



Module Handbook

M5 a58 Global Food, Nutrition and Health

Faculty of Life Sciences: Food, Nutrition and Health

University of Bayreuth

General Information and Reading Notes

A central component of the Bologna process is the modularisation of degree programmes which means a switch from the former course system to a modular system by grouping thematically related courses into course bundles – or modules.

This module handbook contains the description of all modules offered in the degree programme. The module handbook gives an overview and provides students, prospective students, and other interested persons with information on the content of the individual modules, their qualification goals, as well as qualitative and quantitative requirements.

Table of Contents and Index

The table of contents provides an overview of the module areas and modules of the degree programme. The information in brackets after the title of a module contains the date on which its description was last updated. Example of notation: 24W denotes the winter semester 2024/25, 25S denotes the following summer semester 2025.

The index at the end of the module handbook lists all modules of the degree programme in alphabetical order.

Module description

The description of a module includes its learning content, objectives, and assessment methods. For modules with multiple assessments, the weight of each assessment toward the final grade is specified. The *examination and study regulations* for each degree program define the scope and duration of assessments.

The QR code in the description links to the module's website. There, you can find the courses that belong to this module and see which other degree programs include this module.

Legal Disclaimer

Module descriptions provide students with detailed information regarding the content and the structure of the modules of a degree program. Only the relevant *examination and study regulations* are legally binding.

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Fak721259: Food and Society

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Bartelmeß, Tina; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam or essay	1	5

Prerequisites

None

Literature recommendations for preparation:

- Gibson, M. (2020). Food and Society. London: Elsevier.
- Murcott, A. (2019). Introducing the sociology of Food & Eating. London, New York: Bloomsbury Academic.

Learning objectives

This module explores the social and cultural aspects of food. The students acquire basic knowledge about social science theories of food and nutrition. Based on this knowledge, students are able to identify social structures and cultural norms that influence food habits in real life contexts. Furthermore, students are able to explain how food sociology can help to conceptualise the connections between individual food habits and wider social patterns. Finally, students are able to recognize the importance of food in the development of identities, cultures, group dynamics, symbolism, communication, and other sources of meaning in human life.

Learning contents

- Sociological Perspectives on Food & Nutrition
- Food at Home & Food in Public
- Food & Identity
- Food & Migration
- Food in the Media & Digital Food Cultures
- Transforming Food Cultures

Type and scope of the courses

Lecture and seminar (2 hours per week)

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Fak721260: Global Health Policy

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Dorlach, Tim; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam or semester tasks	1	5

Prerequisites

None

Learning objectives

Students acquire a basic understanding of the political institutions and actors that shape global health outcomes. Based on this knowledge, they are able to analyze current developments in global health policy and to evaluate pertinent reform proposals.

Learning contents

- Political Determinants of Health
- Institutions and Actors in Global Health Policy
- Reform Options for Global Health Policy

Type and scope of the courses

Lecture (2 hours per week)

Literature:

Clinton, C. & Sridhar, D. (2017). Governing global health: Who runs the world and why?. Oxford University Press.

Chorev, N. (2017). The World Health Organization between North and South. Cornell University Press.

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Fak322806: Medicine and Climate Change I

Valid from: 01.04.2022

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam		1	5
Prerequisites None			
Learning objectives The students acquire fundamental knowledge about organ systems, their anatomical localizations, their physiological functions and climate change associated diseases and health-related consequences. In this context, students will develop a deeper understanding of the multiple interrelationships between climate changes and human health.			
Learning contents - Determinants of health - Organ systems: anatomy and physiology - Climate change-associated diseases			
Type and scope of the courses Lecture (2 hours per week) Seminar (2 hours per week)			
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Fak726835: Sustainable Food Production

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Vlot-Schuster, Anna Cornelia; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam	3	3
Presentation	2	2

Prerequisites

None

Learning objectives

A sufficient supply of nutritious food is an essential prerequisite of health, while the continuous rise of the world population demands (more) sustainable ways of production. At the global scale, climate change poses a major threat to food security and planetary health, which includes human and environmental health aspects. An understanding of Global Food, Nutrition and Health therefore requires knowledge about (i) the ingredients of food and their health impacts, (ii) food systems and the production of plant and animal food products, and (iii) the influence of climate change on the physiology of food crops. Further, knowledge of modern breeding techniques and their influence on environmental and human health will be discussed as a prerequisite of change towards more sustainable production strategies.

Based on this interdisciplinary approach, the students will realize how food, nutrition, climate change, and health are interwoven at a global scale. They can develop strategies aiming at changes in food systems towards securing human and planetary health. They will be aware of the existing challenges and the need to advance technologies and their beneficial application to secure food for current and future generations.

Learning contents

Lectures will summarize the components of food and their connection to human health, give an overview of modern food production strategies of plant and animal food products, and will focus on the influence of climate change on plant physiology and how these play into plant breeding schemes for sustainable food production. In the Seminar, students will discuss current issues in the realm of sustainable food production, connecting sustainability to human health. For this purpose, students will prepare and share presentations on topics, including Food Production, Sustainability, Planetary Health Diet, One Health Concept, Modern Breeding Targets, and Smart Farming.

Type and scope of the courses

Lecture (2 hours per week)
Seminar (2 hours per week)

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Fak726836: Nutrition and Public Health

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency winter semester	Person responsible for the module von Philipsborn, Peter; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam or semester tasks		1	5
Prerequisites None			
Learning objectives Students acquire a basic understanding of the relationship between nutrition and public health. Based on this knowledge, they are able to analyze how the health of populations can be improved through nutrition interventions and evaluate current public health nutrition policy proposals.			
Learning contents - Fundamentals of Nutrition and Malnutrition - Fundamentals of Public Health - Public Health Nutrition Interventions			
Type and scope of the courses Lecture and seminar (3 hours per week)			
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Fak721264: Global Political Economy of Food

Valid from: 01.04.2026

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Dorlach, Tim; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam or semester tasks	1	5

Learning objectives

Students acquire a basic understanding of the political and economic processes that shape the world food system and global food security. Based on this knowledge, they are able to analyze current developments in global food governance and evaluate pertinent reform proposals.

Learning contents

- Structure and Development of the World Food System
- Institutions and Actors of Global Food Governance
- Reform Options for Global Food Governance

Type and scope of the courses

Lecture (2 hours per week)

Literature:

Literature recommendation:

Paarlberg, R. (2023). Food Politics: What Everyone Needs to Know (3rd ed.). Oxford University Press. (ebook available via the library)

Clapp, J. (2020). Food (3rd ed.). Polity. (various physical copies available in the library)

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Fak721268: Research Strategies and Methods

Valid from: 01.04.2026

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Bartelmeß, Tina; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam or essay	1	5

Prerequisites

Literature recommendations for preparation:

Flick, U. (2022). An Introduction to Qualitative Research. Sage.

Learning objectives

The students acquire detailed and differentiated knowledge about the research process in the social sciences with a specific focus on qualitative research methods. Based on this knowledge, they can choose the appropriate data collection method for various research questions. Furthermore, they can develop designs for qualitative studies on food, nutrition, and health by defining suitable approaches for data collection and conducting their research. Finally, students acquire a basic understanding of qualitative data analysis. Based on this knowledge, they can perform basic data analysis tasks.

Learning contents

- Research paradigms and designs in social sciences
- Qualitative research methods (interviews, focus groups, participant observation, document analysis)
- Analysing and reporting qualitative data

Type and scope of the courses

seminar (2 SWS)

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Fak723347: Food, Health and Climate Communication

Valid from: 01.04.2026

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Bartelmeß, Tina; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester tasks	1	5

Prerequisites

basic knowledge on the linkages of food, nutrition, health, and climate change

Learning objectives

Climate change affects our food system and our food system has a fundamental impact on the climate. Raising awareness of these connections and promoting transformations is currently a significant challenge for food studies. In this module, students acquire detailed and differentiated knowledge of theories, strategies, and methods of climate change communication. Furthermore, they know successful strategies of public engagement for food and health-related challenges of climate change and are able to develop their own creative communication approaches.

Learning contents

- Climate change communication research: theories, strategies, approaches
- factors that influence public understanding of climate change
- food, nutrition, and health in the context of climate change
- innovative climate change communication approaches and strategies

Type and scope of the courses

Seminar (2 SWS)

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Fak726837: European and International Food and Health Law

Valid from: 01.04.2026

Teaching language English	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Grosche, Nils; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam or semester tasks	1	5

Prerequisites

None

Learning objectives

Students acquire basic knowledge about the legal principles and framework underlying health protection and food safety in European Union and International Law. Based on this knowledge, they are able to analyze and evaluate the impact of legal principles underlying health protection and food safety in the European Union in the context of global changes.

Learning contents

This course focuses on the practical application of European and international food and health law by examining specific case studies. Through in-depth analysis of real-world legal disputes, regulatory challenges, and compliance issues, students will explore key topics such as food safety, labeling, consumer protection, and international trade regulations. The seminar encourages critical discussion on the interaction between European Union law, international treaties, and national regulations.

Type and scope of the courses

Seminar (3 hours per week)

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Fak720426: Introduction to Law and Food Law

Valid from: 01.04.2020

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Purnhagen, Kai; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam		1	5
Prerequisites None			
Learning objectives At the end of the course students are expected to			
<ul style="list-style-type: none"> - Describe legal families, understanding their differences and analyze their interactions through examples - Distinguish between different branches of a legal systems and analyze their interactions through examples - Distinguish between national, international and supranational legal systems and analyze their interactions, - Distinguish between different sources of international law - Describe the main features of the TBT and the SPS agreement - Describe the features of the peaceful settlement of disputes under the WTO - Know the main aspects of International Human Rights Law - Describe the role and the characteristics of private standards - Describe the roles and functions of EU institutions, as well as the basis of their historical development - Be able to assess whether a competence is within the sphere of the EU or of the Member States - Be able to describe the ordinary legislative procedure in the EU - Understand the ‘four fundamental freedoms’ and the functioning of the internal market - Describe the “Brussel effect” - Describe the principles at the base of EU Food Law and know its main provisions - Describe the main provisions of selected pieces of EU food legislation (e.g. labelling law, novel food regulation, GMO directive, hygiene package) - Identify the main features of the CAP - Develop legal thinking skills - Be able to recall legal information (laws, interpretations, cases) from the major EU law databases, - Bring theory and practice together, applying the legal perspective acquired in the lectures to real-life examples 			
Learning contents The purpose of the course is to provide students with a well-rounded introduction to law, with a specific focus on EU Law, International Law, and EU food law. The course is divided into three thematic blocks, starting with a general introduction to law and legal thinking, followed by an introduction into International Law and institutions and by an overview on the European Union law and Food Law specifically.			
Type and scope of the courses Lecture (2 hours per week) Tutorial (2 hours per week)			
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Fak721267: International Nutrition Politics

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Dorlach, Tim; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Semester tasks		1	5
Prerequisites None			
Learning objectives Students acquire a basic understanding of international nutrition politics, in the Global North as well as in the Global South. This knowledge enables them to analyze current developments in nutrition politics, to identify reform needs, and to evaluate relevant reform proposals.			
Learning contents - International Nutrition Politics - Nutrition Politics in the Global North - Nutrition Politics in the Global South			
Type and scope of the courses Seminar (2 hours per week)			
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Fak726838: Food Supply and Quality Management

Valid from: 01.04.2026

Teaching language English	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Fikar, Christian; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam	3	3
Semester tasks	2	2

Prerequisites

None

Learning objectives

After completion of the course, students will understand key concepts of supply chain management and are able to highlight the importance of quality management within the food industry. They will be able to investigate various supply chain structures and develop concepts on how to improve process quality, transparency and coordination within such systems.

Learning contents

The course tackles:

- Introduction to food supply chains
- Supply chain drivers and metrics
- Risk management
- Food quality management concepts
- Supply chain coordination
- Business process modelling

Type and scope of the courses

Lecture (2 hours per week)

Seminar (1 hour per week)

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Fak721985: Science Communication

Valid from: 01.04.2026

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 60
Credit points (CP) 3	Frequency summer semester	Person responsible for the module Bartelmeß, Tina; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Essay		1	3
Learning objectives			
Students acquire knowledge of the theoretical foundations of communicating science to the public. They deal with specialized scientific literature and prepare it for specific target groups. They develop and practice various strategies to reach target groups effectively. In addition, students acquire skills in writing texts and designing visual representations to effectively communicate scientific findings to the public.			
Learning contents			
<ul style="list-style-type: none"> - Perspectives of research on scholarly and science communication - Target groups and their characterisation - Models, theories and approaches of science communication - Texts, visuals, types, media, and practices of science communication 			
Type and scope of the courses			
Seminar (2 SWS)			
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Fak726841: Comparative Health Systems and Policies

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam or semester tasks		1	5
Learning objectives			
<p>The aim of the course is to enable students to systematically understand, analyse and compare health systems in different countries of the world. The course will introduce key frameworks, concepts, and ideas about health systems and about measuring their performance. In addition, students will be expected to use and apply the theoretical concepts to analyse the functioning and the performance of a health system.</p>			
Learning contents			
<p>The course provides a structured overview of the main building blocks and goals of health systems, following the health systems framework of the World Health Organization (WHO). Following a general introduction, the first part of the course covers (1) health systems financing (briefly), (2) workforce, (3) service delivery, (4) medical Products, vaccines and technologies, and (5) leadership/ governance. The second part focuses on the goals of health systems, including intermediate goals (access/ coverage, quality/safety) and final goals (improved health, responsiveness, social and financial risk-protection, and improved efficiency). The course consists of lectures and exercises with group work, where students use the introduced concepts to analyse health systems in various countries.</p>			
Type and scope of the courses			
Lecture (2 hours per week)			
Seminar (2 hours per week)			
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Fak726842: Maternal and Child Nutrition Policy

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency irregularly	Person responsible for the module Dorlach, Tim; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Semester tasks		1	5
Learning objectives Students will learn about a selection of policies and programmes on maternal and child nutrition at both global and national levels. They will be able to identify the causal factors to their successes and/or failures encompassing political, social and structural aspects.			
Learning contents - The International Code of Marketing Breast-milk Substitutes - The Innocenti Declaration - The Baby Friendly Hospital Initiative (BFHI) - School feeding			
Type and scope of the courses Seminar (2 hours per week)			
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Fak726843: Global Careers in Food, Nutrition and Health

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 30
Credit points (CP) 2	Frequency winter semester	Person responsible for the module	

Assessments

Title:	Weighting:	CP:
Contribution	1	2

Prerequisites

None

Learning objectives

Students will be exposed to different career pathways in Food, Nutrition and Health. They will gain knowledge on key competencies for each of the options presented in the course, strategies for success and practical aspects to be considered for each option. Based on this knowledge, students will be prompted to plan and align their studies according to their internship/ career options of interest.

Learning contents

- Key competencies and skills required for different career options in global food, nutrition and health
- Finding internship and career opportunities in global food, nutrition and health.
- Preparing effective application documents (motivation letter & CV).

Type and scope of the courses

Seminar (2 hours per week)

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Fak726840: International Human Rights Law and Health

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours)	Self-study hours (in hours)
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Grosche, Nils; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester tasks	1	5

Prerequisites

Prior completion of the courses "Introduction to Law and Food Law" and "International and European Food and Health Law" is useful but not a requirement.

Recommendes literature for preparation:

- Virginia A. Leary, "The Right to Health in International Human Rights Law" available at <https://www.jstor.org/stable/4065261>
- Michael Da Silva, "The International Right to Healthcare: A Legal and Moral Defence" available at <https://repository.law.umich.edu/mjil/vol39/iss3/3/>

Learning objectives

The overall objective of this course is to provide students with knowledge of the interrelationship between health and human rights, particularly the right to health under international human rights law. This course will provide an overview of the international human rights law system, such as treaties and general comments, governing the right to health as well as regional legal instruments with a focus on the European Union and African Union systems. It will evaluate the role of institutional actors, including the World Health Organization, UN Special Rapporteur on the Right to Health and public health professionals in promoting the right to health. It will also explore mechanisms for realizing the right to health, including international procedures, litigation and advocacy. Particular attention will be paid to emerging issues related to the right to health including climate change, migration and vulnerable groups.

Learning contents

By the end of the course, students should have solid knowledge of:

- i. Scope and content of the right to health.
- ii. Interrelationship between the right to health and other human rights, such as the right to food.
- iii. International human rights law and institutions regulating the right to health.
- iv. State obligations and mechanisms for realizing the right to health.
- v. Protection of vulnerable groups in the context of health.
- vi. Contemporary issues affecting the right to health.

Type and scope of the courses

Seminar (4 hours per week)

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Fak218114: Wirtschaftsgeographie

Valid from: 01.10.2018

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 240
Credit points (CP) 10	Frequency winter semester	Person responsible for the module Ouma, Stefan; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Verortungen der Globalen Ökonomie: Aktuelle Fragestellungen, Praxis, Kritik	1	5
Übung ggf. mit 2 Geländetagen	1	5

Learning objectives

On the one hand, the module deals with current issues in economic geography that are particularly relevant with regard to overcoming social challenges in a globalised economy. Students will learn to situate important economic upheavals in historical and social terms, to deal with them using appropriate economic geography approaches and to critically reflect on the responses to them in economic and planning practice. On the other hand, the students' critical problem recognition, reflection and problem-solving skills are promoted in the module as part of a practical exercise. The results generated should make an emancipatory-progressive contribution to overcoming the previously identified upheavals and social challenges - preferably 'on the doorstep'.

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Fak726898: Food Trade Law

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Purnhagen, Kai; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Term paper	1	5

Prerequisites

Introduction to Law and Food Law

Learning objectives

At the end of the course students are expected to

- Understand relevant international instruments pertaining to the international trade law area
- Apply the fundamental principles of the WTO framework
- Utilize the rules of major trade agreements
- Understand the complexities between international trade law, environment, agriculture, public health and intellectual property rights
- Understand finance related aspects that influence foreign trade and investment

Learning contents

This course offers an overview of Global Economic Law, with an emphasis on the food aspects. It will introduce students to the treaty architecture of the World Trade Organization (WTO) and certain other regional trade arrangements. Topics will include the historical, legal and regulatory rationale as well as political economy of the international trade framework, the relationship between international and domestic law and regulation in particular in the light of state arbitration and compliance issues, the standard-setting and the WTO dispute resolution system. Particular attention will also be directed to the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures.

Type and scope of the courses

Lecture (2 hours per week)

Tutorial (2 hours per week)

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Fak726839: Data Analysis and Statistics

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module von Philipsborn, Peter; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam	1	5

Prerequisites

None

Learning objectives

The students acquire basic knowledge about data types, descriptive and inferential statistics. Furthermore, they will learn about types of data visualisation and their advantages and disadvantages. They can use software to analyse and visualise data. Based on this knowledge they are able to choose the appropriate types of analysis and visualisation for a range of problems.

Learning contents

- Types of data
- Descriptive statistics
- Inferential statistics
- Data visualisation

Type and scope of the courses

Lecture and seminar (2 hours per week)

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Fak721273: Migration and Health

Valid from: 01.04.2025

Teaching language English	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Module exam		1	5
Essay and presentation			
Prerequisites None			
Learning objectives The aim of the module is to learn how health and health care can be influenced by migration. Students will gain basic knowledge about interactions between migration, legal regulations, and climate change as well as between migration movements and social conditions.			
Learning contents -Intro to Migration and Health: social determinants, human rights, how to ensure equity and overcome migration blindness. -Migration and Access to Healthcare: Background and Legal Frameworks. -Migrants' Access to Healthcare in High-Income Countries: The Case of Germany -Migration perspective from Latin America -Climate Justice -Causes and dimensions of migration -Migration and Integration center visit			
Type and scope of the courses Seminar (3 hours per week)			
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Fak285764: Changes in Agroecosystems

Valid from: 01.10.2023

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Professor Dr. Diamantopoulos	

Assessments

Title:	Weighting:	CP:
Written examination Soil Structure and Soil Functions	1	2
Semester-long tasks in Global Change and Agroecosystems	0	3

Written exam (graded) and seminar presentation (ungraded)

Prerequisites

None

Learning objectives

The objective of this module is to gain a thorough understanding of natural processes of water flow and storage in and between the various compartments of the environment and to learn about various impacts on global water resources.

Learning contents

The module is divided into a lecture/exercise about fundamental hydrological processes and a seminar with interactive content.

The focus of the lecture are the hydrological cycle and the water balance equation. Processes of water movement through the compartments of the atmosphere, biosphere and geosphere and their interactions are discussed in detail. Furthermore, aspects of chemical and ecological water quality and strategies for protecting surface- and groundwater are presented. In the seminar, we discuss current risks for and impacts on water resources in a global context. Students select a topic and present the results of their literature review to their fellow students, with the aim to stimulate a critical discussion also of potential mitigation strategies. The student presentations may be complemented by presentations of external experts.

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Fak220621: Biodiversity, Climate Change and Health

Valid from: 01.04.2020

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Thomas, Stephanie; Dr.	

Assessments

Title:	Weighting:	CP:
Written elaboration and contributions (ungraded)	2	2
Presentation (graded)	3	3

Prerequisites

None

Learning objectives

At the end of this course, the students will have acquired a good understanding of how drivers such as loss of biodiversity, land use change or climate change can impact on human and animal health.

Learning contents

Health implications of Global Change:

The lecture synthesizes information on the most important interlinkages between biodiversity, climate change and health. It covers the concepts of one health, and planetary health and includes an overview of related Sustainable Development Goals, CBD Aichi Targets, and the joint work program of CBD and WHO.

Current Research in Health implications of Global Change:

In the seminar we review and discuss current contributions which cover the biodiversity – climate change – health nexus especially for zoonotic infectious diseases, with a special focus on global change drivers such as biodiversity loss, land use change and climate change. This knowledge is used to articulate future research priorities.

Type and scope of the courses

V Health implications of Global Change (2 SWS, 2 CP) S Current Research in Health implications of Global Change (2SWS, 3CP)

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Fak213377: Introduction to R

Valid from: 01.04.2016

Teaching language German/English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 30
Credit points (CP) 2	Frequency winter semester	Person responsible for the module Samimi, Cyrus; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written elaboration (ungraded)	1	2

Prerequisites

None

Learning objectives

Aim of this course is to teach practically oriented information about data handling including the analysis and graphical presentation of data as well as simulation with the programming language R.

Learning contents

Assignments, objects, data types, data structures, and how to handle them; input and output of data; graphs; functions; efficient programming;

Type and scope of the courses

Lecture/Tutorial (2 hours per week)

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Fak323127: Environment and Economics

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Stadelmann, David; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written or oral exam or report or term paper		1	5
Prerequisites None			
Learning objectives In this module, students will first be acquainted with basic conceptual tools in economics. They will learn how economic analysis can help to understand and solve problems related to the environment, climate, and public health. Course participants will understand the importance of incentives, markets, market failure, and the interaction between markets and government. The module focuses on an economical way of thinking about real world problems. Special attention will be given to the health care sector. It is being taught, how the economic efficiency in health care can be measured and how economic evaluations can be performed.			
Learning contents			
<ul style="list-style-type: none"> - Analyze the importance of economic incentives - Understand the relevance of market failure and solutions to market failure - Evaluate link between economic performance and the environment - Analyze economic consequences of climate change and costs/benefits of climate protection - Perform economic evaluations related to health care sector - Explore types of economic evaluations (cost-minimization analysis, cost-effectiveness analysis, cost-utility analysis) - Programme budgeting and marginal analysis in health care sector 			
Type and scope of the courses			
Lecture (3 hours per week)			
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Fak324906: Impact Entrepreneurship – Developing Social and Ecological Innovations

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 135
Credit points (CP) 6	Frequency every semester	Person responsible for the module Jakob, Eva; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester tasks	1	6

The module examination consists of a presentation and the submission of a written solution concept.

Prerequisites

None

Learning objectives

The aim is to connect interdisciplinary master's students from all faculties and to enable them to jointly develop solutions for social and/or ecological problems using innovative methods. Examples of these are acute and global challenges such as biodiversity loss, climate change, environmentally friendly production/additive manufacturing, nutrition and smart cities.

By taking the course, sustainable, impact-oriented action can be experienced and solutions to global problems are developed. Through this course, you will not only learn a range of methods to address global challenges, but also develop a deeper understanding of these challenges, which is especially enhanced through interdisciplinary collaboration.

Learning contents

You will learn advanced knowledge in the field of impact entrepreneurship (i.e., solving social and/or ecological problems through innovative methods). Furthermore, you will learn how to develop your own sustainable solutions for social and/or ecological challenges. In addition to obtaining a foundation of scientifically based content on impact entrepreneurship, you will learn the necessary tools and their application in practice-oriented workshops and will also be personally advised in a team by the interdisciplinary lecturers.

Schedule:

1. Kick-off event (topic/problem presentation)
2. Interactive workshops (development of ideas/solutions, business models)
3. Independent further development of the project
4. Personal coaching (individual team advice)
5. Final presentations
6. Submission of the concept

Type and scope of the courses

Lectures, interactive workshops and personal coaching (3 hours per week)

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Fak320210: Principles of Entrepreneurship

Valid from: 01.04.2020

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 120
Credit points (CP) 6	Frequency every semester	Person responsible for the module Baum, Matthias; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester tasks	1	6

Evaluation of the exercises (presentations and elaborations of case studies). The final grade will be composed of the partial performances of the four exercises.

Prerequisites

Knowledge of the Bachelor courses Business Model Creation and Foundations of Entrepreneurship is helpful.

Learning objectives

Students learn about entrepreneurial processes and entrepreneurial decision-making as well as how to create innovative ideas and how to move from such ideas to an entrepreneurial firm. Moreover, students become acquainted with the basic principles of analyzing business opportunities, designing feasible business models and what it takes to develop innovative startup companies. Students further develop competencies in performing industry and competitor analyses, designing customer oriented value propositions and get to know the basics of corporate entrepreneurship.

Learning contents

In the lecture, students learn the basic principles of entrepreneurship, get acquainted with entrepreneurial processes, learn how to conduct feasibility analyses, how to design economically sustainable business models and how corporate entrepreneurship helps established organizations to stay innovative. In the exercises part, students have to apply their knowledge and solve small case studies.

Type and scope of the courses

Lecture (2 hours per week)

Tutorial (2 hours per week)

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Fak726335: Advanced Plant Breeding and Sustainable Food Production

Valid from: 01.04.2025

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Vlot-Schuster, Anna Cornelia; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written or oral exam	3	3
Essay or presentation	2	2

Written exam on lecture content (60%)

Presentation (40%)

Prerequisites

Basic knowledge of genetics.

Prior completion of the following modules is recommended:

Analytics in Life Sciences – from molecules to cells (for FSS students), Crop Plant and Animal Biology (for FQS students) or Sustainable Food Production (Components and Production of Plant and Animal Foods, for GFNH students).

Learning objectives

The students acquire detailed and differentiated knowledge about plant breeding and its relevance to produce food. Furthermore, they gain in-depth knowledge about modern genomic techniques, including RNAinterference and CRISPR-Cas genome editing, and their possible applications to plant production. Based on this knowledge, they can identify and optimize strategies to support the production of healthy food in the face of climate change.

Learning contents

Lecture content will apply the principles of Mendel's genetics to analyse conventional and modern plant breeding methods, including marker-assisted breeding. These will be reflected against advanced genomics and recombinant DNA technologies, including RNAinterference. Modern genomic techniques, including CRISPR-Cas genome editing and its derived applications (e.g. prime editing) will be introduced. Finally, repercussions of climate change will be discussed, focusing on both the quantity and quality of yield.

In the seminar students will apply and deepen their knowledge from the lectures in theoretical exercises, focusing on genetics, marker-assisted breeding, genomics, and CRISPR-Cas experimental designs. Students will further gain hands-on experience with a practical CRISPR-Cas exercise in the lab. Finally, students will present their experimental result and reflect it against dedicated articles from relevant plant breeding-related scientific literature, gaining insights into the state-of-the-art in plant breeding research.

Type and scope of the courses

Lecture (2 hours per week)

Seminar/ laboratory practical (2 hours per week)

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Fak323553: Climate Change

Valid from: 01.04.2022

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Oral exam or report or presentation or term paper	1	5

Prerequisites

None

Learning objectives

This module is interdisciplinary. In the lecture, students acquire fundamental knowledge, wherefore global environmental changes can be described by the students. Multifaceted consequences will be reflected in the seminar.

Based on this knowledge, students are able to define transformation needs in different sectors and on all levels, whose implementation is necessary for a healthy life under consideration of the planetary boundaries.

Learning contents

Basic principles of the climate system; naturally-occurring climate, variability, climate change in the past; reconstruction of past climate; natural forcing-factors, circulation dynamics; human impact on the climate system; global warming; Greenhouse effect; land use change; aerosols; ozone depletion; global circulation models; forecasts; scenarios; fundamentals of energy and mass balance; modelling; sensitive parameters of global change

Type and scope of the courses

Lecture (2 hours per week)

Seminar (2 hour per week)

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Fak729192: Coding & Data Science with Python for All

Valid from: 01.04.2025

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Faisal, Aldo; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester-long tasks	1	5

Prerequisites

This is an introductory course. There is no prerequisite knowledge. However, participants should be comfortable with mathematics and engineering.

Learning objectives

After the module students will have gained:

- LO1: a good understanding of, and ability to use Python Programming Language effectively;
- LO2: the ability to design and access procedural and object-orientated programming structure in Python
- LO3: a fundamental understanding of Python standards, Data Science and Deep Learning libraries and how to appropriately select and apply them to solve a given programming problem;
- LO4: the ability to create, combine and complete relevant data science pre-processing steps;
- LO5: the ability to use standard Machine Learning algorithms to interact with Big Data.

Learning contents

Computer Programming has become one of the core-desirable skills within both academic and industrial settings. The versatility of modern computer languages, the abundance of data and a high-powered computational device led to swift progress in many fields of research and industry, especially in healthcare where rapid digitalisation allows research to be accomplished using computer simulation and machine learning.

The module aims to teach students the fundamentals of Computer programming and Data Science through one of the most popular Programming languages to its readability and Flexibility: Python. In this module the students will learn:

- Fundamentals of Programming in Python
- Core design philosophies and their differences (Procedural and Object Orientated)
- Common design patterns in Python
- Introduction to standard libraries
- Introduction to popular Data Science, Machine Learning and Deep Learning Libraries

Type and scope of the courses

- Lecture (2 hours per week)
- Exercise (2 hours per week)

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Fak726348: Current Issues in Food and Health Policy

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Dorlach, Tim; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam or semester tasks		1	5
Prerequisites none			
Learning objectives Depending on the chosen course.			
Learning contents Courses that can be chosen in this module include: - Food Security in Africa (course number: 70500, instructor: Maryanne Wamahiu)			
Type and scope of the courses Depending on the chosen course.			
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Fak729191: Digital Health for All

Valid from: 01.04.2025

Teaching language English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Faisal, Aldo; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester-long tasks	1	5

Prerequisites

Students from all faculties with an interest in (digital) health

Learning objectives

Upon completion of the course, students should:

- Understand the fundamentals of the application of data-driven methods in medicine and health
- Gain a qualitative insight into the principles of artificial intelligence and how they serve as the cornerstone of digital health
- Gain a more detailed understanding of some concrete application examples in the field of digital health
- Be able to read and interpret scientific literature in this rapidly moving field.

Learning contents

This course provides students from any background with a fundamental understanding of digital healthcare, AI for medicine, and the literature in this field.

Topics covered include:

- Data Science & Data Engineering
- Wearables (Personal Digital Health)
- Telemedicine, eHealth, mHealth
- Electronic Health Record, Health Data and their use
- Integrated Care (Digital Public Health)
- Healthcare systems and their differences
- Design, Implementation, Evaluation of Digital Health, and Ethical Issues

Type and scope of the courses

Lecture (2 hours per week)

Exercise (2 hours per week)

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Fak521281: Foundations of Sustainability

Valid from: 01.04.2024

Teaching language German	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency every semester	Person responsible for the module Steinbauer, Manuel; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam or presentation or term paper		1	5
Prerequisites None			
Learning objectives Die Studierenden erkennen die Relevanz der Nachhaltigkeit und können den Nachhaltigkeitsbegriff differenziert erläutern. Sie sind in der Lage, das Thema historisch einzuordnen und auf verschiedenen Ebenen (regional, national, international) zu reflektieren. Es besteht ein umfassendes Verständnis der Nachhaltigkeit aus der Perspektive verschiedener Fachrichtungen (Umweltnaturwissenschaft und Ökologie, Wirtschaft- und Sozialwissenschaft, Unternehmensethik, naturwissenschaftliche und technische Lösungsansätze). Auf der Basis von Beispielen können die Studierenden Nachhaltigkeitsstrategien aus verschiedenen Perspektiven kritisch beurteilen. Sie erkennen ferner Grenzen der Umsetzung und können neue Strategien eigenständig entwickeln.			
Learning contents Vorlesung: - Nachhaltigkeit: Begriffsdefinition und deren Relevanz (Vom Bericht an den Club of Rome bis zur Agenda 2030 – Konjunktoren und Meilensteine des Nachhaltigkeitsdiskurses; Starke und schwache Nachhaltigkeit – Bedeutung und Wirkung unterschiedlicher Nachhaltigkeitskonzepte; Klimakrise und Artensterben – Hinweise zu aktuellen Handlungsbedarfen) - Konzepte der Nachhaltigkeit und Ansätze einer "Großen Transformation" (Die Große Transformation und ein neuer Welt-Gesellschaftsvertrag – der Ansatz des Wissenschaftlichen Beirats Globale Umweltfragen; Wege zur Nachhaltigkeit – das Konzept des Transition Managements und Kritik; Die Transformation vor Ort gestalten – aktuelle Ansätze einer nachhaltigen Praxis) - Ökologie und Umweltnaturwissenschaften (Raumzeitliche Einordnung des menschlichen Einflusses in ökologischen Systemen; Tragfähigkeit und Belastbarkeit von Ökosystemen, auch als Existenzgrundlage des Menschen; Menschlich verursachter Klimawandel, Extremereignisse und Naturkatastrophen; Natürliche Rohstoffe und Degradationsprozesse) - Wirtschaft- und Sozialwissenschaft (Nachhaltigkeit und Generationengerechtigkeit aus ökonomischer Sicht; Externalitäten und Internalisierungsprobleme; Instrumente, Umsetzung, Anreize, polit-ökonomische Aspekte) - Ethik (Güterabwägung zwischen Hinsichten der Nachhaltigkeit; Soziale Nachhaltigkeit und Gerechtigkeit; Management von Nachhaltigkeit: Werte- und Strategieentwicklung, Best practices; Umsetzung von Nachhaltigkeit: Handlungsfelder, Rankings und Ratings, Kennzahlen, Berichterstattung) - Naturwissenschaftliche und technische Lösungsansätze (Erneuerbare Energien aus naturwissenschaftlicher und technischer Sicht, Energiewende und regenerative Energieträger; Nachhaltige Chemie, Substitution und Recycling kritischer Elemente) Seminar: Die Studierenden und Professorinnen und Professoren reflektieren gemeinsam zukunftsorientierte Lösungsansätze zur Bewältigung der dringendsten Herausforderungen. Die Diskussion wird durch aktuelle Beispiele aus der Nachhaltigkeitsforschung verschiedener Disziplinen angeregt.			
Type and scope of the courses Lecture (2 hours per week) Seminar (1 hour per week)			
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Fak729056: Future-oriented agricultural systems - Interdisciplinary perspectives on the agriculture of tomorrow

Valid from: 01.04.2025

Teaching language English	Duration one semester	Contact hours (in hours) 15	Self-study hours (in hours) 75
Credit points (CP) 3	Frequency winter semester	Person responsible for the module Baldermann, Susanne; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Presentation		1	3
Prerequisites none			
Learning objectives By the end of this lecture series, students will:			
<ul style="list-style-type: none"> - understand current research approaches in interdisciplinary agricultural systems research, critically examine them and reflect on current debates on this topic. - analyze the complex dimensions of future agricultural systems and grasp the systemic dimension of the transformation of agricultural systems, - identify systemic challenges and innovation potential in the context of the agricultural and food transition and identify their intersections - discuss and critically reflect on scientific contributions, - derive interdisciplinary research approaches 			
Learning contents			
<ul style="list-style-type: none"> - Different lectures from experts acting in the BMFTR funding line "Agricultural Systems of the Future" from various disciplines from universities and institutions outside the UBT. - https://agrarsysteme-der-zukunft.de/en/home 			
Type and scope of the courses			
lecture (1 hour per week)			
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Fak223346: Global Urban Health

Valid from: 01.04.2022

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Rothfuß, Eberhard; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written or oral exam or report or term paper		1	5
Prerequisites None			
Learning objectives In the seminar, students acquire knowledge on the development of urban areas in a global perspective. They will learn how health can be/is influenced by demographic structure, labour and which (urban and regional) concepts and theories exists to reflect on societal health effects.			
Learning contents - Development of urban areas and associated health conditions in the Global North and South - Interactions of society, demographic structure, labour and health - Theories and concepts on cities, urbanity, sustainability and life quality			
Type and scope of the courses Seminar (2 hours per week)			
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Fak311385: Health Policy

Valid from: 01.10.2015

Teaching language German	Duration one semester	Contact hours (in hours)	Self-study hours (in hours)
Credit points (CP) 6	Frequency summer semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Gesundheitspolitik	1	6

Benoteter Leistungsnachweis auf Basis einer einstündigen Klausur

Prerequisites

Grundlagen des Aufbaus von Gesundheitssystemen. Umfassende Grundkenntnisse zur Finanzierung und Leistungserbringung (öffentlicher und privater Sektor).

Learning objectives

Ziel dieser Veranstaltung ist es, die Grundlagen der Gesundheitspolitik im Hinblick auf Landes-, Bundes- und Europapolitik systematisch aufzuarbeiten. Priorität haben in der Veranstaltung deshalb Struktur, Prozesse und Akteure/Stakeholder, die für die Gesundheitspolitik in Deutschland relevant sind. An aktuellen Fallbeispielen, wie der politischen Diskussion der Zukunft der privaten Krankenvollversicherung werden entsprechende Inhalte in den Übungen diskutiert und vertieft.

Learning contents

- Grundbegriff zur Politik und Gesundheitspolitik
- Vorstellung der Stakeholder/Akteure, die in die Gesundheitspolitik involviert sind
- Gesundheitssystemgestaltung, Interventionstypen und -ebenen
- Gesetzgebungsverfahren Land, Bund, Europa
- Bundespolitik, Besuch der Parteifractionen (Exkursion Berlin)
- Landespolitik am Beispiel des Freistaates Bayern, Besuch der Parteifractionen (Exkursion München)
- Bedeutung der Europapolitik
- Interessenvertretungen und Lobbyismus
- Wissenschaftliche Zugänge zur Gesundheitspolitik

Type and scope of the courses

Vorlesung und Übung

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Fak310611: Healthcare Marketing

Valid from: 01.04.2015

Teaching language German	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Nagel, Eckhard; Prof. Dr. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam		1	5
Prerequisites Es gibt keine formale Teilnahmevoraussetzung			
Learning objectives Ziel dieser Veranstaltung ist es, den Studierenden ein Grundverständnis des Marketingkonzepts bei der Anwendung im Gesundheitswesen zu vermitteln. Hierfür wird zunächst ein Überblick über die Grundlagen des Marketings geschaffen. In diesem Zusammenhang wird vor allem auf die Besonderheiten des Dienstleistungsmarketings eingegangen. Darauf aufbauend ist das zentrale Ziel der Transfer des Marketingkonzepts auf die unterschiedlichen Gesundheitseinrichtungen unter Berücksichtigung der jeweiligen Spezifika.			
Learning contents - Grundkonzepte des Marketings und des Marketingmanagements mit spezifischem Blick auf die Gesundheitswirtschaft - Besonderheiten des Dienstleistungsmanagements mit spezifischem Blick auf die Gesundheitswirtschaft - Marketingrelevante Rahmenbedingungen des Gesundheitswesens - Möglichkeiten der Gesundheitskommunikation - Zielgruppensegmentierung - Übertragung des Marketingkonzepts auf unterschiedliche Gesundheitseinrichtungen			
Type and scope of the courses Vorlesung (2 SWS) Übung (1 SWS)			
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Fak729054: Interdisciplinary Lecture Series

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 15	Self-study hours (in hours) 45
Credit points (CP) 2	Frequency irregularly	Person responsible for the module Dorlach, Tim; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Essay		1	2
Prerequisites none			
Learning objectives By the end of this lecture series, students will:			
<ul style="list-style-type: none"> - Critically analyze how political frameworks, sociological dynamics, and interdisciplinary perspectives shape food systems, dietary patterns, and public health outcomes. - Engage with and reflect on current academic debates related to nutrition, food policy, and sociology and other interdisciplinary perspectives. - Develop the ability to formulate informed questions, connect insights across disciplines, and evaluate the broader social and political consequences of changing nutrition practices. - Strengthen skills in academic communication through reflective writing, and active participation. 			
Learning contents			
<ul style="list-style-type: none"> - Different lectures from experts from various disciplines from universities and institutions outside the UBT. - The exact topic is redefined for each run. 			
Type and scope of the courses			
lecture (1 hour per week)			
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Fak726013: Lecture Series “Planetary Health – Connecting the dots”

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 60
Credit points (CP) 3	Frequency summer semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Essay or presentation	1	3

Prerequisites

None

Learning objectives

After attending the lecture series, students will:

- have acquired basic knowledge of the most important political aspects of environment, climate change and health worldwide.
- be able to put different subject areas into context with environment, climate change and health.
- be able to name relevant international actors working on climate change and health.
- be able to identify factors influencing climate and environmental change
- have acquired competences to develop their own project ideas

Learning contents

You are interested in the greatest global challenges for health in our times? You wonder about how we want to live in the future? The lecture series Planetary Health - Connecting the Dots students will introduce students to knowledge about causal relations between environment, climate change and health. The series takes a broad integrative, transdisciplinary perspective, including natural science, public health, economics, and social science. It aims to inspire future pioneers of change. During the lectures students will hear from international experts from various disciplines joining forces, connecting the dots for a healthy planet.

Type and scope of the courses

Different lectures from experts from the university of Bayreuth as well as from different fields.

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Fak726012: Malnutrition – from Theory to Practice

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency summer semester	Person responsible for the module Nagel, Eckhard; Prof. Dr. Dr.	

Assessments

Title:	Weighting:	CP:
Semester tasks	1	5

Prerequisites

The course is limited in admission. Interested students should be dietitians or have a background in nutrition.

Learning objectives

The course will provide students with knowledge and skills on assessment, diagnosis and management of malnutrition using the NCP model. Furthermore, the students will discuss policy dilemmas about malnutrition and evaluate appropriate diagnosis tools from a global perspective. A special focus will be on interdisciplinary teamwork in the treatment of malnutrition.

Type and scope of the courses

Seminar (2 hours per week)

Notes

This course is an external course at our partner university Tel-Hai-College Israel.

The lecturers are: Josefa Kahal; Dr. Galia Shefel-Hilel

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Fak312080: Nutritional Medicine

Valid from: 01.10.2015

Teaching language German	Duration one semester	Contact hours (in hours) 45	Self-study hours (in hours) 105
Credit points (CP) 6	Frequency winter semester	Person responsible for the module Nagel, Eckhard; Prof. Dr. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam	1	6

Prerequisites

Für dieses Modul wird der erfolgreiche Abschluss folgender Module vorausgesetzt: Humanbiologie und Molekular-und Zellbiologie bzw. der Nachweis gleichwertiger Kompetenzen

Learning objectives

Studierende haben Kenntnisse zur Physiologie des Gastrointestinaltrakts und zur Verstoffwechslung von Mikro- und Makronährstoffen. Sie kennen den Nährstoffbedarf gesunder Erwachsener sowie den Bedarf in speziellen Lebensphasen. Studierende verfügen über Wissen zu Krankheitsursachen und Krankheitsverlauf ernährungsabhängiger Erkrankungen und können deren Ernährungstherapie herleiten.

Learning contents

Es werden physiologische und soweit erforderlich biochemische Grundlagen, wie beispielsweise der Nährstoffbedarf gesunder Erwachsener sowie der Bedarf in speziellen Lebensphasen und die Nährstoffaufnahme und-verstoffwechslung im menschlichen Körper thematisiert.

Anhand der Physiologie des Gastrointestinaltrakt wird weiterhin die Pathophysiologie ernährungsabhängiger Erkrankungen (u.a. Adipositas, Diabetes mellitus, Herz-Kreislauf-erkrankungen, Osteoporose, Karies) dargestellt und Therapieoptionen vorgestellt.

Type and scope of the courses

Vorlesung (2 SWS)

Übung (1 SWS)

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Fak726152: Nutritional Physiology – from Cells to Organisms

Valid from: 01.10.2025

Teaching language English	Duration one semester	Contact hours (in hours) 75	Self-study hours (in hours) 105
Credit points (CP) 6	Frequency winter semester	Person responsible for the module Haderer, Marika; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written exam	1	3
Semester tasks	1	3

Prerequisites

none

Learning objectives

After completing this module, the students will be able to (i) delve into the intricate relationship between nutrition and physiology and (ii) explore how nutrients impact the functioning of cells, tissues, and the entire organism. Through interdisciplinary approaches, the students will gain a comprehensive understanding of nutritional biochemistry, metabolism, and physiology with emphasis on latest research to create a solid foundation for a career in nutrition, health sciences or related fields.

Learning contents

The lecture will cover:

- gastrointestinal tract anatomy
- Cellular nutrition
- Tissue- and organ-level physiology
- Nutritional biochemistry
- Nutritional genetics
- Nutritional epigenetics

The practical work will include:

- microscopy analysis
- protein digestion/quantification methods
- titration experiment

Type and scope of the courses

Lecture (2 hours per week)

Student-based Presentations + Practical work in the lab (3 hours per week)

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Fak729055: Practice in Nutrition Science Communication

Valid from: 01.04.2025

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Henkel-Oberländer, Janin; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Semester-long tasks		1	5
Script (40%) and podcast or video (60%)			
Prerequisites none			
Learning objectives The students acquire detailed and differentiated knowledge about communication with a focus on nutritional facts. This will include speech and voice training as well as social media training. Based on this knowledge, they will be able to design an idea for a podcast or video on nutritional facts.			
Learning contents - Introduction into research design (speech and voice training; social media training) - Literature research - Data visualisation - Creating a podcast or a video			
Type and scope of the courses Seminar (2 hours per week)			
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Fak726933: Science, law & society: Food innovations and alternative proteins

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Purnhagen, Kai; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written or oral exam	1	5

Learning objectives

The course is based on an interdisciplinary setting where students apply various methods from different fields to investigate the impact of regulatory frameworks on the case study of alternative proteins.

At the end of the course, students are expected to:

- define and identify different sources of alternative proteins
- possess adequate knowledge of the main regulatory frameworks applicable to alternative proteins on the global scene, with a specific focus on the European Union
- be able to reconnect the adoption of alternative proteins to the modern sustainability challenges
- be able to identify political and socio-economic issues behind the acceptance of alternative proteins in different countries and context
- understand how different political decisions and subsequent regulatory treatments can affect the development of food innovations.

Learning contents

The course provides students with an introduction to alternative proteins. The course covers the basic scientific aspects of alternative protein production. The course focuses explicitly on the relevance of alternative proteins for the sustainability transition of modern food systems.

Students will dive into the regulation and politics of alternative proteins, learning to identify political, environmental, and cultural reasons behind their promotion and/or rejection. Students will learn to assess the impact of different regulatory frameworks on the development of food innovations. The course will also highlight opportunities of collaboration with the global network of the Good Food Institute through the synergies with the Bayreuth-Kulmbach Alt Protein Society.

Type and scope of the courses

Seminar (2 SWS)

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Fak726015: Scientific Writing for Planetary Health

Valid from: 01.04.2024

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 60
Credit points (CP) 3	Frequency summer semester	Person responsible for the module Quentin, Wilm; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Semester tasks	1	3

Prerequisites

None

List of preparatory reading

- The Lancet 2015: Planetary health: a new science for exceptional action
- Transdisciplinary Research Priorities for Human and Planetary Health in the Context of the 2030 Agenda for Sustainable Development
- Writing a scientific article: A step-by-step guide for beginners
- HERA EU Research Agenda

Learning objectives

The aim of this module is to acquire skills in scientific writing and to gain insight into inter- and transdisciplinary research in the field of planetary health.

Learning contents

The course will introduce the basics of scientific writing. It will consist of overview presentations about essential elements, including writing an introduction, methods, results, and conclusion section, visualising results, writing an abstract, and developing a title. In addition, students will learn about different types of journals, factors to consider when selecting a journal, the peer-review process, and how to respond to reviewer comments. Each class will consist of a theoretical introduction to these topics, and the practical application of this knowledge. In addition, most classes will include a group presentation of students, discussing an existing paper in the field of planetary health.

Type and scope of the courses

Seminar (2 hours per week)

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Fak520318: Sport Ecology

Valid from: 01.04.2020

Teaching language German/English	Duration one semester	Contact hours (in hours) 60	Self-study hours (in hours) 90
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Steinbauer, Manuel; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Written/oral exam/report/presentation	1	5

Prerequisites

None

Learning objectives

Upon completion of the module Sport Ecology, students understand the interactions between sports and ecological systems and are able to illustrate them with practical examples. They can identify quantitative relationships regarding the effect of outdoor sports on ecological systems from scientific publications and reflect them critically.

Learning contents

Students learn the complex and dynamic relationship between sport and the environment. The courses impart the importance of nature sports, their potential of conflict with goals in nature and environmental protection and the potential of sports in conveying ecological understanding and derived action strategies. Students collaboratively develop conceptual, functional, and methodological foundations to an economic view on ecology and nature protection and to an analysis of the interactions between human behaviour and ecological systems in the area of sports.

Type and scope of the courses

- 1) Sportökologische Wechselwirkungen (Interactions of sport and ecology), Kleingruppenübung (Exercise), 2 hours per week
- 2) Wirkungsanalyse von Outdoorsportarten (Impact Assessment of Outdoor Sports), Hauptseminar (Seminar), 2 hours per week

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Fak323526: Tools in Social Research

Valid from: 01.04.2022

Teaching language English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency winter semester	Person responsible for the module Nagel, Eckhard; Prof. Dr. Dr.	

Assessments

Title:	Weighting:	CP:
Oral exam or report or presentation or term paper or essay	1	5

Prerequisites

None

Learning objectives

The students acquire detailed and differentiated knowledge about the research process in the social sciences with a specific focus on qualitative and quantitative research methods. Based on this knowledge, student are able to choose the appropriate method of data collection for a range of research questions. Furthermore, they are able to develop designs for qualitative and quantitative studies. Finally, students acquire a basic understanding of qualitative and descriptive quantitative data analysis.

Learning contents

Free choice of different elective subjects:

- Qualitative research methods (interviews, focus groups, participant observation, document analysis)
- Quantitative research methods (questionnaires, experimental approaches)
- Descriptively analysing and reporting quantitative and qualitative data

Type and scope of the courses

Seminar (2 hour per week)

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Fak726932: Topics in Politics and Society

Valid from: 01.04.2026

Teaching language German/English	Duration one semester	Contact hours (in hours) 30	Self-study hours (in hours) 120
Credit points (CP) 5	Frequency irregularly	Person responsible for the module Dorlach, Tim; Prof. Dr.	
Assessments			
Title:		Weighting:	CP:
Written exam or term paper or essay or semester tasks		1	5
Prerequisites Depending on the chosen course.			
Learning objectives The students acquire detailed knowledge about political and social processes that are relevant in shaping global food, nutrition and health.			
Learning contents Courses that can be chosen in this module include: - Regional Integration for Development (course number: 50076) - Communicating Planetary Health: Media, Research, and Practice (course number: 30070) - Hauptseminar Humangeographie (Critical Food Geographies (Master Seminar) (course number: 20736)			
Type and scope of the courses Depending on the chosen course.			
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Fak721278: Mandatory Internship (Praktikum)

Valid from: 01.10.2025

Teaching language German/English	Duration one semester	Contact hours (in hours) 0	Self-study hours (in hours) 300
Credit points (CP) 10	Frequency every semester	Person responsible for the module Dorlach, Tim; Prof. Dr.	

Assessments

Title:	Weighting:	CP:
Internship report	1	10

The module examination is not graded but assessed on a pass/fail basis.

Prerequisites

None

For more information, see the current version of the "Guidelines for the mandatory internship in the study programme "Global Food, Nutrition and Health" (M.Sc.)", which can be found in the e-Learning course "Study Service Faculty VII".

Learning objectives

Students gain practical experience related to their study programme and their professional career goals. They can apply their theoretical knowledge in practical activities or research and also improve their soft skills.

Learning contents

depending on internship provider

Type and scope of the courses

full-time internship of (at least) 8 weeks or equivalent part-time internship

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Fak721239: Master's Thesis – Global Food, Nutrition and Health

Valid from: 01.10.2020

Teaching language German/English	Duration	Contact hours (in hours)	Self-study hours (in hours) 900
Credit points (CP) 30	Frequency every semester	Person responsible for the module All professors	

Assessments

Title:	Weighting:	CP:
Master Thesis	1	30

Prerequisites

It is recommended to have completed the modules from semesters 1-3

Learning objectives

Students acquire the ability to work independently on a comprehensive research question within a given period using scientific methods.

In addition to the technical competence required for this, students have further developed their methodological competence and self-competence in the process.

Learning contents

Formulating an adequate research question (topic identification), developing a concept, literature research, data collection and evaluation or literature and source analysis, writing a scientific thesis.

Type and scope of the courses

Independent research under supervision

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