

# Module Guide for the Study Path

# **Master Interdisciplinary Courses**



# interdisciplinary competence

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interdisciplinary	
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CS3208-KP04 - Responsible Use of Generative AI (GENAI)			
Duration:	Turnus of offer:	Credit points:	
1 Semester	each winter semester	4	

- Bachelor Interdisciplinary Courses for health sciences (optional subject), interdisciplinary competence, Arbitrary semester
- Master Interdisciplinary Courses (optional subject), interdisciplinary competence, Arbitrary semester
- · Bachelor Interdisciplinary Courses (optional subject), interdisciplinary competence, Arbitrary semester

#### Classes and lectures:

- CS3208-P: Responsible Use of Generative AI (not for medical students) (project work, 1 SWS)
- CS3208-V: Responsible Use of Generative AI (lecture, 2 SWS)

#### Workload:

- 45 Hours work on project
- 45 Hours private studies
- 30 Hours in-classroom work

#### Contents of teaching:

- Introduction An overview of tools, possibilities and discourses on generative Al
- Fundamentals of Technology 1 Basic Modes of Operation
- Fundamentals of Technology 2 Adaptation to Social Norms
- Application basics How to proceed when using generative AI?
- Psychological implications effects on experience, motivation and skills in the workplace
- Use cases 1 General productivity and scientific writing
- Use cases 2 Research
- Use cases 3 Training
- Use cases 4 Medicine
- Al and security The risks of Al in safety-critical applications
- Legal and Ethical Aspects Intellectual Property, Privacy and Societal Challenges
- Sustainability Environmental Costs
- The future outlook on future possibilities and limitations

#### **Qualification-goals/Competencies:**

- Students will be able to explain the basic functioning and technology of generative AI in general content production.
- Students recognise the ethical and societal challenges of generative AI technologies and can formulate these concretely and precisely.
- Students are able to critically evaluate the impact of generative AI on their tasks.
- Students are able to use the potential of generative AI responsibly and reflectively in their studies and future work.
- The students know the basic legal framework around generative AI applications.
- Students are aware of the social and environmental implications of generative AI applications.

### **Grading through:**

- continuous, successful participation in course
- presentation
- project work

### Responsible for this module:

• Prof. Dr.-Ing. Christian Herzog

#### Teacher:

- Institute for Electrical Engineering in Medicine
- Prof. Dr.-Ing. Christian Herzog
- Prof. Dr. Corinna Peifer
- Dr. Maria Henke
- Roman Spendler
- Prof. Dr. rer. nat. Floris Ernst
- Prof. Dr. rer. nat. habil. Ralf Möller
- Prof. Dr. André Calero Valdez
- Prof. Dr. med. Jürgen Westermann
- Prof. Dr. Doris Weßels
- Prof. Dr. Maximilian Schüler





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• : Various further literature from science and journalism

# Language:

German or English

#### Notes:

Admission requirements for taking the module:

- None

Admission requirements for participation in module examination(s):

- None

Module-Exam(s):

CS3208-L1: Responsible Use of Generative AI, successful submission and presentation of a semester-long project, 100% of the (non existent) module grade

Rooms:

Lecture:

- Mon 10:00 - 12:00, Seminar room Mathematics 1 (Hilbert)

# Project:

- Mon 12:00 - 14:00, Seminar room Mathematics 2 (Banach)



emester  ourse of study, specific field and term:  • Bachelor Interdisciplinary Courses (optional subject), interdisciplinary Courses (optional subject), interdisciplinary Eachelor Interdisciplinary Courses for health sciences (optional lasses and lectures:  • PS1110-S: Social Aspects of Sustainability (seminar, 1 SWS)	nary competence, Arbitrary semester
<ul> <li>Bachelor Interdisciplinary Courses (optional subject), interdiscip</li> <li>Master Interdisciplinary Courses (optional subject), interdiscipli</li> <li>Bachelor Interdisciplinary Courses for health sciences (optional</li> </ul>	nary competence, Arbitrary semester
<ul> <li>Bachelor Interdisciplinary Courses (optional subject), interdiscip</li> <li>Master Interdisciplinary Courses (optional subject), interdiscipli</li> <li>Bachelor Interdisciplinary Courses for health sciences (optional</li> </ul>	nary competence, Arbitrary semester
DS1110 St Social Aspects of Sustainability (comings 1 SWS)	Workload:
<ul> <li>PS1110-3. Social Aspects of Sustainability (serimal, 13WS)</li> <li>PS1102-V: Social classification of sustainability science (lecture, 1 SWS)</li> </ul>	<ul><li>60 Hours private studies</li><li>30 Hours in-classroom work</li></ul>
ontents of teaching:	·
<ul> <li>The idea of sustainable development and its historical classifica</li> <li>Foundations for theoretical concepts of sustainable development</li> <li>Foundations of sustainable development and its scientific reso</li> <li>Basic concepts of sustainability ethics</li> <li>Fundamentals of the philosophy of science and transdisciplina</li> <li>Specific aspects of the methodology of sustainability science</li> </ul>	nt nance
<ul> <li>Students master the basics of ecological, social and economic a</li> <li>They have an understanding of which procedures are sustainal criteria they must fulfil</li> <li>You will gain a general understanding of sustainability science economic developments.</li> </ul>	ole in which areas (business, medicine, research, transfer) and which
rading through:	
• portfolio exam	
esponsible for this module:	
Prof. Dr. rer. nat. Charli Kruse	
eacher:	
Institute of Medical and Marine Biotechnology	
<ul><li>Prof. Dr. rer. nat. Charli Kruse</li><li>Dr. rer. nat. Daniel Hans Rapoport</li></ul>	
Dr. rer. nat. Sandra Schumann	
Dr. rer. nat. Philipp Ciba	
Dr. rer. nat. Anna Matthießen	

Joachim Pietzsch: Bioökonomie für Einsteiger - Springer Spektrum 1. Auflage 2017 Editior

# Language:

• offered only in German





Admission requirements for taking the module:

None

Admission requirements for participation in module examination(s):

- Successful and regular participation in the seminar

# Module Exam(s):

- PS1110-L1: Social Aspects of Sustainability, Portfolio exam consisting of: 30 points in the form of an individual term paper, 70 points in the form of a semester presentation, 100% of the (non-existent) module grade



PS1120-I	KP04 - Economic Aspec	cts of Sustainability (C	DekoNach)
Duration:	Turnus of offer:		Credit points:
1 Semester	every summer semester		4
Course of study, specific field and term:			
<ul> <li>Bachelor Interdisciplinary Courses (or</li> <li>Master Interdisciplinary Courses for</li> <li>Bachelor Interdisciplinary Courses for</li> </ul>	otional subject), interdisciplin	nary competence, Arbitrary	semester
Classes and lectures:		Workload:	
<ul><li>PS1120-S: Economic Aspects of Sus</li><li>PS1100-V: Sustainable bioeconomy</li></ul>		• 60 Hours private s • 30 Hours in-classr	
Contents of teaching:			
restoration, sustainable water mana • Connection between the bioecono	agement, cost avoidance thromy and sustainability using endesine the perone t	ough flood and coastal pro exemplary examples: The o	tection using the example of peatland tection in Germany. rigin of biomass, the use of biomass for the economy, the bioeconomy as a closed-loop
Oualification-goals/Competencies:	system and the specifics of a ecology and their economic f the bioeconomy and sustai	sustainable bioeconomy classification	explain them using examples epreneurship (management, digital economy,
Grading through:			
portfolio exam			
Responsible for this module:			
Prof. Dr. rer. nat. Charli Kruse			
Teacher:			
<ul> <li>Institute of Medical and Marine Bior</li> </ul>	technology		
<ul> <li>Prof. Dr. rer. nat. Charli Kruse</li> <li>Dr. rer. nat. Daniel Hans Rapoport</li> <li>Dr. rer. nat. Sandra Schumann</li> <li>Dr. rer. nat. Philipp Ciba</li> <li>Dr. rer. nat. Anna Matthießen</li> </ul>			
Literature:			

- Harald Heinrichs, Gerd Michelsen: Nachhaltigkeitswissenschaften Springer Spektrum 2014
- Joachim Pietzsch: Bioökonomie für Einsteiger Springer Spektrum 1. Auflage 2017 Edition

# Language:

• offered only in German





Admission requirements for taking the module:

None

Admission requirements for participation in module examination(s):

- Successful and regular participation in the seminar

# Module Exam(s):

- PS1120-L1: Economic Aspects of Sustainability, Portfolio exam consisting of: 30 points in the form of an individual term paper, 70 points in the form of a semester presentation, 100% of the (non-existent) module grade



PS1500-KP05 - Sustainability Science with Focus on Ecology & Biotechnology (NachWiss)		
Duration:	Turnus of offer:	Credit points:
1 Semester	every summer semester	5

- Master Interdisciplinary Courses (optional subject), interdisciplinary competence, Arbitrary semester
- Bachelor Interdisciplinary Courses for health sciences (optional subject), interdisciplinary competence, Arbitrary semester
- · Bachelor Interdisciplinary Courses (optional subject), interdisciplinary competence, Arbitrary semester

#### Classes and lectures:

- PS1500-V: Sustainability Science (lecture, 2 SWS)
- PS1500-S: Sustainability Science (seminar, 1 SWS)
- PS1500-Ü: Sustainability Science (exercise, 1 SWS)

#### Workload:

- 90 Hours private studies
- 60 Hours in-classroom work

### Contents of teaching:

- Introduction to scientific perspectives on sustainability
- Basic concepts of ecosystem and biodiversity
- Foundations for food security and healthy nutrition in the context of the bioeconomy
- Review of the importance of biotechnology for the bioeconomy
- · Significance of chemical substances in the environment
- Basics of global material cycles (earth system, climate)
- Conditions for a sustainable bioeconomy
- Basics on the importance of transgenic animals and plants

#### Qualification-goals/Competencies:

- Students can use examples to explain the terms sustainability, bioeconomy and biotechnology
- They can assess selected technological developments with regard to their influence on sustainability
- They will learn exemplary different processes to get a practical insight into the bioeconomy
- They understand the fundamental importance of biotechnology for a sustainable bioeconomy
- · They will learn about examples of the close link between sustainable bioeconomy and biotechnology
- They will gain insight into the use of extracorporeal cell cultures, sustainable medical processes, and biomass production and utilization
- They will learn about the construction of recirculating systems or the ecologically sound use of marine biomass
- They can professionally evaluate the topics of sustainability and bioeconomy in new subject areas
- They have a profound knowledge to be able to assess technologies and processes with regard to their sustainability

#### **Grading through:**

· portfolio exam

#### Responsible for this module:

• Prof. Dr. rer. nat. Charli Kruse

### Teacher:

- · Institute of Medical and Marine Biotechnology
- Prof. Dr. rer. nat. Charli Kruse
- Dr. rer. nat. Daniel Hans Rapoport
- Dr. rer. nat. Sandra Schumann
- Dr. rer. nat. Philipp Ciba
- Dr. rer. nat. Anna Matthießen

#### Literature:

- Harald Heinrichs, Gerd Michelsen: Nachhaltigkeitswissenschaften Springer Spektrum; 2014
- Joachim Pietzsch: Bioökonomie für Einsteiger Springer Spektrum; 1. Aufl. 2017 Edition
- Reinhard Renneberg, Darja Süßbier, Viola Berkling, Vanya Loroch: Biotechnologie für Einsteiger Springer Spektrum; 5. Aufl. 2018
- Daniela Thrän, Urs Moesenfechtel: Das System Bioökonomie Springer Spektrum; 1. Aufl. 2020

# Language:





• offered only in German

# Notes:

Admission requirements for taking the module:

- None

Admission requirements for participation in module examination(s):

- Successful and regular participation in the seminar

# Module Examination(s):

- PS1500-L1: Sustainability Science with a Focus on Ecology & Biotechnology, portfolio examination consisting of: 50 points in the form of a term paper completed independently during the semester and 50 points in the form of a presentation, 100% of the (non-existent) module grade



CS5820-KP04, CS5820 - Legal foundations for IT (ITRecht)			
Duration:	Turnus of offer:	Credit points:	
1 Semester	not available anymore	4 (Typ B)	
Course of study, specific field and term:			

- · Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- Master Medical Informatics 2014 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Master MES 2014 (optional subject), no specific field, 1st or 2nd semester
- Bachelor MES 2014 (optional subject), no specific field, Arbitrary semester
- Master Computer Science 2012 (optional subject), interdisciplinary competence, 3rd semester

#### Classes and lectures:

- Legal Foundations for IT (lecture, 1 SWS)
- Legal Foundations for IT (seminar, 1 SWS)

#### Workload:

- 55 Hours private studies
- 45 Hours in-classroom work
- 20 Hours exam preparation

# Contents of teaching:

- Introduction and Overview
- · Personality rights, freedom of the press and the media, and freedom of speech
- Regulatory objectives: information and law
- Youth protection and self-regulation
- Privacy and Data Protection
- Press and advertising law
- Copyright, trademark, patent law
- German Data Protection Act (TDG) and Teleservice Data Protection Act(TDDSG), Signature Act (SigG), German Interstate Media Services Agreement(MDStV)
- · Contract law and e- contracting
- International aspects
- Case Studies
- · Summary and Outlook

#### **Qualification-goals/Competencies:**

- The students know the legal basis for the production and use of software and digital media.
- The students know the legal basis for the operation of IT and communications systems.

# **Grading through:**

• Written or oral exam as announced by the examiner

# Responsible for this module:

• Studiengangsleitung Informatik

#### Teacher:

- external institution
- externe Lehrbeauftragte

# Literature:

- :
- :
- :

#### Language:

• English, except in case of only German-speaking participants



1	EC4001-KP04, EC4001 - Gen	eral Business Administration (ABWL)
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semeste	r 4
<ul> <li>Master Psychology 201</li> <li>Master Interdisciplinary</li> <li>Master psychology 201</li> <li>Master Media Informati</li> </ul>	nce 2019 (optional subject), interdiso 6 (optional subject), interdisciplinar 7 Courses (optional subject), Interdiso 3 (optional subject), interdisciplinar ics 2014 (optional subject), interdisc	sciplinary modules, Arbitrary semester
	nistration (lecture, 2 SWS) nistration (exercise, 1 SWS)	Workload:  • 60 Hours private studies  • 45 Hours in-classroom work  • 15 Hours exam preparation
Theories in business ad     Organisational forms     Legal forms     Accounting basics     Theories on leaderhip a		
Within this lecture, the	portant and in-depth overview of t students are empowered to identif	he single parts of business administration. Ty and classify the different theoretical areas of business administration. It approaches and apply them to specific situations.
Grading through:  • portfolio exam		
Responsible for this module:		
	e Allgemeine Betriebswirtschaftslel Indlagen der Unternehmensführung	hre - Vahlen-Verlag, 24. Auflage, 2010 g - Gabler-Verlag, 4. Auflage, 2011

• offered only in German

Language:



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC4001-L1: General Business Administration, (online) tests, 100 % of module grade

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further registration and exam-related questions will be clarified during the first lectures.

(Is equal to EC4001 T-KP04)



Language:

Notes:

• offered only in German

	EC4004-KP04, EC4004 -	Strategic Management (StratMng)
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semest	er 4
<ul> <li>Master Interdisciplinary</li> </ul>	6 (optional subject), interdisciplina Courses (optional subject), Interd	ary competence, Arbitrary semester lisciplinary modules, Arbitrary semester ary competence, Arbitrary semester
Classes and lectures:		Workload:
<ul><li>Strategic Management</li><li>Strategic Management</li></ul>		<ul> <li>60 Hours private studies</li> <li>45 Hours in-classroom work</li> <li>15 Hours exam preparation</li> </ul>
Contents of teaching:		
<ul> <li>Coroporate goals and s</li> <li>Marketing Strategies</li> <li>Enterprise Controlling</li> <li>Internationalization str</li> </ul>	-	
<ul><li>independently.</li><li>They are empowered t</li></ul>	ning areas the students will be able o use and apply the different strate ork within the lecture and exercise	e to use the teaching content and to analyze and evaluate business cases egic management tools and approaches. enables the students to formulate and define common goals and solution
Grading through:  • portfolio exam		
Responsible for this module	: :	
• Prof. Dr. Christian Sche	iner	
Teacher:	eurship and Business Development	
Simon Behrendt	eurstrip and business Development	
Literature:		
<ul><li>Hungenberg: Strategis</li><li>Schierenbeck: Grundzi</li><li>Schäfer-Kunz Vahs: Ein</li></ul>	ches Management in Unternehme ige der Betriebswirtschaftslehre - C führung in die Betriebswirtschaftsl	ng - Gabler-Verlag, 4. Auflage, 2011 n - Gabler-Verlag, 8. Auflage 2014 Didenbourg-Verlag, 17. Auflage, 2008 Jehre - Schäffer-Poeschel-Verlag, 5. Auflage, 2007



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC4004-L1: Strategic Management, portfolio exam, 100 % of module grade

The portfolio exam consists of the following:

- -□Written assignment, 40 %
- -□Exam, 60 %

The commercial rounding is used to determine the overall grade.

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further registration and exam-related questions will be clarified during the first lectures.

(Is equal to EC4004 T-KP04)



EC4007-KP04 - Innovation and Technology Management (WFIuTMng)				
Duration:	Turnus of offer:	Credit points:		
1 Semester	each winter semester	4		
Course of study, specific field				
Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester				
Classes and lectures:		Workload:		
<ul> <li>Innovation and Technological</li> </ul>	ogy Management (lecture, 2 SWS)	60 Hours private studies		

# • Innovation and Technology Management (exercise, 1 SWS)

Contents of teaching:

• Technology and innovation are the basis for success and growth of any business. This course deals with theories, concepts and tools for the management of technology and innovation. During the event, basic concepts of innovation and technology management are defined. In addition, corporate internal and external sources of innovation are discussed, before the search for business opportunities is covered. Furthermore, the course deals with the development of an innovation strategy, the establishment of innovation networks, the development of new products and services and business model innovations.

 45 Hours in-classroom work • 15 Hours exam preparation

- The content is also linked to practical and current topics thus covering relevant applications.
- Individual aspects of the event will be studied on selected case studies.

#### **Qualification-goals/Competencies:**

- Students are able to master and apply scientific foundations and develop specialized and in-depth expertise in innovation and technology management.
- · Students are able to structure and solve problems in innovation and technology management even in a new, unfamiliar and multidisciplinary context.
- Students are able to define goals for their own development and reflect their own strengths and weaknesses, plan their own development and reflect the societal impact.
- Students can work cooperatively and responsibly in groups and reflect and enhance their own cooperative behavior in groups critical.

### **Grading through:**

· Written or oral exam as announced by the examiner

### Responsible for this module:

• Prof. Dr. Christian Scheiner

#### Teacher:

- Institute for Entrepreneurship and Business Development
- · Dr. Stefan Becker

#### Literature:

- Nichols: Social Entrepreneurship Oxford University Press: 1. Auflage 2008
- Bessant & Tidd: Innovation and Entrepreneurship Wiley-Verlag: 2. Auflage 2013
- Fisch & Roß: Fallstudien zum Innovationsmanagement Gabler-Verlag: 1. Auflage 2009
- Bessant & Tidd: Managing Innovation: Integrating Technological, Market and Organizational Change Wiley-Verlag: 5. Auflage 2013

#### Language:

English, except in case of only German-speaking participants



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC4007-L1: Innovation and Technology Management, written exam, 60 min, 100 % of module grade, or as announced by examiner
- EC4007-L1: Innovation and Technology Management, oral exam, 15 min, 100 % of module grade

(Is equal to EC4005T-KP04)



EC4008-KP04 - Entrepreneurship & Innovation (EI)		
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester	4

- Master Computer Science 2019 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Medical Informatics 2019 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Master Computer Science 2014 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Media Informatics 2014 (optional subject), Interdisciplinary modules, Arbitrary semester
- Master Medical Informatics 2014 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester

#### Classes and lectures:

- Entrepreneurship and Innovation (lecture, 2 SWS)
- Entrepreneurship and Innovation (exercise, 1 SWS)

#### Workload:

- 60 Hours private studies
- 45 Hours in-classroom work
- 15 Hours exam preparation

### Contents of teaching:

- This course deals with fundamental theories, concepts and tools for the entrepreneurship and innovation management.
- The content is also linked to practical and current topics thus covering relevant applications.
- Individual aspects of the event will be studied on selected case studies.

#### **Qualification-goals/Competencies:**

- Students are able to master and apply scientific foundations and develop predominantly fundamental expertise in entrepreneurship and innovation
- Students are able to structure and solve problems in innovation and technology management predominantly in a familiar be to some extent also even in a new, unfamiliar and multidisciplinary context.
- Students are able to define goals for their own development and reflect their own strengths and weaknesses, plan their own development and reflect the societal impact.
- Students can work cooperatively and responsibly in groups and reflect and enhance their own cooperative behavior in groups critical.

### **Grading through:**

· portfolio exam

#### Responsible for this module:

• Prof. Dr. Christian Scheiner

### Teacher:

- Institute for Entrepreneurship and Business Development
- Prof. Dr. Christian Scheiner

### Literature:

- Nichols: Social Entrepreneurship Oxford University Press 1. Auflage 2008
- Bessant & Tidd: Innovation and Entrepreneurship Wiley-Verlag 2. Auflage 2013
- Fisch & Roß: Fallstudien zum Innovationsmanagement Gabler-Verlag 1. Auflage 2009
- Bessant & Tidd: Managing Innovation: Integrating Technological, Market and Organizational Change Wiley-Verlag: 5. Auflage 2013

### Language:

• German and English skills required



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC4008-L1: Entrepreneurship and Innovation, portfolio exam, 100% of module grade

The portfolio exam consists of the following:

- Individual written assignment, 15 %
- -□Group work (Presentation), 45 %
- -□(Online)exams, 40 %

The commercial rounding is used to determine the overall grade.

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further registration and exam-related questions will be clarified during the first lectures.

(Is equal to EC4008 T-KP04) (Replaces PS5830-KP04)



EC4010-KP04, EC4010 - Commercial Law (WirtRecht)			
Duration:	Turnus of offer:	Credit points:	
1 Semester	each summer semester	4	

- Master Computer Science 2019 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Entrepreneurship in Digital Technologies 2020 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Medical Informatics 2019 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- Master MES 2014 (optional subject), no specific field, Arbitrary semester
- Bachelor MES 2014 (optional subject), no specific field, 3rd semester at the earliest
- Master Medical Informatics 2014 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Master Computer Science 2014 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Entrepreneurship in Digital Technologies 2014 (optional subject), interdisciplinary competence, Arbitrary semester

#### Classes and lectures:

- Commercial Law (lecture, 2 SWS)
- Commercial Law (exercise, 1 SWS)

#### Workload:

- 60 Hours private studies
- · 45 Hours in-classroom work
- 15 Hours exam preparation

#### Contents of teaching:

- The importance of legal aspects in entrepreneurship especially in the high-tech sector
- legal acts
- contract law
- · technology protection and intellectual property (know how, patents, trademarks, designs, with license rights)
- · labor law
- corporate law
- · enforcement of legal claims

#### **Qualification-goals/Competencies:**

- The objective of the course is to provide students with a basic knowledge of legal subjects relevant for scientists, medical doctors, engineers and computer scientists in technology-driven enterprises or in research at a university.
- Students will gain an understanding of legal reasoning to help them avoid pitfalls and exploit to the fullest extent opportunities in R&D projects and startup companies.

# **Grading through:**

• written exam

# Responsible for this module:

· Prof. Dr. Christian Scheiner

#### Teacher:

- Institute for Entrepreneurship and Business Development
- Dr. Carsten Richter

#### Literature:

- Carsten Richter: Kurshandout -
- Ann/Hauck/Obergfell: Wirtschaftsrecht kompakt München 2012
- Meyer: Wirtschaftsprivatrecht Heidelberg 2012
- -: BGB Bürgerliches Gesetzbuch Beck-Texte, neuste Auflage
- Schönfelder: Deutsche Gesetze Textsammlung neuste Auflage

### Language:

• offered only in German



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

# Module exam(s):

- EC4010-L1: Commercial Law, written exam, 60 min, 100 % of module grade



	EC4501-KP04 - Negotiation (WFVerfuehr)	
Duration:	Turnus of offer:	Credit points:
1 Semester	each summer semester	4

• Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester

#### Classes and lectures:

- Negotiation (lecture, 2 SWS)
- Negotiation (exercise, 1 SWS)

#### Workload:

- 60 Hours private studies
- 45 Hours in-classroom work
- 15 Hours exam preparation

#### Contents of teaching:

- Negotiation fundamentals
- Negotiation (sub-)processes
- Negotiation contexts
- Individual differences in negotiation
- Resolving differences
- · Emotions in negotiations

#### **Qualification-goals/Competencies:**

- Students are able to identify the central issues in the process of negotiations and have a broad knowledge including the scientific basis
  as well as the practical application of the importance of negotiations in economic and in a business context.
- Students are able to apply this knowledge to their own examples.
- Individual aspects of negotiations will be studied on selected case studies and exercises
- Students master the scientific foundations and have specialized and in-depth expertise in negotiation.
- Students know how to prepare, structure and conduct negotiations.
- Students are able to define goals for their own development and can reflect their own strengths and weaknesses, plan their individual development and reflect the societal impact.
- Students can work cooperatively and responsibly in groups as well as reflect and enhance their own cooperative behavior in groups
  critical.

#### **Grading through:**

portfolio exam

#### Responsible for this module:

• Prof. Dr. Christian Scheiner

#### Teacher:

- Institute for Entrepreneurship and Business Development
- Prof. Dr. Christian Scheiner

#### Literature:

- Lewicki, R., Barry, B., & Saunders, D.: Negotiation Readings, Exercises and Cases. 2015, McGraw-Hill Education, New York.
- Nalebuff, B.: Split the Pie: A Radical New Way to Negotiate. 2022, Harper Collins Publishers, New York.
- Dinnar, S. & Susskind, L.: Entrepreneurial Negotiation. 2018, Palgrave Macmillan, Cham.
- Feld, B. & Mendelson, J.: Venture Deals. 2016, John Wiley & Sons, New Jersey, 3rd Edition.
- Cialdini, R.: Influence The Psychology of Persuasion. 2007, Harper Collins Publishers, New York, Revised Edition.
- Spolin, Viola: Improvisation for the Theater. 1963, Martino Fine Books, Eastford.

# Language:

• offered only in German



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC4501-L1: Negotiation, portfolio exam, 100 % of module grade

The portfolio exam consists of the following:

- -□Group work, 40 %
- -□(Online) tests, 60 %

The commercial rounding is used to determine the overall grade.

Students for whom this course is a compulsory module have priority.



EC4502-KP04 - Entrepreneurial Behavior (WEntrBehav)		
<b>Duration:</b>	Turnus of offer:	Credit points:
1 Semester	each summer semester	4

· Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester

#### Classes and lectures:

- Entrepreneurial Behavior (lecture, 2 SWS)
- Entrepreneurial Behavior (exercise, 1 SWS)

#### Workload:

- 60 Hours private studies
- 45 Hours in-classroom work
- 15 Hours exam preparation

#### Contents of teaching:

- · Psychology of entrepreneurs and entrepreneurial teams
- Entrepreneurial decision making and implementation
- · Motivation of employees
- Personnel management and personality development
- Influence of entrepreneurial passion on the actions of entrepreneurs
- Fundamentals in entrepreneurial and organizational behavior
- Stakeholder, top management, and principal-agent-theory
- · Challenges in the organizational design
- · Organizational culture
- · Organizational learning
- · Individual differences and diversity

#### **Qualification-goals/Competencies:**

- Students are able to identify the central issues in the context of entrepreneurial/organizational behavior and have a broad knowledge including the scientific basis as well as the practical application its importance.
- Students are able to apply this knowledge to their own examples and in a changing context.
- Individual aspects of the event will be studied on selected case studies.
- · Students master the scientific foundations and have specialized and in-depth expertise in entrepreneurial and organizational behavior.
- Students know how to structure and solve problems even in new, unfamiliar and multidisciplinary contexts of entrepreneurial and organizational behavior.
- Students can work cooperatively and responsibly in groups and reflect and enhance their own cooperative behavior in groups critical.

# **Grading through:**

portfolio exam

# Responsible for this module:

• Prof. Dr. Christian Scheiner

#### Teacher:

- Institute for Entrepreneurship and Business Development
- Prof. Dr. Christian Scheiner

#### Literature:

- Ansfried B. Weinert: Organisations- und Personalpsychologie Beitz Verlag, Basel, 2004
- Lutz von Rosenstiel, Friedemann W. Nerdinger: Grundlagen der Organisationspsychologie Schaeffer Poeschel Verlag, 7. überarbeitete Auflage
- Lioba Werth: Psychologie für die Wirtschaft Spektrum Akademischer Verlag, 2004
- Dieter Frey, Hans Werner Bierhoff: Sozialpsychologie Interaktion und Gruppe Hogrefe Verlag, Göttingen 2011
- Peter Dowling, Marion Festing, Allen D. Engle: International Human Resource Management 5th Edition, London, 2008

#### Language:

• offered only in German



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC4502-L1: Entrepreneurial Behavior, portfolio exam, 100 % of module grade

The portfolio exam consists of the following:

- -□Group work, 40 %
- -□(Online) tests, 60 %

The commercial rounding is used to determine the overall grade.

(Is equal to EC4500 B-KP04)

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further registration and exam-related questions will be clarified during the first lectures.



Language:

EC4503-KP04 - Entrepreneurship and olympic strategies (EnuSe)		
Duration: Turnus of offer: Credit points:		
Semester every summer semester 4		4
<ul> <li>Master Interdisciplinary</li> </ul>	p in Digital Technologies 2020 (optional Courses (optional subject), Interdisciplin	subject), entrepreneurship, 2nd semester ary modules, Arbitrary semester subject), entrepreneurship, 2nd semester
SWS) • EC4503-Ü: Entrepreneu	4503-V: Entrepreneurship and olympic strategies (lecture, 2 • 60 Hours in-classroom work	
Contents of teaching:		
<ul> <li>Creative solution findin</li> <li>Team building</li> <li>Management duties and</li> <li>Acting under uncertain</li> <li>Strategy building</li> <li>Strategy</li> <li>Dealing with turbulent</li> <li>Identification and evalu</li> <li>Dealing with stress</li> <li>Acting under restrictive</li> </ul>	d responsibility ty environmental conditions ation of opportunities and possibilities	
basic scientific knowled  Students are able to ap  Students can identify chacquired methods, and  The combination of sail  Students will be able to  Students can plan and of  Students can define good reflect on their own four  Students can work coop groups.	the most important questions in the corlige.  ply this knowledge to their own example naracteristics and factors of successful stadevelop and visualise them independening and sport provides a direct application apply simple scientific basics from startcarry out work steps in solving problems als for their own development, reflect on indations.	ort-up projects and tasks, evaluate them on the basis of criteria and tly. On reference. Up research. even in new and unfamiliar as well as interdisciplinary contexts. their own strengths and weaknesses, plan their own development and critically reflect and expand their own cooperative behaviour in
Grading through:		
written homework		
Responsible for this module:	ner urship and Business Development	
Literature:  • : • : • :		



• offered only in German

#### Notes:

Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none

# Module exam(s):

- EC4503-L1: Entrepreneurship and olympic strategies, written homework, 100 % of module grade

In the module Entrepreneurship and olympic strategies , students learn about the similarities between olympic strategies and entrepreneurship and which lessons of olympic strategies can be adopted in the context of start-up ventures.

This is a block course.



EC4510-KP06, EC4510 - Entrepreneurial and High-Tech-Marketing (EntMark)			
Duration:	Turnus of offer:	Credit points:	
1 Semester	each summer semester	6	
Course of study, specific field a	and term:		
Master Entrepreneurship     Master Interdisciplinary C	in Digital Technologies 2020 (compul ourses (optional subject), Interdiscipli	sory), entrepreneurship, 2nd semester nary modules, Arbitrary semester sory), entrepreneurship, 2nd semester	
Classes and lectures:		Workload:	
<ul> <li>Entrepreneurial and High-Tech-Marketing (lecture, 2 SWS)</li> <li>Entrepreneurial and High-Tech-Marketing (exercise, 2 SWS)</li> </ul>		<ul><li>100 Hours private studies</li><li>60 Hours in-classroom work</li><li>20 Hours exam preparation</li></ul>	
Contents of teaching:			
<ul> <li>In addition, the character</li> </ul>	istics of innovation marketing and in	rences between classical and entrepreneurial marketing. particular the marketing of high-tech and innovative products will be lities in the field of entrepreneurial marketing will be further explained	
<ul> <li>Students are able to deve</li> </ul>	elop and apply marketing strategies fo ills acquired in this subject can thus b	latest state of knowledge in the field of entrepreneurial marketing. or innovative and creative (product) ideas. e applied in the future to tasks in new and unfamiliar situations using	
• witten exam			
Responsible for this module:  • Prof. Dr. Christian Scheine Teacher:	er		
Institute for Entrepreneur	ship and Business Development		
Prof. Dr. Marc Opresnik			
<ul> <li>Hollensen / Opresnik: Gru</li> <li>Kotler / Armstrong / Opre</li> <li>Kotler / Keller / Opresnik:</li> <li>J. Mohr, Sengupta, S., Sla</li> </ul>	ter, S.: Marketing of High-Technology Kommunikativen Intelligenz nutzen. E	torientierter Ansatz - Lübeck, 2020 Aufl., Harlow, 2019 ür wertschaffendes Handeln - 15. Aufl., München, 2017	

# Notes:

Language:

• offered only in German



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none

# Module exam(s):

- EC4510-L1: Entrepreneurial- and High-Tech-Marketing, written exam, 120 min, 100 % of module grade

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further questions related to registration and exam will be clarified during the first lectures.

Please note the different lecture periods of the universities.



Language:

Notes:

• German and English skills required

EC4550-KP04 - Blockchain for Business (BlockBusi)			
Duration:	Turnus of offer:	Credit points:	
1 Semester	every summer semeste	r 4	
Course of study, specific fi	eld and term:		
	ship in Digital Technologies 2020 (option ary Courses (optional subject), Interdiscip	nal subject), interdisciplinary competence, 1st to 3th semester olinary modules, Arbitrary semester	
Classes and lectures:		Workload:	
<ul> <li>Blockchain Entrepreneurship (lecture, 2 SWS)</li> <li>Blockchain Entrepreneurship (exercise, 1 SWS)</li> </ul>		<ul><li>60 Hours private studies</li><li>45 Hours in-classroom work</li><li>15 Hours exam preparation</li></ul>	
Contents of teaching:			
Basic insights into the Use cases of blockche Assessment of blockche Scaling opportunities  Qualification-goals/Compe Students have gained Students have learned Students will be able Students will be able Students will be able	etencies: d a basic knowledge of blockchain techned criteria for a successful Blockchain apport to fundamentally design and evaluate pot identify and describe the added valute to understand the potential impact of b		
Grading through:	to (further) develop business models.		
portfolio exam			
Responsible for this modul	le:		
• Prof. Dr. Christian Sch	neiner		
Teacher:			
Institute for Entrepre	neurship and Business Development		
<ul><li> Prof. Dr. Christian Sch</li><li> Simon Behrendt</li></ul>	neiner		
Literature:			
	ckchain for Business - Springer Gabler, 20 schain-Technologie für Unternehmenspr		





Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none

Module exam(s):

- EC4004-L1 Blockchain for Business, portfolio exam, 100 % of module grade

The portfolio exam consists of the following:

-□(Online) tests, 100 %



EC5002-KP04 - Businessplan (WFBusiPlan)		
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester	4

· Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester

#### Classes and lectures:

- Business Plan (lecture, 1 SWS)
- Business Plan (exercise, 1 SWS)
- Business Plan (project work, 1 SWS)

#### Workload:

- 75 Hours work on project
- 45 Hours in-classroom work

#### Contents of teaching:

- During the business plan seminar, the business ideas for a potential business start-up are collected, evaluated and worked out in the form of a detailed business plan. The relevance of the business plan for business practice is to be demonstrated by means of specialist lectures on the individual components of the business plan.
- Students develop over the course period a business plan for a fictional or real business opportunity in teams.
- Business plan fundamentals
- Product and service description
- · Market and competitor analysis
- Development of a marketing strategy
- · Development of a distribution strategy
- Organizational structure
- Financing and financial planning

#### **Qualification-goals/Competencies:**

- Students are able to identify the central issues in the process of writing a business plan and have a broad knowledge including the scientific basis as well as its practical application. Business plan is an advanced course in the curriculum and requires the completion of fundamentals courses (e.g. Entrepreneurial, Marketing, Strategic Management, Fundamentals in Business Administration, etc.).
- Students are able to apply this knowledge to their own examples. Students master the scientific foundations and have specialized and in-depth expertise in writing a business plan.
- Students know how to prepare, structure and conduct negotiations. Students are able to define goals for their own development and can reflect their own strengths and weaknesses, plan their individual development and reflect the societal impact.
- Students can work cooperatively and responsibly in groups and reflect and enhance their own cooperative behavior in groups critical.

# **Grading through:**

portfolio exam

# Responsible for this module:

• Prof. Dr. Christian Scheiner

#### Teacher:

- Institute for Entrepreneurship and Business Development
- Prof. Dr. Christian Scheiner
- Simon Behrendt

#### Literature:

- Netzwerk Nordbayern: Handbuch zur Businessplan-Erstellung 8. überarbeitete Auflage
- H. Klandt: Gründungsmanagement: Der integrierte Unternehmensplan Verlag Oldenbourg, 2. Auflage, 2006
- M. E. Porter: On Competition. Updated and Expanded Edition Harvard business review book series, 2008
- K. Kerth, H. Asum, V. Stich: Die besten Strategietools in der Praxis: Welche Werkzeuge brauche ich wann? Wie wende ich sie an? Wo liegen die Grenzen? Carl Hanser Verlag, 5. Auflage, München, Wien, 2011

#### Language:

• offered only in German



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC5002-L1: Business Plan, portfolio exam, 100% of module grade

The portfolio exam consists of the following:

- -□Written assignment, 60%
- -□Presentation, 40%

The commercial rounding is used to determine the overall grade.

(Is equal to EC5000 B-KP04)



EC5010-KP04, EC5010 - Entrepreneurship in the digital economy (EEntre)		
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester	4

- Master Entrepreneurship in Digital Technologies 2020 (compulsory), entrepreneurship, 3rd semester
- Master Media Informatics 2014 (optional subject), Interdisciplinary modules, Arbitrary semester
- Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- Master Robotics and Autonomous Systems 2019 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Master Entrepreneurship in Digital Technologies 2014 (compulsory), entrepreneurship, 3rd semester

#### Classes and lectures:

- Entrepreneurship in the digital economy (lecture, 2 SWS)
- Entrepreneurship in the digital economy (exercise, 1 SWS)

#### Workload:

- 60 Hours private studies
- 45 Hours in-classroom work
- 15 Hours exam preparation

### Contents of teaching:

- In this class students obtain a key insight into the entrepreneurial processes, the identification of business opportunities as well as the shaping and changing of young companies. In addition, students are able to understand business models on a basic level. At the same time, this class will include strategy development, fundamental aspects of corporate marketing, growth forms and strategies, entrepreneurship in the context of established enterprises and social entrepreneurship.
- Special emphasize will be on start-ups in the digital economy.

# **Qualification-goals/Competencies:**

- Students are able to identify the central issues in the process of founding a new company and have a broad Knowledge including the scientific basis as well as the practical application of the importance of entrepreneurship in economic and in a business context. Students are able to apply this knowledge to their own examples and in a changing context.
- Students are able to develop features and factors of successful start-ups and independently develop, visualize and submit business concepts based oncriteria and methods acquired. This knowledge is also linked to practical and current topics and representable applications.
- Individual aspects of the event will be studied on selected case studies.
- Students master the scientific foundations and have specialized and in-depth expertise in innovation and technology management.
- Students know how to structure and solve problems even in new, unfamiliarand multidisciplinary contexts of innovation and technology management.
- Students are able to define goals for their own development and canreflect their own strengths and weaknesses, plan their individual development and reflect the societal impact.
- · Students can work cooperatively and responsibly in groups and reflect and enhance their own cooperative behavior in groups critical.

# Grading through:

· portfolio exam

#### Responsible for this module:

• Prof. Dr. Christian Scheiner

### Teacher:

- Institute for Entrepreneurship and Business Development
- Prof. Dr. Christian Scheiner

#### Literature:

- Bygrave & Zacharakis: The Portable MBA in Entrepreneurship Wiley-Verlag: 2010
- Bygrave & Zacharakis: Entrepreneurship Wiley-Verlag: 3. Auflage 2013
- Hisrich, Peters & Shepherd: Entrepreneurship McGraw-Hill: International Edition 2010

#### Language:

• English, except in case of only German-speaking participants



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

#### Module exam(s):

- EC5010-L1: Entrepreneurship in the Digital Economy, portfolio exam, 100 % of module grade

The portfolio exam consists of the following:

- -□Group work(s) (Presentation), 40 %
- -□(Online)exams, 60 %

The commercial rounding is used to determine the overall grade.

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further questions related to registration and exam will be clarified during the first lectures.

(Formerly EC5010-KP04)



Language:

Notes:

• offered only in German

EC5020-KP06, EC5020 - Business game (PlanSp)		
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester	6
<ul> <li>Master Interdisciplinar</li> </ul>	ld and term: nip in Digital Technologies 2020 (compu y Courses (optional subject), Interdiscipl nip in Digital Technologies 2014 (compu	inary modules, Arbitrary semester
Classes and lectures:		Workload:
<ul><li>Business game (lecture</li><li>Business game (project</li></ul>	· · · · · · · · · · · · · · · · · · ·	
development in comp  On the basis of the inc  Qualification-goals/Compete  Students are able to an Based on the available measures.  Students are able to de	dicators, decisions for the next periods and analysis they can make evelop and apply strategies and solve periods and solve periods.	al context. e decisions and understand the impact of their decisions on performanc
Grading through:	·	
successful addressing (	of the project goals	
Responsible for this module     Prof. Dr. Christian Sche Teacher:     Institute for Entreprend     Prof. Dr. Christian Sche	eurship and Business Development	
Literature:  • Manual will be provide		



Prerequisites for attending the module:

- none

Prerequisites for participation in module exam(s):

- none
- Prerequisites for admission to the (written) examination may be scheduled at the beginning of the semester. When prerequisites are defined, they should be completed and positively evaluated before the initial (written) examination.

### Module exam(s):

- EC5020-L1: Business Game, portfolio exam consisting of the successful solution of the project task, 100 % of module grade

Students for whom this course is a compulsory module have priority.

Registration takes place at the beginning of the semester via Moodle. Further questions related to registration and exam will be clarified during the first lectures.

(Formerly EC5020)



• offered only in German

	EW2412-KP03 - C	Quality management (	WFQM)	
Duration:	Turnus of offer:		Credit points:	
1 Semester	each winter semester 3			
<ul> <li>Bachelor Interdiscipli</li> </ul>	ary Courses (optional subject), Interdinary Courses (optional subject), Inte	erdisciplinary modules, Arbi		er
Classes and lectures:  • Quality Managemen	t (lecture, 2 SWS)	Workload:  • 60 Hours p	rivate studies	
• 30 Hours in-classroom work				
Total Quality Manage quality system audit certification  Qualification-goals/Compe	ganisation of a QM-system ement (TQM)			
Grading through:				
written exam				
Responsible for this modu				
<ul> <li>Prof. Dr. med. Christ</li> <li>Teacher:</li> </ul>	an Sina			
•				
Literature:				
Language:				



LS2	807-KP04 - Philos	ophy of Science (WissT	heo)
Duration:	Turnus of offer:		Credit points:
1 Semester	every summer semeste	er	4
<ul> <li>Course of study, specific field and term:</li> <li>Bachelor Molecular Life Science 2024</li> <li>Bachelor Interdisciplinary Courses for</li> <li>Bachelor MLS 2018 (optional subject),</li> <li>Master Interdisciplinary Courses (optional subject),</li> <li>Bachelor Interdisciplinary Courses (optional subject),</li> </ul>	health sciences (option life sciences, 4th seme onal subject), Interdisci tional subject), Interdis	nal subject), interdisciplinary o ester plinary modules, Arbitrary se sciplinary modules, Arbitrary s	competence, Arbitrary semester mester
Classes and lectures:		Workload:	
<ul> <li>Basic of evolution theory: Historical arperspectives (lecture, 2 SWS)</li> <li>Basic of evolution theory: Historical arperspectives (seminar, 1 SWS)</li> </ul>		<ul><li>75 Hours private</li><li>45 Hours in-class</li></ul>	
• • • Qualification-goals/Competencies: • •			
Grading through:  • oral presentation and essay			
Responsible for this module:  • Dr. phil. Staffan Müller-Wille			
Teacher:			
Institute for History of Medicine and S	cience Studies		
<ul> <li>Dr. phil. Staffan Müller-Wille</li> <li>Prof. Dr. med. Cornelius Borck</li> <li>Prof. Dr. ror pat Burghard Weiss</li> </ul>			

# Literature:

- S. Shapin: Die wissenschaftliche Revolution Frankfurt a.M. 1998
- M. Hagner: Ansichten der Wissenschaftgeschichte Frankfurt a.M., 2001
- I. Hacking: Einführung in die Philosophie der Naturwissenschaften Stuttgart 1983
- Rheinberger, Hans-Jörg: Historische Epistemologie zur Einführung Hamburg 2007
- U. Krohs und G. Toepfer: Philosophie der Biologie: Eine Einführung Frankfurt a.M. 2005.
- I. Jahn: Grundzüge der Biologiegeschichte Jena 1990

• Prof. Dr. phil. Christoph Rehmann-Sutter

• Prof. Dr. phil Christina Schües • Dr. phil. Leonhard Menges • Dr. rer. nat. Schult

- K. Köchy: Biophilosophie zur Einführung Hamburg 2008
- A. Brenner: Leben. Grundwissen Philosophie Stuttgart 2009





# Language:

• offered only in German

# Notes:

Part of the module LS2800

Basics understanding of molecular Biology; Interest in philosophical-ethical questions in the life sciences



	ME4520-KP04 - Introduction to Med	dical Device Regulation	on (EinfMPR)
Duration:	Turnus of offer:	Credit points:	Max. group size:
1 Semester	each winter semester	4	40
Course of study, sp	ecific field and term:		
Master Medic	al Informatics 2019 (optional subject), interdisciplina isciplinary Courses (optional subject), Interdisciplina		
Classes and lecture	s:	Workload:	
2 SWS) • ME4520-Ü: In 1 SWS)	troduction to Medical Device Regulation (lecture, troduction to Medical Device Regulation (exercise, troduction to Medical Device Regulation (seminar,	<ul> <li>60 Hours work on a presentation</li> <li>60 Hours in-classro</li> </ul>	n individual topic with written and oral
<ul> <li>Requirements</li> <li>Application o</li> <li>Application o</li> <li>GENERAL REC</li> <li>Quality mana</li> <li>Clinical evalu</li> <li>SOFTWARE R</li> <li>Software as a</li> </ul>	amework for the marketing of medical devices in the for manufacturers of medical devices frisk management to medical devices fusability to medical devices QUIREMENTS gement for medical device manufacturers ation of medical devices		
Qualification-goals,	/Competencies:		
<ul> <li>They explain and market s</li> <li>They recogniz</li> <li>They apply no</li> <li>They are prof</li> <li>They use eler</li> </ul>	cribe the regulatory framework for the marketing of the concepts of regulatory requirements in the devolution urveillance of medical devices. we and justify which requirements are relevant for a porms and standards specifically to comply with requicient in risk analysis and assessment methods. In the usability-oriented development processing quality of a clinical evaluation or software lifecycliness.	elopment, production, marl product. irements. s.	keting, distribution, operation, maintenan

# **Grading through:**

• portfolio exam

# Responsible for this module:

• Dr. Maria Henke

# Teacher:

- Institute for Robotics and Cognitive Systems
- Dr. Maria Henke

# Literature:

• will be announced:

## Language:

• offered only in German

## Notes:



Admission requirements for taking the module:

None

Admission requirements for participation in module examination(s):

- None

## Module Exam(s):

ME4520-L1: Portfolio Exam Introduction to Medical Device Regulation with a total of 100 points, divided as follows:

- 70 points for active participation in the classroom sessions and group work, submission of homework assignments
- 20 points for elaboration and presentations
- 10 points for an e-test

An ungraded Category B Certificate of Achievement will be awarded.

The course is divided into three parts: The part Basic Knowledge is the basis for the course parts General Requirements and Software Requirements and must be completed by all students. Students can choose between the two other parts of the course.

The module focuses on medical device law from the perspective of manufacturers and developers of medical devices. However, the module is not only aimed at future technical developers of medical devices but all those who can contribute to the design of medical devices in interdisciplinary teams.

A maximum of 40 students can participate in one semester.



Language:

• offered only in German

Р	S1050-KP04 - Intercultural skills in hi	gher education, work an	d society (IKKSBG)
Duration:	Turnus of offer:	Credit points:	Max. group size:
1 Semester	each winter semester	4	15
<ul><li>Bachelor Interdi</li><li>Master Interdi</li></ul>	ecific field and term: rdisciplinary Courses for health sciences (option isciplinary Courses (optional subject), Interdiscip rdisciplinary Courses (optional subject), interdisc	olinary modules, Arbitrary seme	ester
Classes and lectures	 s:	Workload:	
	kills in higher education, work and society	<ul><li>40 Hours private st</li><li>38 Hours in-classro</li><li>22 Hours group wo</li></ul>	om work
Contents of teachin			
Grading through:  • continuous, so • Group work • Active Particip	uccessful participation in course		
Responsible for this     Prof. Dr. rer. n Teacher:     International     Dr. Imke Lode     Matthias Holz	at. Till Tantau Office		
<ul> <li>Hofstede, Gee</li> </ul>	Critical Whiteness: Weißsein als Privileg - Ersche ert; Hofstede, Gert Jan: Cultures and Organizatio m: Das Fremde als Herausforderung in der Psycl nologie 2014	ns. Software of the Mind - Ersc	



	PS4620-KP04, PS4620SJ14 - Ethics of S	ciences (EthikKP04)	
Duration:	Turnus of offer:	Credit points:	
1 Semester	each summer semester	4 (Typ B)	

### Course of study, specific field and term:

- Bachelor Interdisciplinary Courses for health sciences (optional subject), interdisciplinary competence, Arbitrary semester
- Master Medical Informatics 2019 (optional subject), interdisciplinary competence, 1st or 2nd semester
- Bachelor MES 2014 (optional subject), no specific field, Arbitrary semester
- Master MES 2014 (optional subject), no specific field, 1st or 2nd semester
- Master Medical Informatics 2014 (optional subject), interdisciplinary competence, 1st or 2nd semester
- · Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- Bachelor Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester

#### Classes and lectures:

• Ethics in the Life Sciences (seminar, 2 SWS)

### Workload:

- 65 Hours private studies
- 30 Hours in-classroom work
- 25 Hours work on an individual topic with written and oral presentation

## Contents of teaching:

- · Societal and ethical implications of research in biomedical sciences and technologies
- · Basics of philosophy and sociology of science
- Good scientific practice
- Basics of bioethics: duties of investigators, obligations to colleagues,
- Ethics of human subjects research and animal experiments, environmental ethics. Governance of technology, risk assessement
- Neuroethics
- Ethics of AI and robotics

### **Qualification-goals/Competencies:**

- · Students can explain the methodology of the physical sciences and technology and their philosophical basis
- They can recognize ethical dimensions of practice and deciding
- They can identify and assess ethical dimensions of action and decision-making in biotechnology and Al
- · They can understand relevant laws in Germany
- They can participate in current discussions in bioethics and research ethics
- They can reflect on ethical dimensions of biomedical sciences

### **Grading through:**

• continuous, successful participation in course

### Responsible for this module:

• Prof. Dr. phil. Christoph Rehmann-Sutter

### Teacher:

- Institute for History of Medicine and Science Studies
- Prof. Dr. med. Cornelius Borck
- Prof. Dr. phil. Christoph Rehmann-Sutter
- Prof. Dr. phil. Christina Schües
- Dr. phil. Frank Wörler

### Literature:

- Urban Wiesing (Hg.):: Ethik in der Medizin. Ein Studienbuch Stuttgart: Reclam 5. Aufl. 2020
- Ben Mepham: Bioethics. An Introduction for the Biosciences Oxford: Oxford University Press 2008
- Jennifer A. Parks, Victoria S. Wike: Bioethics in a Changing World Upper Saddle River, N.J.: Prentice Hall, 2010

## Language:

offered only in English



# Notes:

Prerequisites for attending the module:

- None

Prerequisites for the exam:

- Writing an essay and giving a lecture



	PS4670-KP04 - Studi	ium Generale (StuGen)
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester	4 (Typ B)
Course of study, specific	field and term:	
<ul><li>Bachelor Interdiscip</li><li>Master Interdisciplir</li></ul>	elligence 2023 (optional subject), for equiva linary Courses for health sciences (optional nary Courses (optional subject), Interdiscipli linary Courses (optional subject), Interdiscip	subject), interdisciplinary competence, Arbitrary semester inary modules, Arbitrary semester
Classes and lectures:		Workload:
<ul> <li>Studium Generale (, 1 SWS)</li> <li>Studium Generale (seminar, 1 SWS)</li> </ul>		<ul> <li>60 Hours private studies</li> <li>30 Hours work on an individual topic with written and oral presentation</li> <li>30 Hours in-classroom work</li> </ul>
Contents of teaching:		-1
<ul> <li>Current discussions</li> </ul>	political topics ral studies and contemporary history persp from science, politics and society scussions about specialized scientific texts	pectives
Qualification-goals/Comp	petencies:	
<ul><li>They can increase t</li><li>Expand knowledge</li></ul>	rough argumentation structures heir analysis, reflection and argumentation of social and political issues and their curre	

# **Grading through:**

• continuous, successful participation in course

## Responsible for this module:

• Prof. Dr. phil Christina Schües

# Teacher:

- Institute for History of Medicine and Science Studies
- Prof. Dr. phil Christina Schües
- Prof. Dr. med. Cornelius Borck
- Prof. Dr. phil. Christoph Rehmann-Sutter
- Dr. phil. Birgit Stammberger
- externe Referent\*innen

### Literature:

• :

## Language:

• offered only in German

Notes:



Prerequisites for attending the module:

- None

# Prerequisites for the exam:

- Active participation in the seminar
- Written elaboration according to the requirements at the beginning of the semester

# Module exam(s):

- PS4670-L1: Studium Generale, ungraded seminar, 0% of module grade, must be passed.



PS4680-KP04 - About Racism and other -Isms (RassIs)		Rassis)
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester	4 (Typ B)

## Course of study, specific field and term:

- Bachelor Interdisciplinary Courses for health sciences (optional subject), Interdisciplinary modules, Arbitrary semester
- · Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- Bachelor Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester

#### Classes and lectures:

• About Racism and other -Isms (seminar, 2 SWS)

#### Workload:

- 60 Hours private studies
- 30 Hours work on an individual topic with written and oral presentation
- 30 Hours in-classroom work

### **Contents of teaching:**

- · Current social and political discussion on racism
- Conceptual reappraisal of the historical, cultural and social background of e.g. race, gender or eugenics
- Reading and discussion of scientific texts
- Development of perspectives critical of racism

### **Qualification-goals/Competencies:**

- Students can understand and evaluate the structures of concepts and arguments
- · Increasing their ability to analyse, reflect and argue
- Expanding the knowledge in a subject area that is cross-disciplinary
- Development of a philosophical, historical and cultural-theoretical understanding of the social contexts of psychology, medicine, natural and life sciences.

# **Grading through:**

• continuous, successful participation in course

## Responsible for this module:

• Prof. Dr. phil Christina Schües

### Teacher:

- Institute for History of Medicine and Science Studies
- Prof. Dr. phil Christina Schües

## Literature:

•

### Language:

· German and English skills required

### Notes:

Prerequisites for attending the module:

- None

### Prerequisites for the exam:

- Written preparation and giving a lecture during the semester



• offered only in English

Notes:

Credit points:  6 (Typ B)  7, 3rd semester  3rd semester ester etence, 3rd semester  3rd semester edules, Arbitrary semester elsory courses, 3rd semester etence, 3rd semester etence, 3rd semester ester  kload:  155 Hours work on an individual topic (research and development) and written elaboration  25 Hours in-classroom work
3rd semester 3rd semester ester tence, 3rd semester 3rd semester odules, Arbitrary semester lsory courses, 3rd semester tence, 3rd semester ester kload:  155 Hours work on an individual topic (research and development) and written elaboration
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kload:  155 Hours work on an individual topic (research and development) and written elaboration
<ul> <li>155 Hours work on an individual topic (research and development) and written elaboration</li> </ul>
development) and written elaboration
23 Hours in Classicolli Work
ships  pic  discussions



Admission requirements for the module:

- Successful completion of at least one project internship.
- Registration for at least one project internship is required.

Admission requirements for the examination:

- Regular and successful participation

Since the content of the presentation should reflect the results of at least one of the project internships, the students will be supervised by the same university lecturer that supervised the internships. Internships can be carried out at home or abroad in medical technology companies, audiology companies and IT companies in the healthcare industry as well as hospitals and scientific institutions. The supervision by an university lecturer is obligatory.

Students for whom this course is a compulsory module have priority.

(The share of the Institute of Medical Technology in all is 75%) (Share of medical informatics in all is 25%)



	PS5010-KP04 - Sustainable	Power Supply (EnergieZuk)
Duration:	Turnus of offer:	Credit points:
1 Semester	each winter semester 4 (Typ B)	
<ul> <li>Master Interdisciplina</li> </ul>		
Classes and lectures:  • Sustainable Power St  • Sustainable Power St	upply (lecture, 2 SWS) upply (seminar and project work, 2 SWS)	Workload:  • 60 Hours work on project  • 50 Hours in-classroom work  • 10 Hours excursion
Contents of teaching:  • • • • • • •		
Qualification-goals/Compe • •	tencies:	
Grading through:	,	
Responsible for this modu  Prof. Dr. Martin Leucl Teacher:  Institute of Software  Dr. Matthias Meinefe	ker Technology and Programming Languages	
=-	Statistical Review of World Energy - https://w	//www.energyinst.org/statistical-review

# Language:

• offered only in German



		ons in Medical Technology (EthMedTe	cn)
Ouration:	Turnus of offer:	Credit points:	
Semester	each summer semester	4	
<ul> <li>Course of study, specific field and terms</li> <li>Master Interdisciplinary Courses (o</li> <li>Master MES 2020 (optional subject</li> <li>Medicine clinical part (optional subject</li> <li>Master MES 2014 (optional subject</li> </ul>	ptional subject), Interdisciplina t), interdisciplinary, Arbitrary se bject), Elective, Arbitrary seme:	emester ster	
Classes and lectures:		Workload:	
<ul> <li>Ethical Design Considerations in M SWS)</li> <li>Ethical Design Considerations in M work, 1 SWS)</li> </ul>		<ul><li>75 Hours private studies</li><li>30 Hours in-classroom work</li><li>15 Hours work on project</li></ul>	
Contents of teaching:			
Basic concepts and methods in ethe Ethical decision models. Case studies and projects in ethica Innovation methods based on the Innovation games, business-, value Qualification-goals/Competencies:  Qualification-goals/Competencies:	al decision-making in medical t adapted BIODESIGN principle		
<ul> <li>Grading through:</li> <li>portfolio exam</li> <li>participation in discussions</li> <li>certificate for exercises</li> <li>Presentation of oral talk/poster</li> <li>contributions to the discussion</li> </ul>			
Responsible for this module:			
Prof. DrIng. Christian Herzog			
Teacher:			
Institute for Electrical Engineering	in Medicine		
Prof. DrIng. Christian Herzog			
Language:			
• English, except in case of only Ger	man-speaking participants		
Notes:			
Prerequisites for attending the mode - None	ule:		



PS5810-KP04	, PS5810 - Scientific Teaching and Tutoring	g (WLehrKP04)
Duration:	Turnus of offer:	Credit points:
1 Semester	irregularly	4 (Typ B)

### Course of study, specific field and term:

- Bachelor Interdisciplinary Courses for health sciences (optional subject), interdisciplinary competence, Arbitrary semester
- Master Computer Science 2019 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Entrepreneurship in Digital Technologies 2020 (optional subject), interdisciplinary competence, Arbitrary semester
- · Master Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- · Bachelor Interdisciplinary Courses (optional subject), Interdisciplinary modules, Arbitrary semester
- Master CLS 2016 (optional subject), Interdisciplinary modules, 3rd semester
- · Master Entrepreneurship in Digital Technologies 2014 (optional subject), interdisciplinary competence, Arbitrary semester
- Master Media Informatics 2014 (optional subject), interdisciplinary competence, Arbitrary semester
- Master MES 2014 (optional subject), no specific field, 1st or 2nd semester
- Bachelor MES 2014 (optional subject), no specific field, Arbitrary semester
- Master Computer Science 2014 (optional subject), interdisciplinary competence, Arbitrary semester
- Master CLS 2010 (optional suject), interdisciplinary competence, 3rd semester
- Master Computer Science 2012 (optional subject), interdisciplinary competence, Arbitrary semester

#### Classes and lectures:

- Theory and Practice of Good Teaching (seminar, 1 SWS)
- Work as a tutor in a lecture (practical course, 2 SWS)

#### Workload:

- 60 Hours private studies and exercises
- 45 Hours oral presentation (including preparation)
- 15 Hours in-classroom work

### Contents of teaching:

- Organizing and running a scientific lecture
- Basic didactics of scientific teaching
- Practical work in tutorials

### **Qualification-goals/Competencies:**

- The participants are able to lead a student working group and to communicate technical issues to it appropriately.
- Basic pedagogical and didactical skills

### Grading through:

continuous participation in all courses of the module

### Responsible for this module:

- Prof. Dr. rer. nat. Nico Bunzeck
- Prof. Dr. rer. nat. Jürgen Prestin

### Teacher

- Institute for Mathematics
- Dr. rer. nat. Jörn Schnieder
- Corinna Lütsch

### Language:

• depends on the chosen courses

### Notes:

The seminar must be attended before working as a tutor. This activity cannot be remunerated.

The course instructor in charge of the respective course will issue a certificate of achievement for the module.



CS3	510-KP04 - Data protection law	and information security (DatInfoSec)
Duration:	Turnus of offer:	Credit points:
1 Semester	every summer semester	4 (Typ B)
<ul><li>Bachelor Medical Infor</li><li>Master Interdisciplinar</li></ul>	atics 2019 (optional subject), interdiscip	
(lecture, 2 SWS)	ction law and information security	<ul> <li>Workload:</li> <li>60 Hours private studies</li> <li>40 Hours in-classroom work</li> <li>20 Hours exam preparation</li> </ul>
Contents of teaching:  • • •		
a data processing syst	e and apply the legal framework for da em.	ta protection and information security for persons who are responsible for developing, implementing and operating data processing systems.
Grading through:  • written exam		
Responsible for this module	barth	
Literature:		
Language: • offered only in German	າ	
Notes: Admission requirements - None	for taking the module(s):	
Admission requirements - None	for participation in module examinatio	n(s)
Module examination: - CS3510-KP04 Data prot	ection law and information security Wr	itten exam, 100 % of the module grade