Scientific evaluation of test results

Form of examination

Regular attendance

Prerequisite for the awarding of credit points

Regular attendance

Applicability of the course

- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

NN

Other information

Literature depends on the chosen research project and recommendation will be provided at the beginning of the course.

Research Project

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 06	81 h	3	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Research Project	Pr	30	51	1-4 students	3

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Students have gained an in-depth knowledge on a specific aspect of nutrition or food sciences. They are familiar with the objectives, methods, components, framework conditions and phases of the execution of a project and have learnt project skills such as teamwork, meeting deadlines, creativity, scientific planning, decision-making and evaluation.

Content

Practice-orientated project with a defined project objective. The topic to be addressed can cover any area of nutrition or food sciences and is worked on in groups.

Form of examination

Written term paper

Prerequisite for the awarding of credit points

Grade in the examination at least 4.0

Applicability of the course

- Bachelor of Science *Food Science*: Assignment as compensation for the module part " Semesterprojekt" of the module "Projekt- und Kommunikationskompetenz"
- Bachelor of Science *Nutrition Science*: Assignment as compensation for the module part " Semesterprojekt" of the module "Vertiefungsprojekt 3 + Semesterprojekt"
- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

Respective project lead

Other information

Literature recommendation will be provided at the beginning of the course.

Intercultural HR Management and Leadership

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 07	150 h	6	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Intercultural Communication	SL	60	90	8 students	6

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Content

The course will be run by the faculty of Business Administration and Economics.

- Basics of human resource management with a view to an international environment: staff recruitment, staff management, payroll, layoffs.
- Basics of motivational research: self-affirmation, good performance, recognition, responsibility, promotion, advancement.
- Leadership styles in an intercultural context: task-related, process-related, structure-related, personal.
- Cultural issue basics: central cultural studies and cultural models, corporate forms shaped by culture.

Form of examination

Oral examination

Prerequisite for the awarding of credit points

Grade in the examination at least 4.0

Applicability of the course

- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

Prof. Jonas Jasper

Other information

Literature recommendation will be provided at the beginning of the course.

Language Course

Course number	Workload	Credits	Semester	Frequency of the offer	Duration
MI 08	81 h	6	N/A	Every summer term	1 semester

Course name	Type of class	Contact time [hrs]	Self-study [hrs]	Planned group size	Credits
Different courses offered by the language centre	Ü	60	51	-	6

Type of course

L = Lecture, E = Exercise, P = Practical course, SC = Seminar course, S = Seminar, Tut = Tutorial, Pr = Project

Objectives

Students develop language skills in German or deepen their language skills in a language other than the mother tongue or language taught at the outgoing university according to the Common European Framework of Reference for Languages (CEFR).

Content

The courses are run by the Language Centre. The content of the course is based on the required level of the Common European Framework of Reference for Languages (CEFR).

Available courses:

1. German as a foreign language (depending on your current level A1-B1) (3 KP)
2. Language Competence (German) B2 (6 KP)
3. Business German I B2/C1 (6 KP)
4. Business German II B2/C1 (6 KP)
5. Any other language course offered by the Language Centre, e.g. Chinese, Japanese, Dutch, French, Italian, Russian

Language courses in the mother tongue or the language taught at the outgoing university cannot be awarded.

Form of examination

The type of examination will be announced at the beginning of the course in the Language Centre of the Hochschule Niederrhein.

Prerequisite for the awarding of credit points

Grade in the examination at least 4.0

Credit points can only be awarded after the course certificate has been submitted to the student office.

Applicability of the course

- Incoming Students: International Minor Food and Nutrition Sciences

Course coordinator

NN

Other information

Literature recommendation will be provided at the beginning of the course.