Module Handbook

Bachelor Degree Program:

*Health Science, B.Sc.*

The Department of Sport and Health Sciences

Module: Composition and Function of the Human Body I

1. General data

Title of module
Körperstrukturen und –funktionen
Composition and Function of the Human Body

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
7

2. Workload

Contact Hours: 60 hours
Self-study: 150 hours
Total: 210 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

➤ to understand and describe the composition and the structures of the human musculoskeletal system
➤ to fundamentally understand the health effects of preventive and rehabilitative measures on the body
➤ to remember structures and functions of biomolecules and the mechanisms of biochemical reactions
to understand and describe metabolic processes in the body on the basis of biochemistry

to give an overview of the pathways of basal metabolism, its networking and its regulation

Content

- Biochemical basis of metabolism:
  - Liquid hormones
  - Structures and functions of macronutrients
  - Digestion and absorption
  - Important nutrient-related metabolic pathways
  - Krebs cycle and respiratory chain as a basis for further events in the field of medicine, health and nutrition.

- Functional anatomy of the musculoskeletal system:
  - Bones of the human body
  - Ligaments of the human body
  - Tendons of the human body
  - Muscles of the human body
  - Peripheral nervous system
  - Functional aspects of the individual structures under different conditions such as age, sport and work world
  - Health aspects

Teaching and learning methods

The module consists of 2 lectures with blended learning components. The content of the module is conveyed through lectures and presentations. Students will be encouraged to study the literature and the substantive discussion of the topics.

Courses

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Biochemical basis of metabolism</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Hande Hofmann</td>
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2. **LV**

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Functional anatomy of the musculoskeletal system</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Thorsten Schulz</td>
</tr>
</tbody>
</table>
**Literature**


Horn E: Biochemie des Menschen. Thieme, Stuttgart 2012

Königshoff M, Brandenburger T: Kurzlehrbuch Biochemie. Thieme, Stuttgart 2012

Additional current primary literature

**Recommended prerequisites**

Human biological and biochemical knowledge of secondary level II is a prerequisite to understanding the contents.

4. **Study/Examinations**

The written examination is held in a classroom. Within a limited time and without aids, it will be demonstrated that metabolic processes in the body based on the biochemistry are understood and that the metabolic pathways, their connectivity and their regulation, as well as the functions and structures of the human body can be given again. The answers require choosing from among given multiple choice options.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Thorsten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Dr. Schulz</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:thorsten.schulz@tum.de">thorsten.schulz@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Fundamental Competences in Psychology and Pedagogy

1. General data

Title of module
Psychologische und pädagogische Basiskompetenz
Fundamental Competences in Psychology and Pedagogy

Module level
Bachelor degree program

Module subtitle
Required

Semester duration
One semester

Frequency
WS

Language
German or English

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to recall goals, tasks and methods of psychology and classify them by definition in the canon of scientific disciplines (humanities/natural/social science)
- to recall fundamentals of cognitive psychology, learning, emotion, motivation psychology and social psychology.
to describe the physiological and neurological basis of human experience and behavior and to generalize to different fields of application.

- to name main lines of development, issues, methods and results of education and to describe their significance for action in everyday working life, especially in the field of counseling/intervention.

**Content**
- Objectives and tasks of psychology;
- Fundamentals of
  - Cognitive psychology;
  - Learning, emotional and motivational psychology;
  - Social psychology;
- Selected topics in psychophysiology and neuropsychology;
- Exemplary representation of relevant studies;
- Topics in applied psychology;
- Directions of educational science;
- Education and training;
- Extracurricular activity areas: e.g., adult education, leisure education.

**Teaching and learning methods**
The module consists of two lectures. The students are encouraged to deeper engagement with the material through exercises as part of the lecture.

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to Psychology</td>
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<tr>
<td>SWS</td>
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</tr>
<tr>
<td>Docent</td>
<td>Prof. Jürgen Beckmann</td>
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2. **LV**

<table>
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<tr>
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<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to Education</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Volker Lippens</td>
</tr>
</tbody>
</table>

**4. Study/Examinations**
The module examination consists of a written test, in which students will retrieve and remember different theories and findings of psychology and pedagogy without aids. An-
swering the questions requires some personal formulations and some choosing from among multiple choice options.

**Literature**


**Recommended prerequisites**

None

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Jürgen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Dr. Beckmann</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:juergen.beckmann@tum.de">juergen.beckmann@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Society and Communication

1. General data

Title of module
Gesellschaft und Kommunikation
Society and Communication

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
- to remember and understand fundamental sociological and communication science concepts
- to remember and understand the organization and structure of society and the mass media with respect to legal, cultural and economic aspects.
Content
The introductory lectures will provide students with central theories and concepts and, at the same time, offer a compact overview of sociology as well as an overview of communication and media studies. The main topical contents of the courses are:
- Introduction to the issues and theories of sociology, socialization and life cycle,
- Sociological fundamentals of social inequality, culture, gender, family,
- Social developments such as migration, urbanization, industry and labor,
- Information and communication models,
- Fundamentals of individual, organizational and mass communication,
- Media structure and media organization

Teaching and learning methods
The module consists of two lectures. The contents of the lecture are conveyed via a PowerPoint presentation and through multi-perspective presentations and video recordings.

Courses
1. LV
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<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to sociology</td>
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<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Elisabeth Wacker</td>
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2. LV
<table>
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<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to communication and media studies</td>
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<tr>
<td>Docent</td>
<td>Prof. Michael Schaffrath</td>
</tr>
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</table>

Literature


Beck, Klaus (2012): Das Mediensystem Deutschlands. Strukturen, Märkte, Regulierung, Wiesbaden: VS.


**Recommended prerequisites**
None

3. **Study/Examinations**
The written examination is held in a classroom. Students will be required to demonstrate that, within a limited time and without the use of aids, concepts and models of communication and media science are understood. The answers require both independent formulations and the selection of multiple-choice answers.

4. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Michael</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Apl. Prof. Dr. Schaffrath</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:michael.schaffrath@tum.de">michael.schaffrath@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Dimensions of Health

1. General data

Title of module
Dimensionen von Gesundheit
Dimensions of Health

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students are able
- to recall definitions and dimensions of health (also as distinguished from sickness) and to follow scientific discussions pertaining to the health sciences,
to historically correlate different definitions of health and disease and to relationally identify the strengths and weaknesses of these definitions, to understand the biomedical model, the social epidemiology and the homeostatic models,

to analyze boundaries and overlaps between the models,

to know and describe professional fields of health care.

Content

- Development and significance of definitions and terminology
- Concepts and models of health and disease
- Medical-scientific models of health (Western perspective)
- Culture-dependent understanding of health and disease
- Salutogenesis
- Determinants of health (age, gender, residence, resources, socio-economic situation)
- Environment and health
- Work and health
- Physical, psychological and social conditions and contexts of health development
- Dissemination of health and disease conditions in the population
- Structures of health care
- Widespread diseases and care requirements
- Occupational fields and settings (lecture)
- Importance and role of WHO

Teaching and learning methods

The module consists of 2 lectures with blended learning components. The contents of the lecture are conveyed through multi-perspective presentations. Students are encouraged to study relevant literature and to go engage with the topics.

Courses

1. LV

<table>
<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to the dimensions of health</td>
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<tr>
<td>SWS</td>
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<tr>
<td>Lecturer</td>
<td>Prof. Elisabeth Wacker</td>
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2. LV

<table>
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<tr>
<th>Type</th>
<th>Lecture series</th>
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<tbody>
<tr>
<td>Name</td>
<td>Occupational fields and settings of health care</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
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<tr>
<td>Lecturer</td>
<td>Prof. Elisabeth Wacker, various</td>
</tr>
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</table>
Literature


Recommended prerequisites

None

4. Study/Examinations

The written examination is held in a classroom. Students will be required to demonstrate that, within a limited timeframe and without the use of aids, they can recall concepts and models of health and disease as well as fundamental principles of health care and that they can perform evaluations and analyses. The answers require a detailed formulation.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Elisabeth</th>
</tr>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Basic Skills of Science

1. General data

**Title of module**
Basiskompetenz Forschung
Basic Skills of Science

**Module level**
Bachelor degree program

**Module subtitle**
Required

**Semester duration**
One semester

**Frequency**
WS

**Language**
German

**ECTS**
5

2. Workload

Contact Hours: 60 hours
Self-study: 90 hours
Total: 150 hours

3. Description

**Targeted learning outcomes**
After participating in the module, students will be able:
- to explain the fundamentals of scientific work, the scientific literature and citations, as well as scientific theory and to apply selected required programs in the area of IT for scientific work
- to describe health science research directions and foundations of scientific theory
to understand principle sports and health science relationships and to specify the provided research methods for specific scientific questions.

**Content**

Fundamentals of sport and health science theory: What is sport science, what is health science? What research methods are used in these research disciplines?

Introduction to scientific work: Theoretical/practical, issues, overview of work techniques and research methods, researching, quoting, presenting, publishing scientific research methods of the various sub-disciplines in overview (lecture series).

Computer programs: MS Office, CITAVI

**Teaching and learning methods**

Lecture with PowerPoint and video clips

**Courses**

1. **LV**

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<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to scientific work</td>
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<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Veit Senner</td>
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2. **LV**

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<tr>
<td>Name</td>
<td>Fundamentals of scientific theory</td>
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<td>Prof. Jürgen Beckmann</td>
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3. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture series</th>
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<tbody>
<tr>
<td>Name</td>
<td>Research methods in sports and health science</td>
</tr>
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<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Joachim Hermsdörfer, various</td>
</tr>
</tbody>
</table>
Literature
Karl R. Popper: Logik der Forschung, Hrsg. von Herbert Keuth. 11. Aufl. durchges. u. erg.
Röthig u.a. (Hrsg.) Sportwissenschaftliches Lexikon, 7. Auflage. Schorndorf 2003
Hamburg 2002
Wydra G: Wissenschaftliches Arbeiten im Sportstudium, 2nd ed. Aachen 2005

Recommended prerequisites
Knowledge in natural sciences and mathematics at the school-leaving exam level

4. Study/Examinations
The written examination is held in a classroom. In this, it will be demonstrated that, in limited time and without aids, principle sports and health science relationships can be recognized, and the presented research methods for specific scientific questions can be selected. The answers require choosing from among given multiple choice options.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Ansgar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Schwirtz</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Ansgar.Schwirtz@tum.de">Ansgar.Schwirtz@tum.de</a></td>
</tr>
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</table>
Module: Composition and Function of the Human Body II

1. General data

Title of module
Körperstrukturen und –funktionen II
Composition and Function of the Human Body II

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
SS

Language
German

ECTS
7

2. Workload

Contact Hours: 60 hours
Self-study: 150 hours
Total: 210 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to understand the structure, development and function of the human body as well as individual specific organ systems, to describe them, and moreover apply biomedicine of the body to specific problems
- to understand preventive and rehabilitative influences on the body from the point of view of anatomy and physiology of the internal organs.
Content
Anatomy and physiology of the human body:
- Structure/composition and function of the cell and tissue;
- Structure and function of the muscles and physiological functioning;
- Structure and function
  - of the cardiovascular system (heart and blood vessels),
  - of the blood and immune system,
  - of the lymphatic system,
  - of the respiratory tract;
- Structure/composition and function
  - of the endocrine system,
  - of the digestive system,
  - of the genitourinary system,
  - of the central nervous system.

Teaching and learning methods
The module consists of 2 lectures with blended learning components. The content of the module is conveyed through lectures and presentations. Students will be encouraged to study the literature and the substantive discussion of the topics.

Courses
1. LV

<table>
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<tr>
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<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Anatomy and physiology of the internal organs</td>
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<tr>
<td>SWS</td>
<td>4</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Renate Oberhoffer</td>
</tr>
</tbody>
</table>

Literature
Silverthorn DU: Physiologie. Pearson, München 2009
Faller A, Schünke M: Der Körper des Menschen. Thieme, Stuttgart 2012;
Platzer W: Taschenatlas der Anatomie. Thieme, Stuttgart 2011;

Additional current primary literature

Recommended prerequisites
The module "Composition and Function of the Human Body I" is a prerequisite to understanding the contents, since the physiological contents are based on an understanding of biochemistry.
4. **Study/Examinations**
The written examination is held in a classroom. In this, in a limited time and without aids, it will be demonstrated that the structures, functions and relationships of anatomy and physiology of the human body are understood. The answers require choosing from among given multiple choice options.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Renate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Oberhoffer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:praeventive-paediatrie@tum.de">praeventive-paediatrie@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Learning and Behavior

1. General data

Title of module
Lernen und Verhalten
Learning and Behavior

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
SS

Language
English

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
- to differentiate different types of learning, motivation and self-regulation processes
- to describe and understand the cognitive and neurophysiological sequence of learning and motivation processes
to describe conditions under which those values and behavioral habits are learned and stabilized

- to specify how different training programs can be designed for relearning and which type of learning model appears appropriate for which change training

- to specify conditions under which motivation for behavioral change arises and can be maintained.

**Content**

- Neurophysiological basis of learning, motivation and self-regulation;
- Learning and motivation theories;
- Basic concept of motivational conditions and their design;
- Conditions and processes of learning approaches and behavior or behavioral styles;
- Behavioral change through unlearning and relearning;
- Design of learning or behavior modification processes,
- Didactic basic orientations

**Teaching and learning methods**
The module consists of two lectures. Students are encouraged to deeper engagement with the material through activating exercises as part of the lecture.

**Courses**

1. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Learning and Behavior</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Jürgen Beckmann</td>
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2. LV

<table>
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<tr>
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<tbody>
<tr>
<td>Name</td>
<td>Motivation and volition</td>
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<tr>
<td>SWS</td>
<td>2</td>
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<tr>
<td>Docent</td>
<td>Dr. Peter Gröpel</td>
</tr>
</tbody>
</table>

**Literature**


**Recommended prerequisites**
Lecture Introduction to Psychology

4. **Study/Examinations**
The module examination consists of a written test, in which students retrieve questions about different theories and findings in the area of learning and behavior without tools and will describe processes and conditions. Answering the questions therefore requires some choosing from among given multiple choices and partly from one’s own formulations.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Jürgen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Dr. Beckmann</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:juergen.beckmann@tum.de">juergen.beckmann@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Diversity and Inclusion

1. General data

Title of module
Diversität und Inklusion
Diversity and Inclusion

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
SS

Language
German

ECTS
7

2. Workload

Contact Hours: 90 hours
Self-study: 120 hours
Total: 210 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
➢ to understand how to deal with diversity as a social field of action,
➢ to explain inclusion and exclusion processes of contemporary society – both socio-historically and theoretically,
to understand how "differences are produced", why this creates different participation opportunities, and what actually makes a difference,

- to understand how diversity characteristics such as non/disability, age and/or gender act as a social "place indicator".

**Content**

- Meaning and development of definitions and terminology
- Basic knowledge of inclusion and exclusion theories
- System theory perspective on inclusion
- Theories of social inequality and exclusion
- Inclusion and participation (legal requirements, the demands of society, political strategies)
- Self-determination and participation claims of social movements
- Social construction of normality and deviance
- Epistemological perspectives on the "practice of discrimination"
- Construction of disability and/or gender as a form of "Doing Difference"
- Recognizing and using potentials of diversity (human resources, social justice discourse)
- Successfully dealing with difference and diversity in society
- Diversity management

**Teaching and learning methods**

The module consists of 3 lectures with blended learning components. The contents of the lecture are conveyed through multi-perspective presentations. Students are encouraged to study relevant literature and to engage actively with the topics.

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Age, impairment/disability</td>
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<tr>
<td>SWS</td>
<td>2 SWS</td>
</tr>
<tr>
<td>Lecturers</td>
<td>Prof. Elisabeth Wacker/Stefanie Frings</td>
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2. **LV**

<table>
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<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Gender and diversity research</td>
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<tr>
<td>SWS</td>
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<tr>
<td>Lecturers</td>
<td>Prof. Elisabeth Wacker/Laura Dobusch</td>
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3. LV

<table>
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<tr>
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<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>Lecturers</td>
<td>Stefanie Frings/Dominik Baldin</td>
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</tbody>
</table>

**Literature**


**Recommended prerequisites**

Basic knowledge of sociology, English language (literature partly in English)

4. Study/Examinations

On the basis of a written examination students will be required to demonstrate that they understand the complex field of diversity and inclusion and the processes at play there. The answers require independent formulations.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Elisabeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Health Care Systems

1. General data

Title of module
Gesundheitssysteme
Health Care Systems

Module level
Bachelor degree program

Module subtitle
No entry

Semester duration
One semester

Frequency
Open

Language
German

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to remember and understand fundamental developments of the German health care system as well as various European health systems and to remember their basic data
to remember and understand the basic principles of social security in case of illness and to remember and understand the basic structures and classifications of the health system

- to remember and understand structural and control problems in health care
- to remember and understand fundamental economic theories that are important for health care
- to remember and understand when health care resources are used efficiently or inefficiently and how this is influenced by the behavior of different actors in the health market
- to understand economic concepts of the assessment of health and to apply them to current challenges in the health care market

**Content**

Historical development of health care - basic principles of social security in case of illness - basic structures and basic health care data - system theoretical consideration of health care (including introduction to cross-country analysis) - health care finance - introduction to economics and economic principles - economic valuation of life and health - people as producers of health - justice and market failure in health care (in particular efficiency problems) - optimal design of health insurance contracts - market-specific considerations (doctors, hospitals, health insurers, pharmaceutical manufacturers and other health care providers (e.g., primary prevention))

**Teaching and learning methods**

The necessary knowledge is provided by presentations of the lecturers. Students are encouraged to study the literature and the substantive discussion of the topics.

**Courses**

1. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Health Care Policy (Health Care Policy)</td>
</tr>
<tr>
<td>SWS</td>
<td>2 SWS</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Andreas Beiners</td>
</tr>
</tbody>
</table>
2. LV

<table>
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<tr>
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<th>Lecture</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Health Care Economics (Health Care Economics)</td>
</tr>
<tr>
<td>SWS</td>
<td>2 SWS</td>
</tr>
<tr>
<td>Docent</td>
<td>NN</td>
</tr>
</tbody>
</table>

**Literature**

Journal articles are posted for specific topics.

**Recommended prerequisites**

None

4. Study/Examinations

The written examination is held in a classroom. In this, it will be demonstrated that, in a limited time and without aids, questions on the fundamentals of health policy and health economics (e.g., development of health care, social security principles, structural and governance issues in health care), can be answered. The questions include possible answers to a series of predetermined multiple choice options. Mathematical calculation and drawing tasks are also posed in order to test the understanding of economic theories and economic concepts of the evaluation of health.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Jörg</th>
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</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Königstorfer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:joerg.koenigstorfer@tum.de">joerg.koenigstorfer@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Research Methodologies I

1. General data

Title of module
Forschungsmethoden I
Research Methodologies I

Module level
Bachelor degree program

Module subtitle
Required

Semester duration
One semester

Frequency
SS

Language
German

ECTS
4

2. Workload

Contact Hours: 45 hours
Self-study: 75 hours
Total: 120 hours

3. Description

Targeted learning outcomes
After participating in the module, students will be able:

- to understand the fundamentals of measurement theory
- to understand the fundamentals of probability theory
- to understand and apply methods of descriptive statistics
- to plan empirical data collection and to calculate their processing
to determine descriptive statistics and present them correctly and scientifically.

**Content**
Theory of measurement, descriptive statistics, fundamentals of scientific work, fundamentals of performing studies (experimental design).

**Teaching and learning methods**
PowerPoint slides, clicker system, diagnostic procedures for conducting studies, statistical programs, online method

**Courses**
1. **LV**
<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Calculation of probability and descriptive statistics</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Lena Lämmle</td>
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2. **LV**
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<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Experimental Design</td>
</tr>
<tr>
<td>SWS</td>
<td>1</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Lena Lämmle</td>
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</tbody>
</table>

**Literature**

**Recommended prerequisites**
Basic mathematical skills, foundations of test theory

4. **Study/Examinations**
The written examination is held in a classroom. In this, it will be demonstrated that, in a limited time and without aids, questions about the fundamentals of measurement theory and probability theory can be answered and empirical data collection can be planned, represented and calculated. The answers require one's own formulations.
5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Ansgar</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Schwirtz</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Ansgar.Schwirtz@tum.de">Ansgar.Schwirtz@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Health Risks and Common Diseases

1. General data

**Title of module**
Gesundheitsrisiken und Krankheiten
Health Risks and Common Diseases

**Module level**
Bachelor degree program

**Module subtitle**
Required module

**Semester duration**
One semester

**Frequency**
WS

**Language**
German

**ECTS**
7

2. Workload

Contact Hours: 60 hours
Self-study: 150 hours
Total: 210 hours

3. Description

**Targeted learning outcomes**
After successfully completing the module, students will be able:

- to understand pathogenesis, appearance, therapy and prognosis of frequent, individual and economically important diseases of internal medicine, general medicine and orthopedics
- to understand preventive and rehabilitative measures in the topical field of orthopedics and internal medicine
- to differentiate the major mental disorders
to name the most important treatment options and to classify preventive approaches from a basic knowledge of the etiology.

**Content**
Common formation of diseases, pathophysiology, diagnosis and therapy in internal medicine, general medicine and orthopedics, which are generally referred to as diseases of civilization: Cardiovascular disease; metabolic diseases (diabetes mellitus, dyslipidemia, gout); introduction to cancer; gastritis and ulcer, liver cirrhosis and other alcohol-related diseases; renal failure, urinary tract infections; asthma and allergy, COPD; formation of the rheumatic diseases, osteoarthritis, herniated disc, spinal stenosis. Gender and age aspects of the diseases described. Structured approach to general medicine case descriptions.
Introduction to mental disorders. Representation of personal and societal causation factors. Imparting of fundamental knowledge about different possibilities of prevention and treatment methods.

**Teaching and learning methods**
The module consists of two lectures including learning objective controls with blended learning components. Students will be encouraged to study the literature and the substantive discussion of the topics. The content of the module is conveyed through lectures and presentations.

**Courses**

1. **LV**

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<thead>
<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to pathology according to ICD</td>
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<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Renate Oberhoffer</td>
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2. **LV**

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<tr>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to common mental disorders</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Jürgen Beckmann</td>
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</tbody>
</table>

**Literature**
Michels, Guido, Schneider, Thorsten (2010). Klinikmanual Innere Medizin. Springer


**Recommended prerequisites**
Module: Body structures and functions: only on the basis of anatomy and physiology and biochemistry can more profound pathophysiological features be understood
Introduction to psychology, learning and behavior, motivation and self-regulation

4. **Study/Examinations**
The written examination is held in a classroom. In this, it will be demonstrated that, in a limited time and without aids, questions about pathophysiology, diagnosis and therapy for common syndromes and different theories and findings of psychology can be answered. The answers require choosing from among given multiple choice options.

5. **Responsible for module**

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<thead>
<tr>
<th>First name</th>
<th>Renate</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Oberhoffer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:praeventive-paediatrie@tum.de">praeventive-paediatrie@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Health Behavior and Prevention

1. General data

Title of module
Gesundheitsverhalten und Prävention
Health Behavior and Prevention

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to explain what task of behavioral prevention is performed in health promotion,
- to explain, on the basis of fundamental knowledge of motivated behavior, psychological theories and models of the development and promotion of health-related behavior and health-related lifestyle,
to name the different levels, approaches and methods of behavioral interventions for prevention and health promotion and to discuss these in the light of theories and models,

to name and represent the fields of action of primary prevention according to Prevention Guidelines of SHI,

to describe and distinguish among exercise, physical activity and sports in their fundamental aspects and to describe their health-promoting effects,

to understand the impact of nutrition and diets on health and to evaluate individual examples,

to understand exercise and nutrition as factors in the context of health promotion and prevention.

Content

- Theories for recording and maintaining health-related behavior;
- Intervention approaches to change behavior and lifestyles in different approaches and at different levels;
- Effectiveness research on behavioral (change) programs;
- Definitions and principles of healthy nutrition;
- Food and eating habits;
- Field of action of "diet" in the Prevention Guidelines;
- Health-promoting and preventive dietary recommendations;
- Diets and their health-related modes of action;
- Types of nutritional and enjoyment behavior;
- Definitions and principles of exercise, physical activity and sports from a (bio) medical point of view.
- Field of action of "movement" in the Prevention Guidelines.
- Behavioral prevention approaches and programs in different settings through diet, exercise.

Teaching and learning methods

The module consists of 2 lectures with blended learning components. The content of the module is conveyed through lectures and presentations. Students will be encouraged to study the literature and the substantive discussion of the topics.
Courses

1. LV

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<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Diet, exercise and health</td>
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<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Dr. Thorsten Schulz</td>
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2. LV

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<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to health psychology</td>
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<tr>
<td>SWS</td>
<td>1</td>
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<tr>
<td>Docent</td>
<td>Dr. Felix Ehrlenspiel</td>
</tr>
</tbody>
</table>

Literature


Tomasits J, Haber P: Leistungsphysiologie: Grundlagen für Trainer, Physiotherapeuten und Masseure. Springer


Additional current primary literature

Recommended prerequisites

Modules: Body structures and functions, introduction to health science and learning and behavior. Only on the basis of anatomy and physiology, biochemistry, the definitions of health science and the psychology of motivation can prevention characteristics of exercise, nutrition and relaxation be understood.

4. Study/Examinations

The written examination is held in a classroom. In this, it will be demonstrated that questions about behavioral prevention, exercise and healthy eating can be answered in a limited time and without aids. The answers require choosing from among given multiple choice options.
5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Thorsten</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Dr. Schulz</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:thorsten.schulz@tum.de">thorsten.schulz@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Structural Prevention and Protective Factors

1. General data

Title of module
Verhältnisprävention und Schutzfaktoren
Structural Prevention and Protective Factors

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
5

2. Workload

Contact Hours: 60 hours
Self-study: 90 hours
Total: 150 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to use the ICF as a multidisciplinary, cross-national, uniform and standardized "language" to describe individuals` functional health status, impairment and social disadvantage(s) as well as the relevant environmental factors of a population,
to recall biosocial aspects of disease management taking contextual factors into account, to name successful strategies for dealing with health risks and to promote health,

to understand which aspects of behavior and relationships affect and influence health and why they entail different participatory opportunities.

Contents:

- Theories and models of disability, taking into account participatory models (empowerment/self-determination/participation/inclusion)
- Conditions for resilience and their impact on the individual level
- Resilience as a salutogenic construct
- Health risks and resources in the context of life cycle, biography and social discourses
- Social and institutional frameworks as well as standardization practices of health risks and resources
- Concepts and theories linked to the life cycle and biography

Coming to terms with social change processes through risk-related discourses and conflicts (theory & examples)

Teaching and learning methods

The module consists of 2 lectures with blended learning components. The contents of the lecture are conveyed through multi-perspective presentations. Students are encouraged to study relevant literature and to engage with the topics.

Courses

1. LV

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<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>The bio-psycho-social model in a social context</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Lecturer/s</td>
<td>Prof. Elisabeth Wacker/N.N.</td>
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2. LV

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<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Salutogenesis, participation and quality of life</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Lecturer/s</td>
<td>Prof. Elisabeth Wacker/N.N.</td>
</tr>
</tbody>
</table>

**Literature**

Ferriss, Abbott L. (2010): Approaches to Improving the Quality of Life. Heidelberg u.a.: Springer

**Recommended prerequisites**

“Introduction to Psychology” course, “Learning and Behavior” module

4. **Study/Examinations**

A written examination will evaluate acquired skills. Students will be required to demonstrate that, within a limited timeframe and without the use of aids, they can answer questions on the various health models. They will prove that they can use the ICF as a multidisciplinary, cross-national, uniform and standardized “language” to describe individuals’ functional health status, impairment(s) and social disadvantage(s) as well as the relevant environmental factors. Finally, the answers will require a detailed formulation.

5. **Responsible for module**

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<tr>
<th>First name</th>
<th>Elisabeth</th>
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</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Management in Health Care

1. General data

Title of module
Management im Gesundheitswesen
Management in Health Care

Module level
Bachelor degree program

Module subtitle
No entry

Semester duration
One semester

Frequency
WS

Language
English

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to understand basic principles and processes of business administration, entrepreneurship and management in health care
- to understand principles of company management, which manifest themselves in various management functions
to transfer learning content to health care providers of different types (e.g., associations, partnerships)

- to understand basic concepts and processes of business start-ups and to apply to current challenges in the health care market
- to independently design, present to others and discuss a basic idea in the form of a business plan in the context of a real application

**Content**

Strategic business planning - customer management - performance management - HR management - financial management and investment planning - internal and external financial reporting - internationalization and growth strategies - characteristics of entrepreneurship and management in health care - principles, processes, success and risk factors of the company's founding in health care - choice of legal form and legal aspects of founding a company - market analysis at the company's founding

**Teaching and learning methods**

The module consists of two lectures and one exercise. In the lectures, the necessary knowledge is provided by presentations of the lecturers. Students are encouraged to study the literature and the substantive discussion of the topics. In the exercise, students work on current challenges in management from the perspective of health care providers and develop relevant problem-solving strategies. They create and present a business plan and take a critical look (each in partner work).

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Introduction to Management (Introduction to Management)</td>
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<tr>
<td>SWS</td>
<td>2 SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Jörg Königstorfer</td>
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</table>
2. LV

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<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Entrepreneurship and Management in Health Care (Entrepreneurship and Management in Health Care)</td>
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<td>Docent</td>
<td>Prof. Jörg Königstorfer</td>
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3. LV

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<tr>
<th>Type</th>
<th>Exercise</th>
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<tbody>
<tr>
<td>Name</td>
<td>Entrepreneurship and Management in Health Care (Entrepreneurship and Management in Health Care)</td>
</tr>
<tr>
<td>SWS</td>
<td>1 SWS</td>
</tr>
<tr>
<td>Docent</td>
<td>Felix Wemmer</td>
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</tbody>
</table>

**Literature**


**Recommended prerequisites**

None

4. **Study/Examinations**

In order to demonstrate that, in limited time and without aids, questions about the fundamentals of business administration and management in health care (e.g., principles of company management, management functions, processes of entrepreneurship) can be answered, the examination, on the one hand, is provided in the form of a written examination. The questions include possible answers to a series of predetermined multiple choice options. Short computing tasks are also posed in order to test for the understanding of financial ratios and formulas, which are fundamental for the management, (e.g., calculation of rates of return). In order to demonstrate that the idea of starting a business can be taught in a limited time, on the other hand, the creation and presentation of a business plan (course work) is required.
### 5. Responsible for module

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<thead>
<tr>
<th>First name</th>
<th>Jörg</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Königstorfer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:joerg.koenigstorfer@tum.de">joerg.koenigstorfer@tum.de</a></td>
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</tbody>
</table>
Module: Research Methodologies II

1. General data

Title of module
Forschungsmethoden II
Research Methodologies II

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

➤ to collect empirical data, to determine statistics, and to present scientifically and correctly
➤ to understand and apply parametric and nonparametric tests for testing differences and correlations
➤ to understand basic concepts, methods and issues in the fields of epidemiology and public health
to understand and interpret indicators of epidemiology, as well as to establish a reference to the causes and consequences of health-related states and events in populations.

to deal critically with health effects and preventive measures in knowledge of research methods of these areas

to understand causality principles in the development of disease

Content
- Definition epidemiology and sub-regions, e.g., work epidemiology, environmental epidemiology, genetic epidemiology, etc.,
- Descriptive epidemiology (frequency distribution of diseases),
- Analytical epidemiology (causal origins),
- Interventional epidemiology with science-based courses of action for successfully combating and overcoming diseases.
- Inferential statistics,
- Performing studies,
- Application of statistical programs,

Teaching and learning methods
A 2-hour lecture is offered in the area of epidemiology, which can be alternatively supplemented by case-based knowledge or alternatively allocated as part of the VHB course Epidemiology. In addition, PowerPoint slides, a clicker system, diagnostic procedures for conducting studies, statistical programs and online methods are used.

Courses
1. LV

<table>
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<tr>
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<tbody>
<tr>
<td>Name</td>
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2. LV

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<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Inferential statistics</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
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<tr>
<td>Docent</td>
<td>Dr. Martina Gratz</td>
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</table>
Literature

Recommended prerequisites
Basic mathematical skills, test theory foundations

4. Study/Examinations
The written examination is held in a classroom. In this, it will be demonstrated that indicators of epidemiology can be interpreted, and a reference can be made to the causes and consequences of health-related states and events in the population. In addition, it must be demonstrated that parametric and nonparametric tests are used to test differences and correlations and presented empirical data are processed, statistics are specified and can be shown to be scientifically correct. The answers require both independent formulations and the selection of multiple-choice answers.

5. Responsible for module

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<tr>
<th>First name</th>
<th>Ansgar</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Schwitz</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:ansgar.schwitz@tum.de">ansgar.schwitz@tum.de</a></td>
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</tbody>
</table>
Module: Placement

1. General data

Title of module
Praktikum
Placement

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
SS

Language
German or English

ECTS
30

2. Workload

Contact Hours: 20 hours
Internship: 800 hours
Self-study: 80 hours
Total: 900 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students gain insight into a specific professional life and its complexity over a longer period and are thus able
➢ to deal with the requirements of typical occupations,
➢ to assess personal inclinations, strengths and weaknesses in professional practice
➢ to reflect on their experiences in the context of the area of conflict of practice and science
to critically present the experience gained during the internship and to take into account their elective modules in another course of study when choosing

**Content**

The internship is an integral part of the course. It provides insights into the work content, working conditions and skill requirements of potential occupational fields of health science (e.g., hospitals, prevention facilities, nursing homes, prevention centers, rehabilitation facilities, health, social and health services, nursing services, nursing associations, event agencies, youth organizations). Students learn to work in teams and to transfer, apply and extend acquired knowledge in the course of their studies and their key skills qualifications in the health science profession. The practical performance can have different forms:

through the assistance of professional workers and with its related acquisition of specific tasks, depending on the chosen internship orientation,

- career-specific skills and methods (practical assistance) will be acquired or expanded,
- developed and optimized in consultation with institutions of the profession model projects and/or project plans, implemented in practice, and are evaluated (designed practice),
- simple health science issues in the direct exploratory and research application with scientific methods (e.g., diagnostic procedures, discussions with experts, etc.) are worked out (exploratory/research-based practice), or
- procedures and processes of the health/prevention programs are structured, prepared and presented (documenting/presenting practice).

The internship semester can also be combined with a stay abroad (placement abroad) or be completed in two unrelated institutions.

**Teaching and learning methods**

- Introductory block course to teach relevant aspects in the choice and performance of the internship,
- for individual consultation, if necessary, accompanying tutorial,
- placement (20 weeks)
- after the placement written reflection with poster presentation and discussion as part of a block course.
Courses

1. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Block course seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Action areas of health</td>
</tr>
<tr>
<td>SWS</td>
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</table>

2. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Exercise-block placement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Interactive presentation</td>
</tr>
<tr>
<td>SWS</td>
<td>1</td>
</tr>
</tbody>
</table>

Literature


Recommended prerequisites

3. Study/Examinations

Requirements for the award of credits is placement in the workplace as well as a poster presentation (course work).

4. Responsible for module

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</tbody>
</table>
Module: Problem Based Learning

1. General data

Title of module
Problemorientiertes Lernen (POL)
Problem-Based Learning (PBL)

Module level
Bachelor degree program

Module subtitle
Obligatory? module

Semester duration
One semester

Frequency
WS

Language
German or English

ECTS
5

2. Workload

Contact Hours: 60 hours
Self-study: 90 hours
Total: 150 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able to understand and apply the PBL method (Sevensteps) and lead PBL sessions. Thus, they will be able:
to look at different cases from different perspectives (medical perspective, nursing perspective, socio-educational perspective, psychological perspective, etc.)

to take findings from current health research into account and to apply it to the case in question.

Content

- Problem-Based Learning as a method for acquiring flexible usable knowledge, for developing interdisciplinary skills and for problem solving abilities.
- The PBL method (the seven-step method):
  1. Clarifying difficult terms
  2. Defining the problem
  3. Brainstorming
  4. Taking stock of and analyzing the possible solutions provided in step 3
  5. Formulating learning objectives
  6. Literature study
  7. Post discussion
- Application of PBL using different cases in order to explore the different viewpoints in the professional field of health. The topic cases come from the different professional fields of health (medicine, nursing care, prevention, ...).

Teaching and learning methods

The module consists of an alternation of lecture, independent research work and presentation of results. The contents of the lecture are conveyed through presentations and e-learning components. The literature review and the substantive discussion of the subjects will be held in small groups in PBL sessions.

Courses

1. LV

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<tr>
<th>Type</th>
<th>Lecture</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Fundamentals of Problem-Based Learning</td>
</tr>
<tr>
<td>SWS</td>
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</tr>
<tr>
<td>Docent</td>
<td>Jolanda Huls</td>
</tr>
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</table>

2. LV

<table>
<thead>
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<th>Type</th>
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<tbody>
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<td>Name</td>
<td>Problem-Based Learning in the application</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Jolanda Huls</td>
</tr>
</tbody>
</table>

Literature

Recommended prerequisites
Basic knowledge of semesters 1-3.

4. Study/Examinations
The examination is in the form of a presentation of a case study and a written documentation of the case process in the group (reflected PBL protocols). It is shown that the instruments of PBL can be applied and that the different perspectives are understood.

Responsible for module

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<th>Jolanda</th>
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<tr>
<td>Last name</td>
<td>Huls</td>
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<tr>
<td>Email</td>
<td><a href="mailto:jolanda.huls@tum.de">jolanda.huls@tum.de</a></td>
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</tbody>
</table>
Module: Scientific Work

1. General data

Title of module
Forschungskolloquium
Scientific Work

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
WS

Language
German or English

ECTS
6

2. Workload

Contact Hours: 45 hours
Self-study: 135 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
- to know and apply the different methodological approaches to research questions from the bio-psycho-social fields of action
- to understand the basic structure of a scientific paper and to demonstrate an example
- to name the most important publications of the bio-psycho-social research fields.

Content
Definition of scientifically important question in the context of health, literature reviews on scientific issues and development of methodology and possible solutions in small groups, applying already learned and new research methods in bio-psycho-social research fields, active participation in faculty research projects and learn about the research in the composite analysis of data material, formulating an ethics application, imparting knowledge to deal with people in research projects (Declaration of Helsinki).

**Content**
Definition of scientifically important question in the context of health, literature reviews on scientific issues and development of methodology and possible solutions in small groups, application of already learned and new methods of research investigation in biopsychosocial research fields, active participation in faculty research projects and learning about the research work in conjunction, analysis of data material, formulation of an ethics application, imparting knowledge to deal with people in research projects (Declaration of Helsinki).

**Teaching and learning methods**
Seminar and exercises in small groups with different focus of topics (choice of the thematic pillars of the course) supported by blended learning.

**Courses**

1. **LV**
   | Type       | Seminar                  |
   | Name       | Research on humans       |
   | SWS        | 1                        |
   | Docent     | NN                       |

2. **LV**
   | Type    | Exercise                |
   | Name    | Biomedical research-psycho-social |
   | SWS     | 2                        |
   | Docent  | NN                       |

**Literature**


Additional literature as announced depending on the project.

**Recommended prerequisites**

Successful completion of the modules of the first three semesters in which basic research methods and the most important contents of the biomedical-psychosocial pillars are taught.

4. **Study/Examinations**

To demonstrate understanding of the structure of a scientific paper, completed research (graded) is expected in small groups on the basis of defined questions of the three pillars of the course of study. This can be a literature review or a sub-project within an already ongoing research project.

5. **Responsible for module**

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<tr>
<th>First name</th>
<th>Renate</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Oberhoffer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Praeventive-paediatric@tum.de">Praeventive-paediatric@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Health Promotion Programs

1. General data

Title of module
Präventionsprogramme (deutsch)
Health Promotion Programs (English)

Module level
Bachelor degree program

Module subtitle
Required module

Semester duration
One semester

Frequency
SS

Language
German or English

ECTS
5

2. Workload

Contact Hours: 60 hours
Self-study: 90 hours
Total: 150 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to understand the PRECEDE-PROCEED model.
- to understand how a theory based and evidence based Health Promotion Program is developed (e.g., based on Intervention Mapping).
to create a Health Promotion Program on a particular topic or to plan health interventions for a particular topic (e.g., breast cancer, obesity) based on an intervention model.

➢ to present a Prevention Program.

Content
Basic knowledge of
- "Health Promotion Program" planning,
- Theory-based intervention methods,
- Prevention programs,
- Current fields of prevention topics,
- The PRECEDE-PROCEED model, with its nine Phases

Performing Intervention Mapping with the following action steps:

1. Needs assessment
2. Program objectives
3. Methods & strategies
4. Program,
5. Implementation,

Teaching and learning methods
The module consists of an alternation of lectures, group work and presentation of results. The contents of the lectures are conveyed through presentations with blended learning components. In group work, students will be encouraged to study literature and discuss its contents with each other and to develop a Health Promotion Program based on an Health-Promotion Planning method for a current topic.

Courses

1. LV

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<thead>
<tr>
<th>Type</th>
<th>VL</th>
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<tbody>
<tr>
<td>Name</td>
<td>Fundamentals of Health promotion Programs</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Dr. Yolanda Demetriou</td>
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</table>
2. LV

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<tr>
<th>Type</th>
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<tbody>
<tr>
<td>Name</td>
<td>Intervention mapping</td>
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<tr>
<td>SWS</td>
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<td>Docent</td>
<td>NN</td>
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</table>

**Literature**


**Recommended prerequisites**

Modules: "Introduction to Health Science" 1st Semester, "Health Behavior and Prevention" and "Structural Prevention" 3rd semester.

4. Study/Examinations

In order to check whether a Prevention Program can be developed, the examination is provided in form of a graded presentation of a Health Promotion Program.

5. Responsible for module

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<th>First name</th>
<th>Jolanda</th>
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<tr>
<td>Last name</td>
<td>Huls</td>
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<tr>
<td>Email</td>
<td><a href="mailto:jolanda.huls@tum.de">jolanda.huls@tum.de</a></td>
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</tbody>
</table>
Module: Health Counseling

1. General data

Title of module
Beratungskompetenz (deutsch)
Health Counseling (English)

Module level
Bachelor degree program

Module subtitle
Required

Semester duration
One semester

Frequency
SS

Language
German

ECTS
4

2. Workload

Contact Hours: 45 hours
Self-study: 75 hours
Total: 120 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
➢ to name and to explain different counseling methods
➢ to conduct a Health Counseling session based on a particular method and to apply their contents to specific themes.
➢ to present results together with a group
Content
- Counseling methods
- Psychological counseling (Lang and van der Molen)
- Client-centered counseling according to Carl R. Rogers
- Multiple roles of the counselor
- Conversational skills
  - Regulatory skills, such as opening and terminating an counseling session
  - Listening skills, for example, open and closed questions, paraphrasing the content, reflect feelings
  - Nuancing skills, such as nuancing empathy, confrontation, directness.

Teaching and learning methods
Self-prepared presentations are the basis for the counseling sessions in the seminar:
Scientifically based presentation of own research work on different topics, after being controlled by the instructor, individual practice in small groups with direct feedback.

Courses
1. LV
   | Type       | Seminar lecture                     |
   | Name       | Solution-oriented counseling         |
   | SWS        | 1                                    |
   | Docent     | NN                                   |

2. LV
   | Type       | Seminar                          |
   | Name       | Applied solution-oriented counseling |
   | SWS        | 2                                |
   | Docent     | NN                               |

Literature
Recommended prerequisites

4. Study/Examinations
The examination is in the form of graded course-related performance certificates (counseling session):

A) A presentation of one's own research based on a topic demonstrates that the results obtained in the group can be presented (not graded).
B) A counseling session demonstrates that a selected counseling method can be performed and interview skills can be applied (graded).

5. Responsible for module

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<td>Last name</td>
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<td>Email</td>
<td><a href="mailto:jolanda.huls@tum.de">jolanda.huls@tum.de</a></td>
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</tbody>
</table>
Elective module: Settings, Environmental Fit and Participation

1. General data

Title of module
Umgebung, Passung und Teilhabe
Settings, Environmental Fit and Participation

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
6

2. Workload

Contact Hours: 75 hours
Self-study: 105 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to describe and reflect upon supportive contextual conditions, such as personal factors (e.g., personal background, age, gender, social status, coping skills or education) and environmental factors (e.g., tools, people, settings, services, barriers and facilitators) on both individual and societal levels
to select and assess appropriate procedures, methods, concepts, products and applications for the design and the implementation of participation in social life, depending on the individual and the context

- to recognize how these contextual conditions can affect and account for the activities and participation of the individual in society and how they can change in different settings.

**Content**

- Perspectives on participation in society and in specific functional systems (health, education, culture, politics, etc.)
- Opportunities for and limitations of social participation
- Life-world perspectives and everyday theory of social participation
- Opportunities and action options as prerequisites for social participation
- Contextual conditions, resources and challenges that affect the health and participation of individuals.
- Whole lifespan perspective and the various inherent challenges for individual health

- Relevant procedures, methods, concepts, products and applications that help to prevent disease and promote health or restore and enable participation.
- Accessibility, infrastructure and mobility (adaptive environments)
- Universal design - design for all
- Discourses of quality social and health services
- Embedding of socio-spatial prerequisites

**Teaching and learning methods**

The module consists of a lecture and two seminars. The content of the module is conveyed through lectures and presentations. Students are encouraged to study the literature and to engage actively with the topics. In the course of the seminars and on the basis of specific topics and tasks, students will be encouraged to develop their own hypotheses and to research them independently.
Courses

1. LV
Type Lecture
Name Health-related contextual factors (environmental dimensions and relation to the life world)
SWS 1
Docent Prof. Elisabeth Wacker/N.N.

2. LV
Type Seminar
Name Social space: Accessibility - infrastructure
SWS 2
Lecturers Stefan Schmidt/Sarah Reker

3. LV
Type Seminar
Name Accessibility: Individual - environment - mobility
SWS 2
Lecturers Vera Tillmann/Stefan Schmidt

Literature


Wansing, Gudrun (2014): Was bedeutet Inklusion? Annäherungen an einen vielschichtigen Begriff. In: Degener, Theresia; Diehl, Ulrike; Markowitz, Reinhard (Hg.): Partizipation als Menschenrecht. Inklusion als gesellschaftliche Aufgabe. Schriftenreihe der Bundeszentrale für politische Bildung, Bonn. (i.V.)

Recommended prerequisites
None
4. **Study/Examinations**
   The examination consists of a presentation and a small essay. In the presentation, students will demonstrate that the knowledge (relevant procedures, methods, concepts, products and applications to promote participation) they have acquired can be applied, adjusted and adapted to different settings. The essay should highlight students’ ability to critically reflect upon this knowledge as well as expand it with their own hypotheses.

5. **Responsible for module**

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<tr>
<th>First name</th>
<th>Elisabeth</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
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</tbody>
</table>
Elective module: Principles of Nutrition

1. General data

Title of module
Schwerpunkt Ernährung (deutsch)
Principles of Nutrition (English)

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
WS

Language
German

ECTS
3

2. Workload

Contact Hours: 30 hours
Self-study: 60 hours
Total: 90 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to describe the composition of foodstuffs
- to understand the regulation of fluid balance
- to have an overview of hormonal regulation of hunger and satiety
- to describe the importance of demand and recommendation.
Content
- Composition of the diet (macro and micro nutrients);
- Regulation of fluid balance;
- Selected diets;
- Common nutritional problems;
- Nutrition-associated diseases;
- Food consumption;
- Eating behavior;
- Food choices;

Teaching and learning methods
The contents of the lectures are conveyed through presentations. Students will also deal with complementary literature on nutritional issues.

Courses
1. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Fundamentals of nutrition and hydration</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Hans Hauner</td>
</tr>
</tbody>
</table>

Literature

Recommended prerequisites
Body structures and functions I & II

4. Study/Examinations
The written examination is held in a classroom. In this, it will be demonstrated that the students can make associations between basics of food composition and different diets in limited time and without aids. The answers require choosing from among given multiple choice options.
5. **Responsible for module**

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<tr>
<th>First name</th>
<th>Johann</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Dr. Hauner</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:hans.hauner@tum.de">hans.hauner@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Medical Prevention and Rehabilitation

1. General data

Title of module
Medizinische Prävention und Rehabilitation
Medical Prevention and Rehabilitation

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
Two semesters

Frequency
WS and SS

Language
German

ECTS
6

2. Workload

Contact Hours: 60 hours (incl. online course)
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to describe the various diagnostic and therapeutic options for the most important disease formations as well as their prevention and rehabilitation
- to understand and present a case-specific preventive and rehabilitative therapy including sports therapy, nutritional therapy and alternative therapies such as naturopathy
Content
Preventive strategies and concepts of primary/secondary prevention with a special focus on nutrition and exercise interventions as well as issues and strategies to improve compliance and adherence to prevention programs.
Rehabilitative (tertiary prevention) therapeutic methods in physical medicine (e.g., manual therapy, active and passive movement mediation, massage, heat and cold application, early mobilization and rehabilitation of orthopedic and neurological disorders) and internal exercise and nutrition therapy (such as in metabolic diseases, e.g., diabetes mellitus, heart and lung diseases, as well as oncology and mental illness) as well as aspects of naturopathic and complementary medicine

Teaching and learning methods
Different aspects of prevention and rehabilitation are explained in parts of the series of lectures by the medical faculty. As part of the interactive VHB course General Medicine 3 (Prevention in General Practice), therapies can be developed based on the concepts presented.

Courses
1. LV
<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Cross-sectional area &quot;Rehabilitation&quot;</td>
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<tr>
<td>SWS</td>
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2. LV
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<tr>
<th>Type</th>
<th>Online Lecture VHB</th>
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<tbody>
<tr>
<td>Name</td>
<td>Prevention General Medicine 3</td>
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3. LV
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<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
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<tr>
<td>SWS</td>
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<tr>
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</table>
Literature


ACSM’s Advanced Exercise Physiology. Lippincott Williams&Wilkins, USA

ACSM’s Resource Manual for Guidelines for Exercise Testing and Prescription Lippincott Williams&Wilkins, USA.

Olaf Adam, Hans-Konrad Biesalski. Ernährungsmedizin, Georg Thieme Verlag

Recommended prerequisites
Successful completion of the module health disorders and diseases

4. Study/Examinations
The score is calculated from the results of classroom examinations (average) of the medical department. In addition, an interactive online audit is required as course work.

5. Responsible for module

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<tr>
<th>First name</th>
<th>Martin</th>
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<tr>
<td>Last name</td>
<td>Halle</td>
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<tr>
<td>Email</td>
<td><a href="mailto:halle@tum.de">halle@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Motor Neurorehabilitation

1. General data

Title of module
Motorische Neurorehabilitation
Motor Neurorehabilitation

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
WS

Language
English

ECTS
6

2. Workload

Contact Hours: 60 hours
Self-study: 120 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
- to know the basic principles of human movements
- to remember the most important structures of the peripheral and central nervous system and to understand fundamental functional relationships primarily with sensorimotor functions
to recognize important neurological diseases, especially of the motor system and to understand the relationships with neural structures

- to know the basics of motor learning and to assess applications in neurorehabilitation
- to be able to assess literature in the field of scientific evidence regarding neurorehabilitation
- to know methods for quantification and for the therapy of movement disorders, to independently apply and evaluate the results

**Content**

A lecture introduces motion control as well as in the associated neural correlates. Contents based thereon are diseases of the central and peripheral nervous system leading to motor disorders (stroke, Parkinson's disease, multiple sclerosis, dystonia, epilepsy, etc.) as well as their diagnosis and rehabilitation. Literature from the fields of motor neurorehabilitation and motion-based prevention programs are discussed in a seminar and quantifying measurement methods in the field are used in an exercise.

**Teaching and learning methods**

The module consists of a lecture, a seminar and an exercise. The contents of the lecture are conveyed through multi-media presentations in an interactive type and manner. Students present and discuss relevant literature in the seminar. In the exercise, the students learn methods of neurorehabilitation and learn to apply them. Seminar and exercise can also take place as a block course, the exercise as an excursion.

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Motor neurorehabilitation</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Prof. Joachim Hermsdörfer</td>
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</table>

2. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>Name</td>
<td>Evidence-based neurorehabilitation and prevention</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Dr. Leif Johannsen</td>
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</table>

3. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Methods of Neurorehabilitation</td>
</tr>
</tbody>
</table>
Literature
Basics Neurologie, Krzovska, Urban & Fischer, 2012
Pinel & Pauli, Biopsychologie, Pearson 2012
Additional literature is determined in the events

Recommended prerequisites
Module "Body Composition and Functions" in semester 1 and 2 or equivalent knowledge

4. Study/Examinations
Module performance is assessed in the form of an oral examination. In this, it will be demonstrated that functional relationships and important neurological diseases and their correlation with neural structures are understood. In addition, applications in neurorehabilitation will be assessed, and the main findings from the seminar and exercise reports and questions can also be answered.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Joachim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Hermsdörfer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Joachim.Hermsdoerfer@tum.de">Joachim.Hermsdoerfer@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Exercise Programs

1. General data

Title of module
Bewegungsprogramme
Exercise Programs

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
SS

Language
German

ECTS
3

2. Workload

Contact Hours: 30 hours
Self-study: 60 hours
Total: 90 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to analyze exercise programs with regards to the Prevention Guide (SHI)
- to assess exercise programs’ content on their quality (e.g., billing for health insurance)
- to design exercise programs for different settings
**Content**

Prevention guide; identify, analyze and evaluate motion programs from different vendors. Evaluation criteria for exercise programs. Continued training providers for exercise programs. Exercise programs in different settings. Exercise programs and cognition. Self-realization of different forms of motion to clarify the evaluation criteria.

**Teaching and learning methods**

The module consists of a seminar with exercise components, that can also be offered as a block course (excursion). The content of the seminar is developed in practice together or work as tasks in small groups and presented independently by the student. Students will be encouraged to study the literature and the substantive discussion of the topic. Self-awareness and self-realization are encouraged.

**Courses**

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar exercise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Exercise programs</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Thorsten Schulz, Dr. Christiane Peters, Evi Schmitt, NN</td>
</tr>
</tbody>
</table>

**Literature**

Prevention Guide
Current primary literature

**Recommended prerequisites**

Courses of the 3rd semester

4. **Study/Examinations**

The study and examination performance takes place as graded exercise performance (group instruction with composition) or alternatively as graded presentation accompanying the semester in which students will demonstrate that they can analyze, evaluate and create exercise programs for target groups.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Thorsten</th>
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</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Dr. Schulz</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:thorsten.schulz@tum.de">thorsten.schulz@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Health Consumer Behavior

1. General data

**Title of module**
Konsum und Verhalten im Gesundheitswesen
Health Consumer Behavior

**Module level**
Bachelor degree program

**Module subtitle**
Elective module

**Semester duration**
One semester

**Frequency**
SS

**Language**
English

**ECTS**
6

2. Workload

Contact Hours: 45 hours
Self-study: 135 hours
Total: 180 hours

3. Description

**Targeted learning outcomes**
After successfully completing the module, students will be able:

- to understand fundamental theories of consumer behavior and to use them in the context of current challenges in promoting healthy and physically active consumer behavior in the population
- to understand measurement models of consumer behavior in health care and to apply them to current issues in health care and make behavioral predictions on the basis of analyses
- to use social techniques of consumer behavior (e.g., personal consulting, advertising) to satisfy consumer needs in the context of individual decision-making processes
- to analyze, evaluate and develop health-promoting environments

**Content**

Contents are current topics in the field of consumer behavior with respect to health and fitness. This includes, for example, the following topics:

- Health marketing - marketing of (un)healthy food
- Marketing of services to promote physical activity
- Consumer protection and to be protected target groups
- Internal and external environment of consumers and their importance for health
- Buying decision types and health
- Activating and cognitive processes and their importance for healthy and physically active decision behavior
- Values and lifestyles and consumption patterns of health-promoting products and services.

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Consumer Behavior in Sport and Health Care (Consumer Behavior in Sport and Health Care)</td>
</tr>
<tr>
<td>SWS</td>
<td>2 SWS</td>
</tr>
<tr>
<td>Docent</td>
<td>Prof. Jörg Königstorfer</td>
</tr>
</tbody>
</table>

2. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Exercise</th>
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<tbody>
<tr>
<td>Name</td>
<td>Consumer Behavior in Health Care (Consumer Behavior in Health Care)</td>
</tr>
<tr>
<td>SWS</td>
<td>1 SWS</td>
</tr>
<tr>
<td>Docent</td>
<td>Sabrina Lucke</td>
</tr>
</tbody>
</table>
Literature

Teaching and learning methods
The module consists of a lecture and an exercise. In the lecture, the necessary knowledge is provided by presentations of the lecturers. Students are encouraged to have substantive discussion of the topics. In the exercise, students work on problems on current health care challenges in the context of the behavior of consumers. Using case studies, they analyze and evaluate current concepts in health management (e.g., integrated care in public health care, company health promotion) and in health economics (e.g., moral hazard in health insurance). They also develop relevant problem-solving strategies to avoid poor health promoting behavior (e.g., labeling of unhealthy foods and tobacco products) from the perspective of health care providers.

Recommended prerequisites
Management in health care

4. Study/Examinations
A written examination is held. In this, it will be demonstrated that questions about fundamentals of consumer behavior in health care can be answered in a limited time and without aids. Questions are open-ended and test whether students can remember, understand and apply relevant theories and measurement models of consumer behavior. It is also determined whether relevant social techniques are remembered and understood. By creating a poster (course achievement, as in the usual context of scientific conferences), it is verified whether students can analyze, evaluate and develop health-promoting environments using knowledge of consumer behavior.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Jörg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Königstorfer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:joerg.koenigstorfer@tum.de">joerg.koenigstorfer@tum.de</a></td>
</tr>
</tbody>
</table>

Elective module: Stress and Stress Management Programs

1. General data
Title of module
Stress und Stressmanagementprogramme
Stress and Stress Management Programs

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
WS

Language
German/English

ECTS
6

2. Workload

Contact Hours: 45 hours
Self-study: 75 hours
Total: 120 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to describe stress from a psycho-physiological perspective,
- to explain and discuss psychological models and theories of the development of stress
- to describe and classify preventive methods of stress management, to present their psycho-physiological effect and to evaluate their effectiveness
to demonstrate one of these methods, especially in the field of relaxation techniques.

**Content**

Theories and models on stress and stress development; psychoneuroendocrinology of stress; effect of stress in pathogenesis; forms and methods of stress inoculation and stress management; relaxation as a form of stress prevention; effects and effectiveness of stress management procedures, stress inoculation procedures; fundamentals of providing of stress management procedures, testing of individual methods in self-awareness and implementation.

**Teaching and learning methods**

The module consists of 1 lecture and 1 exercise. In the lecture, the theoretical content is taught by lecture and presentation, where students are encouraged to deeper discussion of the literature via exercises using e-learning. In the exercise, the students prepare the implementation of stress management procedures in individual study under guidance and then test these on their fellow students.

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Stress and Stress Management</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
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<tr>
<td>Docent</td>
<td>Prof. Jürgen Beckmann</td>
</tr>
</tbody>
</table>

2. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Exercise</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Stress management training and programs</td>
</tr>
<tr>
<td>SWS</td>
<td>1</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Felix Ehrlenspiel</td>
</tr>
</tbody>
</table>

**Literature**


**Recommended prerequisites**

4. **Study/Examinations**
The capacity to implement the theoretical knowledge to perform stress vaccination/management procedures will be demonstrated as course work in the form of a group demonstration. An in-depth understanding of psychological models of stress formation and the ability for critical reflection with regard to the impact and effectiveness of stress inoculation and management methods will be demonstrated as a performance examination by means of a test.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Felix</th>
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</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Dr. Ehrlenspiel</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:felix.ehrlenspiel@tum.de">felix.ehrlenspiel@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Psychoregulation

1. General data

Title of module
Psychoregulation
Psychoregulation

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
SS

Language
German/English

ECTS
3

2. Workload

Contact Hours: 30 hours
Self-study: 60 hours
Total: 90 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:
- to describe the psycho-physiological bases of psychological regulation,
- to name the levels of the effects of relaxation techniques as well as each of the major psychophysiological methods to measure this effect,
to classify relaxation methods as a form of psycho-regulation according to different aspects,
- to explain the field of action "relaxation" in the Prevention Guide,
- to demonstrate various relaxation techniques and to evaluate their suitability in prevention and for different target groups.

**Content**
Neurophysiological foundations of psychoregulation, autonomic nervous system, psychophysiological measurement methods; effects and effectiveness of relaxation techniques; similarities and differences of relaxation techniques, relaxation methods in the field of action of stress management; other relaxation techniques; fundamentals of providing relaxation techniques;

**Teaching and learning methods**
The module consists of 1 seminar with high proportions of exercise. The theoretical background is developed in self-study and presented to each other in group work. In addition, relaxation techniques are practically tested and implemented.

**Courses**

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>Name</td>
<td>Psychoregulation and Relaxation Techniques</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Felix Ehrlenspiel</td>
</tr>
</tbody>
</table>

**Literature**

**Recommended prerequisites**
"Body Composition and Functions II" in which the important physiological basis for understanding psychophysiology is laid out, "Fundamentals of Prevention and Health Behavior" in order to integrate use and application into the Prevention Guide.
4. Study/Examinations
The capacity to implement theoretical knowledge to perform relaxation techniques will be demonstrated in the form of a group demonstration as course work during the semester. Understanding the fundamentals and skills for critical reflection about the impact and effectiveness will be demonstrated in the form of three short poster presentations as coursework during the semester.

5. Responsible for module

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<tr>
<th>First name</th>
<th>Felix</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Dr. Ehrlenspiel</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:felix.ehrlenspiel@tum.de">felix.ehrlenspiel@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Health Science and Ethics

1. General data

**Title of module**
Health Science and Ethics

**Module level**
Bachelor degree program

**Module subtitle**
Elective module

**Semester duration**
One semester

**Frequency**
WS

**Language**
German

**ECTS**
6

2. Workload

Contact Hours: 90 hours
Self-study: 90 hours
Total: 180 hours

3. Description

**Targeted learning outcomes**
After successfully completing the module, students will be able:
- to critically reflect upon and evaluate their professional self-image, their job in particular and, more broadly, their profession.
- to describe and assess the complexity of institutional and organizational aspects of health and their consequences for professional thinking and action.
to describe, discuss and theoretically justify the ethical foundations of health science and to apply them to specific fields of practice as well as decision-making and conflictual situations.

to assess and evaluate the scope and usefulness of techniques and technology in the context of healthcare.

**Content**

- Ethical foundations of health science
- Perspectives, opportunities and problems as well as structural, personal and interpersonal relationships, professional thought and action in health-related areas
- Self-understanding, mission, methods and concepts of professional action between conflicting of biographical, social and institutional factors
- Aspects of multi-professional communication
- Implementation of technology
- Professional ethical questions
  Professional role (social service)

**Teaching and learning methods**

The module consists of three seminars. The content is conveyed through lectures and presentations as well as case-studies based on specific topics and practical assignments. Students are encouraged to study the literature and to engage actively with the topics. Seminars are designed according to the type of issue at hand in order to provide sufficient time and space for discussion. Students are encouraged to develop their own hypotheses and to investigate them in their own work.

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>Name</td>
<td>Ethics and Professional Ethics</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
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<tr>
<td>Lecturer/s</td>
<td>Prof. Elisabeth Wacker/N.N.</td>
</tr>
</tbody>
</table>
2. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>Name</td>
<td>Profession and Professional Conduct</td>
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<tr>
<td>SWS</td>
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<tr>
<td>Lecturers</td>
<td>Stefan Schmidt/Luisa Demant/Stefanie Frings</td>
</tr>
</tbody>
</table>

3. LV

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<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Ethical issues of different technologies and the use of technology</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Lecturer</td>
<td>N.N.</td>
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</tbody>
</table>

**Literature**


**Recommended prerequisites**

Research methodology, academic research

4. **Study/Examinations**

Students will be required to submit an essay demonstrating the skills they have acquired. The essays will show that they are able to reflect critically upon their personal professional understanding—with the help of the knowledge transmitted during class. Moreover, they will highlight that they are able to both transfer and analyze methods and concepts of professional action.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Prof. Elisabeth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Rehabilitation Systems

1. General data

*Title of module*
Systeme der Rehabilitation (German)
Rehabilitation Systems

*Module level*
Bachelor degree program

*Module subtitle*
Elective module

*Semester duration*
One semester

*Frequency*
SS

*Language*
German

*ECTS*
3

2. Workload

Contact Hours: 45 hours
Self-study: 45 hours
Total: 90 hours

3. Description

*Targeted learning outcomes*
After successfully completing the module, students will be able:

➢ to describe social and vocational rehabilitation systems.
to demonstrate their awareness of socio-legal frameworks and specific rehabilitation objectives (for participation and rehabilitation) and to assess and reflect upon their impact.

to capture the complexity of service systems both within the lifespan and the community.

Content

➢ Basic assumptions and the development of rehabilitative service systems
➢ Professional fields of rehabilitation service systems (welfare, prevention and rehabilitation) and their legal conditions
➢ Practices of prevention, support, resource promotion etc.
➢ The community and its citizens (lifeworld relevance)
➢ Localization of practice in the community (interaction of neighborhood, civic involvement and benefit systems)
➢ Concepts of and access to the community (e.g., counseling, sports, etc.)

Teaching and learning methods

The module consists of two lectures and a seminar with e-learning components. The contents of the lectures are conveyed through presentations. Students are encouraged to engage actively with the topics. In the course of seminar and based on specific topics and tasks, students will be encouraged to develop their own hypotheses and to investigate them independently.

Courses

1. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Systems of social and vocational rehabilitation</td>
</tr>
<tr>
<td>SWS</td>
<td>1</td>
</tr>
<tr>
<td>Lecturers</td>
<td>Prof. Elisabeth Wacker/Stefanie Frings</td>
</tr>
</tbody>
</table>

2. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Lecture</th>
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<tbody>
<tr>
<td>Name</td>
<td>Socio-legal framework</td>
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<tr>
<td>Lecturer</td>
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3. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Rehabilitation in the community/social space</td>
</tr>
<tr>
<td>SWS</td>
<td>1</td>
</tr>
<tr>
<td>Lecturer</td>
<td>Sarah Reker</td>
</tr>
</tbody>
</table>

**Literature**

**Recommended prerequisites**
Basic knowledge of social science

4. **Study/Examinations**
The examination consists of a seminar paper. Students will thereby demonstrate that the knowledge (on e.g. the legal foundations of the rehabilitation system) they have acquired can be applied to a self-chosen support system or setting. They will also show how impacts, solutions and arguments can be detected and developed within various professional fields. A search for additional literature as well as the choice of an individual focus will enable students to link theoretical inputs with practical aspects and to convincingly formulate potential solutions.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Prof. Elisabeth</th>
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</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Global Health

1. General data

Title of module
Internationales (deutsch)
Global Health (English)

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
SS

Language
English

ECTS
6

2. Workload

Contact Hours: 90 hours
Self-study: 90 hours
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

- to locate and reflect upon health science aspects in a global context, to recognize and evaluate the links between health-related developments on an international level as well as to understand the role of the World Health Organization (WHO) in this context
to identify health-related structures that can be influenced, to assess and evaluate international prevention and rehabilitation strategies in terms of both their potentials and their limits.

**Content**
- International issues related to health science
- Content from the first two years of study will be presented in a global context, exemplarily applied to international issues and supplemented with knowledge about concrete strategies for prevention and rehabilitation
- Introduction to international preventive, rehabilitative and social policy developments
- Aspects of healthcare from a global perspective
- Proven strategies of community-based prevention and rehabilitation, international health promotion programs
- The WHO and "Global Public Health"
- Selected international health systems and system types
- Relativity of health from an international perspective

**Teaching and learning methods**
The module consists of three seminars. The contents are conveyed through a lecture as well as presentations. Students are encouraged to study the literature and to engage actively with the topics. In the course of the seminars and based upon specific topics and tasks, students will be encouraged to develop their own hypotheses and investigate them independently. Project work and field trips provide opportunities for the implementation of knowledge in specific practical fields.

**Courses**

1. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>International preventative, rehabilitative and social policy developments</td>
</tr>
<tr>
<td>SWS</td>
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</tr>
<tr>
<td>Tutor</td>
<td>Kathrin Schmidt</td>
</tr>
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</table>
2. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Health care in a global perspective</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Kathrin Schmidt</td>
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3. LV

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<tr>
<th>Type</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>Name</td>
<td>Community-based prevention and rehabilitation</td>
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<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Kathrin Schmidt/Stefanie Frings</td>
</tr>
</tbody>
</table>

**Literature**


Laaser U (2002). The institutionalization of public health training and the health sciences. Public Health Reviews 30/1-4: 71-95


**Recommended prerequisites**

English language skills

4. Study/Examinations

The examination consists of either a presentation with a short essay or a long essay (all three in English!). Students will thereby demonstrate that they can locate the knowledge (e.g., the significance of the World Health Organization – WHO) they have acquired in an international context. They will also show that they are able to identify the links between health-related developments on an international level as well as assess and evaluate international prevention and rehabilitation strategies.

5. Responsible for module

<table>
<thead>
<tr>
<th>First name</th>
<th>Prof. Elisabeth</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Wacker</td>
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<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Specific aspects of health in different phases of life

1. General data

Title of module
Spezielle Aspekte der Gesundheit in verschiedenen Lebensphasen (deutsch)
Special aspects of health (English)

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
SS or WS

Language
German

ECTS
6

2. Workload

Contact Hours: 30 hours
Self-study: 150 hours (project work on site)
Total: 180 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

➢ to name specific features of physical and psychological development from childhood and adolescence to adulthood at different ages
➢ to classify this knowledge in the context of means of impairing and promoting health
➢ to take into account the knowledge about the specifics of development in advising on prevention strategies in different phases of life
Content
Somatic and psychological development from birth to adolescence, special pathophysiological conditions (nutrition, susceptibility to certain diseases, influence of genes and environment, disability), anthropometric, medical and psychological measurement methods, forms of communication and motivation strategies according to different age groups, context with legal guardians, family or guardian, direct participation and/or involvement in health-promoting measures.

Teaching and learning methods
Summer school with seminar and workshops, direct work with the target group in different settings (kindergarten, school, hospital, rehabilitation facility, health promoting project, students research center of the TUM, youth group, facilities for disabled, home for the elderly, palliative care, etc.) under instruction domestically or abroad, applying typical methods of measurement

Courses
1. LV
   | Type   | Seminar                      |
   | Name   | Special features of human development phases |
   | SWS    | 1                             |
   | Docent | Prof. Renate Oberhoffer      |

2. LV
   | Type   | Seminar                        |
   | Name   | Interaction of human-family-environment |
   | SWS    | 1                             |
   | Docent | Prof. Renate Oberhoffer       |

3. LV
   | Type   | Exercise excursion            |
   | Name   | Specific health aspects in the "field" |
   | SWS    | 2                             |
   | Docent | Prof. Renate Oberhoffer       |

Literature


Karges, Beate Maria, Wagner, Norbert (2010) Pädiatrie ... in 5 Tagen. Springer

**Recommended prerequisites**

Internship in the field of action health and disease

**4. Study/Examinations**

Graded independent development of a health-promoting concept for a defined target group in the context of a research paper

**5. Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Renate</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Prof. Dr. med. Oberhoffer</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Praeventive-paediatric@tum.de">Praeventive-paediatric@tum.de</a></td>
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</tbody>
</table>
Elective module: Models and Theoretical Conceptions of Teaching and Learning Research

1. General data

Title of module
Modelle und Grundlagen der Unterrichtsforschung
Models and Theoretical Conceptions of Teaching and Learning Research

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
WS

Language
English

ECTS
9

2. Workload

Contact Hours: 105 hours
Self-study: 165 hours
Total: 270 hours

3. Description

Targeted learning outcomes
The students acquire detailed and differentiated knowledge about classroom models together with their specifications for mathematics and science didactics, especially about the central influences on learning in classroom and teacher acting. Furthermore they know relevant research designs of classroom research and their theoretical foundation. On the basis of this knowledge they are able to develop and produce a classroom model in an own project work, to identify a research question and to deduce an appropriate research design with work schedule for the investigation of a selected research question.
**Content**
Imparting of fundamental knowledge of teaching and learning, transferring this basic knowledge on the prerequisite and process level of teaching and learning. Introduction to models and theories of teaching and learning. The module is an integral part of the master program Research on Teaching and Learning of the TUM School of Education: The module "Models and Theoretical Conceptions of Teaching and Learning Research" aims at giving the students an overview about models and theoretical conceptions of teaching and learning research from a general and a subject-related didactical view. The complex models integrate (subject-)didactic aspects of instructional design with knowledge about the effectiveness on the part of the learners, but as well with knowledge about preconditions/required competencies on the part of the teachers. Basic knowledge is provided in the seminar "Theoretical principles about teacher acting and classroom". Further qualitative and quantitative methodical standards for the investigation of teaching and learning processes are acquired in the seminar "Qualitative and quantitative research methods of classroom research". An integration of the courses and a test of all contents and competencies takes place in the form of a project work "Planning and implementation of research works in classroom research" within a team. Within the team composition the students work together interdisciplinary (educational science, psychology, subject didactics).

**Teaching and learning methods**
Variation of different teaching and learning methods, which are facilitated to the students through a facilitator's toolbox

**Courses**

1. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Models and Theoretical Conceptions of Teaching and Learning Research</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
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<tr>
<td>Docent</td>
<td>Dr. Tina Seidel</td>
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</tbody>
</table>

2. **LV**

<table>
<thead>
<tr>
<th>Type</th>
<th>Seminar</th>
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</thead>
<tbody>
<tr>
<td>Name</td>
<td>Qualitative and quantitative research methods of classroom research</td>
</tr>
<tr>
<td>SWS</td>
<td>2</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Tina Seidel</td>
</tr>
</tbody>
</table>
3. LV

<table>
<thead>
<tr>
<th>Type</th>
<th>Project seminar</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Planning and implementation of research works in classroom research I</td>
</tr>
<tr>
<td>SWS</td>
<td>3</td>
</tr>
<tr>
<td>Docent</td>
<td>Dr. Tina Seidel</td>
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</table>

**Literature**
Special literature; will be announced at the courses

**Recommended prerequisites**
Successful completion of the modules "Psychological and Educational Basic Skills", "Society and Communication", "Learning and Behavior", "Basic Competence Research", "Research Methods".

4. **Study/Examinations**
The written examination consists of a project report in the project seminar "Planning and implementation of research works in classroom research" (graded credit requirement). Teams of students work together on this report. Deadline for submission is the end of the semester break. Required achievements in all courses of the module encompass active class participation, completing assignments, reading scientific literature, oral presentations, and project work.

5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Tina</th>
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<tbody>
<tr>
<td>Last name</td>
<td>Seidel</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:tina.seidel@tum.de">tina.seidel@tum.de</a></td>
</tr>
</tbody>
</table>
Elective module: Diversity

1. General data

Title of module
Diversität (deutsch)
Diversity (English)

Module level
Bachelor degree program

Module subtitle
Elective module

Semester duration
One semester

Frequency
WS

Language
German/English

ECTS
3

2. Workload

Contact Hours: 30 hours
Self-study: 60 hours
Total: 90 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students will be able:

➢ to understand the need to deal with diversity as a social field of action
➢ to critically analyze concepts and practices that relate to the diversity buzzword

More specifically, they will be aware of the inclusion and exclusion potentials of diversity aspects when it comes to health-related behaviors and access to healthcare.
Content
The module provides basic knowledge on theoretical approaches of diversity studies and links them to the field of health:
1. Different diversity concepts (especially in terms of age, disability, gender and ethnicity/nationality);
2. Organizational approaches to the "processing of diversity";
3. Reflection on "Doing Diversity" as an everyday practice;
4. Focus on the practical field of "health, prevention and rehabilitation" and related forms of diversity-linked discrimination

Teaching and learning methods
The module consists of a seminar. The content of the seminar will be presented through a lecture as well as presentations. Students are encouraged to study the literature and actively engage with the issues at hand. Based on specific topics and tasks, they are encouraged to develop their own hypotheses and to investigate them independently.

Courses

<table>
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<tr>
<th>Type</th>
<th>Seminar</th>
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<tbody>
<tr>
<td>Name</td>
<td>Doing difference - An introduction to diversity studies</td>
</tr>
<tr>
<td>SWS</td>
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<tr>
<td>Docent</td>
<td>Laura Dobusch</td>
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</tbody>
</table>

Literature

Recommended prerequisites
None

4. Study/Examinations
The examination consists of an oral (graded) exam. Students will thereby demonstrate that they are able to apply the knowledge acquired (about e.g. various diversity concepts or organizational approaches to the "processing of diversity") to a health-relevant context. They will also prove that they are capable of analyzing and reflecting upon impacts as well as further developing their own solutions and arguments in specific practical fields that are diversity-relevant. Moreover, in this exam students will determine whether they are able to analyze, reflect upon and implement the knowledge acquired about the diversity buzzword in a practical field.
5. **Responsible for module**

<table>
<thead>
<tr>
<th>First name</th>
<th>Elisabeth</th>
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</thead>
<tbody>
<tr>
<td>Last name</td>
<td>Prof. Wacker</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:elisabeth.wacker@tum.de">elisabeth.wacker@tum.de</a></td>
</tr>
</tbody>
</table>
Module: Bachelor's Thesis

1. General data

Title of module
Bachelorarbeit (deutsch)
Bachelor's Thesis (English)

Module level
Bachelor degree program

Module subtitle
Thesis

Semester duration
One semester

Frequency
SS

Language
German or English, abstract in English

ECTS
12

2. Workload

Self-study: 360 hours
Total: 360 hours

3. Description

Targeted learning outcomes
After successfully completing the module, students are able to independently work out, plan, perform, and evaluate a scientific question in the field of health science, and present the results according to international scientific standards.

Content
Students become acquainted with a scientific topic and hypothesis of health science under guidance. They can firstly perform a quantitative or qualitative study and evaluate these with the appropriate procedures and present the results of both content and form in accordance with international standards.
**Prerequisites**

120 credits of compulsory modules

**4. Study/Examinations**

In addition to the prepared composition, the thesis work consists of a lecture in which the student must answer questions about the presented work.