

# Course Description Guide

## Winter Semester 2018/19

**FH JOANNEUM, Graz Campus**

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## *Winter Semester*

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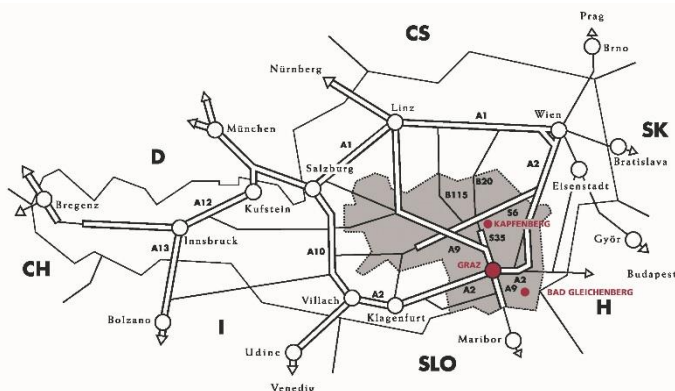
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# Capital of Delight.



## *Studying in the charming city of Graz*

Styria (German: *Steiermark*) is the second largest province in Austria and known as Austria's "green heart". Forests cover about half the province, and grasslands and vineyards blanket another quarter. Styria borders Slovenia and Hungary, as well as the Austrian provinces of Burgenland, Lower Austria, Upper Austria, Salzburg, and Carinthia. In the Dachstein mountains overshadowing the Enns Valley, skiing is possible all year round, whereas the south of the province known as the Weinstraße (Wine Route) is hilly and dominated by large vineyards that remind visitors of the Chianti region – a fact that has earned it the name „Styrian Tuscany“.



**GRAZ** is the capital of Styria and Austria's second largest city with about 300.000

inhabitants (thereof about 45.000 students). A short walk through the Old Town, a UNESCO World Cultural Heritage Site (since 1999) with a Mediterranean atmosphere, is a stroll through the past. From the 15th century, it was a major bulwark against the Turks and in the 17th century it adopted the Baroque style in architecture before the rest of the Austrian empire. The city is compact and most important sights are within walking distance of the main square, or *Hauptplatz*. The Landesmuseum Joanneum, a large complex of museums, is one of the world 's oldest, including the Alte Galerie with its superb Gothic paintings. The Neue Galerie in the Herberstein Palace displays 19th- and 20th-century paintings, including some works by the world famous Austrian painters Egon Schiele and Gustav Klimt. The Cathedral, the Mausoleum of Emperor Ferdinand II, the Leech Church, the pedestrian zone of the old quarter, the Schlossberg (castle hill) with its Uhrturm (clock tower) and Glockenturm (bell tower) are also worth seeing. Some distance west of the city and within easy walking distance of the FH JOANNEUM campus, is Schloss Eggenberg, a 16<sup>th</sup>-century palace noted for its state rooms and museums and part of the UNESCO World Heritage Site since 2010. More than any other provincial centre, Graz preserves the old café culture, where one can sit all day enjoying a leisure coffee, watching the life of the city go by. Since March 2011, Graz is UNESCO City of Design and the newest member of the international network of creative cities in the world! >[www.graz.at](http://www.graz.at)



# *Study Programmes for Incomings Students*

## Global Business Program

The Global Business Program provides incoming students with a wide variety of seminars and lectures in the field of International Business taught by distinguished international faculty. The fascinating experience of the Global Business Program originates from the big diversity of both the professors and the participating students

## Applied Summer School

The Applied Summer School on "Business in Europe" introduces the participants to various aspects of doing business in Europe, in particular in the European Union. The program addresses issues of culture, economics, business, communication and the legal framework.



# Courses in the Winter Semester

## Applied Computer Sciences

### eHealth, Bachelor Course(s)

Course code	Course	Year	ECTS
180414303	Global Issues in Healthcare	1	2.5

### eHealth, Master Course(s)

Course Code	Course	Year	ECTS
130415301	Scientific Communication on Current Issues in Healthcare	2	2.0

### Information Management, Bachelor Course(s)

Course code	Course	Year	ECTS
110422109	English for Academic Study 1	1	2.5
0910423112	English for Academic Purposes	1	2.0
110422309	English for Business Purposes	2	2.5
110422306	Basics of Project Management	2	1.5
110422502	Software Engineering Selective	3	5.0
110422509	WPF SW- Engineering - Mobile and Location based Computing*	3	5.0

\* - ELECTIVE SUBJECTS (5th semester): Please note that the elective subjects are only offered when there is sufficient demand!



## Information Management, Master Course(s)

Course code	Course	Year	ECTS
0910423112	English for Academic Purposes	1	2.0

## Building Energy & Society

### Construction Design and Economics, Bachelor Course(s)

Cours code	Course	Year	ECTS
150233106	General English for Architects and Engineers 1	1	2.0
150233314	Desing 2	2	6.0
150233315	Structural Design 2	2	4.0
150233312	Professional English for Architects 1	2	1.0
150233307	Professional English for Engineers 1	2	2.0
150233508	Inter-disciplinary Project work	3	6.0
150233509	Bachelor Thesis 1 – Civil Engineering	3	3.0
150233513	Interdisciplinary Design	3	8.0
150233514	Bachelor Thesis 1 – Architecture	3	3.0
150233512	Professional English for Architects 3	3	1.0
150233505	Professional English for Engineers 3	3	1.0

## Architecture, Master Course(s)

Course Code	Course	Year	ECTS
150235106	Design 1	1	7.0
150235107	Visualisation 1	1	3.0
150235109	Project Work 1	1	3.0.
150235102	Study of Buildings: Special Fields	1	1.0

150235116	Applied Building Theory	1	2.0
150235108	Project Work & Presentation 1	1	1.0
150235301	Design 3 (Design in the Urban Space)	2	6.0
150235307	Project Work 3	2	3.0
150235304	Selected Topics: Land Use	2	2.0
150235309	Ecology and Development of Space	2	3.0
150235311	New Materials in Architecture	2	2.0
150235303	Project Work & Presentation 2	2	1.0

## Social Work, Bachelor Course(s)

<b>Cours code</b>	<b>Course</b>	<b>Year</b>	<b>ECTS</b>
180416109	Social Work Issues 1	1	3.0
180416110	International and intercultural Social Work	1	2.0
310	English for social work purposes and academic writing	2	2.0
306	Communication Skills in Social Work 2	2	3.0

## Social Work, Master Course(s)

<b>Cours code</b>	<b>Course</b>	<b>Year</b>	<b>ECTS</b>
306	Communication Skills in Social Work 2	2	3.0

## Engineering

### Electronic and Computer Engineering, Bachelor Course(s)

Course Code	Course	Year	ECTS
140420504	Bachelor Thesis 1	3	15.0
140420501	Model Based Design	3	4.0
140420502	Marketing and Sales	3	2.0
140420503	Quality Management	3	2.0
140420506	Energy and Mobility 2	3	7.0
140420505	Industrial Automation 2	3	7.0

### Aviation, Bachelor Course(s)

Course Code	Course	Year	ECTS
160587414	Incoming Informatics Project 1/2	2	6.0
160587416	Incoming Design Project 1/2	2	12.0
160587417	Aviation-Related Incoming Project 1/2	2	12.0

### Aviation, Master Course(s)

Course Code	Course	Year	ECTS
150588101	Human Factors	1	5.0
150588102	Digital Avionic System	1	3.0
150588103	CNS/ATM Systems	1	2.0
150588104	Aircraft Assembly	1	1.0
150588105	Engine and Components Dynamics	1	2.0
150588106	Advanced Design and Mechanical	1	3.0

	Components		
150588107	Heat Transfer	1	3.0
150588108	Fluid Mechanics & Aerodynamics	1	2.0
150588110	Finance	1	1.0
150588109	Aviation Management	1	4.0
150588111	Project 1	1	5.0
150588112	Aeronautics for Mechanical & Electrical Engineers	1	3.0
150588113	Hydraulics	1	1.0
150588115	Product Management and Marketing	1	2.0
150588116	Certification	1	2.0
130680303	Statistics and Data Analysis	2	30.0

## Automotive Engineering, Bachelor Course(s)

Course Code	Course	Year	ECTS
160679110	English Foundation Bachelor's	1	2.0
160679309	English for Automotive Engineers 2	2	2.0
160679510	The Global Workplace 2	3	2.0

## Automotive Engineering, Master Course(s)

Course Code	Course	Year	ECTS
130680102	Advanced Mechanics	1	4.0
130680101	Applied Engineering Mathematics 1	1	3.0
130680103	Control Systems 1 / Sensors & Actuators	1	2.0
130680108	Engineering Methods and Design 1	1	4.0
130680110	English for Scientific Studies	1	2.0

130680109	Human Resource Management	1	1.0
130680107	Hydraulics and Pneumatics	1	2.0
130680104	Machine Dynamics/Acoustics	1	3.0
130680105	Methods of Product Development & Production	1	3.0
130680106	Project Work 1	1	5.0
130680307	Academic Writing and Speaking	2	2.0
130680302	Advanced Drive and Propulsion Technology	2	4.0
130680305	Control Systems 3 / Bus and On-board Diagnostics	2	1.0
130680304	Control Systems 3 / Supply and Storage systems	2	1.0
130680301	FEM/CFD	2	3.0
130680303	Strategic Management	2	3.0
130680310	Commercial Vehicles*	2	3.0
130680311	Electric Drive and Propulsion Systems*	2	3.0
130680309	Energy Management and Storage Systems*	2	3.0
130680308	Large Engines*	2	3.0
130680313	Marketing and Product Management*	2	3.0
130680312	Rail Vehicle Dynamics*	2	3.0

\*-ELECTIVE SUBJECTS (3rd semester): Please note that the following elective subjects are only

## Engineering and Production Management, Master Course(s)

Course Code	Course	Year	ECTS
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140682301	Advanced Production Technologies	2	3.0
140682303	Cleaner Production	2	3.0
140682309	Internationalization	2	2.0
140682316	Product Lifecycle Engineering	2	2.0
140682315	Technology Impact Analysis	2	2.0
140682312	Key Skills 3	2	1.0
140682313	Professional English 3	2	1.0
140682305	Sustainable Production Engineering	2	1.0

## Production Technology and Organization, Bachelor Course(s)

Course Code	Course	Year	ECTS
130681311	Professional English 1	2	1.5
130681416	Professional English 2	2	1.5
130681515	Professional English 3	3	1.5
130681606	Professional English 4	3	1.5

## Sustainable Food Management\*, Bachelor Course(s)

Course Code	Course	Year	ECTS
	Module 1: Product Life Cycle and International Food Quality	3	5.0
160763501	Sustainability and Product Life Cycle Management	3	2.5
160763502	International Trends in Food Quality	3	2.5
	Module 2: Production Planning in Food Processing	3	5.0
160763508	Introduction to Plant Engineering	3	2.5
160763507	Production Planning in Food	3	2.5

	Processing		
	Module 3: Supply Chain Management	3	5.0
160763504	Supply Chain Management	3	2.5
160763505	Conservation, Packing and Storage of Food	3	2.5
	Module 4: Food Sales and Marketing	3	5.0
160763511	Marketing Principles and Strategies	3	2.5
160763510	Branding and Creative Corporate Communication	3	2.5
	Module 5: Elective Module	3	5.0
160763516	Energy and Materials Production	3	5.0
160763517	Special Topics in Nutrition and Health	3	5.0
160763518	Global Food Systems Analysis	3	2.5

\*Exams are taken per module with the content of the courses in each module.

## Health Studies

### Biomedical Science, Bachelor Course(s)

Course Code	Course	Year	ECTS
170467112	Communicating in the Professional World of Biomedical Scientists	1	1.0
170467308	Social Skills 3: Presentations	2	3.0
170467503	Scientific English	3	2.0

### Health Care and Nursing, Bachelor Course(s)

Course Code	Course	Year	ECTS
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160801308	English 2	2	1.0
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## Midwifery, Bachelor Course(s)

Course Code	Course	Year	ECTS
110465313	English 2 for midwives	2	1.0
110465506	English 4 for midwives	3	1.0

## Logopedic, Bachelor Course(s)

Course Code	Course	Year	ECTS
110464117	English 1	1	1.0
110464318	Academic English for SLTs 1	2	1.0

## Physiotherapy, Bachelor Course(s)

Course Code	Course	Year	ECTS
11 0463116	English 1	1	1.0
110463503	English 3	3	1.0
110463504	Clinical Problem Solving 1	3	0.5

## Radiography, Bachelor Course(s)

Course Code	Course	Year	ECTS
180466105	Introduction to medical English for radiographers	1	1.5
180466313	English in health management	2	1.5
180466508	English in health education	3	1.5



## Management

### International Management, Bachelor Course(s)

Course Code	Course	Year	ECTS
170371101	International Business and Entrepreneurial Perspectives	1	3.0
170371104	Principles of B2B Marketing	1	2.0
170371106	European Union Law	1	2.0
170371110	Critical Thinking and Scientific Writing	1	2.0
170371302	Entrepreneurial and Cross Cultural Competences	2	2.0
170371303	Project: International Market Entry	2	5.0
170371307	Presentation Skills	2	2.0

### Business in Emerging Markets, Master Course(s)

Course Code	Course	Year	ECTS
110372301	International Finance (Focus Emerging Markets)	2	5.0
110372305	Leadership and HR in Emerging Markets	2	5.0
110372303	Mergers and Acquisitions in Emerging Markets	2	5.0
110372304	Compliance in Emerging Markets	2	5.0
110372302	Distribution and Sales Management	2	5.0
110372304	International Strategic Management	2	5.0

## Media & Design

### Information Design, Bachelor Course(s)

Course Code	Course	Year	ECTS
140373109	3D-Modelling	1	1.0
140373108	Usability Testing	1	2.0
140373111	Design English 1	1	2.0
140373103	Art Theory and Aesthetical Practice 1	1	2.0
140373105	Information Design 1	1	2.0
140373101	Typography 1	1	3.0
140373112	Visual Communication Basics	1	7.0
140373307	Applied Game Design	2	3.0
140373302	Art Theory and Aesthetical Practice 3	2	2.0
140373304	Media Theory 1	2	3.0
140373312	Media Production	2	7.0
140373305	Sound Design and Postproduction	2	2.0
140373301	Sound Editing and Audio Engineering	2	2.0
140373311	Video Editing and Postproduction	2	3.0
140373309	Client-centred Design	2	2.0
140373306	Generative Design 1	2	3.0
140373504	Advertising	3	1.0
140373503	Design Lectures 2	3	2.0
140373505	Design Thinking 2	3	2.0
140373510	Package Design	3	3.0
140373512	Social and Sustainable Design	3	3.0
140373507	Scenographic interventions	3	3.0
140373508	User Experience Design	3	3.0
140373513	Communication Design	3	11.0
140373515	Interaction Design	3	11.0

140373514	Media Design	3	11.0
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## Journalism and Public Relations, Bachelor Course(s)

Course Code	Course	Year	ECTS
180593108	English: News Writing	1	2.0
180593206	English: Research-Based Writing	1	2.0
180593308	English: Capaigning	2	2.0
180593403	English: International Media	2	2.0
180593502	English: Global Communication and Negotiations	3	2.0

## Industrial Design Course(s), Bachelor Course(s)

Course Code	Course	Year	ECTS
160646108	General English 1	1	2.0
01-08a	Stützkurs English	1	
160646308	Professional English 1	2	2.0
160646510	Professional English 3	3	2.0

## Industrial Design Course(s), Master Course(s)

Course Code	Course	Year	ECTS
160647104	Professional Business Meetings and Presentations 1	1	1.0

## Communication, Media, Sound & Interactive Design, Master Course(s)

Course Code	Course	Year	ECTS
140374104	City of Design – Local Networks	1	1.0
140374108	Design & Research 1	1	1.0
140374107	Designing with Code	1	2.0
140374105	Marketing and Cooperate Identities	1	2.0
140374101	Media Theory	1	2.0
140374103	Psychology of Perception	1	1.0
140374122	3D Media Design	1	2.0
140374125	Audio Production and Postproduction	1	2.0
140374123	Screen Design	1	2.0
140374121	User Experience Design	1	2.0
140374110	Design & Research 1 (COD)	1	4.0
140374111	Project Work 1 – Explore (COD)	1	8.0
140374116	Design & Research 1 (IAD)	1	4.0
140374117	Project Work 1 – Explore (IAD)	1	8.0
140374119	Design & Research 1 (SND)	1	4.0
140374120	Project Work 1 – Explore (SND)	1	8.0
140374304	Design & Research 3	2	1.0
140374305	Final Crit	2	2.0
140374302	Future Design Lab	2	1.0
140374303	International Design Discourse 2	2	1.0
140374306	Creation and Conception	2	3.0
140374309	Design & Research 3 (COD)	2	2.0
140374307	Digital Production	2	2.0
140374310	Project Work 3 – Product (COD)	2	14.0
140374308	Visual Analysis	2	2.0
140374318	App Design 2	2	2.0

140374319	Design & Research 3 (IAD)	2	2.0
140374316	Interaction Design 2	2	3.0
140374320	Project Work 3 – Product (IAD)	2	14.0
140374317	User Experience Design 2	2	2.0
140374314	Design & Research 3 (MED)	2	2.0
140374311	Dynamic Media 2	2	3.0
140374315	Project Work 3 – Product (MED)	2	14.0
140374313	Story and Visualisation	2	1.0
140374312	Video and Animation 2	2	3.0
140374322	Advanced Postproduction	2	2.0
140374324	Design & Research 3 (SND)	2	2.0
140374323	Physical Modelling of Sound and Material Science	2	2.0
140374325	Project Work 3 – Product (SND)	2	14.0
140374321	Sonification and Acoustic Displays	2	3.0

## Exhibition Design, Master Course(s)

Course Code	Course	Year	ECTS
140375109	Project Work 1 – Conception of a Large-scale Exhibition	1	12.0
140374309	English for Specific Purposes	2	2.0
140375310	Project Work 2 – Realisation of an Exhibition	2	12.0

## Applied Computer Sciences

### eHealth, BSc

#### Global Issues in Health care

**Course Code:** 180414303

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2,5

**Lecturer:** Anita Töchterle

**Learning outcome:** A range of topics connected to the area of study: international healthcare systems, hospital wards and hospital layouts in connection with processes among others. Additional focus on language relevant issues like fluency and register.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Topics relevant in healthcare and its delivery on a global basis. It meaningfully completes curriculum relevant content and secures a sound basis for communication and critical thinking skills in the foreign language. Topics dealt with are among others job profiles of eHealth experts, their work environment as encountered in hospitals, insurance companies, health-related IT companies as well as the world of health wearables, settings of Ambient Assisted Living, international standards in healthcare and aspects of project management in healthcare. The focus is put on both language and content delivery.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Final examination

**Language of instruction:** English

**Literature:** Papers selected from Journal of Medical Informatics, Telemedicine and eHealth, British Journal of Medicine, Journal of Innovations in Health Informatics among others.

## eHealth, MSc

### Scientific Communication on Current Issues in Healthcare

**Course code:** 130415301  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 2,5  
**Lecturer:** Anita Töchterle

**Learning outcome:** Dealing with scientific texts and understanding writing as a learnable process. Describing one's subject area in a foreign language, discussing it in an international environment and integrating other perspectives.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** This course is based on the principle of peer teaching. At the beginning of the semester, topics to be dealt with are going to be laid down. Students will act as peer teachers to their colleagues. The process of class design, class delivery and class evaluation will be continuously supervised and facilitated by the teacher. Content depending on Master projects. Discussion, presentation and identification of possible research questions for master theses.

**Recommended or required reading and other learning resources / tools:** Scientific literature associated with thesis content.

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Final examination

**Language of instruction:** English

**Literature:** Each peer teaching class is based on a scientific paper from eHealth relevant online journals.

## Information Management

### English for Academic Study 1

**Course Code:** 11022109

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2,5

**Lecturer:** Lisa Zimmermann

**Learning outcome:** To accommodate students from various English-learning backgrounds and consolidate and build on their language skills to enable them to deal with the demands of academic English and their later more advanced needs.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** English for Academic Study I will focus on strengthening academic and communication skills aiming at reaching C1 level. It is designed to consolidate and further develop existing reading, writing and speaking skills so that you will better succeed in your bachelor study at the degree programme Information Management. There will be pronunciation practice, comprehension of written and spoken texts as well as role play all with a strong focus on the practical application in academic study.

Students will learn to read faster and understand more, to take better notes, plan time sensibly, write effective essays, detect and correct language mistakes, assess their own progress and to tackle exams with confidence.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Students are assessed continuously during class; midterm and final exam, home assignments.

**Language of instruction:** English

**Literature:** Script; literature on current affairs (e.g. internet links to online references such as [www.guardian.co.uk](http://www.guardian.co.uk), [www.nytimes.com](http://www.nytimes.com), [www.bbc.co.uk](http://www.bbc.co.uk)).



## English for Business Purposes

**Course Code:** 110422309

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2,5

**Lecturer:** Gerhild Janser-Munro

**Learning outcome:** EBP aims to build competence, fluency and confidence in learners in handling business situations (business talks and correspondence, e-mails) and contexts and provides an introduction to abstract writing.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** This course is designed to enlarge students' knowledge of the business world and further develop their business English vocabulary. It focuses on improving speaking (discussion, argumentation skills, etc.), listening, reading and scientific writing skills (abstract). The topics range from business life and travelling through to e-marketing, current issues such as social media as well as trends (Gartner Hype Cycle).

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Three home assignments (MOODLE); continuous assessment in class incl. written assignments; LBS; final oral exam

**Language of instruction:** English

## Basics of Project Management

**Course Code:** 110422306

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 1,5

**Lecturer:** Gerhild Janser-Munro

**Learning outcome:** This course aims to provide you with some basic understanding of project management and help you understand the importance of (international) projects in everyday-business. You will be familiarized with the most relevant project management terms, techniques, tools and methods, as well as with the importance of team building and team culture. Alongside classical project management the course introduces you to agile project management (in specific SCRUM) and some of its methods in a dynamic environment (e.g. software development). Out of the course you should obtain a common understanding of projects and their complexity. Reducing risks in international projects, communicating with your project team members/management/suppliers/customers more efficiently, detecting and solving problems, etc.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Projects come in all shapes and sizes, but have certain features in common: defined goals, a time limit, specified resources (staff, budget, equipment, etc.) and a sponsor/customer. Also, the team members have defined roles and responsibilities. The role of the project leader is to plan and manage tasks, costs and resources of the project so that the goals are reached in the most efficient way. Projects appear as building blocks in an organisation's strategy.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Written final exam; continuous assessment; commitment in class, participation and home assignments.

**Language of instruction:** English

**Literature:** Carroll J; Agile Project Management, Pearson, Leamington Spa 2012; Gareis R; Happy Projects; 2nd ed., Manz, Wien 2004; Litke H.D. (Hrsg.); Projektmanagement - Handbuch für die Praxis; Hanser, München-Wien 2005; Newton R; Project Management. Step by Step; Prentice Hall Business, Harlow 2006; Patzak G, Rattay G; Projektmanagement, Leitfaden zum Management von Projekten, Projektportfolios und projektorientierten Unternehmen; 4th ed., Linde, Wien 2004; Reiss G; Project Management Demystified; 3rd ed., Routledge, New York 2007; <http://www.ipma.at>; <http://www.pmi.org/>

## Software Engineering Selective

**Course Code:** 180414303  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 5  
**Lecturer:** Johann Blauensteiner, Manfred Steyer

**Learning outcome:** Students can evaluate and categorize the specific requirements of web-based applications and single-page applications. You are able to recommend deployment scenarios for service-based architectures as well as single page applications and evaluate alternatives. Based on given requirements, suitable architectures and frameworks can be assessed and selected. In addition, students are able to implement these scenarios.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** This course will cover the development of modern web applications that can be run on any platform. The focus is on the development of Single Page Applications with the Angular 2 framework. It covers the development of reusable components as well as the use of data binding and forms and access to Web APIs / REST-FUL services. Another important aspect is routing and dependency injection to increase the testability and interchangeability. In addition, it also covers authentication and authorization with OAuth2 and OpenId Connect, as well as an overview of Progressive Web Apps, RxJS, and Redux. For the development with Angular 2 the participants use EcmaScript 6 resp. TypeScript. On the server side, Java-based and Spring-based REST-ful services are used.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Mix containing presentations, live-coding and exercises

**Assessment methods and criteria:** Assessment, Project, immanent evaluation

**Language of instruction:** English

**Literature:** - <https://angular.io/>  
 - <https://www.typescriptlang.org/>  
 - <https://spring.io/>

## WPF SW-Engineering – Mobile and Location Based computing

**Course Code:** 110422509

**Course type:** Optional

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 5

**Lecturer:** Gerhard Sprung

**Learning outcome:** Students can assess the potential of mobile devices as an interface to information systems and identify specific scenarios in which the use of these devices represents an added value. They are able to design, define and implement suitable user interfaces for mobile applications, AR, VR and 3D applications. They know the limitations, dangers and opportunities of mobile applications and devices.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The course deals with the use of mobile devices as runtime environment for computer programs ("apps") as well as with the use of 3D technologies in mobile and desktop applications. It shows how different technologies (such as client-server communication, game engines, etc.) can be used. The students learn how platform-independent multimedia applications can be created and tested. Various mobile technologies (such as smartphones, Vuforia, Vumarks, etc.) are discussed with their possibilities and limitations.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture, elearning courses, independent development of content, creation of an online course by each student, presentation and lab-session by the students

**Assessment methods and criteria:** Evaluation of the online courses and the course units planned and carried out by the students, continuous assessment

**Language of instruction:** English

**Literature:** Kompendium E-Learning, Niegemann, Helmut M., Berlin, Springer 2004  
Software engineering, Sommerville, Ian, Boston, Mass. Pearson 2011

## Information Management, Master Course(s)

### English for Academic Purposes

<b>Course Code:</b>	0910423112
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	2
<b>Lecturer:</b>	Gerhild Janser-Munro

**Learning outcome:** This course is a skill-based approach to strengthen academic and communication skills aiming at reaching C1-level. It is designed to consolidate and further develop your existing reading, writing and speaking skills so that you will better succeed in your master study at the degree programme Advanced Information Management. As students, it is expected that you already have developed research and writing skills; however, in order to be successful in our master programme you will need a wider range of academic skills and a higher level of academic English. This course aims to provide you with those skills. By the end of this course you will be able to:

- Structure an academic paper
- Use quotations and paraphrasing, avoid plagiarism
- Compare and contrast information and ideas
- Paraphrase and summarize ideas
- Write conclusions
- Reference your sources

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** This course focuses on understanding and using English appropriate to academic environment as well as on study skills and on independent learning in the form of a joint lecture (Network Planning and Management). You will learn to recognize and understand the purpose of different text types, develop your reading skills (skimming, scanning, identifying the sequence of ideas, predicting the content of text, note taking) as well as your writing and presentation skills. You will be taken through the stages of academic writing, including planning, researching, collecting, and organizing information. You will be working with authentic academic articles and concentrating on efficient reading strategies. Equal emphases are placed on advanced writing (academic level), listening, speaking, and reading skills development. You will enhance your skills in paraphrasing and summarizing and increase your confidence and comprehensibility when delivering presentations.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:**

Class participation, home-assignments, attendance, academic seminar paper, presentation, written final exam.

**Language of instruction:** English

## Building, Energy & Society

### Construction Design & Economics

#### General English for Architects and Engineers 1

**Course code:** 150233106

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2

**Lecturer:** Elizabeth Mathias

**Learning outcome:** The student has good communication skills (speaking, listening, writing and reading) in English.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Consolidation of vocabulary, idiomatic expressions and grammar based on previous knowledge by means of general topics and topics from the fields of architecture and construction engineering.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment during the seminar, final exam

**Language of instruction:** English

## Design 2

**Course code:** 150233314  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 3rd  
**ECTS Credits:** 6  
**Lecturer:** Marion Alexandra Würz-Stalder

**Learnig outcome:** Students have knowledge of considering and methodically preparing planning design tasks. They have detailed knowledge of functional, structural and interior spatial planning parameters and their integration into the design layout. They are aware of the basic conditions for conceptual development and design of residential buildings.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Design of a specific architectural object (e.g. residential building) with a specific spatial reference: that is use and improvement of design and planning methods, whereby building regulations (development planning), design requirements and functional organisation are to be taken into consideration together with a user profile and spatial programme developed from this. Interior spatial design approaches are integrated into the architectural design.

**Recommended or required reading and other learning resources / tools:** None

**Planned activities and teaching methods:** Seminar

**Assessment method and criteria:** Assessment of individual tasks and submission of portfolio

**Language of instruction:** English



## Structural Design 2

Course code:	150233315
Course type:	Integrated course
Course cycle:	First
Semester:	3rd
ECTS Credits:	4
Lecturer:	Jürgen Neugebauer

**Learning outcome:** Students have knowledge of considering and methodically preparing planning design tasks. They have detailed knowledge of functional, structural and interior spatial planning parameters and their integration into the design layout. They are aware of the basic conditions for conceptual development and design of residential buildings.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Characteristics, load bearing behaviour and use of supporting structures, examination of construction members regarding load bearing capacity and the "appropriateness of the means" (material requirement). Evaluation of factors influencing the concept such as: construction, manufacturing, prefabrication, transport, assembly are discussed based on finished projects. The specifics of wood, steel, glass, masonry and concrete construction are examined. The calculated dimensions of the members are a main part of the course.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture with practical exercises

**Assessment methods and criteria:** Final examination and submission of portfolio

**Language of instruction:** English

## Professional English for Architects 1

**Course code:** 150233312

**Course type:** Seminar

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 1

**Lecturer:** Elizabeth Mathias

**Learning outcome:** The student is able to communicate confidently (speaking, listening, writing and reading) about technical and professional topics in English.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Examination of architecture-related topics, development of communicative strategies in professional life, emphasis on job applications and written correspondence.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment during the seminar, final exam

**Language of instruction:** English

## Professional English for Engineers 1

**Course code:** 150233307

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:** Elizabeth Mathias

**Learning outcome:** The student is able to communicate confidently (speaking, listening, writing and reading) about technical and professional topics in English.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Examination of construction-related topics and technical vocabulary, focus on structural engineering, development of communicative strategies in professional life, emphasis on job applications and written correspondence.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment during the seminar

**Language of instructions:** English

## Inter-disciplinary Project Work

**Course code:** 150233508

**Course type:** Complusary

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 6

**Lecturer:** Markus Wallner-Novak

**Learning outcome:** The student is able, on the basis of an architectural design, to complete the essential main tasks of a civil engineer with a structural design, building services, fire protection, scheduling and cost estimation. The student is aware of the methods for dimensioning glass elements.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Development of a structural concept based on an architectural design, dimensioning of the main construction elements and structural engineering design and technical details, foundation concepts, fire protection concept, HVAC planning, construction progress and scheduling, cost estimating.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Projects

**Assessment methods and criteria:** Assessment of project

**Language of instruction:** English

## Bachelor Thesis 1 – Civil Engineering

**Course code:** 150233509

**Course type:** Complusary

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 3

**Lecturer:** Michaela Kofler

**Learning outcome:** The student has knowledge of scientific work and independent development of special issues of civil engineering.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Coaching and assistance by the supervisor in selecting a topic for the first Bachelor thesis based on technical topics taken from the courses in the 1st to 5th semesters. The supervisor taking into consideration the student's ideas specifies the contents individually. Literature and Internet research to a specific topic is of significant importance.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Bachelor paper

**Assessment methods and criteria:** Assessment of bachelor thesis

**Language of instruction:** English

## Interdisciplinary Design

**Course code:** 150233513  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 8  
**Lecturer:** Gernot Ritter

**Learning outcome:** The student is able to design an object in taking into account design and implementation considerations. They can develop a solution for a task working together with representatives of other specialisations. They have knowledge of the influence and impact of construction methods, construction stages, execution progress and construction when in basic design.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Interdisciplinary design project in which the students specialising in architecture apply and improve on advanced design methods under realistic planning conditions for the design and planning of a building project. The draft is developed in coordination with constructive planning (design of supporting structures and dimensioning of the structure) and concretised in structural engineering planning, tracking of materials and cost estimation. The aim of the course is improved observation and greater experience of the interactions of the design process within design and technical parameters.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment during the seminar and submission of project

**Language of instructions:** English

## Bachelor Thesis 1 – Architecture

**Course code:** 150233514  
**Course type:** Complusary  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 3  
**Lecturer:** Michaela Kofler

**Learning outcome:** The student has knowledge of scientific work and independent development of special issues of architecture and construction.

**Mode of delivery:** Face-to-face

**Requisites and co-requisites:** None

**Course content:** Scientific paper on a specialized topic taken from the courses in the 1st to 5th semesters. The choice of topics is determined in consultation with the supervisor of the first Bachelor thesis. Content and structure are determined individually by the supervisor based on concepts of students. On the basis of literature and Internet research a theoretical, specialised paper is compiled.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Bachelor paper

**Assessment methods and criteria:** Assessment of bachelor thesis

**Language of instruction:** English

## Professional English for Architects 3

**Course code:** 150233512  
**Course type:** Complusary  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 1  
**Lecturer:** Tanja Psonder

**Learning outcome:** The student is able to communicate confidently (speaking, listening, writing and reading) about technical and professional topics in English.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Architecture-related topics (e.g. sustainability, project management), improvement of the relevant communicative strategies in the profession with emphasis on report writing.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment during the seminar, final exam

**Language of instructions:** English



## Professional English for Engineers 3

**Course code:** 150233505

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 1

**Lecturer:** Tanja Psonder

**Learning outcome:** The student is able to communicate confidently (speaking, listening, writing and reading) about technical and professional topics in English.

**Mode of delivery:** Face-to-face

**Requisites and co-requisites:** None

**Course content:** Construction-related topics with the focus on project management, improvement of the relevant communicative strategies in the profession with emphasis on report writing.

**Recommended or required reading and other learning resources /tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment during the seminar, final exam

**Language of instructions:** English

# Architecture

## Design 1

**Course code:** 150235106

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 7

**Lecturer:** Tim Lüking

**Learning outcome:** The student has an in-depth knowledge of solutions of complex planning tasks with high architectural value. They are able to solve and depict challenging urban planning and architectural tasks. Students are in a position to carry out, both in a team and as individuals, design tasks including technical and legal parameters.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The seminar addresses complex urban design tasks. Residential multi-storey construction as well as large-volume constructions with a variety of functional demands are dealt with. The effect of different requirements in the urban context and the result of these on the organization of accommodation in particular will be discussed. The knowledge of basic legal and technical conditions as well as the practically-oriented design requirements are also imparted.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous and final assessment

**Language of instruction:** English

## Visualisation 1

<b>Course code:</b>	150235107
<b>Course type:</b>	Second
<b>Course cycle:</b>	First
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	3
<b>Lecturer:</b>	Wolfgang Höhl

**Learning outcome:** The aim of the course is to convey technical and design basics for the transformation and projection of graphic objects. The students work with software packages for the image editing, the 3D modelling, the rendering and the visualisation. The student has an in-depth knowledge of 3D modelling with software for CAD and visualisation, of the design of surfaces and textures, of the conceptual design and rendering of scenes with light and cameras. Eventually, the student is in the position to design, create and process a freeze image of a computer-generated 3D object.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Using various animation software ever more complex forms and space scenarios are developed in consecutive steps. In this way, the human perception of movement and representation come to the fore rather than geometrically formal criteria. Conceptual design and construction of a 3D CG architectural visualization  
3D-models and modelling techniques, working with routines for 3D-modelling, structure and behaviour of complex and non-uniform surfaces.  
Introduction into rendering and visualization. Layout and production of an architectural visualization.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar, Integrative lecture with theoretical background and practical lessons

**Assessment criteria:** Final examination and continuous assessment of practical exercises

**Language of instructions:** English

## Project Work 1

**Course code:** 150235109

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 3

**Lecturer:** Tim Lüking

**Learning outcome:** The student completing this module understands technical and constructive tasks with various marginal values and recognizes their correlation. Complex procedures in the area of building services engineering are not only understood, but can be independently planned and solved. In addition, the student can establish a relation to the design and construction.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The basics for this course are buildings which fulfill the demands of urban residential housing. Further basics were elaborated in Design 1. The technical development as well as the constructive details are major components of the project work. Here, the focus is placed on the integration of contemporary architecture into modern façade construction, sustainability and utilities management. In addition, the aspects of indoor climate and acoustics in the context with the technical and atmospheric development of buildings are taken into consideration.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Assessment of the project

**Language of instruction:** English

## Study of Buildings: Special Fields

**Course code:** 150235102  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 1  
**Lecturer:** Thomas Pucher

**Learning outcome:** The student has an in-depth knowledge of solutions of complex planning tasks with high architectural value. They are able to solve and depict challenging urban planning and architectural tasks. Students are in a position to carry out, both in a team and as individuals, design tasks including technical and legal parameters.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** In the lecture and using the contents of various talks, the basic principles of design work are analysed, systematised and prepared for practical use in design. The parameters of the decision-making processes in the design process are thereby both made clear and scientifically analysed.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

## Applied Building Theory

**Course code:** 150235116  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 2  
**Lecturer:** Thomas Pucher

**Learning outcome:** The student of this module has advanced design skills regarding space and interiors of residential objects and is familiar with the demands of acoustics and indoor climate of building structures and apartments while taking the compact urban situations into consideration. In doing so, the interior is always seen as the interface to the residential environment as well as the interaction to the exterior.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The contents of this seminar serve to support the topical design work from Design 1: systematic research, analysing and synthesising the materials gained for comprehensive conceptual design of buildings are components of the course. The decision processes are supported by practical examples that teach the incorporation of basic theoretical principles and knowledge gained of conceptual design of buildings and spaces. The main topic of the course is linked to the course Design 1 and therefore varies.

**Recommended or required reading and other learning resources /tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous and final assessment

**Language of instruction:** English

## Project Work & Presentation 1

**Course code:** 150235108  
**Course type:** Compulsary  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 1  
**Lecturer:** Tanja Psonder

**Learning outcome:** The student is able to present, analyse and evaluate topics related to the profession. In addition, the student has a founded knowledge of the different presentation formats and can proactively use them. The historic focus of this module is placed on the deepening of skills in contemporary problem solving and on analyzing historic and theoretical issues. The student completing this module gains insight into the contextual understanding of historic contexts and their meaning in the current planning.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Linguistic and non-linguistic characteristics of presentations, for example, preparation, systematic development, design, execution as well as the use of media; verbal, non-verbal and interactive skills in the area of communication.

**Learning outcome:** The student is able to present, analyse and evaluate topics related to the profession. In addition, the student has a founded knowledge of the different presentation formats and can proactively use them.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment, presentation, self-evaluation and documentation, pronunciation task

**Language of instruction:** English

## Design 3 (Design in the Urban Space)

**Course code:** 150235301

**Course type:** Compulsary

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 6

**Lecturer:** Thomas Lettner, Anke Strittmatter

**Learning outcome:** The student has an in-depth knowledge of solutions of complex planning tasks with high architectural value. They are able to solve and depict challenging urban planning and architectural tasks. Students are in a position to carry out, both in a team and as individuals, design tasks including technical and legal parameters.

The student has detailed knowledge of the basic principles of regional and urban planning as well as their application in planning and implementation. They know the urban structures and town model terminologies, the connection between economy and urban growth, society and town structure, distribution of functions in urban space and mobility, planning and environmental quality. The student has a basic knowledge of the use of cybernetic design tools in urban planning. Development of student's ability for project management through knowledge of planning processes and governing factors. Knowledge of regional planning in Austria, legal basics and the normed tools of local planning and the basics and methods of planning on a communal scale. The students have basic information about EU regional policy as a condition for the participation in development schemes.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Planning of areas in urban centres and in the suburbs; organisation of various urban functions, conception and planning of urban spaces such as public space, open space, traffic zones and urban functional planning (city sectors, boroughs). Concrete project design tasks for specific areas of town, planning of settlement typologies based on scientific treatment of the urban space free-space system taking into consideration socio-scientific aspects (social psychology, social behaviour and patterns of interaction) as well as project marketing and project management in the urban context.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous and final assessment

**Language of instruction:** English



## Project Work 3

**Course code:** 150235307

**Course type:** Seminar

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Peter Kompolschek

**Learning outcome:** The student completing this module understands technical and constructive tasks with various marginal values and recognizes their correlation. Complex procedures in the area of building services engineering are not only understood, but can be independently planned and solved. In addition, the student can establish a relation to the design and construction.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The basics of this course are urban planning tasks which were developed in the course 'Design in the Urban Space'. Sustainable aspects in space, energetics and the social environment form an integral part of this project work. The reaction on existing urban structures during the planning of new urban developments and the handling of existing structures that can be revitalised need to be worked on in order to gain insight into their immanent complexity.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Assessment of the project

**Language of instruction:** English

## Selected Topics: Land Use

**Course code:** 150235304

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:** Bernhard Schneider

**Learning outcome:** Fundamental skills, awareness raising for relevant issues

- Ability to recognize rules and regulations imposed on a property by urban and regional planning instruments

- Basic skills enabling to act as a junior expert in local or regional planning

**Teaching methods:** blended learning, flipped classroom, discussions, unguided internet research, lecturing

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Basic principles of planning and instruments of regional planning (definitions, planning levels, general legal requirements, etc.), application of land use regulations. Teaching of forms of development and organisation in regional and national land-use planning (national and international instruments) - regional aid programmes and EU regional policies, new tendencies in regional planning ('from overall concept to model of cooperation').

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

## Ecology and Development of Space

**Course code:** 150235309  
**Course type:** Integrated course  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 3  
**Lecturer:** Bernhard Schneider

**Learning outcome:** The student completing this module acquires the ability to develop sustainable strategies and concepts for the construction trade throughout the entire life cycle in the areas of urban and spatial planning and knows tools to assess the relevant structures. Together with the modules NE I and NE II, the student deepens their skills in sustainable construction ranging from urban planning issues to the level of building materials.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Influence and implementation of ecological approaches in spatial and regional planning (definition; planning levels, general legal conditions, etc.). Nationwide coordination and planning tools; climate protection agreements.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Final examination and continuous assessment of the practical exercises

**Language of instruction:** English

## New Materials in Architecture

**Course code:** 150235311  
**Course type:** Lecture  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 2  
**Lecturer:** Erich Handel

**Learning outcome:** The student completing this module is in a position to conclusively analyse and work on the complex questions in the context of revitalisation measures. An in-depth knowledge of construction materials is imparted. Adaptations of protected structures based on the knowledge gained in the modules KBB I and KBB II are mastered both on a material-constructive as well as a planning-constructive level.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Systematic overview of materials, products and their areas of application. Synthetic and composite materials, fibre production and application in mineral and in resin compound. (Examples from the restoration of supporting structures and buildings.) Textile fabrics and tiles - bonding: Basic principles and application in construction.

**Recommend or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

## Project Work & Presentation 2

**Course code:** 150235303  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 1  
**Lecturer:** Tanja Psonder

**Learning outcome:** The student completing this module is able to professionally present topics related to the profession. In addition, the student has a founded knowledge of group dynamics and a reflective view of communicative processes.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** This module is based on the two previous modules

**Course content:** Verbal, non-verbal and interactive skills in the areas of communication, rhetoric and presentation; focus on speed presentation formats.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous and final assessment

**Language of instruction:** English

## Social Work, Bachelor Course(s)

### Social work Issues 1

**Course code:** 180416109

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 3

**Lecturer:** Monica Altenreiter, Karen Meixner

**Learning outcome:** Students acquire professional knowledge in the field of social work with special attention to professional communication in the cultural and intercultural context. Self-directed and autonomous learning within professional context. Peer teaching, group work, discussions of social work specific topics. Practical competence in using effective communication techniques. Understanding and applying professional and specific terms in social work.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:**

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments, active participation, journal, portfolio.

**Language of instruction:** English

**Literature:**

## International and intercultural Social Work

**Course code:** 180416110

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2

**Lecturer:** Monica Altenreiter, Karen Maixner, Moser

**Learning outcome:** Understanding of international social work (concepts, key terms), international social work in selected countries, contexts, issues and fields of activities. Social work in a society of migration, intercultural and diversity oriented competences, discrimination and racism critical aspects.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:**

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments, active participation, paper.

**Language of instruction:** English

**Literature:**

## English for social work purposes and academic writing

**Course code:** 310  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 3rd  
**ECTS Credits:** 2  
**Lecturer:** Monica Altenreiter

**Learning outcome:** Improvement of social work-specific language: communication skills based on relevant texts, cross-references to curriculum-based subjects such as psychology, group dynamics, reading skills (scientific texts), social work specific vocabulary, business writing. The graduate possesses English language skills for professional use, for ESP discourses, can write scientifically, present professionally and take part in conferences actively. Improvement of oral skills as well as listening and writing skills. Acquisition of relevant language and vocabulary skills for social work purposes. Use of new media. Self-directed and autonomous learning within professional context. Presentations, group work, discussions of social work specific topics. Projects: Academic writing, application portfolio, study journals. Abstract writing as preparation for bachelor thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Courses of the previous semesters

**Course content:**

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments, active participation, paper.

**Language of instruction:** English

**Literature:** Cournoyer, B.R. (2005). The social work skills workbook. Thomson Learning: UK. Baart, A.J. (2002). The presence approach, an introductory sketch of a practice. Actioma: CTU Utrecht, Netherlands. Schilling, T. (2003). The presence approach in New York. Journal "Sociale Interventie": Nijmegen. Actioma / Catholic Theological University in Utrecht, the Netherlands. Grobman, Linda May (2005). Days in the Lives of Social Workers. Harrisburg: White Hat Communications. Ambrosino, R. [et al.] (2001). Social Work and Social Welfare. Belmont: Wadsworth. Morris, C. & Maisto, A. (2002). Psychology – An Introduction. New Jersey: Prentice Hall. Thomas, M. & Pierson J. (2001). Dictionary of Social Work. London:



Collins Educational. Rollnick, S. [et al.] (2008).  
Motivational Interviewing in Health Care. London: Guilford Press. Redman, S. (2001). English  
Vocabulary in Use. Intermediate. Cambridge: CUP. Murphy, R. (2002). English Grammar in  
Use. Intermediate. Cambridge: CUP. Herrmann, P. (2002). Wörterbuch soziale Arbeit.  
Frankfurt: Dt. Verein für öffentliche und private Fürsorge.

## Social Work, Master Course(s)

### Communication Skills in Social Work 2

**Course code:** 306

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Karen Meixner

**Learning outcome:** Communication skills (speaking, listening, reading, writing); vocabulary, idiomatic use of the language, grammar, general and specific topics; applying the language in various every-day and professional context. Language functions and discussions.

Students will continue to build their English language skills in order to be able to communicate efficiently and effectively in both everyday situations as well as in a social work practice environment.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Students will have successfully completed Communication Skills in Social Work 1

**Course content:** The graduate possesses English language skills for everyday use, for ESP discourses, can write scientifically, present professionally and take part in conferences actively.

The aim of this course is to ensure that students can improve their general communication skills in English as well as to enlarge their vocabulary and improve their reading, writing and listening skills on a variety of topics in different areas of social work. There will be a particular focus on the National Association of Social Workers Code of Ethics in this semester.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Active participation, final report, reflection

**Language of instruction:** English

Literature: Script

## Engineering

### Electronic and Computer Engineering

#### Bachelor Thesis 1

Course code: 140420504

Course type: Compulsory

Course cycle: First

Semester: 5th

ECTS Credits: 15

Lecturer: Raul Estrada Vazquez

**Learning outcome:** Students apply the knowledge and skills gained in the technical and interdisciplinary courses to solve a specific technical problem.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Depending on the topic

**Cours Content:** Depending on the topic; **Results:** Students can solve a technical problem relevant to their level of study under supervision

**Recommended or required reading and other learning resources / tools:** Depending on topic

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Final exam

**Language of instructions:** English

**Literature:** Depending on the topic

## Model Based Design

**Course code:** 140420501

**Course type:** Integrated Course

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 4

**Lecturer:** Raul Estrada Vazquez, Alfred Karl Steinhuber

**Learning outcome:** Get familiar with the concept of model-based software development for embedded systems. Be able to design and test simple functions in a model-based development environment. Be able to automatically generate code in a model-based development environment including microcontroller

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Power Electronics, Drives and Dynamic Control; Applied Computer Science; Embedded Computing; Object-Oriented Software design.

**Course Content:** The content will be covered along the semester by a combination of lectures and laboratory sessions. The topics to study are the following:  
Introduction to Model Based Design; Modeling techniques for E/E components and systems; Foundations of function development for embedded systems; Implementation of functions in time-discrete; Finite state machines; Automatic code generation; Test for verification and validation; Safety aspects.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course with practical part

**Assessment methods and criteria:** Will be done by the integration of two criteria: training units (labs) and final exam; 6 laboratory session will take place during the semester and 4 reports have to be handed in –sessions 1 and 2, and 4 and 5 will be reported together; meanwhile sessions 0 and 3 will be reported independently.

**Language of instruction:** English

## Marketing and Sales

**Course Code:** 140420502  
**Course type:** Integrated Course  
**Cours cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 2  
**Lecturer:** Angela Kremshofer

**Learning outcome:** Get to know the importance of marketing and sales management for enterprises, get to know the principles and necessary steps of a marketing planning and understanding of marketing and sales management tools.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Knowledge in business economics

**Cours Content:** Marketing planning and strategic marketing; Marketing mix (product-, price-, distribution, communication policy); Web side analysis (focus sales management) with presentation; Sales management and sales conversation; Project work marketing with presentation

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Project work; Active participation, web side analysis, sales conversation

**Language of instruction:** English

## Quality Management

**Course Code:** 140420503  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 2  
**Lecturer:** Michael Paulweber

**Learning outcome:** Provide basic overview of importance of quality management, its most common methods and procedures, the necessary tools. Additionally, the importance of processes in product development to ensure product quality will be discussed.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** The students shall have an understanding in product development (with focus on electronics and embedded SW development). Additionally, basic statistical skills are necessary.

**Cours Content:** Total Quality Management; What is Quality; Dimensions of quality History of quality management; Total quality management system; ISO 9000; TQM Tools and Skills; Statistical Process control; Six Sigma; Costs of Quality; Striving for Perfection in an Imperfect World; Six Sigma; Product and Service Defects / Improving Process Systems Just-in-time / Lean Manufacturing; Processes as Enabler for Quality; Introduction Requirement management; Process skills; Configuration management; Integration management; Verification and validation; Risk management; Estimation; Setup production; Agile development; Continuous process improvement; Metrics; Maintenance.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment method and criteria:** Final exam, presentation, active assessment

**Language of instruction:** English

## Energy and Mobility 2

**Course Code:** 140420506

**Course type:** Optional

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 7

**Lecturer:** Raul Estrada Vazquez, Werner Obermayr, Florian Mayer

**Learning outcome:** Students get to know the FMCW radar technology as a sensor in the vehicle and as a robotic based on statistic methods and filters for the application in autonomous vehicles. Further methods of vehicle modelling are presented.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Informatics and programming intermediate; Embedded Computing; Signals and systems; Power Electronics, drives and dynamic control.

**Course Content:** Review basics of signal processing; Startup of a radar sensor (FMCW radar); Basics of extended driving algorithms and basics of probability; Sensor data upload via radiocommunication; Localisation in static surroundings; Examples of „lane detection and lane keeping “; Perception; Modelling of a vehicle model; Setting of a testpad and test of applications.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Exam Protocols of labs; Continuous assessments (presentation of solutions)

**Language of instruction:** English

## Industrial Automation 2

**Course Code:** 140420505

**Course type:** Seminar

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 7

**Lecturer:** Thomas Messner, Micheal Salloker, Alfred Karl Steinhuber

**Learning outcome:** After finishing this course, students are able to analyse a given system from automation engineering point of view, have the capability to develop the software structure for the automation system, are able to implement the automation software using LabVIEW or a B&R PLC, are able to test the software of the automations system.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Programming using C; Software development; Basic knowledge LabVIEW; Basic knowledge PLC.

**Course Content:** The contents of this course is splitted up in two main sections; Automation using LabVIEW; LabVIEW topics; Modularity in programming; Programming hardware; Using Variables; Communicating Data Between Parallel Loops; Implementing Design Patterns; Controlling the User Interface; File I/O Techniques; Automating a real coffee machine; Control algorithm on a real time target; Controlling and monitoring the system on a web interface; Automation using a PLC; In this part the automation of different stations of a production line has to be implemented using PLCs. The students are guided to solve the following tasks: Analysis of a given system; Developing a software structure to achieve a specified functionality including error handling; Implementing the software; Start-up of the system; Test of the automated system; Implementation of feedback control.

**Recommended or required reading and other learning reosources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Exam, Constituent Parts; The assessment of the course is based on software development to obtain the functionality of the given systems and documentation of the software, functionality and test for both parts (PLC programming and LabVIEW). Components: The final grade is composed of the following components: software development LabVIEW; documentation LabVIEW; software development PLC documentation PLC.

**Language of instruction:** English





## Aviation, Bachelor Course(s)

### Human Factors

Course code: 160587414

Course type: Compulsory

Course cycle: Second

Semester: WS/SS

ECTS Credits: 6 ECTS

Lecturer:

Learning outcome: project work, project management,  
working on project topic in field of informatics

Mode of delivery: Face-to-face

Prerequisites and co-requisites:

Course content: depends on project topic

Recommended or required reading and other learning resources / tools:

Planned learning activities and teaching methods: project

Assessment methods and criteria: written report

Language of instruction: English

Literature:

## Imparting of knowledge is

**based** on scientific models, theories and evidence. The significance of humans in highly automated systems and their ensuing influence on safety is the major topic of the lecture. Course content is concerned with the term and significance of the discipline of human factors as well as the domains of specialization - organization and human performance. Lecture content for organizational human factors is concerned with communication, leadership, organizational culture and safety culture. Lecture content for the topic of human performance is concerned with cognition (fundamental knowledge), mental workload, stress, situation awareness, decision-making, human-computer interaction. Scientific methods for the conduction of human factors studies is also part of the lecture content.

**Course code:** 160587416

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** WS/SS

**ECTS Credits:** 12 ECTS

**Lecturer:**

**Learning outcome:** project work, project management, working on project topic in field of informatics

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** depends on project topic

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** project

**Assessment methods and criteria:** written report

**Language of instruction:** English

**Literature:**

## Books: Spitzer: Digital Avionics

Systems, Moir: Civil Avionics Systems, Collinson: Introduction to Avionics Systems.

**Course code:** 160587417

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** WS/SS

**ECTS Credits:** 12 ECTS

**Lecturer:**

**Learning outcome:** project work, project management,  
working on project topic in field of informatics

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** depends on project topic

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** project

**Assessment methods and criteria:** written report

**Language of instruction:** English

**Literature:**

## Aviation, Bachelor Course(s)

### Human Factors

<b>Course code:</b>	150588101
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	5 ECTS
<b>Lecturer:</b>	Sporer-Fellner Simone / Friehmelt Holger

**Learning outcome:** Students acquire professional and methodological competences in the field of human factors

**Mode of delivery:** Face-to-face

#### Prerequisites and co-requisites:

**Course content:** Imparting of knowledge is based on scientific models, theories and evidence. The significance of humans in highly automated systems and their ensuing influence on safety is the major topic of the lecture. Course content is concerned with the term and significance of the discipline of human factors as well as the domains of specialization - organization and human performance. Lecture content for organizational human factors is concerned with communication, leadership, organizational culture and safety culture. Lecture content for the topic of human performance is concerned with cognition (fundamental knowledge), mental workload, stress, situation awareness, decision-making, human-computer interaction. Scientific methods for the conduction of human factors studies is also part of the lecture content.

#### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Imparting of fundamentals by means of teacher-centred lecture, independent treatment of examples in group work, presentation, discussion and feedback

**Assessment methods and criteria:** exam, presentation, homework

**Language of instruction:** English

#### Literature:

- Harris, D. (2011). Human performance on the flight deck. Ashgate.  
Hollnagel, E. (2014). Safety-I and Safety-II. The past and future of system management. Ashgate.  
Riggio, R. E. (2012). Introduction to industrial/organisational psychology (6th ed.). Pearson.  
Stanton et al. (2013). Human factors methods: a practical guide for engineering and design. Ashgate.  
Wickens et al. (2013). Engineering psychology and human performance (4th ed.). Pearson.

**Course code:** 150588102  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 3 ECTS  
**Lecturer:** Flühr Holger

**Learning outcome:** Students become acquainted with modern techniques of digital signal processing and apply them to digital avionic systems and CNS/ATM systems.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Digital signal processing; network engineering; integration of data buses; system architecture in modern civil aircraft and UAVs.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course and laboratory

**Assessment methods and criteria:** exam

**Language of instruction:** English

**Literature:**

Spitzer: Digital Avionics Systems, Moir: Civil Avionics Systems, Collinson: Introduction to Avionics Systems.

## 12 ECTS

**Course code:** 150588103

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:**

**Learning outcome:** Students become acquainted with modern techniques of digital signal processing and apply them to digital avionic systems and CNS/ATM systems.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Concept of CNS/ATM systems; Maxwell's equations and wave propagation; application: Global Navigation Satellite System (GNSS).

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** exam

**Language of instruction:** English

**Literature:** Spitzer: Digital Avionics Systems, Moir: Civil Avionics Systems, Collinson: Introduction to Avionics Systems.

**Course code:** 150588104  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 1 ECTS  
**Lecturer:** Vogl Stephan/Bausek David

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Joining methods and technologies for the assembly of aircraft components and modules.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**



**Course code:** 150588105  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 1 ECTS  
**Lecturer:** Lindner Gerhard

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Review of mechanical basics; kinematics of linear (and non-linear) single mass vibrations; multiple mass vibrating chains; vibration extinction.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course and laboratory

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588106  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 3 ECTS  
**Lecturer:** Van Ruitenbeek Josephus

**Learning outcome:** Interaction of mechanics, aircraft design, and assembly processes.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Aeronautical and job-specific topics: design elements, assemblies, ATA numbering, product tree, project data management, certification documents, release processes, JAA/FAA requirements, design principles, materials selection, joints.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Construction practical

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

EASA Subparts  
Fritz: Fertigungstechnik

**Course code:** 150588107  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 3 ECTS  
**Lecturer:** Hassler Wolfgang

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** The course deals with the primary mechanisms of heat transfer for steady-state and transient systems. The three types of heat transfer – conduction, convection and radiation – are worked out in theory and then illustrated with particular examples.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course and laboratory

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588108

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Schmidl Robin

**Learning outcome:** Students learn how to complete demanding research and development tasks independently

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** The course deals with the Fluid Mechanics of Newtonian fluids and gases; particular focus is put on applications in Aerodynamics.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course and laboratory

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

Kayes, Crawford, Weigand: Convective Heat and Mass Transfer  
Lienhard IV, Lienhard V: A Heat Transfer Textbook  
Incropera, Dewitt, Bergman, Lavine: Principles of Heat and Mass Transfer  
McCormick: Aerodynamics and Flight Mechanics  
Anderson: Fundamentals of Aerodynamics  
Stevens, Lewis: Aircraft Control and Simulation

**Course code:** 150588110  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 1 ECTS  
**Lecturer:** Gogl-Hassanin Irena

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Repetition of fundamentals from the bachelor programme; options and limits of internal financing: financing by revenues and further capital emission, advantages and disadvantages of internal financing; options and limits of external financing: banks (credit worthiness assessments by banks, accounting requirements, liquidity requirements, optimisation of assets and liabilities), financial holding companies (forms of financing, venture capital, private equity companies), business angels, going public, private placement (off-exchange capital market, legal forms, participation rights, capital commitment, taxes), capital sharing (reasons, claims, characteristics), public funding (promotional purposes, eligibility conditions, forms of funding); forms of equity and debt financing: fundamentals, trade credits, promissory notes, bonds; forms of equity capital financing: limited partner's shares, stocks, limited company shares; special forms: leasing, sale and leaseback, factoring, forfeiting

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588109  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 4 ECTS  
**Lecturer:** Jelinek-Nigitz Heidelinde

**Learning outcome:** Students learn how to take on demanding business administration and organisation tasks in aviation industry.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** The content of the course focused on the theoretical and practical examination of operational and strategic management tasks (planning, Entscheidung, implementation and monitoring) and role of innovation and technology management in the aviation industry. Processes of business analysis and strategy development are illustrated by realistic problems and case studies.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588111

**Course type:** Elective

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 5 ECTS

**Lecturer:**

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Work on an individual or group project.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous assessment

**Language of instruction:** English

**Literature:**

**Course code:** 150588112  
**Course type:** Elective  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 3 ECTS  
**Lecturer:** Andracher Lukas

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Principles of flight, aircraft design, propulsion systems, flight dynamics & system theory.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**



**Course code:** 150588113

**Course type:** Elective

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 3 ECTS

**Lecturer:**

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Introduction to fundamentals of hydraulic and pneumatic drive and control engineering: physical basics; design, operating principle and calculation of essential components (e.g. pumps, valves); concepts of basic circuit diagrams and layout of basic control systems.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588115  
**Course type:** Elective  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 2 ECTS  
**Lecturer:** Friehmelt Holger

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Introduction to the design process and the resulting product management and marketing tasks; raising engineering-oriented students' awareness of cost and time constraints during the design process; raising management-oriented students' awareness of the required technical design steps and tasks; sensitising students to the need for parallel and sequential design steps and their implications for product management and marketing; presentation of possible means to assure and increase customer satisfaction and customer acceptance; positioning and focus of an airline with explanations of the hub-and-spoke system as well as alliances; network planning containing the development of new routes, the monitoring of existing routes, all costs concerned, break-even analysis, controlling and benchmarking, competitor analysis; all pricing matters, fare types and yield management; budgeting process including production, yield, passenger, cost and staff budgeting; forms of possible cooperation between airlines that are beyond contracts completed in the ordinary course of business like Blocked Space Agreements, Joint-Venture and Code Share Agreements; loyalty programmes such as frequent flyer programmes and incentive schemes; communication policies like sales organization and promotion, advertising and public relations activities; various aspects that are relevant for the marketing department of an airline such as charter flights, reservations and call centers, ground operation, customer relations, quality management and cargo.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588116

**Course type:** Elective

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:**

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Standards and regulations in the aerospace industry, selected contents of EASA Part 21, Part 66 and Part 147

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** According to examination regulations

**Language of instruction:** English

**Literature:**

**Course code:** 150588301

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 30 ECTS

**Lecturer:**

**Learning outcome:** Students can apply the knowledge they have acquired during their studies in an industrial setting and are able to document their work as well as to research the theoretical background of a project assignment.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Application, consolidation and extension of the knowledge acquired at university in a practice-oriented environment; production of a final report.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

## Automotive Engineering, Bachelor Course(s)

### English Foundation Bachelor's

**Course code:** 160679110

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Adrian Millward-Sadler

**Learning outcome:** Review and revision of language based on high-school level or knowledge required on a university entrance exam.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Communicative grammar; short presentations on selected topics; practice of oral English language skills.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Communicatively oriented language teaching

**Assessment methods and criteria:** Continuous assessment, written and oral exams.

**Language of instruction:** English

**Literature:**

Script

Current texts from the English-speaking sources

## English for Automotive Engineers 2

**Course code:** 160679309

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Annette Casey

**Learning outcome:** Improving written communication; writing technical/project documentation; Compiling short reports, emails; improving discussion skills by means of short group meetings; improving presentation skills.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** B1/B2 according to the Common European Framework of Reference for Languages

**Course content:** Written communication: compiling technical reports and/or project documentation (based on an existing project), emails; specialized vocabulary; short group meetings; presentations; communicative grammar.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Communicative language instruction

**Assessment methods and criteria:** Continuous assessment, written and oral exam.

**Language of instruction:** English

**Literature:**

Script

Current texts from English language publications

## The Global Workplace 2

**Course code:** 160679510  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 2 ECTS  
**Lecturer:** Adrian Millward-Sadler

**Learning outcome:** Familiarization with different types of team building through active team work; Familiarization with cultural differences and/or cultural markers to help improve communication for the global workplace; Compiling professional CVs and letters of application; Job applications (CV, letters of application, follow-up and interviews); Presentation techniques

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** B2 or above, according to the Common European Framework of Reference for Languages

**Course content:** Team building/team work; intercultural competences; Communicative grammar; Job applications (CV, letters of application, follow-up and cold calling); Presentations

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Communicative language instruction

**Assessment methods and criteria:** Continuous assessment, written and oral exam

**Language of instruction:** English

**Literature:**

Script  
Current texts from English-language publications

## Automotive Engineering, Master Course(s)

### Advanced Mechanics

**Course code:** 130680102

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 4

**Lecturer:** Stefan Sollerer

**Learning Outcome:** Enhancement of analytical thinking and of the degree of abstraction in the formulation of physical problems; insight into the variational methods in mechanics

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Introduction to Analytical Mechanics: statements of the principle of virtual work, d'Alembert's principle and Lagrange's equations of the 2nd kind and their application to particles, systems of particles, rigid bodies and systems of rigid bodies; application of energy principles and variational methods in the strength of materials.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** D. A. Wells: Lagrangian Dynamics: with a Treatment of Euler's Equations of Motion, Hamilton's Equations and Hamilton's Principle. Schaum, New York, 1967

C. Lanczos: The Variational Principles of Mechanics. 4th ed., University of Toronto Press, Toronto, 1970 (Repr.: New York, Dover Publications, 1986)



## Applied Engineering Mathematics 1

**Course code:** 130680101  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 3  
**Lecturer:** Günter Bischof

**Learning Outcome:** The graduate students shall become acquainted with a framework of differential equations and the discrete analogies in form of matrix equations. The students shall see and understand the cooperation between calculus and linear algebra and recognize the underlying pattern.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Symmetric Linear Systems (Eigenvalues and Dynamical Systems), Equilibrium Equations (Constraints and Lagrange Multipliers, Structures in Equilibrium, Electrical Networks), Equilibrium in the Continuous Case (Differential Equations of Equilibrium, Laplace's Equation and Potential Flow, Equilibrium of Fluids and Solids, Calculus of Variations), Numerical Methods.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials

**Assessment methods and criteria:** Homework and final exam

**Language of instruction:** English

**Literature:** Gilbert Strang, Introduction to Applied Mathematics, Wellesley-Cambridge Press (1986), ISBN 0-9614088-0-4

## Control Systems 1 / Sensors & Actuators

**Course code:** 130680103

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2

**Lecturer:** Bernhard Breitegger

**Learning Outcome:** The peripheral elements of engine and vehicle control systems are discussed, including their physical characteristics and use in electronic systems

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Sensors and actuators are parts of control systems. Knowledge about the functions performed by engine and vehicle controls are the basis for the discussion of sensors and actuators. The objective is to provide an overview of these elements and to impart knowledge on how to use them.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Bosch Automotive Handbook, Wiley  
<http://www.elektroniknet.de/automotive/>

## Engineering Methods and Design 1

**Course code:** 130680108

**Course type:** Seminar

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 4

**Lecturer:** Michael Trzesniowski, Wolfgang Schöffmann, Gerhard Eibler,  
Thomas Weberbauer

**Learning Outcome:** Getting to know and understanding the virtual product development process based on a practical example

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Conceptual design of vehicle parts and function groups based on Formula Student or own problems derived from project work. Compilation of relevant documents: CAD models, drawings, parts list (BOM).

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Group tutorials

**Assessment methods and criteria:** Continuous assessment of tutorial work. Quality of created CAD models and compiled production documents. Resonation and defence of work. Written report. The achieved scores are assigned to a mark in the following way: 0 - 49%: insufficient (5) = negative mark. 50 - 64%: sufficient (4). 65 - 79%: satisfactory (3). 80 - 90%: good (2). 90 -100%: excellent (1).

**Language of instruction:** English

**Literature:** Beitz W., K.-H. Küttner (Eds.): Dubbel, Handbook of Mechanical Engineering, Vol. 1., 1. Aufl., London: Springer, 1994.

## English for Scientific Studies

**Course code:** 130680110  
**Course type:** Seminar  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 2  
**Lecturer:** Annette Casey

**Learning Outcome:** Consolidation of English skills as well as development of abilities in English for Specific Academic Purposes (ESAP), with the objective of preparing students for an academic English language environment in the technical area of automotive engineering.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The purpose of ESS is to enable students to study on an English only degree programme such as the Master's degree in Automotive Engineering. Content and assignments will therefore be tailored to this degree curriculum.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Interactive group work, presentations

**Assessment methods and criteria:** Continuous assessment, written exam, oral examination (poster presentation)

**Language of instruction:** English

**Literature:** Course script

## Human Resource Management

**Course code:** 130680109

**Course type:** Seminar

**Course cycle:** Second

**Semester:** 1st

**ECTS:** 1

**Lecturer:** Erhard Semlitsch

**Learning Outcome:** The aim is to create a holistic understanding of need and professional approach in terms of modern HRM

**Prerequisites and co-requisites:** None

**Course content:** HRM-Basics | HRM-Stakeholder | HRM-Conditions | HRM-Tools | HRM-Controlling

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials, group / team work, moderated discussions in order to exchange experiences

**Assessment methods and criteria:** Active cooperation, individual input, individual performance, written examination

**Language of instruction:** English

**Literature:** Holtbrügge, Dirk: Personalmanagement. 5. Aufl. Springer - Grabler, 2013

## Hydraulics and Pneumatics

**Course code:** 130680107

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st semester, MAE

**ECTS Credits:** 2

**Lecturer:** Bernhard Manhartsgruber

**Learning Outcome:** Fundamentals of oil hydraulics; ability to design and assess systems and flaws; fundamentals of actuators; problems of actuators for high masses

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Fundamentals of hydrostatics in oil-hydraulic systems; properties of oils and other fluids used in pressurized systems; design of containers; operation of hydraulic components; design and operation of different pumps and motors; examples using circuit layouts; simulation of electro-hydraulic systems using Matlab/Simulink

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Gustavo Koury Costa, Nariman Sepehri "Hydrostatic Transmissions and Actuators", Wiley 2015, ISBN 978-1-118-81879-4  
Peter Beater, "Pneumatic Drives", Springer 2007, ISBN 978-3-540-69471-7

## Machine Dynamics/Acoustics

**Course code:** 130680104

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 3

**Lecturer:** Herbert Fellner, Gerald Schleinzer

**Learning outcome:** The graduate students shall get an idea and an overview of vibrations, the problems due to vibrations and the solutions for reducing vibrations in vehicles. Furthermore, they will learn the terminology of acoustics and become familiar with measuring and calculation methods used in acoustics

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:**

1. Fundamentals
2. Frequency Analysis
3. Measurement
4. Vibration Control
5. Vibration Control 2
6. Noise Legislation, Room Acoustics, SEA
7. Modal Analysis, etc.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecturers and tutorials, including calculation examples and experiments

**Assessment methods and criteria:** Written exam and continuous assessment of tutorial work

**Language of instruction:** English

**Literature:** Robert Bosch, Automotive Handbook, Wiley (2011)

## Methods of Product Development & Production

**Course code:** 130680105

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 3

**Lecturer:** Georg Holzner

**Learning outcome:** Students obtain an overview of modern methods of product development and their application in production.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** This lecture covers the theoretical fundamentals of development processes and their influence on production using real-world examples from industry. Topics include: production management, virtual product development, product data management, product engineering processes, simultaneous engineering and production systems.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final examination

**Language of instruction:** English

**Literature:** Basshuysen, Richard van: Fahrzeugentwicklung im Wandel. Springer - Vieweg, 2010



## Project Work 1

**Course code:** 130680106

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 5

**Lecturer:** Christoph Haidinger, Michael Trzesniowski, Wolfgang Kriegler, Philipp Eder, Martin Gossar, Karl Reisinger

**Learning outcome:** Students perform a "training project", with all attributes of a real project in industry. Within this format they should master skills to help solve organisational and technical problems that may occur in a real-life project.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Team projects on a variety of automotive topics.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Introductory lecture. Practical application of knowledge acquired in previous modules.

**Assessment methods and criteria:** Continuous assessment. Final report.

**Language of instruction:** English

**Literature:** Lecture notes; Royce M. u. S. et al.: Learn & Compete, A Primer for Formula SAE, Formula Student and Formula Hybrid Teams. 1. Aufl., London: Racecar Graphic Limited, 2012

Crowder J. A., Friess S.: Agile Project Management: Managing for Success. Springer, 2015.

## Academic Writing and Speaking

**Course code:** 130680307

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:** Adrian Millward-Sadler

**Learning outcome:** Focus on English language skills required for the composition of scientific texts, such as abstracts for scientific publication as well as Master's theses. Particular attention will be paid to English writing methods and subject-specific vocabulary. Advanced presentation rhetorics and techniques will be practiced in preparation for the final defence of the Master's thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The objective of the course is to prepare students to write their Master's thesis as well as the corresponding final presentation of their academic work. For this reason, the course contains the following core components: Constructing an academic thesis, structuring an academic presentation, writing summaries & abstracts, using appropriate register, presenting research, Presentation delivery and signposting, Data commentary, giving definitions & describing information, Making appropriate presentation slides

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar: communicative language lessons (CLIL)

**Assessment methods and teaching criteria:** Continuous assessment, written assignment and oral exam

**Language of instruction:** English

**Literature:** Books: course script; Irish, R. & Weiss, P.E. (2009) Engineering Communication: From principles to practice. OUP; Oxford. Russey, W.E., Ebel, H.F., Bliefert, C. (2006) How To Write a Successful Science Thesis. Wiley-VCH; Weinheim.

## Advanced Drive and Propulsion Technology

**Course code:** 130680302

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 4

**Lecturer:** Wolfgang Kriegler

**Learning Outcome:** Students acquire basic knowledge of vehicle technologies, internal combustion engines, transmission; electrical machines; chemistry

**Mode of delivery:** Face-to-face

**Prerequisites:** None

**Course Description:** The lecture focuses on Alternative Powertrain Systems: electric vehicles, hybrids and fuel cell vehicles. It features system architectures, components, packaging aspects, safety concerns, prototype vehicles and current series models, evaluation of alternative powertrains in terms of sustainability; Battery systems: battery fundamentals, brief introduction to various cell chemistries, comparison of cell types, system architecture, battery packaging and control systems; advantages/disadvantages; safety and cost issues; future systems.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Peter Hofmann, „Hybridfahrzeuge“ 2nd Edition; Springer, ISBN 978-3-7091-1779-8  
Dietrich Naunin, Hybrid-, Batterie- und Brennstoffzellen-Elektrofahrzeuge“ expert verlag, ISBN-10: 3-8169-2625-8

Stan Cornel, „Alternative Antriebe für Automobile“ Springer, ISBN 3-540-24192-2

Wallentowitz/Reif (Hrsg): Handbuch der Kraftfahrzeugelektronik, Vieweg;

Jurgen, K: Electric and Hybrid-Electric Vehicles, SAE Nr. PT-85

Subject-related journals.

## Control Systems 3 / Bus and On-board Diagnostics

**Course code:** 130680305  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 1  
**Lecturer:** Eric Armengaud

**Learning Outcome:** Knowledge of behaviour and capability of on-board electrical systems, communication networks and diagnostics. Choice and dimensioning of optimal storage systems for electrical energy.

Knowledge of function, capability and development tools for commonly used vehicle communication networks and diagnosis systems.

Capability to acquire electrical power consumption, network signals and diagnosis messages. Inter- and intra-vehicle communications.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** OSI model with examples; overview of vehicle networks (K-Line, CAN, FlexRay, LIN, SAE J1850, MOST, ...); transport protocols; diagnosis protocols (KWP2000, UDS, OBD); ASAM Standard calibration protocols (CCP, XCP, ...); AUTOSAR concept; development tools; reading and analysis of OBD-diagnosis, analysis of communication networks using modern CAx-Tools; theoretical fundamentals will be consolidated in laboratory using modern application tools.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lab tutorials

**Assessment methods and criteria:** Lab reports

**Language of instruction:** English

**Literature:** Bosch Automotive Handbook, Wiley

## Control Systems 3 / Supply and Storage systems

**Course code:** 130680304  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 1  
**Lecturer:** Holger Flühr

**Learning outcome:** Knowledge of behaviour and capability of on-board electrical systems, communication networks and diagnostics. Choice and dimensioning of optimal storage systems for electrical energy. Knowledge of function, capability and development tools for commonly used vehicle communication networks and diagnosis systems. Capability to acquire electrical power consumption, network signals and diagnosis messages. Inter- and intra-vehicle communications.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Fundamentals of electric driving; Electric vehicles and hybrid vehicles; Concepts and design of electric propulsion systems; Overview of EV and HEV, Roadmap 2020; Electric auxiliaries and their requirements; Pedelecs; Electric Train Traction Systems Driver assistance systems and their interaction with EV; Energy management of EV and HEV, recuperation; Vision 'autonomous driving'

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** PowerPoint slides (FH literature server)  
Larminie, Lowry, Electric Vehicle Technology Explained, Wiley  
Veltman, Pulle, De Doncker, Fundamentals of Electrical Drives, Springer Verlag

## FEM/CFD

**Course code:** 130680301  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 3  
**Lecturer:** Philipp Eder/Peter Priesching

**Learning Outcome:** The graduate student shall have the competence of modelling real fluid dynamics problems with the finite volume method in a commercial CFD software. The student shall also be able to post-process and interpret the results of such calculations.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Refreshing basics of fluid mechanics (Navier-Stokes equations, turbulence modelling, ...); basics of numerical methods for solving the Navier-Stokes equations; discretization methods, solution algorithms; discussion of numerical difficulties; practical introduction into CFD software (AVL FIRE); pre-processing, calculation and post-processing of different examples.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lectures and tutorials

**Assessment methods and criteria:** CFD: Written exam about the theoretical part. One simple practical example shall be done during the exam.

**Language of delivery:** English

**Literature:** Klaus-Jürgen Bathe, Finite Element Procedures, Prentice Hall (1996), ISBN 0-13-301458-4; J. E. Akin, Finite Element Analysis with Error Estimators, Butterworth (2005), ISBN 978-0750667227

Tannehill, Anderson, Fletcher: Computational Fluid Dynamics (Taylor & Francis)

Journals: International Journal of Numerical Methods in Fluids

## Strategic Management

**Course code:** 130680303  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 3  
**Lecturer:** Manfred Bornemann

**Learning Outcome:** Students will gain a clear focus on methods - and the ideas behind them.

We want students to gain insight into some essential strategy instruments.

At the end of this course, participants will be able to:

- understand key concepts of strategy (e.g Porters 5 Forces, resources and capabilities, generic strategies of cost leadership or technological differentiation)
- explain some management concepts (What is an organization? What is change management? What are modern management ideas?)
- know about organizations who applied those concepts and be able to deliver a case study paper.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** ISM invites students to foster strategic analyses and development skills on company and business levels by acting together as consultants for an international strategic management project for a real-life automotive company or in the frame of a case study. Strategic techniques such as automotive industry analyses, competitor analyses and decision trees are applied. Students provide a company with decision guidance for instance in terms of portfolio diversification and international strategy.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Concept presentation, case study discussions, group efforts, self-study

**Assessment methods and criteria:** class and online participation 20% ; written participation 10% (e.g. quizzes or mini cases); 2 case studies as team effort 20% (10% each); formal test 50%

**Language of delivery:** English

**Literature:** Robert M. Grant: Contemporary Strategy Analysis: Text and Cases Edition, 9th Edition, ISBN: 978-1-119-12084-1; 776 pages, December 2015, ©2016

**ELECTIVE SUBJECTS (3rd semester):** Please note that the following elective subjects are only offered when there is sufficient demand!

## Commercial Vehicles

**Course code:** 130680310

**Course type:** Optional

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Gerhard Skoff

**Learning Outcome:** On successful completion of this course, students will have a comprehensive overview of the options and uses of industrial and commercial vehicles and also buses.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Technology of: heavy-duty commercial vehicles; buses; construction vehicles; agricultural vehicles; municipal vehicles.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Grundlagen der Nutzfahrzeugtechnik: Basiswissen Lkw und Bus, Verlag: Kirschbaum; Auflage: 3., veränd. Aufl. (Dezember 2008), ISBN-13: 978-3781217270 (auch in Englisch verfügbar)  
Nutzfahrzeugtechnik: Grundlagen, Systeme, Komponenten (ATZ/MTZ-Fachbuch), Verlag: Vieweg+Teubner Verlag; Auflage: 5, vollst. überarb. Aufl. 2008 (28. August 2008), ISBN-13: 978-3834803740



## Electric Drive and Propulsion Systems

**Course code:** 130680311

**Course type:** Optional

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Martin Gossar

**Learning Outcome:** Overview of electric propulsion systems and their areas of application

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Fundamentals of electric driving; Electric vehicles and hybrid vehicles; Concepts and design of electric propulsion systems; Overview of EV and HEV, Roadmap 2020; Electric auxiliaries and their requirements; Pedelecs; Electric Train Traction Systems Driver assistance systems and their interaction with EV; Energy management of EV and HEV, recuperation; Vision 'autonomous driving'

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Larminie, Lowry, Electric Vehicle Technology Explained, WileyVeltman, Pulle, De Doncker, Fundamentals of Electrical Drives, Springer Verlag

## Energy Management and Storage Systems

**Course code:** 130680309

**Course type:** Optional

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Wolfgang Kriegler

**Learning Outcome:** Understanding of the energy management and storage systems in a vehicle.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Starting from the so-called energy change (Energiewandel) the problems of energy storage in general will be highlighted. In special chapters the mechanical storage (flywheels and pressure storages), the electrochemical storage (batteries), the battery charging technologies and the storage of gaseous fuels will be presented. Further the energy and thermal management of electric and hybrid vehicles will be discussed.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** PowerPoint presentations, four presenters according their field of experience

**Assessment methods and criteria:** Final examination

**Language of instruction:** English

## Large Engines

**Course code:** 130680308  
**Course type:** Optional  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 3  
**Lecturer:** Wolfgang Kriegler

**Learning outcome:** Students will acquire the fundamentals of both large engines and gas engines, as well as their areas of application. They will learn about related operating and combustion processes as well as fuels.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Introduction in Large Engines; applications; specification and characteristic values; classification; differences to other engine classes; used fuels, liquid and gaseous; differences in operation behavior; special design features of Large Engines, new and special components; lubrication; charging; legal requirements regarding emissions and emission aftertreatment; combustion processes; thermodynamic analysis using indication methodology; evaluation of heat release (ROHR); consideration about increasing efficiency and reducing losses; Special chapter about stationary large gas-engines; overview engine modelling;

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture with active participation of students - small presentations

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Grundlagen Verbrennungsmotor" von Günter Merkel, Rüdiger Teichmann et.al., 2014 Springer Vieweg Verlag ISBN: 978-3-658-03194-7

List Reihe Band 1 / Springer Verlag

Diesel Engine Reference Book Hardcover - May, 1999 by Bernard Challen, Rodica Baranescu, ISBN-13: 978-0750621762; ISBN: 0750621761 Edition 2nd

Harald Maass: "Gestaltung und Hauptabmessungen der Verbrennungskraftmaschine" List Reihe, "Die Verbrennungskraftmaschine 1979; ISBN 3-211-81562-7

TUG Skriptum: Grundlagen Gasmotoren von Dr. DI Günther Herdin /DI Rüdiger Herdin

## Marketing and Product Management

**Course code:** 130680313

**Course type:** Optional

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Josef Smoly

**Learning outcome:** Upon successful completion of this course, students will demonstrate an in-depth understanding/awareness of:

1. the nature and importance of marketing from the perspective of a) its role in the economy, b) automotive companies, and c) business and end consumers.
2. product management and innovation in the automotive industry
3. effective marketing strategies, including a marketing mix, for automotive products and services.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The specific approach of marketing and product management in the automotive industry makes up the focal point of the course using fundamental correlations and scientific findings as its basis.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

**Literature:** Kotler, P. & Keller, K.L. (2011). Marketing Management, 14th global ed. Prentice Hall International.

Morgan, J.M. & Liker, J.K. (2006). The Toyota Product Development System: Integrating People, Process and Technology, Productivity Press.

## Rail Vehicle Dynamics

**Course code:** 130680312

**Course type:** Optional

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Heinz-Peter Kotz

**Learning Outcome:** Students will learn about the vehicle dynamics of railcars

**Method of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Vehicle dynamics of railcars

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

## Engineering and Production Management, Master Course(s)

### Advanced Production Technologies

Course code:	140682301
Course type:	Compulsory
Course cycle:	Second
Semester:	3rd
ECTS Credits:	3
Lecturer:	Hagen Hochrinner, David Schneider

**Learning outcomes:** Beginning from issues arising from their accompanying R&D projects and out of the requirements of their industry placements, the students work towards a deeper understanding of the fundamental principles and application of selected areas of production engineering. They will be able to evaluate new technologies, especially technologies that use resources efficiently, in view of their intended use and to integrate them into the production planning process. Depending on the sector, they focus on manufacturing or process engineering topics.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Rapid prototyping and fabrication of one-off product  
Introduction to microsystems technology and nanotechnology  
New technologies for processing of renewable and new materials  
Technological trends in pharmaceuticals production  
Technological trends in food production  
Technologies and the goal of "zero-emission"

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Final exam

**Language of instruction:** English

## Cleaner Production

**Course code:** 140682303

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3

**Lecturer:** Florian Salzer, Gerhard Walenta

**Learning outcome:** The students are introduced to the concept of cleaner production and its importance as part of an integrated management system as well as for sustainable economic and technological development. They will be able to analyze existing production plants and processes and to design and implement improvements of environmental performance.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Energy savings concepts in production plants

Principles of eco-design and circular economy

Comprehensive presentation of the concepts of pollution prevention and cleaner production and their connections to integrated environmental management systems

Examples of successful solutions in manufacturing industry

Examination of examples from the participating placement companies

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Projects

**Language of instruction:** English

## Internationalization

**Course code:** 140682309

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:** Kurt Felfernig

**Learning outcome:** The students will learn how internationalization projects proceed from intentions to selection, evaluation and development of target countries, forms of cooperation and legal formats. They can analyze and adapt aspects of corporate organization and management in the context of the target country.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Forms of international cooperation  
Environmental analysis and identification of potential partners  
Evaluation of countries and locations for internationalization strategy development  
Intercultural communication, conflict management and mediation  
Strategic importance of the south-eastern neighbouring countries  
Case studies and guest speakers

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Interdisciplinary project

**Language of instruction:** English



## Product Lifecycle Engineering

**Course code:** 140682316  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3  
**ECTS Credits:** 2  
**Lecturer:** Georg Wagner

**Learning outcome:** The students learn about concepts and methods for predicting the operational characteristics and effects of products over their whole life cycle. They learn how to score these aspects and how to develop strategies to optimize the products economically, environmentally and socially.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Advanced environmental and safety management  
Methods of integrated management over the whole life cycle of products.  
Concept of product lifecycle management (PLM)  
Product data management (PDM)  
Effects on the design of production processes

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Module project

**Language of instruction:** English

## Technology Impact Analysis

**Course code:** 140682315

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:** Engineering and Production Management Staff Member

**Learning outcome:** The students learn about concepts and methods for predicting the operational characteristics and effects of products over their whole life cycle. They learn how to score these aspects and how to develop strategies to optimize the products economically, environmentally and socially.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Effects of new materials and technologies  
Consequences of engineering decisions for humans and the environment, and their dependence on these considerations  
Conflicts of values and interests as a chance to develop alternatives  
Fundamentals of distributed decision-making processes for multidimensional problems  
Legislative framework for decision-making processes: issues related to estimation of risks of technology and long-term effects

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Module project

**Language of instruction:** English

## Key Skills 3

Course code:	140682312
Course type:	Compulsory
Course cycle:	Second
Semester:	3rd
ECTS Credits:	1
Lecturer:	Georg Wagner

**Learning outcomes:** The students will be able to understand essential thematic complexes and their relevance to their responsibilities in people management in their future work as engineering managers. They will understand the importance of in-house and outside communication and the interactions between these two modes.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** Intercultural communication in international project teams and joint projects between companies; gender mainstreaming and diversity as success factors

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Report on work experience

**Language of instruction:** English

## Professional English 3

**Course code:** 140682313

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 1

**Lecturer:** Daniela Ettl

**Learning outcome:** The students will be able to understand essential thematic complexes and their relevance to their responsibilities in people management in their future work as engineering managers. They will understand the importance of in-house and outside communication and the interactions between these two modes.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Organizational communication and culture  
English terminology for human resources and team management  
Practical training

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Work-term report

**Language of instruction:** English

## Sustainable Production Engineering

Course code:	140682305
Course type:	Compulsory
Course cycle:	Second
Semester:	3rd
ECTS Credits:	1
Lecturer:	Guest lecturer

**Learning outcomes:** In this module, the students apply their existing knowledge of science, environmental and energy engineering as well as in project planning and implementation to a case study of a production process, with the goal of achieving an economically feasible optimization of the process towards zero emissions. The cases analyzed will be taken from both mechanical and batch processes.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Project management  
Peer review of the project phases  
Documentation and presentation of the projects

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project work and evaluation

**Language of instruction:** English

# Production Technology and Organization, Bachelor Course(s)

## Professional English 1

Course Code: 130681311

Course type: Compulsory

Course cycle: First

Semester: 3rd

ECTS Credits: 1,5

Lecturer: Angela Schöpfer

Learning outcome: Increased fluency in everyday and business English.

Mode of delivery: Face-to-face

Prerequisites and co-requisites: None

Course content: Harmonization and consolidation of existing levels, articulating opinions, talking about the workplace, enhancing fundamental technical vocabulary.

Recommended or required reading and other learning resources / tools: None

Planned learning activities and teaching methods: Seminar

Assessment methods and criteria: Written tests.

Language of instruction: English

## Professional English 2

**Course Code:** 130681416

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 4th

**ECTS Credits:** 1,5

**Lecturer:** Angela Schöpfer

**Learning outcome:** Increased fluency in workplace-related topics, improvement of writing skills.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students work on expanding their English for the workplace, especially in the area of automation. After a review of key tenses and writing basics, students will get practice writing a report.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Written tests.

**Language of instruction:** English

## Professional English 3

**Course Code:** 130681515

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 1,5

**Lecturer:** Angela Schöpfer

**Learning outcome:** Increased fluency in workplace-related topics, improvement of writing skills.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students continue to get practice speaking and writing in English. Among topics focused on are decision-making across cultures and emailing.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Written tests.

**Language of instruction:** English



## Professional English 4

**Course Code:** 130681606

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 6th

**ECTS Credits:** 1,5

**Lecturer:** Angela Schöpfer

**Learning outcome:** Improved competency in career development.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students work on preparing their abstract for the bachelor thesis and strengthening their English on management topics such as interviewing and C.V. writing.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** C.V., written tests.

**Language of instruction:** English

## SUSTAINABLE FOOD MANAGEMENT

The Bachelor Programme "Sustainable Food Management" offers 25 ECTS of the 5th Semester (October to February) in English.

Each of the following modules has a work load of 5 ECTS (125 working hours). Regular modules consist of two courses with two semester hours (30 units of 45 min each) each of classroom attendance. The elective module consists of one course with three semester hours of class room attendance (45 units of 45 min each).

Teaching method is typically a combination of basic lectures, case studies, guest lectures from industry and excursions to selected companies.

Grading is done with a combination of work assignments and a final exam covering all courses of the module with a focus on integration of the different topics. Contribution of different elements to the final grade is announced at the start of the module by the module coordinator.

## Module 1: Product Life Cycle and International Food Quality

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5<sup>th</sup>

**ECTS Credits:** 5

**Lecturer:** Monika Grasser

**Learning Outcomes:** Upon completion of the module students will be able to assess food production from an economic, ecological and social perspective. They will know international regulation in the field of food production and putting food into circulation.

**Mode of delivery:** ^ Face-to-face

**Prerequisites and co-requisites:** None

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Work Assignments in Courses Final Module Exam

**Language of instruction:** English

**Literature:** Steger, U.: Handbuch des Umweltmanagements, Oldenburg-Verlag

Porter, M.E.: Wettbewerbsstrategie - Methoden zur Analyse von Branchen und Konkurrenten, Campus-Verlag

Brunner K.M.; Schönberger, G.U.: Nachhaltigkeit und Ernährung, Produktion-Handel-Konsum

## Sustainability and Product Life Cycle Management

**Course code:** 160763501

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5<sup>th</sup>

**ECTS Credits:** 2,5

**Lecturer:** Simon Berner, Monika Grasser, Johannes Haas

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Emissions and waste in food production, Handling of renewable and non-renewable resources; Strategies and options for the avoidance and use of residual- and by-products; Strategies and options for the reduction of energy and water use in food production, Sustainability standards: life cycle assesment, material flow analyses, product carbon footprint, cost optimization and others

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## International Trends in Food Quality (160763502)

**Course code:** 160763502

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2,5

**Lecturer:** Christian Kummer

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course Description:** International food standards, Food additives, Food approval, Food safety

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Module 2: Production Planning in Food Processing (5 ECTS)

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5<sup>th</sup>

**ECTS Credits:** 5

**Lecturer:** Simon Berner

**Learning outcomes:** Students will acquire general grounding in PPS, different guiding principles, their advantages and disadvantages, as well as conception and introduction strategies. Students are able to design simple processing systems with the required technical elements.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Recommended or required reading and other learning resources / tools:** Wieneke, F.: Produktionsmanagement; Schuh, G.: Produktionsplanung und -steuerung; course materials

Food Plant Engineering Systems, Theunis Christoffel Robberts;

Food Plant Design, Antonio Lopez-Gomez

**Planned learning activities and teaching methods:** Module Grading

**Assessment methods and criteria:** Work Assignments in Courses + Final Module Exam

**Language of instruction:** English

## Introduction to Plant Engineering

<b>Course code:</b>	160763508
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	First
<b>Semester:</b>	5 <sup>th</sup>
<b>ECTS Credits:</b>	2,5
<b>Mode of delivery:</b>	Face-to-face
<b>Prerequisites and co-requisites:</b>	None

**Course content:** Design and selection of procedural plants, Plant design: functional specification document, documentation, execution, project design; Plant construction: Plant components, apparatuses, plant parts, media, equipment, safety and environmental technology; Dimensioning of conveyer and material transport apparatuses in process engineering

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Production Planning in Food Processing

**Course code:** 160763507

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5<sup>th</sup>

**ECTS Credits:** 2,5

**Lecturer:** Simon Berner, Kurt Felfernig, Ernst Peßl

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Introduction and overview, Goals, tasks and functions of PPS, Setup of ERP- and PPS-systems, operating characteristics procedures, Disposition, demand calculation, sequencing; JIT and KANBAN, Simulation of production processes, Conception of a PPS-project, Implementation of a PPS-system, Optimization of an organization process with a graphic process-modeling system

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English



## Module 3: Supply Chain Management

Course type:	Compulsory
Course cycle:	First
Semester:	5th
ECTS Credits:	5
Lecturer:	Not yet nominated for 2018/2019

**Learning Outcomes:** Students should acquire a fundamental understanding of wholistic logistical frameworks and processes in the entire supply chain. They should learn the fundamentals of SCM and PPS, how to deal with the respective codes and different optimization processes. Upon completion of the course students should be skilled in the fundamental fields of production scheduling and SCM in individual production companies, as well as be able to execute project work beyond supply chain management. Furthermore, students should master packaging engineering, know the connections between packaging materials and methods of prolonging shelf life from conventional sterilization through autoclaving to antiseptic packaging.

**Recommended or required reading other learning resources / tools:** Fandel, G.: Supply Chain Management; Arnold, D.: Handbuch Logistik

Bleisch at al.: Lexikon Verpackungstechnik. Hüthig Verlag;

Holdsworth, S.D.: Aseptik Processing and Packaging of Food Products

**Assessment methods and criteria:** Work Assignments in Courses + Final Module Exam

**Language of instruction:** English

## Supply Chain Management

**Course code:** 160763504

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2,5

**Course content:** Historical development of SCM; Terminology and subject matter of SCM; Competitive factor of SCM; Trends in SCM; Goals and procedures SCM; Methods of analysis SCM; Inventory indices in SCM; Batch sizes from the perspective of SCM; Goals, tasks and functions of PPS; Design of ERP- and PPS-Systems; Disposition, demand calculation; JIT and KANBAN

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Conservation, Packing and Storage of Food

**Course code:** 160763505

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2,5

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** General fundamentals of packaging practice; Hygienic design of packages and packaging processes; Packaging processes (Vacuum-, modified and aseptic packaging, autoclaving of foods); Degermination models and validation procedures, relevance of D- and z-scores; Packaging machines for foods and their hygiene categorization; maintenance of sterility, commercial sterility

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Module 4: Food Sales and Marketing

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5<sup>th</sup>

**ECTS Credits:** 5

**Lecturer:** Emil Tsenov

**Learning Outcomes:** Based on fundamentals of marketing, students learn to develop a solid marketing concept. They not only reflect on the special features of food marketing but also learn about branding. This module will be rounded off by developing different professional communication pathways with special focus on crossmedia and social media marketing.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Recommended or required reading and other learning resources / tools:**

Kotler/Keller, Marketing Management 14, Pearson Education, Harlow 2012

**Assessment methods and criteria:** Work Assignments in Courses + Final Module Exam

**Language of instruction:** English

## Marketing Principles and Strategies

**Course code:** 160763511

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2,5

**Lecturer:** Emil Tsenov

**Course content:** In the first part we will cover fundamentals of marketing according to Kotler and draw the connection to food marketing. After students learn the fundamentals of market research, consumer behavior, segmentation and the 4 Ps, the second part of the course will cover different external and internal analytical instruments. Different strategic approaches and supervised assignments will complete the course.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Branding and Creative Corporate Communication

**Course code:** 160763510  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 2,5  
**Lecturer:** Alessio Cavicchi, Emil Tsenov  
**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The subject of this course will be the importance of the "brand", its vision and mission statement. Different tools for the description of brand identity and positioning will be introduced. Based on this we will cover the most important criteria for a cross-media campaign.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Module 5: Elective Module

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5<sup>th</sup>

**ECTS Credits:** 5

**Learning Outcomes:** Through elective modules three possible paths of competency development are offered: Specialization in direction of the chosen focus or in a field not covered in detail in the regular curriculum; free choice of a course module from other degree programmes within and outside of the university. This way the overall personal competence profile is sharpened according to the planned field of occupation.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Recommended or required reading and other learning resources / tools:** Case studies in the elective modules are designed after recent topics emerging from research or public awareness recommended reading changes accordingly.

**Assessment methods and criteria:** Work Assignments + Final Exam

**Language of instruction:** English

## Energy and Materials Production

**Course code:** 160763516

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 5

**Lecturer:** Herbert Böchzelt, Johannes Haas

**Course content:** Basic Physics and Biology of Energy Issues; Energy as a central element of the food chain; Principals of Cleaner Production; Agricultural Production of Energy Sources and Materials; Selected Excursions

**Recommended or required reading and other learning resources /tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English



## Special Topics in Nutrition and Health (160763517)

**Course type:** 160763517  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 5  
**Lecturer:** Daniela Grach, James Miller  
**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Fundamentals of dietetics: food intolerance, allergies, celiac disease...); Diets of specific groups (pregnant women, children, the elderly); Special diets (vegetarians, vegans...); Performance-enhancing substances; Non-staple and luxury foods in nutrition; Nutrition physiology; Ecological aspects: Nutrition and environment protection (organic farming, use of resources, food production and -transport...); Socio-ethical aspects of a sustainable diet: Fair Trade, world food supply: safeguarding the food supply with regard to a growing global population (plant vs. animal food, distribution of resources, refinement losses, responsibility and possibilities of industrialized countries...); Economic aspects: food prices, discarding of intact food...

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Global Food Systems Analysis (160763518)

**Course code:** 160763518  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 5  
**Lecturer:** Uli Seebacher  
**Mode of delivery:** Face-to-face

**Prerequisites or co-requisites:** None

**Course content:** This class will provide students with an overview of the world's food system and its impacts from the individual to the global scale. Further the class deals with complex implications of choices that are made along the food supply chain. Students should critically think about how the global food system may need to change in order to adapt to future economic and environmental conditions.

<https://www.coursera.org/course/globalfoodsystems>

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated course

**Language of instruction:** English

## Health Studies

### Biomedical Science, Bachelor Course(s)

#### Communicating in the Professional World of Biomedical Scientists

<b>Course code:</b>	170467112
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	First
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	1 ECTS
<b>Lecturer:</b>	Marion Trattner

**Learning outcome:** Upon completion of this course, students can outline briefly what biomedical science deals with; demonstrate intercultural awareness: apply efficient communication and conversation techniques; assess the importance of the English language when communicating biomedical science.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** B2 CEFR

**Course content:** world Englishes, the role of English as a global language; plurilingual competence and mobility; language tests; brainbased language learning; mindsets; communication strategies in a foreign language; communicative and intercultural competence; speech acts; careers in health care.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** blended learning, collaborative learning, peer learning

**Assessment methods and criteria:** online test 20%; independent study and activities 40%; presentation 40%

**Language of instruction:** English

**Literature:** Mercer, S. (2014). Social network analysis and complex dynamic systems. In: Dörnyei, Z., MacIntyre, P. & Henry, A. (Eds.) *Motivational Dynamics in Language Learning* (pp. 73-82). Bristol: Multilingual Matters.

Mercer, S., Ryan, S. & Williams, M. (Eds.) (2012). *Psychology for Language Learning: Insights from Research, Theory & Practice*. Basingstoke: Palgrave MacMillan.

Mercer, S. (2013). A complexity-informed pedagogy. *RBLA (Revista Brasileira de Linguística Aplicada)* 13 (2): 375 – 398.

Gardner, H 3 2011, *Frames of Mind: The Theory of Multiple Intelligences*, Basic Books, N.Y.

## Social Skills 3: Presentations

Course code:	170467308
Course type:	Compulsory
Course cycle:	First
Semester:	3rd
ECTS Credits:	1 ECTS
Lecturer:	Marion Trattner

**Learning outcome:** Upon completion of this course, learners will demonstrate the ability to organize a well-structured presentation; be comfortable to speak freely yet with confidence; make good use of presentation language and skills; know how to capture and maintain your audience's attention; be able to make a strong closing; take into consideration feedback; be creative and experiment; have developed an appropriate personal style

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** presentation techniques; introductions and grabbing your audience's attention; structuring the main body; concluding effectively and leaving a lasting impression; handling the question section masterfully; non-verbal communication; body language; visual aids and techniques of visual presentation

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** collaborative learning, peer learning

**Assessment methods and criteria:** continuous assessment

**Language of instruction:** English

**Literature:** Duarte, N 2012, *HBR Guide to Persuasive Presentations: Inspire Action, Engage the Audience, Sell your Ideas*, Harvard Business School Publishing Corporation.  
Heath, C & Heath D 2007, *Made to Stick. Why Some Ideas Survive and Others Die*, Random House, New York.  
<http://www.presentation-pointers.com/showarticle/articleid/248/> A.U.D.I.E.N.C.E. analysis, it's your key to success, by Lenny Laskowski  
<http://www.youtube.com/watch?v=0mZhxpY3LXg> Bold presentation skills: Match your body language to your message

Williams, R 2010, *The Non-Designer's Presentation*  
*Book: Principles for Effective Presentation Design*, Peachpit Press, Berkeley.

## Scientific English

<b>Course code:</b>	170467503
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	First
<b>Semester:</b>	5th
<b>ECTS Credits:</b>	2 ECTS
<b>Lecturer:</b>	Marion Trattner

**Learning outcome:** Upon completion of this course, learners can use reading strategies to cope with research written in English; summarize essential information from biomedical literature; compile and present a poster for their bachelor project

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** reading techniques; note taking; paraphrasing; avoiding plagiarism; correct word choice; overcoming writing difficulties; compiling and presenting a poster in English of own research project

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** blended learning, collaborative learning, peer learning

**Assessment methods and criteria:** independent study and activities 40%  
poster presentation 30%  
poster 30%

**Language of instruction:** English

**Literature:** Busch-Lauer, I-A 2007 'Abstracts in der Wissenschaftskommunikation – Definition und Klassifikation' in *Reden und Schreiben in der Wissenschaft*, eds P Auer & H Baßler, Campus Verlag, Frankfurt/New York, pp.99-114.

Greenhalgh, T 2006, *How to Read a Paper: the Basics of Evidence-based Medicine*, Blackwell Publishing, BMJ Books.

Glasman-Deal, H 2011, *Science Research Writing for Non-Native Speakers of English*, Imperial College Press, London.

Mautner, G 2011, *Wissenschaftliches Englisch*, UVK, Konstanz.

Matthews, JR, Bowen, JM & Matthews, RW 1996, *Successful Scientific Writing: A Step-by-Step Guide for the Biological and Medical Sciences*, CUP, Cambridge.

Woods, G 2002, *Research Papers for Dummies: A Fun and Easy Way to Go from Blank Page to Final Draft*, Wiley Publishing, Inc.  
Zeiger, M <sup>2</sup>2000, *Essentials of Writing Biomedical Research Papers*, McGraw-Hill.

Preparing and Presenting Effective Research Posters at

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1955747/>



## Health Care and Nursing, Bachelor Course(s)

### English 2

**Course code:** 160801308

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 1

**Lecturer:** Marion Trattner

**Learning outcome:** Comprehending and being able to present the professional profile of an SLT. Knowing about body parts, specifically the oral/facial ones, and basic anatomical terminology comprehending and presenting speech and sound production. Learning about paragraph writing basics and presentation basics in English

**Mode of delivery:** Feca-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students become familiar with basic vocabulary in the professional field of Speech and Language Therapy, basics of communication between SLT and patient, body parts and basic anatomical vocabulary, writing a paragraph, and giving presentations

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Group and partner work, discussion, presentation

**Assessment methods and criteria:** 50% participation in class, writing a paragraph 25%, presenting a topic relevant to SLTs 25%

**Language od instruction:** English

**Literature:** IALP: International Association of Logopedics and Phoneiatrics:  
<http://ialp.info/>

ASHA: American Speech and Hearing Association: <http://www.asha.org/>

NetQues: Network for Tuning Standards and Quality of Education Programmes in Speech and Language Therapy across Europe: <http://www.netques.eu/>

cplol: The Standing Liaison Committee for Speech and Language Therapists:  
<http://www.cplol.eu/>

## Midwifery, Bachelor course(s)

### English 2 for midwives

Course code:	110465313
Course type:	Compulsory
Course cycle:	First
Semester:	3rd
ECTS Credits:	1 ECTS
Lecturer:	Marion Trattner

**Learning outcome:** Upon completion of this course, learners have acquired L2 communicative competence to admit the pregnant woman; understand the woman describing the course of the pregnancy and the delivery; outline the different stages of labour; respond to the various needs of the woman in labour; give advice on how breathing and relaxation activities are carried out; encourage the woman to adopt different positions during labour; name the instruments and equipment used during delivery; provide information on measures of hygiene the woman must take after delivery; give breastfeeding advice; understand and discuss texts from EBM

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** English 1

**Course content:** communication with the pregnant woman in English: phraseology and grammatical structures; admission to the hospital; labour; instruments and equipment; breathing and relaxation exercises; postnatal hygiene; breastfeeding

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** blended learning, collaborative learning, peer learning

**Assessment methods and criteria:** participation in class 10%  
independent study and elearning 55%  
oral test 35%

**Language of instruction:** English

**Literature:** RCM Manual for producing midwifery practice guidelines  
<https://www.rcm.org.uk/sites/default/files/Guideline%20development%20manual%202012.pdf>

WHO on breastfeeding <http://www.who.int/topics/breastfeeding/en/>

Marshall H K et al. 2002, *The Doula Book: How a Trained Labour Companion Can Help You Have a Shorter, Easier, and Healthier Birth*, Da Capo Press.

Simkin P 3 2008, *The Birth Partner: A complete Guide to Childbirth for Dads, Doulas, AndAall Other Labor Companions*, Harvard Common Press, Boston.

## English 4 for midwives

**Course code:** 110465506  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 1 ECTS  
**Lecturer:** Marion Trattner

**Learning outcome:** Upon completion of this course, learners have English language competence to search for evidence based findings in national and international sources; formulate relevant research hypotheses from their topic area; discuss and evaluate the results of their search; draw relevant professional conclusions; write an abstract for their own bachelor project

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** English 1-3

**Course content:** scientific texts in EBM; abstracts

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** blended learning, collaborative learning, peer learning

**Assessment methods and criteria:** abstract 50%  
independent study and activities 50%

**Language of instruction:** English

**Literature:** Busch-Lauer, I-A 2007, 'Abstracts in der Wissenschaftskommunikation – Definition und Klassifikation' in *Reden und Schreiben in der Wissenschaft*, eds P Auer & H Baßler, Campus Verlag, Frankfurt/New York, pp.99-114.  
Elliott, R 2006, *Painless Grammar*, Barron's, N.Y.  
Gimenez, J 2007, *Writing for Nursing and Midwifery Students*, Palgrave Macmillan.  
Glasman-Deal, H 2011, *Science Research Writing for Non-Native Speakers of English*, Imperial College Press, London.  
Lanoe, N ed. 2002, *Reading Research: How to Make Research More Approachable*, Baillière Tindall, Elsevier Ltd.  
Skern, T 2009, *Writing Scientific English: a Workbook*, Facultas, Wien.

## Logopedic, Bachelor course(s)

### English 1

**Course code:** 110464117

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1<sup>st</sup>

**ECTS Credits:** 1

**Lecturer:** Sabine Eichler

**Learning outcome:** Comprehending and being able to present the professional profile of an SLT. Knowing about body parts, specifically the oral/facial ones, and basic anatomical terminology comprehending and presenting speech and sound production. Learning about paragraph writing basics and presentation basics in English.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students become familiar with basic vocabulary in the professional field of Speech and Language Therapy, basics of communication between SLT and patient, body parts and basic anatomical vocabulary, writing a paragraph, and giving presentations.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Group- and partner work, discussion, presentation

**Assessment methods and criteria:** 50% participation in class, writing a paragraph 25%, presenting a topic relevant to SLTs 25%

**Language of instruction:** English

**Literature:** IALP: International Association of Logopedics and Phoniatrics:  
<http://ialp.info/>

ASHA: American Speech and Hearing Association: <http://www.asha.org/>

NetQues: Network for Tuning Standards and Quality of Education Programmes in Speech and Language Therapy across Europe: <http://www.netques.eu/>

cplol: The Standing Liaison Committee for Speech and Language Therapists:  
<http://www.cplol.eu/>

## Academic English for SLTs 1

**Course code:** 110464318  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 3rd  
**ECTS Credits:** 1  
**Lecturer:** Sabine Eichler

**Learning outcome:** This semester focuses mainly on the fact that students have to write their bachelor thesis, and therefore need to be able to comprehend scientific texts and summarize them and also as a first step towards writing their English abstracts. Additionally, students can describe and present specific screening procedures and assessments that are applied when working with children as SLTs.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students read and discuss scientific literature.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Discussion, presentation, group and pair work

**Assessment methods and criteria:** 50% participation in class. Students write a short abstract about a specific topic 25%. Students present a screening or assessment procedure that is applied when working with children as an SLT 25%

**Language of instruction:** English

**Literature:** hearing/stuttering  
[http://kidshealth.org/parent/growth/communication/not\\_talk.html#tongue\\_thrust/autism](http://kidshealth.org/parent/growth/communication/not_talk.html#tongue_thrust/autism)  
<http://www.speechlanguagepathologyservices.com/faqs.html>  
 rticulation disorders/stages of language development  
<http://samhi.mimh.edu/.%5Ccache%5Cdevelopmentaldisabilites%5CWhat%20are%20speech%20and%20language%20disorders.htm>  
 autism/social pragmatic language disorder  
<http://www.childrens-speech.com/faqs.cfm#SpeechLanguagePathologist>

## Physiotherapy, Bachelor Course(s)

### English 1

**Course code:** 110463116

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 1

**Lecturer:** Sabine Eichler

**Learning outcome:** Acquire physiotherapeutically relevant vocabulary; be able to conduct an active RoM assessment in English; be able to write a summary paragraph in English.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Students learn based on texts and videos the basic vocabulary relevant to the physiotherapeutic field

The learn vocabulary to be able to conduct active RoM assessments: welcoming, small talk, body parts, verbs for describing movements, basic anatomical terms, jargon terms for describing movements

They learn about how to differentiate between jargon and patient language

They learn about the basics for writing paragraphs

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Pair- and group work, discussions, role play

**Assessment methods and criteria:** Writing a summary paragraph about a text or video that has been presented; conducting an active RoM assessment in English

50% participation in class

25% written exam

25% oral exam

**Language of instruction:** English

**Literature:** ENPHE (European Network of Physiotherapy Education): <http://enphe.org/>

WCPT (World Confederation of Physical Therapy): <http://www.wcpt.org/>

Medical humanities: <http://mh.bmj.com/>

Physiotherapy UK: <http://www.csp.org.uk/>

Physiotherapy US: <http://www.apta.org/>

## English 3

**Course code:** 110463503

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 1

**Lecturer:** Sabine Eichler

**Learning outcome:** Be able to write an abstract in English about the bachelor thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Cours content:** Reading and understanding scientific texts and writing abstracts in English

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Pair- and group work, discussion, presentation, reading and writing

**Assessment methods and criteria:** Participation in class 50%, English abstract 50%

**Language of instruction:** English

**Literature:** Bailey, Stephen (2006). Academic writing: A handbook for international students, 2nd ed. London: Routledge.

Dawn, Marie Walker (2014). An Introduction to Health Service Research. London: Sage  
Glendinning, Eric, and Beverly Holmstrom (2005). English in Medicine. 3rd revised ed. Cambridge: CUP.

Glendinning, Eric, and Ron Howard (2007). Professional English in Use: Medicine. Cambridge: CUP.

Hamp-Lyons, Liz, and Ben Heasley (2006). Study writing: A course in writing skills for academic purposes, 2nd ed. Cambridge: Cambridge University Press.

Hrdina, Christian und Robert (2009). Scientific English für Mediziner und Naturwissenschaftler: Formulierungshilfen für wissenschaftliche Arbeiten, Publikationen und Vorträge. 2. Auflage. Berlin und München: Langenscheidt

Jones, Leo (1992). Communicative Grammar Practice. Cambridge: CUP.

McCarthy, Michael, and Felicity O'Dell (2008). Academic vocabulary in use. Cambridge: CUP.

Melnyk, B.M. & Fineout-Overholt, E. (2010). Evidence-based practice in nursing & healthcare: A guide to best practice (2nd edition). Philadelphia, PA: Wolters

Schiller, Sandra (2007). Fachenglisch für Gesundheitsberufe. Physiotherapie, Ergotherapie, Logopädie. Berlin: Springer.



## Clinical Problem Solving 1

**Course code:** 110463504  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 0.5  
**Lecturer:** Sabine Eichler

**Learning outcome:** Students get to know clinical guidelines, how they are applied in clinical practice and students can apply these guidelines when answering specific questions.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Cours Description:** In the first unit students are presented with practically relevant input about clinical guidelines and how they are applied in clinical practice to treat chronic pain patients.

The next units then focus on explaining the theoretical framework and are the basis for students to be able to answer specific questions.

The answers to these questions are then presented by the students to a physiotherapist and discussed.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Presentation, group work, practical exercises

**Assessment methods and criteria:** Attendance 50%, group presentation 50%

**Language of instruction:** English

**Literature:** Hannu Luomajoki, Jan Kool, Eling D de Bruin, and Olavi Airaksinen; Reliability of movement control tests in the lumbar spine; BMC Musculoskeletal Disorders 2007, 8:90  
 Olson K. Manual Physical Therapy of the Spine, St. Louis Missouri, 2009, Saunders Elsevier.  
 O'Sullivan PB, Masterclass: Lumbar segmental 'instability': clinical presentation and specific stabilizing exercise management. Manual Therapy 2000, 2;51:2-12.  
 Sahrman SA: Diagnosis and treatment of movement impairment syndromes. 1st edition. St.Louis: Mosby; 2002.

Hicks GE, Fritz JM, Delitto A, McGill SM: Preliminary Development of a Clinical Prediction Rule for Determining Which Patients With Low Back Pain Will Respond to a Stabilization Exercise Program. Arch Phys Med Rehabil Vol 86, September 2005

Demoulin C, Vanderthommen M, Duysens C, Crielaard J: Spinal muscle evaluation using the Sorensen test: a critical appraisal of the literature. Joint Bone Spine 73 (2006) 43-50

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## Radiography, Bachelor course(s)

### Introduction to medical English for radiographers

**Course code:** 180466105

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 1,5 ECTS

**Lecturer:** Marion Trattner

**Learning outcome:** Upon completion of this course you should be able to describe the job of the Austrian radiographer and compare international training programmes; use the topic related special terminology when communicating with the patient (history taking, scheduling appointments, giving directions,); pronounce the special vocabulary efficiently; use some strategies to build medical words

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** CEFR B2

**Course content:** The job of the radiographer in the international context; general medical terminology: basic anatomy and physiology, diseases, symptoms, signs, in the hospital; communicative situations: greetings and introductions, hesitating, opinion, requesting, moods, body language, calming, reassuring, history taking

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** role play, blended learning, collaborative learning, peer learning

**Assessment methods and criteria:** independent study and activities 50%  
oral test 30%  
online test 20%

**Language of instruction:** English

**Literature:**

Gerdes, S. (2015). English for Medical Assistants, Inkl. Download (2. Auflage.). Stuttgart: Holland + Josenhans.

<https://www.radiologyinfo.org/en/info.cfm?pg=article-read-radiology-report>

Hyland, K 2006, *English for Academic Purposes – an Advanced Resource Book*, Routledge, London and NY.

## English in health management

**Course code:** 180466313  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 3rd  
**ECTS Credits:** 1,5 ECTS  
**Lecturer:** Marion Trattner

**Learning outcome:** Upon completion of this course , learners know the technical vocabulary necessary to describe the national health care system and its stakeholders; compare international health care; outline health economic systems; describe the role of diagnostic and therapeutic radiology in health care

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** National health care and its stakeholders in comparison with international health care; Insurance coverage; The role of radiology in health care: resources, services, costs

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** e-learning, peer teaching, independent learning

**Assessment methods and criteria:** presentation 40%  
written summary 30%  
elearning 30%

**Language of instruction:** English

### Literature:

Santos, C., Santos, V., Tavares, A., & Varajão, J. (2014). Project Management Success in Health – The Need of Additional Research in Public Health Projects. *Procedia Technology*, 16 (Supplement C), 1080–1085. <https://doi.org/10.1016/j.protcy.2014.10.122>

Journal of Health Economics. (o. J.). Abgerufen von <https://www.journals.elsevier.com/journal-of-health-economics>

Holmerová, I., Hort, J., Rusina, R., Wimo, A., & Šteffl, M. (2017). Costs of dementia in the Czech Republic. *The European Journal of Health Economics*, 18(8), 979–986. <https://doi.org/10.1007/s10198-016-0842-x>

<https://healthmanagement.org/c/healthmanagement/issuearticle/health-economic-systems-how-do-they-influence-radiology>

The European radiation protection directive

<https://ec.europa.eu/energy/sites/ener/files/documents/CELEX-32013L0059-EN-TXT.pdf>

## English in health education

**Course code:** 180466508  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 1,5 ECTS  
**Lecturer:** Marion Trattner

**Learning outcome:** Upon completion of this course , learners know the technical vocabulary necessary to promote an understanding of how to maintain personal health; enhance patient health literacy; explain advantages and risks of radiological procedures; enable shared decision making in diagnosis and treatment

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Health education and disease prevention; patient empowerment; health literacy; patient information sheets and consent forms for radiological procedures (FAQ, summarizing, register and code switching, alternatives, advantages and risks))

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Independent learning, e-learning, peer learning

**Assessment methods and criteria:**elearning 35 %

videopodcast: health education, informed consent 65%

**Language of instruction:** English

**Literature:**

Geschlechtervergleich: Ergebnisse des WHO-Jugendgesundheits surveys „Health Behaviour in School-aged Children“ (1. Aufl.). Weinheim: Beltz Juventa <http://www.euro.who.int/en/health-topics/Life-stages/child-and-adolescent-health/health-behaviour-in-school-aged-children-hbsc/about-hbsc>

health education videos: <http://www.communityclinicalservices.com/health-education-videos-english/>

radiological informed consent form: a view from the patient's corner

<http://ricomet2016.sckcen.be/-/media/Files/Ricomet2016/Day1/S52Carpeggiani.pdf?la=en&hash=D73C55A60D7F68E80BAB3354BC33BBAE712ACDF5>

Informed consent in diagnostic radiology practice: Where do we stand?

[Akshay D Baheti](#), [Meenakshi H Thakur](#), and [Bhavin Jankharia](#)

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5761182/>

## Management

### International Management, Bachelor Course(s)

#### International Business and Entrepreneurial Perspectives

Course code: 170371101  
Course type: Compulsory  
Course cycle: First  
Semester: 1st  
ECTS Credits: 3 ECTS  
Lecturer: Dr. Brigit Burböck

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** This introductory course focuses on the opportunities and risks of the complex environment of international business with an emphasis on the unique challenges involved in managing international operations. Main topics include foreign economic, political, legal and cultural environments, international trade, organizational structure as well as international marketing. Explanations for the emergence and growth of international entrepreneurial companies are provided based on theories of international business.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

*Academic Journals:*

*Academy of Management Review*

*The Journal of Business Strategy*

*Organisational Studies*



## Principles of B2B Marketing

**Course code:** 170371104  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 1st  
**ECTS Credits:** 2 ECTS  
**Lecturer:** Mag. Denny Seiger

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** This course deals with the special challenges marketers in the area of industrial and B2B marketing are confronted with. Next to the acquisition of general knowledge, the unique aspects of industrial acquisition processes will be highlighted. Additionally, demand analyses, segmentation techniques as well as the key account concept and selling methods such as SPIN Selling will be addressed.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Kotler/Keller, Marketing Management, 13. Auflage (2009) or later;

Brennan/Canning/McDowell, Business-to-Business Marketing, 2nd edition (2010), or later

Michael Hutt, Thomas W. Speh, Business Marketing Management, 8th edition (2004), or later;

Bill Donaldson; Sales Management, Third Edition (2007), or later.

*Academic Journals: European Journal of Marketing; Industrial Marketing Management*

*Academy of Management Review*

*The Journal of Business Strategy*

*Organisational Studies*

## European Union Law

**Course code:** 170371106  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 1st  
**ECTS Credits:** 2ECTS  
**Lecturer:** FH-Prof. Mag. Dr. Doris Kiendl

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Sources of European Union law (primary law, secondary law, case law), EU institutions, history of the European integration process, EU fundamental freedoms, introduction to European competition law.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Davies, K. (2016), Understanding European Union Law (Routledge London).

Common Market Law Review.

## Critical Thinking and Scientific Writing

**Course code:** 170371110  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 1st  
**ECTS Credits:** 2 ECTS  
**Lecturer:** Mag. Mag. Edith Podhovnik, PhD

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** In this course, students apply critical thinking and scientific writing skills in English. The students learn how to do scientific research and how to write clearly, logically, and coherently. The aim of the course is to prepare the students for written scientific work they will have to do throughout your studies and for research activities in their future careers.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Books: Kirton, B. (2012). brilliant Academic Writing. Harlow: Pearson.

Malhotra, N. K. (2014). Basic marketing research (4th ed.). Harlow: Pearson Education Ltd

Journals: The Economist, The Guardian, The New York Times.

## Entrepreneurial and Cross Cultural Competences

**Course code:** 170371302

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:**

**Learning outcome:** The course covers comparisons of a.) different emerging behavioral theories in entrepreneurship research and b.) cultural theories of Kluckhohn & Strodtbeck, Schein, Thomas, Hofstede und Trompenaars.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** In this course students identify and exercise entrepreneurial and cross-cultural skills and behaviours that lead to firm performance and growth. After completion of the course students will have a better understanding of their personal entrepreneurial (and intrapreneurial) as well as cross-cultural capacity and understand learning paths on how to develop or improve essential competences.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Dumetz/Saginova/Woolliams/Foster/Belbin/Trompenaars/.../Hampden-Turner: Cross-cultural management textbook: Lessons from the world leading experts in cross-cultural management (2012).

Jahrmann: Außenhandel, in der Reihe Kompakt-Training Praktische Betriebswirtschaft (Hg. Olfert) (2013).

Lussier/Corman/Kimball: Entrepreneurial New Venture Skills (2014).

Academic Journals:

The Journal of Business Strategy

Entrepreneurship Theory and Practice



## Project: International Market Entry

**Course code:** 170371303

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 5 ECTS

**Lecturer:**

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Students collaborate closely with a real-life company. Students provide a company with decision guidance on a pre-specified company need (e.g. international market selection or international market entry mode choice) based on profound market research. The class enables students to act as consultants to a company and to manage a project throughout the whole project lifecycle, i.e. from project design to project presentation in front of the client. This course is based on a combination of instructor-led lectures, excursions with guest lectures, individual and group work and group discussions.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Albaum/Duerr: International Marketing and Export Management (2016).

Journals:

International Business Review

Journal of Business Research

Journal of International Business Studies

## Presentation Skills

**Course code:** 170371307

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:**

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** The students learn to apply effective presentation techniques to present complex topics and use clear and understandable linguistic tools to visualise contexts and situations.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Nikitina, A. (2011) Successful Public Speaking. Bookboon.com; Tufte, E. R. (2006) Beautiful Evidence. Big Book; Williams, E. (2008) Presentations in English. Macmillan.

## Business in Emerging Markets, Bachelors Course(s)

### International Finance (Focus Emerging Markets)

<b>Course code:</b>	110372301
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	3rd
<b>ECTS Credits:</b>	5 ECTS
<b>Lecturer:</b>	MMMMag. DDr. Wolfgang Granigg

**Learning outcome:** Upon successful completion of part 2 of the course students will have become familiar with financial valuation methods for project and M&A valuation; understand issues that are specific to financial valuations in emerging markets (choice of project currency, country risk and its influence on quantitative valuation methods); have gained hands on experience how to value emerging market companies (through case studies)

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Part 1: Export Finance

Part2: Financial aspects of M&A in emerging markets

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Kennedy: project valuation in emerging markets, Harvard Business School Case 9-702-077

Barber et al.: Telkom South Africa (case study), Duke University, Fuqua School of Business



## Leadership and HR in Emerging Markets

**Course code:** 110372305

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 5 ECTS

**Lecturer:** Richard Mc Andrew, Bacc.

**Learning outcome:** After completion of this module, the student has acquired detailed knowledge on the characteristics of Emerging Markets. The student is able to apply and distinguish market entry strategies and business modules suitable for Emerging Markets.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Leadership and HR Management in Emerging Markets: Power Distance, Expatriates, Personal Development, Empowerment, Remuneration.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Books: H.Jansson: International business strategy in emerging country markets; Elgar 2007;  
H. Merchant (ed.): Competing in emerging markets - cases and reading; Routledge 2008

Journal Article: Dawar, Frost: Competing with Giants, survival strategies for local companies;  
HBR 1999

## Mergers and Acquisitions in Emerging Markets

Course code:	110372303
Course type:	Compulsory
Course cycle:	Second
Semester:	3rd
ECTS Credits:	5 ECTS
Lecturer:	Mag. Martin Gruber, MBA

**Learning outcome:** After completion of this module, the student has acquired detailed knowledge on the characteristics of Emerging Markets. The student is able to apply and distinguish market entry strategies and business modules suitable for Emerging Markets.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:**

1. M&A and FDI
2. M&A Valuation
3. M&A Process

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Books: H.Jansson: International business strategy in emerging country markets; Elgar 2007; H. Merchant (ed.): Competing in emerging markets - cases and reading; Routledge 2008  
Journal Article: Dawar, Frost: Competing with Giants, survival strategies for local companies; HBR 1999

## Compliance in Emerging Markets

**Course code:** 110372304  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 5ECTS  
**Lecturer:** Dr. Hermann Berndt

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** In this course, key factors of public and private enforcement of corporate governance in emerging markets are discussed and analysed. Transparency, shareholder rights and integrity of both private stakeholders and public institutions and reliability of information and efficiency of law enforcement are crucial issues of this course. Upon completion of this module, the student is able to understand the economic and legal framework of business in Emerging Markets.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Kotabe: Global supply chain management, 2006  
Donaldson: Sales management, 2007  
Hutt, M.D. and Speh, T.W.: Business Marketing Management  
Miller, R.B., Heiman, S.E. and Tuleja, T., 1988. Strategic Selling  
Bartlett, C.A. and Ghoshal, S., 1990. Managing Across Borders: The Transnational Solution. , Hutchinson Business Books, London.  
Wilson, Speare: Successful Global Account Management  
Rackham N.: SPIN Selling

## Distribution and Sales Management

**Course code:** 110372302  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 5 ECTS  
**Lecturer:** Mag. Peter Sicher

**Learning outcome:** Upon completion of this module, the student is able to understand the economic and legal framework of business in Emerging Markets.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Selling and Sales Management, Key Account Management, Market Penetration and Acquisition Strategies for Emerging Economies.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Kotabe: Global supply chain management, 2006  
Donaldson: Sales management, 2007  
Hutt, M.D. and Speh, T.W.: Business Marketing Management  
Miller, R.B., Heiman, S.E. and Tuleja, T., 1988. Strategic Selling  
Bartlett, C.A. and Ghoshal, S., 1990. Managing Across Borders: The Transnational Solution. , Hutchinson Business Books, London.  
Wilson, Speare: Successful Global Account Management  
Rackham N.: SPIN Selling

## International Strategic Management

**Course code:** 110372304  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 3rd  
**ECTS Credits:** 5 ECTS  
**Lecturer:** Mag. (FH) Bernadette Frech, PhD

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** The overall objective of this course is to get a deeper insight into companies' strategic responses to complex problems in the internationalization process. Above that specific strategic management competences as well as generic competences shall be strengthened.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:**

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Background Readings:§ Frynas, J.G. and Mellahi, K. (2011). Global Strategic Management, 2nd ed., Oxford University Press§ Kotler, P.; Berger, R. & Bickhoff (2010). The Quintessence of Strategic Management. What you Really Need to Know to Survive in Business, Springer.§ Leitner, Johannes (2013). Doing Business in Opaque Waters. The Black Sea region and its business environment, in Wirtschaft und Management, Bd. 18, p. 7-23During lectures students will receive information related to the emerging market of Georgia and its industries.

## Media & Design

### Industrial Design, Bachelor Course(s)

#### 3D-Modelling

**Course code:** 140373109

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 1 ECTS

**Lecturer:** Thomas Radeke

**Learning outcome:** Basics of Information Technology for designers as well as of 3D and Usability Testing

**Mode of delivery:** Face-to-face

#### Prerequisites and co-requisites:

**Course content:** The students will learn basic concepts and usage of digital 3D technology. Fields of use include visualisations, still images and simulations in the graphical and artistic design process. The course topics are:

- Modelling of simple and medium-complexity objects
- Creating a variety of materials and surfaces
- Scene layout, management, optimisation and lighting
- Simulation of realistic lighting situations
- Still image rendering (animations are scheduled for the 2nd semester)

#### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Final project

**Language of instruction:** English

**Literature:** Books: Isaac Victor Kerlow, The Art of 3-D Computer Animation and Imaging, John Wiley & Sons 2003; Steve Krug (2009): Rocket Surgery Made Easy: The Do-it-yourself Guide to Finding and Fixing Usability Problems.

Steve Krug (2014): Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability.

Journals, Websites:

User Experience Professionals Association:

<https://uxpa.org/>

German Usability Professionals Association: <http://www.germanupa.de/>

## Usability Testing

<b>Course code:</b>	140373108
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	First
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	2 ECTS
<b>Lecturer:</b>	Konrad Baumann

**Learning outcome:** : The students should have developed an understanding for the importance and the methods of usability testing. They should be able to carry out a project using the thinking aloud method by themselves.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** First introduction into user-centred design and usability; sensitisation and motivation for this topic, usability testing of websites using the Thinking-Aloud-Method

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar, exercises in class, homework, group work, practical project

**Assessment methods and criteria:** Assignments, active participation in class, presentation and documentation of a final project

**Language of instruction:** English

**Literature:**

Steve Krug (2009): Rocket Surgery Made Easy: The Do-it-yourself Guide to Finding and Fixing Usability Problems. Steve Krug (2014): Don't Make Me Think, Revisited: A Common Sense Approach to Web Usability.



## Design English 1

**Course code:** 140373111

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Martina Windisch-Koenig

**Learning outcome:** Communicative multimedial approach; presentations, partner- and groupwork, simulations, students are encouraged to work actively and autonomously in and outside class

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** To accommodate students from various English-learning backgrounds and build on their language skills to enable them to deal with the demands of professional English. Improving grammar, vocabulary and knowledge on idioms by means of information-design related texts, videos, discussions. Building on the 4 skills:

Leseverständnis (texts)

Hörverständnis (audio, video)

Mündlicher Ausdruck (talk, talk, talk)

Schriftlicher Ausdruck (written texts)

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Semiar

**Assessment methods and criteria:** Students are assessed during class; midterm and final exam, presentations, homework assignments

**Language of instruction:** English

**Literature:**

## Art Theory and Aesthetical Practice 1

**Course code:** 140373103  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 1st  
**ECTS Credits:** 2 ECTS  
**Lecturer:** Michael Schuster  
**Learning outcome:** Basics of Information Design  
**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Introduction to art of the 20th century with focus on Dadaism, Surrealism, Op Art; setting various art movements into context with information design and adequate musical styles; analysis of aesthetic and content-related aspects of contemporary graphics and paintings; practical and material-technological tasks to given topics.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** integrated course

**Assessment methods and criteria:** Written exam, active participation in class, work piece

**Language of instruction:** English

### Literature:

Books: Wibke Weber (ed.), Kompendium Informationsdesign, Berlin-Heidelberg 2008; P Mijksenaar P, Visual Function. An Introduction to Information Design, New York 1997; R Pettersson, Information Design. An introduction, Amsterdam Philadelphia 2002; T Rurik, M Burke, Gestaltung als Aufklärung, in: Meier C (Hrsg) Design Theorie. Beiträge zu einer Disziplin, Frankfurt am Main 2003, S 144-150.  
Journals: Form. Zeitschrift für Gestaltung; Zeitschrift für Ästhetik und allgemeine Kunstwissenschaft

## Information Design 1

**Course code:** 140373105

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Karl Stocker

**Learning outcome:** The lecture series will provide an overview of the basics of the field information design

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Orientation course: Overview of an information designer's occupational area

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture series

**Assessment methods and criteria:** Permanent assessment

**Language of instruction:** English

### Literature:

Books: Wibke Weber (ed.), Kompendium Informationsdesign, Berlin-Heidelberg 2008; P Mijksenaar P, Visual Function. An Introduction to Information Design, New York 1997; R Pettersson, Information Design. An introduction, Amsterdam Philadelphia 2002; T Rurik, M Burke, Gestaltung als Aufklärung, in: Meier C (Hrsg) Design Theorie. Beiträge zu einer Disziplin, Frankfurt am Main 2003, S 144-150. Journals: Form. Zeitschrift für Gestaltung; Zeitschrift für Ästhetik und allgemeine Kunstwissenschaft

# Typography 1

**Course code:** 140373101

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 3 ECTS

**Lecturer:** Daniel Perraudin

**Learning outcome:** Basics of Information Design

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Topics include: tasks of typography, structure and rhythm, forms of letters, historical developments; practical exercises concerning text structuring, font design on paper and on the computer (Fontographer)

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** Exams, Presentation

**Language of instruction:** English

**Literature:**

Books: Wibke Weber (ed.), Kompendium Informationsdesign, Berlin-Heidelberg 2008; P Mijksenaar P, Visual Function. An Introduction to Information Design, New York 1997; R Pettersson, Information Design. An introduction, Amsterdam Philadelphia 2002; T Rurik, M Burke, Gestaltung als Aufklärung, in: Meier C (Hrsg) Design Theorie. Beiträge zu einer Disziplin, Frankfurt am Main 2003, S 144-150.

Journals: Form. Zeitschrift für Gestaltung; Zeitschrift für Ästhetik und allgemeine Kunstwissenschaft

## Visual Communication Basics

**Course code:** 140373112

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 7 ECTS

**Lecturer:** Batusic, Baumann, Bobinec, Mosbacher, Moschik, Osterider, SIMPLEASE

**Learning outcome:** Basic knowledge of drafting methods, handicraft training

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Analytical work on perception, basics of visual communication: conceptual drafting, drawing, photographic representation, artistic formulation, letter design and semiotics, nature studies, analogue and digital draft techniques, ethics of design, iconography, creativity

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project work in accordance with the supervisor

**Assessment methods and criteria:** Active participation, project presentation and submission of project documents as defined by the supervisor

**Language of instruction:** English

**Literature:**

Piktogramme und Icons: Pflicht oder Kür, Hrg. Rayan Abdullah, Grundlagen der Typografie/Gavin Ambrose, Paul Harris, Annette Gevatter, Druckreif, Paul Renner, Die Kunst der Typographie, Emil Ruder, Typographie – ein Gestaltungslehrbuch, Ina Saltz, Typografie – 100 Prinzipien für die Arbeit mit Schrift, Helmut Schmid, Gestaltung ist Haltung

## Applied Game Design

**Course code:** 140373307

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Maja Pivec

**Learning outcome:** Generation and Preparation of Content

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Draft, graphic realisation and analysis of the technical realisation of computer games in small groups; research of diverse gaming mechanisms

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Group work, Pecha Kucha, Lectures

**Assessment methods and criteria:** Presentation of a game concept

**Language of instruction:** English

### Literature:

- Baumert, Andreas: Professionell texten. Grundlagen, Tipps und Techniken. 2. Auflage. München: dtv, 2008.
- Clark, Roy Peter: Die 50 Werkzeuge für gutes Schreiben. Handbuch für Autoren, Texter und Journalisten. Berlin: Autorenhaus Verlag, 2009.
- Dudenredaktion (Hrsg.): Duden. Die deutsche Rechtschreibung. 25. völlig neu bearbeitete und erweiterte Auflage. Mannheim: Dudenverlag, 2008.
- Fasel, Christoph: Textsorten. Konstanz: UVK, 2008.
- Förster, Hans-Peter: Texten wie ein Profi. 11. Auflage. Frankfurt: F.A.Z.-Institut für Management-, Markt- und Medieninformationen, 2010.
- Häusermann, Jürg: Journalistisches Texten. Sprachliche Grundlagen für professionelles Informieren. Konstanz: UVK, 2001.
- Hanika, Iris & Stefanie Flamm (Hrsg.): Berlin im Licht. 24 Stunden Webcam. Frankfurt/M: Suhrkamp, 2003.
- Heiser, Albert: Bullshit Bingo. Storytelling für Werbetexte. Berlin: Creative Game Verlag, 2009.
- Lehmanski, Dirk und Michael Braun (Hrsg.): Das Schreibbuch. Das Handbuch für alle, die professionell schreiben. 2. Auflage. Waltrop: ISB-Verlag, 2009.
- Linke, Angelika et al.: Studienbuch Linguistik. 5. erweiterte Auflage. Tübingen: Niemeyer, 2004.
- Ortheil, Hanns-Josef: Schreiben dicht am Leben: Notieren und Skizzieren. Mannheim: Dudenverlag, 2012.
- Porombka, Stephan: Kritiken Schreiben. Ein Trainingsbuch. Konstanz: UVK, 2006.
- Porombka, Stephan: Schreiben unter Strom. Experimentieren mit Twitter, Blogs, Facebook & Co. Mannheim: Dudenverlag, 2012.
- Schärf, Christian: Schreiben Tag für Tag. Journal und Tagebuch. Mannheim: Dudenverlag, 2012.
- Schneider, Wolf: Deutsch für Kenner. Die neue Stilkunde. 5. Auflage. München: Piper, 2009.
- Wehrli, Peter K.: Katalog von Allem. 1111 Nummern aus 31 Jahren. München:

Goldmann, 2000.

Serious Games: Games that educate, Train, and Inform. David Michael & Sande Chen;

Game Design Workshop: A Playcentric approach to creating innovative games. Tracy Fullerton;

The Art of Game Design. Jesse Schell;

Level Up!: The guide to great video game design. Scott Rogers;

How to create Fantasy Art for video games. Bill Stoneham;

The ultimate guide to Video Game writing and Design. Flint Dille & John Platten.

## Art Theory and Aesthetical Practice 3

**Course code:** 140373302

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Eva & Gerhard Pichler

**Learning outcome:** Basics of Information Design

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Current trends in multimedia-based art; computer graphics and installation, net art and its technical implications; interactive art projects in a social and corporate context; analysis of various artistic strategies and self-reflection on own work pieces

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** integrated course

**Assessment methods and criteria:** Written exam, active participation in class, work piece

**Language of instruction:** English

**Literature:**

C Kostelnick, M Hassett M, Shaping Information. The Rhetoric of Visual Conventions, Carbondale 2003; A Loos, Ornament und Verbrechen. In: Fischer V, Hamilton A (Hrsg.) (1999) Theorien der Gestaltung. Grundlagentexte zum Design, Band 1. Frankfurt am Main, S 114–120; B Mau, Massive Change, London New York 2004; C Meier (Hrsg), Design Theorie. Beiträge zu einer Disziplin, Frankfurt am Main 2003;



## Media Theory 1

**Course code:** 140373304

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Gerhard Baumgartner

**Learning outcome:** Basics of Information Design

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Short overview of the most important media theories of the 20th century; classification of media; basics of linguistics and semiotics; research on effects; acquisition of analysis capabilities and of the potential for implementation of own work pieces

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Lecture series

**Assessment methods and criteria:** Written exam, active participation in class

**Language of instruction:** English

### Literature:

C Kostelnick, M Hassett M, Shaping Information. The Rhetoric of Visual Conventions, Carbondale 2003; A Loos, Ornament und Verbrechen. In: Fischer V, Hamilton A (Hrsg.) (1999) Theorien der Gestaltung. Grundlagentexte zum Design, Band 1. Frankfurt am Main, S 114–120; B Mau, Massive Change, London New York 2004; C Meier (Hrsg), Design Theorie. Beiträge zu einer Disziplin, Frankfurt am Main 2003;

## Media Production

**Course code:** 140373312  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 3rd  
**ECTS Credits:** 7 ECTS  
**Lecturer:** Bieder, Gokl, Scherz, Schmiedel

**Learning outcome:** Technical and creative skills in the field of sound design and video production and postproduction. Using these skills in first practical projects

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Development of narrative forms, production concept, production design, camera and lighting technology, sound recording technology, media technological content such as technical formats, codecs, etc.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** project work

**Assessment methods and criteria:** Final project, permanent assessment

**Language of instruction:** English

**Literature:**

Peter Hant, Das Drehbuch. Praktische Filmdramaturgie, Hamburg 1992

Marcie Begleiter, Peter Robert: "Storyboard : Vom Text zur Zeichnung zum Film", Verlag Zweitausendeins

Scott McCloud: Comics machen - Alles über Comics, Manga und Graphic Novels, Hamburg 2007

## Sound Design and Postproduction

**Course code:** 140373305  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 3rd  
**ECTS Credits:** 2 ECTS  
**Lecturer:** Andreas Fabianek

**Learning outcome:** Technical and creative skills in the field of sound design and video production and postproduction. Using these skills in first practical projects

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Audio recording, sound mixing, mastering, sequencing, generative methods of sound production, sound design in multimedia environments and in video productions

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Permanent Assessment, product, presentation, documentation

**Language of instruction:** English

**Literature:**

Peter Hant, Das Drehbuch. Praktische Filmdramaturgie, Hamburg 1992

Marcie Begleiter, Peter Robert: "Storyboard : Vom Text zur Zeichnung zum Film", Verlag Zweitausendeins

Scott McCloud: Comics machen - Alles über Comics, Manga und Graphic Novels, Hamburg 2007

## Sound Editing and Audio Engineering

**Course code:** 140373301

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Andreas Fabianek

**Learning outcome:** Technical and creative skills in the field of sound design and video production and postproduction. Using these skills in first practical projects

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Basics of audio recording, of studio technology, of sound processing and editing

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Final project, permanent assessment

**Language of instruction:** English

**Literature:**

Peter Hant, Das Drehbuch. Praktische Filmdramaturgie, Hamburg 1992

Marcie Begleiter, Peter Robert: "Storyboard : Vom Text zur Zeichnung zum Film", Verlag Zweitausendeins

Scott McCloud: Comics machen - Alles über Comics, Manga und Graphic Novels, Hamburg 2007

## Video Editing and Postproduction

**Course code:** 140373311

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Karin Heide, Thomas Radeke

**Learning outcome:** Technical and creative skills in the field of sound design and video production and postproduction. Using these skills in first practical projects

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Basics of video editing and postproduction, handling of relevant video editing software, implementation of sound and visual effects into the video production

**Recommended or required reading and other learning resources / tools:** Seminar

**Planned learning activities and teaching methods:** Final project, permanent assessment

**Assessment methods and criteria:**

**Language of instruction:** English

**Literature:**

Peter Hant, Das Drehbuch. Praktische Filmdramaturgie, Hamburg 1992

Marcie Begleiter, Peter Robert: "Storyboard : Vom Text zur Zeichnung zum Film", Verlag Zweitausendeins

Scott McCloud: Comics machen - Alles über Comics, Manga und Graphic Novels, Hamburg 2007

## Client-centred Design

<b>Course code:</b>	140373309
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	First
<b>Semester:</b>	3rd
<b>ECTS Credits:</b>	2 ECTS
<b>Lecturer:</b>	Melitta Moschik

**Learning outcome:** Processing and realising concrete practical tasks, gaining basics in specific programming languages and their possible fields of application

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Introduction to and consolidation in the field of visual communication by carrying out application-oriented competition projects. Students learn to professionally handle and realise client orders: logo design, corporate design, editorial design, type design, web design. They use new technologies such as laser cut and 3d print. Briefing, drafting, research into materials, working on topics and content, quantification and quality management, time schedules, calculation and exclusive exploitation rights

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project and presentation

**Language of instruction:** English

### Literature:

Ina Saltz, Typografie – 100 Prinzipien für die Arbeit mit Schrift  
Ulrike Felsing, Dynamische Erscheinungsbilder im kulturellen und öffentlichen Kontext; Irene van Mees, Dynamic Identities. How to create a living brand

## Generative Design 1

**Course code:** 140373306

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Lia Schitter, Thomas Radeke

**Learning outcome:** Processing and realising concrete practical tasks, gaining basics in specific programming languages and their possible fields of application

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Basics and conception of dynamic images; basics of research into components, programming languages, specific use of creative instruments, development of a typography, colour and form canon

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project and presentation

**Language of instruction:** English

**Literature:**

Ina Saltz, Typografie – 100 Prinzipien für die Arbeit mit Schrift

Ulrike Felsing, Dynamische Erscheinungsbilder im kulturellen und öffentlichen Kontext; Irene van Mees, Dynamic Identities. How to create a living brand

## Advertising

**Course code:** 140373504

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 1 ECTS

**Lecturer:** Helfried Pilz

**Learning outcome:** Advanced Information Design

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Definition and analysis of advertising campaigns; recognition of strategies behind creative and extra-ordinary realisations; differentiation between the idea itself and marketing strategies

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Exams, presentation

**Language of instruction:** English

### Literature:

Books: Peter Wildbur, Michael Burke, Information Graphics, Mainz 1998;  
Rossiter & Percy, Advertising Communications & Promotion Management, McGraw Hill 1998; Berger & Warren, Advertising Today, Phaidon Press, 2000; Wolfgang Hars, Lexikon der Werbesprüche. 500 bekannte deutsche Werbeslogans und ihre Geschichte, Eichborn 1999; Otl Aicher, Die Welt als Entwurf, o. O. 1999; Stefan Sagmeister: Things I have learned in my life so far, Mainz 2008



## Design Lectures 2

**Course code:** 140373503

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2 ECTS

**Lecturer:** Karl Stocker

**Learning outcome:** Advanced Information Design

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** International und national experts talk about their work experiences, about the strategies of design and discuss the future of information design.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Written exam

**Language of instruction:** English

### Literature:

Books: Peter Wildbur, Michael Burke, Information Graphics, Mainz 1998;  
Rossiter & Percy, Advertising Communications & Promotion Management, McGraw Hill 1998; Berger & Warren, Advertising Today, Phaidon Press, 2000; Wolfgang Hars, Lexikon der Werbesprüche. 500 bekannte deutsche Werbeslogans und ihre Geschichte, Eichborn 1999; Otl Aicher, Die Welt als Entwurf, o. O. 1999; Stefan Sagmeister: Things I have learned in my life so far, Mainz 2008

## Design Thinking 2

**Course code:** 140373505

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2 ECTS

**Lecturer:** Bobinec / Fabry / Kipcak

**Learning outcome:** International comparison, Design English active use

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Excursion to Cities of Design

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Workshops

**Assessment methods and criteria:** Permanent assessment

**Language of instruction:** English

### Literature:

Books: Peter Wildbur, Michael Burke, Information Graphics, Mainz 1998;  
Rossiter & Percy, Advertising Communications & Promotion Management, McGraw Hill 1998; Berger & Warren, Advertising Today, Phaidon Press, 2000; Wolfgang Hars, Lexikon der Werbesprüche. 500 bekannte deutsche Werbeslogans und ihre Geschichte, Eichborn 1999; Otl Aicher, Die Welt als Entwurf, o. O. 1999; Stefan Sagmeister: Things I have learned in my life so far, Mainz 2008

## Package Design

**Course code:** 140373510  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 3 ECTS  
**Lecturer:** Susanne Lippitsch  
**Learning outcome:** Knowledge expansion in specific areas

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Change of meaning of package design, visions for the future and new technologies, communication of the POS, possibilities of communication of packaging, psychological effects of colours and forms, the trend towards added benefits, marketing, advertisement and branding. Development of packaging.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project

**Language of instruction:** English

### Literature:

Braungart, M.; McDonough, W.: Cradle to Cradle. Remaking the Way We Make Things. New York 2002; El-Haggar, S.: Sustainable industrial design and waste management. Cradle-to-cradle for sustainable development. Burlington 2007; Ralf BOHN, Heiner WILHARM (Hg.), Inszenierung und Ereignis. Beiträge zur Theorie und Praxis der Szenografie, Bielefeld 2009; Matthias GÖTZ (Hg.), Villa Paragone. Thesen zum Ausstellen, Basel 2008; Uwe REINHARDT, Philipp Teufel (Hg.), Neue Ausstellungsgestaltung 02/ New Exhibition Design 02, Ludwigsburg 2010; Scenography/Szenografie. Making Spaces talk/Narrative Räume. Projects/Projekte; Virgil WIDRICH et al. (Hg.), Inszenierung und neue Medien, Wien-New York 2011; Larry Ullman, PHP and MySQL for Dynamic Web Sites, Addison-Wesley 2011; Alex Steffen (Hg.), World Changing: A User's Guide For The 21st Century, 2011;

## Social and Sustainable Design

<b>Course code:</b>	140373512
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	First
<b>Semester:</b>	5th
<b>ECTS Credits:</b>	3 ECTS
<b>Lecturer:</b>	Josef Gruendler, Karl Stocker, Sigrid Buerstmayr
<b>Learning outcome:</b>	Knowledge expansion in specific areas
<b>Mode of delivery:</b>	Face-to-face

### Prerequisites and co-requisites:

**Course content:** Dr. Gründler and Dr. Stocker start with an input about Socio-Design, followed by international and national designers which are familiar with the topics of social and sustainable design and inspire the students with their experiences. Finally, the students develop a compact concept about social issues in Graz.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project

**Language of instruction:** English

### Literature:

Braungart, M.; McDonough, W.: Cradle to Cradle. Remaking the Way We Make Things. New York 2002; El-Haggar, S.: Sustainable industrial design and waste management. Cradle-to-cradle for sustainable development. Burlington 2007; Ralf BOHN, Heiner WILHARM (Hg.), Inszenierung und Ereignis. Beiträge zur Theorie und Praxis der Szenografie, Bielefeld 2009; Matthias GÖTZ (Hg.), Villa Paragone. Thesen zum Ausstellen, Basel 2008; Uwe REINHARDT, Philipp Teufel (Hg.), Neue Ausstellungsgestaltung 02/ New Exhibition Design 02, Ludwigsburg 2010; Scenography/Szenografie. Making Spaces talk/Narrative Räume. Projects/Projekte; Virgil WIDRICH et al. (Hg.), Inszenierung und neue Medien, Wien-New York 2011; Larry Ullman, PHP and MySQL for Dynamic Web Sites, Addison-Wesley 2011; Alex Steffen (Hg.), World Changing: A User's Guide For The 21st Century, 2011;

## Scenographic interventions

**Course code:** 140373507

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 3 ECTS

**Lecturer:** Anke Strittmatter, Angelika Thon

**Learning outcome:** Knowledge expansion in specific areas

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** In public space (indoors and/or outdoors) design interventions are carried out. The aim is to critically question the norms and everyday behaviour in terms of design.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project

**Language of instruction:** English

### Literature:

Braungart, M.; McDonough, W.: Cradle to Cradle. Remaking the Way We Make Things. New York 2002; El-Haggar, S.: Sustainable industrial design and waste management. Cradle-to-cradle for sustainable development. Burlington 2007; Ralf BOHN, Heiner WILHARM (Hg.), Inszenierung und Ereignis. Beiträge zur Theorie und Praxis der Szenografie, Bielefeld 2009; Matthias GÖTZ (Hg.), Villa Paragone. Thesen zum Ausstellen, Basel 2008; Uwe REINHARDT, Philipp Teufel (Hg.), Neue Ausstellungsgestaltung 02/ New Exhibition Design 02, Ludwigsburg 2010; Scenography/Szenografie. Making Spaces talk/Narrative Räume. Projects/Projekte; Virgil WIDRICH et al. (Hg.), Inszenierung und neue Medien, Wien-New York 2011; Larry Ullman, PHP and MySQL for Dynamic Web Sites, Addison-Wesley 2011; Alex Steffen (Hg.), World Changing: A User's Guide For The 21st Century, 2011;

## User Experience Design

**Course code:** 140373508

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 3 ECTS

**Lecturer:** Konrad Baumann

**Learning outcome:** Knowledge expansion in specific areas

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Consolidation of: usability evaluation, user-centred design, user interface design, information architecture, information visualisation and service design.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Project

**Language of instruction:** English

### Literature:

Braungart, M.; McDonough, W.: Cradle to Cradle. Remaking the Way We Make Things. New York 2002; El-Haggar, S.: Sustainable industrial design and waste management. Cradle-to-cradle for sustainable development. Burlington 2007; Ralf BOHN, Heiner WILHARM (Hg.), Inszenierung und Ereignis. Beiträge zur Theorie und Praxis der Szenografie, Bielefeld 2009; Matthias GÖTZ (Hg.), Villa Paragone. Thesen zum Ausstellen, Basel 2008; Uwe REINHARDT, Philipp Teufel (Hg.), Neue Ausstellungsgestaltung 02/ New Exhibition Design 02, Ludwigsburg 2010; Scenography/Szenografie. Making Spaces talk/Narrative Räume. Projects/Projekte; Virgil WIDRICH et al. (Hg.), Inszenierung und neue Medien, Wien-New York 2011; Larry Ullman, PHP and MySQL for Dynamic Web Sites, Addison-Wesley 2011; Alex Steffen (Hg.), World Changing: A User's Guide For The 21st Century, 2011;

## Communication Design

**Course code:** 140373513

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 11 ECTS

**Lecturer:** Bobinec, Herms, Joch, Putz

**Learning outcome:** New media in visual communication strategies

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Content Based Design Thinking, Design as thinking method

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** Contract related creativ work (real client), Exhibition, Evaluation

**Language of instruction:** English

**Literature:**

## Interaction Design

**Course code:** 140373515

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 11 ECTS

**Lecturer:** Fabry, Gschwend, Mosbacher

**Learning outcome:** Development, realisation and discussion of interactive design work

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Conception and realisation of practical projects and working on tasks set in the area of interface design, interactive media design, game design and screen design. Guest lectures and workshops by national and international designers.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** Permanent assessment, final exam

**Language of instruction:** English

**Literature:**

Books: Bill Moggridge, Designing Interactions, Cambridge 2007; Lucy Bullivant, Responsive Environments: Architecture, Art and Design, London 2006; Cooper, Reimann Cronin: About Face: Interface und Interaction Design Interaction Design Beyond HumanComputer Interaction, 2007; Leopoldseder, Ars Electronica, Hatje Cantz Verlag; Dawes, Analog In, Analog Out, New Riders 2007; Zeldman, Designing with Web Standards, New Riders, 2009; Tufte, Envisioning Information, Graphics Press, 1990; Marcotte, Responsive Web Design, A Book Apart, 2011;

Journals: ACM: interactions, Reality; IEEE Proceedings; Weave; Digital Production; Production Partner; .net, Future Publishing;



## Media Design

**Course code:** 140373514  
**Course type:** Compulsory  
**Course cycle:** First  
**Semester:** 5th  
**ECTS Credits:** 11 ECTS  
**Lecturer:** Kipcak, Bieder, Sturm

**Learning outcome:** Detailed lessons on artistic-technical aspects of animation, video postproduction, 3D design, motion capturing, TV design. Additional workshops dealing with different current trends in this professional field. Students carry out "real world" projects to apply the skills gained.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Animation, video postproduction, sound design, 3D design, TV design, media dramaturgy.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** Final project, exams, permanent assessment

**Language of instruction:** English

**Literature:**

Jon Krasner: Motion Graphic Design. Applied History and Aesthetics, Oxford 2008; Christian Mikunda, Kino spüren: Strategien der emotionalen Filmgestaltung: Jeweils aktuelle Print- und Online-Tutorials (Adobe After Effects, et al.)

## Journalism and Public Relations, Bachelor Course(s)

### English: News Writing

Course code: 180593108

Course type: Compulsory

Course cycle: First

Semester: 1st

ECTS Credits: 2

Lecturer:

**Learning outcome:** News Writing builds up on the existing competences of the students. From the beginning on, the students will be working on news writing skills relevant for their future careers. They will learn how to write hard news stories and feature stories.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** The focus of this module is on the training of language skills: The courses are aligned to promote the specific language and reading comprehension both receptive and productive. The format-, context and audience specific, German-language text production is important, in addition to practice. Students also acquire intercultural skills in practicing English.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments

**Language of instruction:** English

**Literature:** Haller, Michael: Recherchieren, Konstanz 2004.

Häusermann, Jürg: Journalistisches Texten: Sprachliche Grundlagen für professionelles Informieren. 3., überarb. Auflage. Konstanz 2011.

Schneider, Wolf; Raue, Paul-Josef: Das neue Handbuch des Journalismus und des Online-Journalismus. Reinbek 2012.

Schwiesau, Dietz; Ohler, Josef: Die Nachricht: In Presse, Radio, Fernsehen,

Nachrichtenagentur und Internet: Ein Handbuch für Ausbildung und Praxis. Heidelberg 2013.

Weischenberg, Siegfried: Nachrichten-Journalismus. Anleitungen und Qualitäts-Standards für die Medienpraxis. Wiesbaden 2001.

Förster, Hans Peter und Andreas Förster: Corporate Wording 3.0. FAZ Buch 2014.

Schneider, Rolf: Deutsch für junge Profis. Rowohlt 2010.

- Branston, G. and Stafford, R. (1999). *The Media Student's Book*. Second edition. London and New York: Routledge.
- Cappon, R. J. (2003). *The Associate Press. Guide to Punctuation*. Cambridge: Perseus.
- Hicks, Wynford (1999). *Writing for Journalists*. London and New York: Routledge.
- Leiter, K., Harriss, J. and Johnson, S. (2000). *The Complete Reporter. Fundamentals of News Gathering, Writing, and Editing*. Boston, et al.: Allyn and Bacon.
- McIntyre, B. (1996). *English News Writing*. Hong Kong: The Chinese University Press.
- Kalbfeld, B. (2001). *Broadcast News Handbook. A Manual of Techniques & Practices*. New York, et al: McGraw-Hill.

## English: Research-Based Writing

**Course code:** 180593206

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 2nd

**ECTS Credits:** 2

**Lecturer:**

**Learning outcome:** Students will be able to independently develop a comprehensive bibliography on a topic of their choice. They know statistic vocabulary and are able to deal with scientific works in English

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** English: Research-based Writing provides students with an introduction to scientific research and explores the ways of encoding and decoding scientific writing. Students will learn about the requirements for a scientific research process, a scientific writing style in English, and critically analyzing scientific articles

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments

**Language of instruction:** English

**Literature:** Eco, Umberto: Wie man eine wissenschaftliche Abschlußarbeit schreibt. Doktor-, Diplom- und Magisterarbeiten in den Geistes- und Sozialwissenschaften. Heidelberg 2002.

Hacker, Rupert: Bibliothekarisches Grundwissen, 7., neu bearbeitete Auflage. München 2000.

Karmasin, Matthias und Ribing, Rainer: Die Gestaltung wissenschaftlicher Arbeiten. Ein Leitfaden für Haus- und Seminararbeiten, Magisterarbeiten, Diplomarbeiten und Dissertationen. Wien 2006.

Noelle-Neumann, Elisabeth und Petersen, Thomas: Alle, nicht jeden. Einführung in die Methoden der Demoskopie. Berlin [u. a.] 2005.

Rückriem, Georg [u.a.]: Die Technik wissenschaftlichen Arbeitens. Eine praktische Anleitung. Paderborn [u.a.] 1997.

Tetens, Holms: Wissenschaftstheorie. Eine Einführung. München 2013.

Weber Max: Wissenschaft als Beruf. Stuttgart 2010 (Erstauflage 1919).

Wie kommt Wissenschaft zu Wissen? Bd. 1:

Einführung in das wissenschaftliche Arbeiten. Hg. v. Theo Hug. Hohengerten 2001.

Bauer, M. W., & Bucchi, M. (Eds.). (2008). Journalism, science and society: Science communication between news and public relations. Routledge.

Deane, M. (2010). Academic Research, Writing & Referencing, Pearson Education

Kirton, B. (2012). Brilliant Academic Writing. Pearson.

Malhotra, N. K. (2012). Basic Marketing Research – Integration of Social Media, 4th Edition, Pearson.

Menasche, L. (1997). Writing a Research Paper. The University of Michigan Press.

Owtram, N. (2010). The Pragmatics of Academic Writing. A relevance approach to the analysis of research article introduction. (Vol. 107). Peter Lang.

## English: Campaigning

**Course code:** 180593308

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:**

**Learning outcome:** Students build organization-specific knowledge and learn how to work and communicate in different organizational forms and developing mediation skills as communication experts. They strengthen their design competence regarding multimediality and learn the use of sophisticated evaluation techniques.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Campaigning focusses on Public Relations. The students will learn how to use authentic language in written and spoken discourse (eg. news release, fact sheets, backgrounder, interviews, speeches).

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments

**Language of instruction:** English

**Literature:** Mintzberg, Henry, Bruce Ahlstrand, Joseph Lampel: Strategy Safari. Ein Wegweiser durch den Dschungel des strategischen Managements. 2. aktualisierte Aufl. Finanzbuch Verlag, München, 2012.

Bivins, T. H. (2005). Public Relations Writing. The Essentials of Style and Format. Boston, et al.: McGraw Hill.

Newsom, D. & Carrell, B. (2001). Public Relations Writing. Form and Style. Belmont: Wadsworth Thomson.

Wilcox, D. L., Ault, P.H. & Agee, W. K. (1997). Public Relations. Strategies and Tactics. New York et al.: McGraw Hill

## English: International Media

**Course code:** 180593403

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 4th

**ECTS Credits:** 2

**Lecturer:**

**Learning outcome:** The students deal with socially relevant issues, such as gender issues or intercultural issues. They acquire analytical skills in order to detect and interpret the interdependence of media, society and economy in a global information society. The theory focus helps them to critical-reflexive analysis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** International Media deals with the print and online media not only in the Anglo-American culture but also in an international, global environment. The students will analyze English texts in terms of intentions, stereotypes, and perception of intended audiences.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments

**Language of instruction:** English

**Literature:** Prisching, Manfred: Verrückt.Verspielt.

Verschoben – Unsere spätmoderne Gesellschaft;

Schulze, Gerhard: Die Erlebnisgesellschaft;

Bude, Heinz: Gesellschaft der Angst.

Rommerskirchen, Jan: Soziologie & Kommunikation;

Brodnig, Ingrid: Der unsichtbare Mensch – Wie die Anonymität im Internet unsere Gesellschaft verändert;

Imhof, Kurt: Die Krise der Öffentlichkeit: Kommunikation und Medien als Faktoren des sozialen Wandels;

Wagner, Elke: Mediensoziologie;

Kemper, Peter: Wir nennen es Wirklichkeit – Denkanstöße zur Netzkultur;

Rushkoff, Douglas: Present Shock – Wenn alles jetzt passiert;

Pörksen, Bernhard: Der entfesselte Skandal;  
Türcke, Christoph: Erregte Gesellschaft

Davies, N. (2011). Flat Earth news: an award-winning reporter exposes falsehood, distortion and propaganda in the global media. Random House.

Flew, T. (2007). Understanding global media. Palgrave Macmillan.

International Journal of Communication



## English: Global Communication and Negotiations

**Course code:** 180593502

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2

**Lecturer:**

**Learning outcome:** Students gain skills that are applicable in media management, e.g. entrepreneurial skills, such as the identification of opportunities, creativity and willingness to take risks, the development of ideas, defining strategies and objectives, the planning and implementation of projects, the basic understanding of economic and business relationships

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** English: Global Communication and Negotiation deals with using English in the globalised world. Students will learn about the relationship between language and culture, evaluate the effect of cultural noise, learn about cultural differences in body language and its effect, and discuss the role of international English

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Continuous Assessments

**Language of instruction:** English

**Literature:** Kelly, Sara: The entrepreneurial journalists toolkit: Manage your Media, 2015

Jessen, Svein Arne: Project Leadership – step by step – Part I +II, a handbook on how to master small & medium sized projects, 2nd edition 2012

Benchmark Institute: Time Management Manual: 2010

IPMA <http://ipma.ch/asp/>

Fueglistaller/Müller/Volery: Entrepreneurschip: Modelle-Umsetzung-Perspektiven mit Fallbeispielen aus Deutschland, Österreich und der Schweiz

Faltin, Günter: Kopf schläft Kapital: Die ganz andere Art ein Unternehmen zu gründen – Von der Lust, ein Entrepreneur zu sein, 4. Aufl. 2013

Beyer, Andrea/ Carl, Petra: Einführung in die Medienökonomie: 3. Aufl., 2012.

Jürgen Heinrich, Medienökonomie I, Band 1, Westdeutscher Verlag, 2001

Martin Gläser: Medienmanagement, 2008

Hanno Beck: Medienökonomie - Märkte,  
Besonderheiten und Wettbewerb in Scholz: Handbuch Medienmanagement  
Bernd W. Wirtz/Richard Pelz: Medienwirtschaft - Zielsysteme, Wertschöpfungsketten und -  
strukturen in Scholz: Handbuch Medienmanagement, 2005

Comfort, J. & Brieger, N. (1998). Meetings. London. Penguin Books.

English, L. M. & Lynn, S. (1995). Business across cultures.

Förster, L. & Joyce, A. (2009). Meetings in English. München. Haufe.

Gudykunst, W. B. (2003). Cross-cultural and intercultural communication. Sage.

## Industrial Design, Bachelor Course(s)

### General English 1

**Course code:** 160646108

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** 2

**Lecturer:** FH-Prof. Mag. Dr. Ruth Weiler

**Learning outcome:** The students acquire detailed knowledge of the use of the English language, with a special focus on holding project presentations and taking part in negotiations.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** English B2

**Course content:** For future designers, a host of topics will be offered which will not only enhance the students' English language skills, but also their communication and design-related skills.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Integrated Course

**Assessment methods and criteria:** Tasks in the area of listening, speaking, reading, and writing; Partner and group work; Presentations; Discussions; Simulations and role plays; Text analysis.

20% Presentation (evaluation criteria: language, structure, content, slide design, delivery)

20% Essay (evaluation criteria: language and content)

40% Written examination

87% ..... 1

74% ..... 2

62% ..... 3

50% ..... 4

20% Continuous assessment (participation in class, attendance, and home assignments)

**Language of instruction:** English

**Literature:** BOOKS: English design literature  
JOURNALS: English design magazines  
Course script

## Stützkurs English

**Course code:** 01-08a

**Course type:** Voluntary

**Course cycle:** First

**Semester:** 1st

**ECTS Credits:** /

**Lecturer:** FH-Prof. Mag. Dr. Ruth Weiler

**Learning outcome:** The level of English proficiency will be raised.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** None

**Course content:** Course tailored to the specific needs of students; warm-up course.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Tasks in the area of listening, speaking, reading, and writing; Partner and group work; Presentations; Discussions; Simulations and role plays; Text analysis

**Assessment methods and criteria:** None

**Language of instruction:** English

**Literature:** BOOKS: English design literature  
JOURNALS: English design magazines  
Course script

## Professional English 1

**Course code:** 160646308

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 3rd

**ECTS Credits:** 2

**Lecturer:** FH-Prof. Mag. Dr. Ruth Weiler

**Learning outcome:** The students acquire detailed knowledge of the use of the English language, with a special focus on design-related topics, and of professional communication strategies.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** General English 2

**Course content:** For future designers, a host of topics will be offered which will not only enhance the students' English language skills, but also their communication and design-related skills.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Tasks in the area of listening, speaking, reading, and writing; Partner and group work; Presentations; Discussions; Meetings, simulations and role plays; Text analysis

**Assessment methods and criteria:** 45% Facilitation training

In groups of two students

Duration: 40 minutes

Content: Texts / films / activities / words

Evaluation criteria: Facilitation skills, language, variety of tasks, benefit to the group

Present your concept one week before the date of your workshop

35% Presentation (presentation style: Pecha Kucha; evaluation criteria: language, structure, content, slide design, delivery)

20% Continuous assessment (participation in class, attendance, and home assignments)

**Language of instruction:** English

**Literature:** BOOKS: English design literature  
JOURNALS: English design magazines  
Course script

## Professional English 3

**Course code:** 160646510

**Course type:** Compulsory

**Course cycle:** First

**Semester:** 5th

**ECTS Credits:** 2

**Lecturer:** FH-Prof. Mag. Dr. Ruth Weiler

**Learning outcome:** The students acquire detailed knowledge of the use of the English language, with a special focus on design-related topics, and of professional communication strategies.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** Professional English 2

**Course content:** For future designers, a host of topics will be offered which will not only enhance the students' English language skills, but also their communication and design-related skills.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Tasks in the area of listening, speaking, reading, and writing; Partner and group work; Presentations; Discussions; Meetings, simulations and role plays; Text analysis

**Assessment methods and criteria:** 30% Presentation (evaluation criteria: language, structure, content, slide design, delivery; duration: 10 minutes)

50% Written examination

87% ..... 1

74% ..... 2

62% ..... 3

50% ..... 4

20% Continuous assessment (participation in class, attendance, and home assignments)

**Language of instruction:** English

**Literature:** BOOKS: English design literature  
JOURNALS: English design magazines  
Course script

## Industrial Design, Master Course(s)

### Professional Business Meetings and Presentations 1

**Course code:** 160647104

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 1

**Lecturer:** FH-Prof. Mag. Dr. Ruth Weiler

**Learning outcome:** The students acquire detailed knowledge of the use of the English language, with a special focus on design-related topics, and of professional communication strategies.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:** English B2

**Course content:** For future designers, a host of topics will be offered which will not only enhance the students' English language skills, but also their communication and design-related skills.

**Recommended or required reading and other learning resources / tools:** None

**Planned learning activities and teaching methods:** Tasks in the area of listening, speaking, reading, and writing; Partner and group work; Presentations; Discussions; Meetings, simulations and role plays; Text analysis

**Assessment methods and criteria:** 30% Meeting (evaluation criteria: language, content)

50% Presentation (evaluation criteria: language, structure, content, slide design, delivery)

20% Continuous assessment (participation in class, tests and home assignments)

**Language of instruction:** English

**Literature:** BOOKS: English design literature  
JOURNALS: English design magazines  
Course script

## Communication, Media, Sound & Interactive Design Design, Master Course(s)

City of Design – Local Networks

**Course code:** 140374104

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 1 ECTS

**Lecturer:** Karl Stocker, Eberhard Schrempf

**Learning outcome:** Setting in Graz and in the UNESCO Design City Network.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Cultural und creative networks in Graz, Austria and international

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** Blog entry

**Language of instruction:** English

**Literature:**

Karl Stocker\_ The Power of Design. Wien-New York 2013



## Design & Research 1

<b>Course code:</b>	140374108
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	1 ECTS
<b>Lecturer:</b>	Sigrid Buerstmayr, Christoph Neuhold

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media. The graduate will have acquired leadership qualities, detailed knowledge about self management, corporate management, acquisition, project management, business-friendly design processes, branding, advertising, CD and CI. The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis..

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Lectures alternating with intense phases of research. Students research and work focused on the current developments in their focus. The acquired knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Written exam

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung  
 Bob Cotton/Rich Oliver „Understanding Hypermedia“  
 Robert Jacobson (ed.), „Information Design“, Cambridge, 1999  
 Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“  
 John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley  
 Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”  
 Gene Youngblood: Expanded Cinema  
 Books: „Marketing-Management“, Philip Kotler, Friedhelm Bliemel Schäfte  
 "Werbung ist Kunst" Michael Schirner;  
 "Die Werbung ist ein lächelndes Aas" Oliviero Toscani;  
 "Die Sprache des Neville Brody" Jon Wozencroft;  
 Martin Hartmann, Rüdiger Funk, Horst Nietmann: „Präsentieren. Präsentationen: zielgerichtet und adressatenorientiert.“

Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Designing with Code

<b>Course code:</b>	140374107
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	2 ECTS
<b>Lecturer:</b>	Richard Dank

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media. The graduate will have acquired leadership qualities, detailed knowledge about self management, corporate management, acquisition, project management, business-friendly design processes, branding, advertising, CD and CI. The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis..

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Tools and role of contemporary design management, how to implement design thinking in companies, application of future-oriented innovative design principles in companies

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung  
 Bob Cotton/Rich Oliver „Understanding Hypermedia“  
 Robert Jacobson (ed.), „Information Design“, Cambridge, 1999  
 Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“  
 John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley  
 Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”  
 Gene Youngblood: Expanded Cinema  
 Books: „Marketing-Management“, Philip Kotler, Friedhelm Bliemel Schäfte  
 "Werbung ist Kunst" Michael Schirner;  
 "Die Werbung ist ein lächelndes Aas" Oliviero Toscani;  
 "Die Sprache des Neville Brody" Jon Wozencroft;  
 Martin Hartmann, Rüdiger Funk, Horst Nietmann: „Präsentieren. Präsentationen: zielgerichtet und adressatenorientiert.“  
 Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the  
Future

Krippendorff: The Semantic Turn

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Marketing and Cooperate Identities

<b>Course code:</b>	140374105
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	2 ECTS
<b>Lecturer:</b>	Karin Novozamsky

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media. The graduate will have acquired leadership qualities, detailed knowledge about self management, corporate management, acquisition, project management, business-friendly design processes, branding, advertising, CD and CI. The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis..

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Marketing concepts and strategic planning, branding and brand management, development of a corporate identity on the basis of practical case studies.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung  
 Bob Cotton/Rich Oliver „Understanding Hypermedia“  
 Robert Jacobson (ed.), „Information Design“, Cambridge, 1999  
 Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“  
 John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley  
 Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”  
 Gene Youngblood: Expanded Cinema  
 Books: „Marketing-Management“, Philip Kotler, Friedhelm Bliemel Schäfte  
 "Werbung ist Kunst" Michael Schirner;  
 "Die Werbung ist ein lächelndes Aas" Oliviero Toscani;  
 "Die Sprache des Neville Brody" Jon Wozencroft;  
 Martin Hartmann, Rüdiger Funk, Horst Nietmann: „Präsentieren. Präsentationen: zielgerichtet und adressatenorientiert.“  
 Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the  
Future

Krippendorff: The Semantic Turn

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Media Theory

<b>Course code:</b>	140374101
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	2 ECTS
<b>Lecturer:</b>	Wenzel Mracek

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media. The graduate will have acquired leadership qualities, detailed knowledge about self management, corporate management, acquisition, project management, business-friendly design processes, branding, advertising, CD and CI. The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis..

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** General media theory with special focus on digital media, detailed overview of the most important media and design theories of modernism, the history of the development of communication theories, contemporary references. Overview of media theories of the last 30 years, especially focussing on postmodern theory construction.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** oral or written exam

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung  
 Bob Cotton/Rich Oliver „Understanding Hypermedia“  
 Robert Jacobson (ed.), „Information Design“, Cambridge, 1999  
 Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“  
 John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley  
 Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”  
 Gene Youngblood: Expanded Cinema  
 Books: „Marketing-Management“, Philip Kotler, Friedhelm Bliemel Schäfte  
 "Werbung ist Kunst" Michael Schirner;  
 "Die Werbung ist ein lächelndes Aas" Oliviero Toscani;  
 "Die Sprache des Neville Brody" Jon Wozencroft;

Martin Hartmann, Rüdiger Funk, Horst Nietmann:

„Präsentieren. Präsentationen: zielgerichtet und adressatenorientiert.“

Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: Create Digital Motion, Crea Digital Music, Production Partner, E-Musician, Neural



## Psychology of Perception

<b>Course code:</b>	140374103
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	1 ECTS
<b>Lecturer:</b>	Josef Gruendler

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media. The graduate will have acquired leadership qualities, detailed knowledge about self management, corporate management, acquisition, project management, business-friendly design processes, branding, advertising, CD and CI. The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis..

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Basics of the psychology of perception and the physiology of the sensory system.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Written exam

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung  
 Bob Cotton/Rich Oliver „Understanding Hypermedia“  
 Robert Jacobson (ed.), „Information Design“, Cambridge, 1999  
 Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“  
 John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley  
 Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”  
 Gene Youngblood: Expanded Cinema  
 Books: „Marketing-Management“, Philip Kotler, Friedhelm Bliemel Schäfte  
 "Werbung ist Kunst" Michael Schirner;  
 "Die Werbung ist ein lächelndes Aas" Oliviero Toscani;  
 "Die Sprache des Neville Brody" Jon Wozencroft;  
 Martin Hartmann, Rüdiger Funk, Horst Nietmann: „Präsentieren. Präsentationen: zielgerichtet und adressatenorientiert.“  
 Books: Laura Brendel: Design Research  
 Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## 3D Media Design

**Course code:** 140374122

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Thomas Radeke

**Learning outcome:** cross-modular competences

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Planning and prototypical development of their own concepts in 3D Media Design. The emphasis lies on 3D authoring tools combined with projection/visualisation techniques.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Audio Production and Postproduction

**Course code:** 140374125

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Stefan Warum

**Learning outcome:** cross-modular competences

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Within this course standardized audio recording techniques as well as mastering audio for music and film production will be treated, whereby the main focus is on the use of digital audio effects, synchronization of audio equipment, multi-channel environments and metering audio. Practical tests and implementation of concepts will be examined on existing multi-channel projects

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Integrated course

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Screen Design

**Course code:** 140374123

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Erwin Wagner

**Learning outcome:** cross-modular competences

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** theory and practice of screen design, visual aesthetics and displays.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## User Experience Design

**Course code:** 140374121

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 2 ECTS

**Lecturer:** Konrad Baumann

**Learning outcome:** cross-modular competences

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Development of interaction and interface concepts, content oriented design, development of prototypical solutions.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Design & Research 1 (COD)

**Course code:** 140374110  
**Course type:** Compulsory  
**Course cycle:** Second  
**Semester:** 1st  
**ECTS Credits:** 4 ECTS  
**Lecturer:** Dietmar Mosbacher

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based on the lectures students research and work focused on the current developments in their focus. The acquired knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie  
Annette Gevatter, Druckreif,  
Paul Renner, Die Kunst der Typographie  
Processing: Creative Coding and Computational Art  
Helmut Schmid, Gestaltung ist Haltung  
Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie  
Journals: Create Digital Motion (Blog), Page, nDesign, Code77

## Project Work 1 – Explore (COD)

**Course code:** 140374111

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 8 ECTS

**Lecturer:** Glaezer, Mobacher, Perraudin

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Realisation of projects combining various media and synergetically using different technologies. In the project works different production processes are implemented in a practical division of labour. In the first project work emphasis lies on the experimental research of up-to-date scenarios and products in communication, media and interaction design, which have to be finalised with a demonstrator or mock-up. Main focus is put on the development of an innovative and visionary idea.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie  
Annette Gevatter, Druckreif,  
Paul Renner, Die Kunst der Typographie  
Processing: Creative Coding and Computational Art  
Helmut Schmid, Gestaltung ist Haltung  
Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie  
Journals: Create Digital Motion (Blog), Page, nDesign, Code77



## Design & Research 1 (IAD)

<b>Course code:</b>	140374116
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	4 ECTS
<b>Lecturer:</b>	Daniel Fabry

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments). Knowhow in usability, testing, usability analysis methods as defined by user-centred interface design. Analysis and design of complex processes concerning human-machine-interaction, design of apps for mobile devices, basic knowledge of the underlying psychological and physiological procedures.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based on the lectures students research and work focused on the current developments in their focus. The acquired knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Bücher: Steven Poole, Trigger Happy  
 Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks  
 Massimo Banzi, Getting Started with Arduino  
 Cooper, Reimann Cronin: About Face: Interface und Interaction Design  
 Interaction Design Beyond HumanComputer Interaction  
 Bücher: Donald A. Norman: The Design of Everyday Things  
 Tom Tullis, Bill Albert: Measuring The User Experience  
 Alan Cooper: The Inmates Are Running the Asylum  
 E. Bruce Goldstein: Wahrnehmungspsychologie  
 Journals: ACM: interactions, Reality

## Project Work 1 – Explore (IAD)

<b>Course code:</b>	140374117
<b>Course type:</b>	Compulsory
<b>Course cycle:</b>	Second
<b>Semester:</b>	1st
<b>ECTS Credits:</b>	8 ECTS
<b>Lecturer:</b>	Daniel Fabry et al.

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments). Knowhow in usability, testing, usability analysis methods as defined by user-centred interface design. Analysis and design of complex processes concerning human-machine-interaction, design of apps for mobile devices, basic knowledge of the underlying psychological and physiological procedures.

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Realisation of projects combining various media and synergetically using different technologies. In the project works different production processes are implemented in a practical division of labour. In the first project work emphasis lies on the experimental research of up-to-date scenarios and products in communication, media and interaction design, which have to be finalised with a demonstrator or mock-up. Main focus is put on the development of an innovative and visionary idea.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Bücher: Steven Poole, Trigger Happy  
 Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks  
 Massimo Banzi, Getting Started with Arduino  
 Cooper, Reimann Cronin: About Face: Interface und Interaction Design  
 Interaction Design Beyond HumanComputer Interaction  
 Bücher: Donald A. Norman: The Design of Everyday Things  
 Tom Tullis, Bill Albert: Measuring The User Experience  
 Alan Cooper: The Inmates Are Running the Asylum  
 E. Bruce Goldstein: Wahrnehmungspsychologie  
 Journals: ACM: interactions, Reality

## Design & Research 1 (SND)

**Course code:** 140374119

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 4 ECTS

**Lecturer:** Josef Gruendler

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media, especially sound design

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based on the lectures students research and work focused on the current developments in their focus. The acquired knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: DAFx: Digital Audio Effects, (Ed.) Zölzer U., John Wiley & Sons; Auflage: 2. Auflage (11. März 2011) , engl., ISBN-10: 0470665998, ISBN-13: 978-0470665992

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Donald A. Norman: The Design of Everyday Things.

Blog: Create Digital Music

Magazines – Electronic Musician, Computer Music

## Project Work 1 – Explore (SND)

**Course code:** 140374120

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 8 ECTS

**Lecturer:** Josef Gruendler

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media, especially sound design.

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** Realisation of projects combining various media and synergetically using different technologies. In the project works different production processes are implemented in a practical division of labour. In the first project work emphasis lies on the experimental research of up-to-date scenarios and products in communication, media and interaction design, which have to be finalised with a demonstrator or mock-up. Main focus is put on the development of an innovative and visionary idea.

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: DAFx: Digital Audio Effects, (Ed.) Zölzer U., John Wiley & Sons; Auflage: 2. Auflage (11. März 2011) , engl., ISBN-10: 0470665998, ISBN-13: 978-0470665992

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Donald A. Norman: The Design of Everyday Things.

Blog: Create Digital Music

Magazines – Electronic Musician, Computer Music

## Design & Research 3

**Course code:** 140374304

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 1 ECTS

**Lecturer:** Karl Stocker

**Learning outcome:** The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Lectures alternating with intense phases of research. Students research and work focused on the current developments in their focus. The acquired knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** Written exam, online discourse

**Language of instruction:** English

**Literature:**

Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: CODE77 (Bog), ACM Libray, IEEE

## Final Crit

**Course code:** 140374305

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** 140374305

**Learning outcome:** The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** The students' works and the portfolio are subject to feedback given by experts.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: CODE77 (Bog), ACM Libray, IEEE

## Future Design Lab

**Course code:** 140374302

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 1 ECTS

**Lecturer:** Raphaela Egger

**Learning outcome:** The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** New design concepts / interdisciplinarity - and why it's so important / designing the future / design thinking vs. design doing / iteration and prototyping / user-centered design / innovation design and the role of fab labs, design labs, maker spaces and creative spaces / the future of work and workspaces. What is a "future design lab"?

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** written exam, online discourse

**Language of instruction:** English

**Literature:**

Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: CODE77 (Bog), ACM Libray, IEEE

## International Design Discourse 2

**Course code:** 140374303

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 1 ECTS

**Lecturer:** Nora al-Badri

**Learning outcome:** The graduate will have acquired detailed knowledge about the state of the art of the international design discourse, will be able to actively take part in newsgroups and blogs as well as in public discussions and incorporate the gained knowhow into his/her own work. The graduate is familiar with the basics of scientific work and state of the art of research in design, and s/he can apply scientific methods to his/her own master thesis.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Current design research is being discussed on the basis of literature, case studies and web as well as blog entries. What is Research by Design, how could a creative, scientific work look like?

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Lecture

**Assessment methods and criteria:** written exam, online discourse

**Language of instruction:** English

**Literature:**

Books: Laura Brendel: Design Research

Höger: Design Research: Strategy Setting to Face the Future

Krippendorff: The Semantic Turn

Journals: CODE77 (Bog), ACM Libray, IEEE



## Creation and Conception

**Course code:** 140374306

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Christoph Almasy, Ulf Harr

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Experimental visual design on the basis of an associative task with emphasis on interactive media design (expanded cinema, gamification, interactive storytelling, interactive environments).

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie

Annette Gevatter, Druckreif,

Paul Renner, Die Kunst der Typographie

Processing: Creative Coding and Computational Art

Helmut Schmid, Gestaltung ist Haltung

Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie

Journals: Create Digital Motion (Blog), Page, nDesign, Code77

## Design & Research 3 (COD)

**Course code:** 140374309

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Dietmar Mosbacher, Gabriele Lechner

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Lectures alternating with intense phases of research. Students research and work focused on the current developments in their focus. The acquainted knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie  
Annette Gevatter, Druckreif,  
Paul Renner, Die Kunst der Typographie  
Processing: Creative Coding and Computational Art  
Helmut Schmid, Gestaltung ist Haltung  
Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie  
Journals: Create Digital Motion (Blog), Page, nDesign, Code77

## Digital Production

**Course code:** 140374307

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Matthias Kampitsch

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Conceptual typography, micro typography, intense occupation with typography focused on digital production, grid creation and conception

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie  
Annette Gevatter, Druckreif,  
Paul Renner, Die Kunst der Typographie  
Processing: Creative Coding and Computational Art  
Helmut Schmid, Gestaltung ist Haltung  
Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie  
Journals: Create Digital Motion (Blog), Page, nDesign, Code77

## Project Work 3 – Product (COD)

**Course code:** 140374310

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 14 ECTS

**Lecturer:** Pivec, Mosbacher et al.

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based upon the prototype realised in Project Work 2 a realistic product/scenario is being developed. In this process, the students learn how a visionary, innovative idea of an experimental prototype is turned into a marketable product/scenario.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie  
Annette Gevatter, Druckreif,  
Paul Renner, Die Kunst der Typographie  
Processing: Creative Coding and Computational Art  
Helmut Schmid, Gestaltung ist Haltung  
Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie  
Journals: Create Digital Motion (Blog), Page, nDesign, Code77

## Visual Analysis

**Course code:** 140374308

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Nikola Tomic

**Learning outcome:** Comprehensive knowledge of theory and practice of analogue and digital visual design, from DTP to E-Zine.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Analysis of visual content, quantitative and qualitative methods

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Friedrich Forssmann & Ralph de Jong, Detailtypographie

Annette Gevatter, Druckreif,

Paul Renner, Die Kunst der Typographie

Processing: Creative Coding and Computational Art

Helmut Schmid, Gestaltung ist Haltung

Hans-Peter Willberg & Friedrich Forssmann, Lesetypographie

Journals: Create Digital Motion (Blog), Page, nDesign, Code77

## App Design 2

**Course code:** 140374318

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Matthias Reischer

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments)

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Design focused development for mobile devices (smartphone, tablet, iOS and Android).

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Steven Poole, Trigger Happy

Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks

Massimo Banzi, Getting Started with Arduino

Cooper, Reimann Cronin: About Face: Interface und Interaction Design

Interaction Design Beyond HumanComputer Interaction

Journals: ACM: interactions, Reality

## Design & Research 3 (IAD)

**Course code:** 140374319

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Daniel Fabry

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments)

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Lectures alternating with intense phases of research. Students research and work focused on the current developments in their focus. The acquainted knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Steven Poole, Trigger Happy

Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks

Massimo Banzi, Getting Started with Arduino

Cooper, Reimann Cronin: About Face: Interface und Interaction Design

Interaction Design Beyond HumanComputer Interaction

Journals: ACM: interactions, Reality

## Interaction Design 2

**Course code:** 140374316

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Daniel Fabry

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments)

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Planning and prototypical development of own concepts in interaction design. Emphasis lies on the use of sensory technologies and of augmented reality concepts in order to develop supporting technologies in the field of ambient assisted living, working, and the like.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Steven Poole, Trigger Happy

Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks

Massimo Banzi, Getting Started with Arduino

Cooper, Reimann Cronin: About Face: Interface und Interaction Design

Interaction Design Beyond HumanComputer Interaction

Journals: ACM: interactions, Reality



## Project Work 3 – Product (IAD)

**Course code:** 140374320

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 14 ECTS

**Lecturer:** Daniel Fabry, Josef Gruendler et al.

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments)

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based upon the prototype realised in Project Work 2 a realistic product/scenario is being developed. In this process, the students learn how a visionary, innovative idea of an experimental prototype is turned into a marketable product/scenario.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Steven Poole, Trigger Happy

Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks

Massimo Banzi, Getting Started with Arduino

Cooper, Reimann Cronin: About Face: Interface und Interaction Design

Interaction Design Beyond HumanComputer Interaction

Journals: ACM: interactions, Reality

## User Experience Design 2

**Course code:** 140374317

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Konrad Baumann

**Learning outcome:** Skills in interaction and interface design of interactive media as well as in the field of advanced technologies (touchless interfaces, media spaces, sensory environments)

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based upon User Experience 1 further design possibilities concerning user experiences in the interaction with a product, a service, an environment or an institution are being taught.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Steven Poole, Trigger Happy

Programming Interactivity: A Designer's Guide to Processing, Arduino, and OpenFrameworks

Massimo Banzi, Getting Started with Arduino

Cooper, Reimann Cronin: About Face: Interface und Interaction Design

Interaction Design Beyond HumanComputer Interaction

Journals: ACM: interactions, Reality

## Design & Research 3 (MED)

**Course code:** 140374314

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Orhan Kipcak

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based on the 2nd semesters results, the students research and work focused on the current developments in their focus. The acquired knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung

Bob Cotton/Rich Oliver „Understanding Hypermedia“

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“

John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley

Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”

Gene Youngblood: Expanded Cinema

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Dynamic Media 2

**Course code:** 140374311

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Peter Venus

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Experimental visual design on the basis of an associative task with emphasis on interactive media design (expanded cinema, gamification, interactive storytelling, interactive environments).

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung

Bob Cotton/Rich Oliver „Understanding Hypermedia“

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“

John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley

Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”

Gene Youngblood: Expanded Cinema

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Project Work 3 – Product (MED)

**Course code:** 140374315

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 14 ECTS

**Lecturer:** Kipcak, Pivec, et al.

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Based upon the prototype realised in Project Work 2 a realistic product/scenario is being developed. In this process, the students learn how a visionary, innovative idea of an experimental prototype is turned into a marketable product/scenario.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung

Bob Cotton/Rich Oliver „Understanding Hypermedia“

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“

John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley

Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”

Gene Youngblood: Expanded Cinema

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Story and Visualisation

**Course code:** 140374313

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 1 ECTS

**Lecturer:** Hoier, Steinhauser

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Development of persuasive and motivational content based on narrative and interactive concepts using digital media. Effectiveness of media-based messages.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung

Bob Cotton/Rich Oliver „Understanding Hypermedia“

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“

John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley

Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”

Gene Youngblood: Expanded Cinema

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Video and Animation 2

**Course code:** 140374312

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Lukas Schwarzkogler

**Learning outcome:** Comprehensive artistic and theoretic skills in the field of time-based media

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Design and development of 2D and 3D animation with and without motion tracking technologies. Professional use of respective analogue and digital tools.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

### Literature:

Books: Jeff Bellatoni, Matt Woolman: TYPE in MOTION – innovative digitale gestaltung

Bob Cotton/Rich Oliver „Understanding Hypermedia“

Robert Jacobson (ed.), „Information Design“, Cambridge, 1999

Isaac Victor Kerlow – „The Art of 3-D Computer Animation and Imaging“

John Wiley & Sons, 2003; James Foley et al. – „Computer Graphics, Principles and Practice“ von Foley

Addison Wesley, 2003; Alan Watt – “3D Computer Graphics”

Gene Youngblood: Expanded Cinema

Journals: Create Digital Motion, Create Digital Music, Production Partner, E-Musician, Neural

## Advanced Postproduction

Course code: 140374322

Course type: Compulsory

Course cycle: Second

Semester: 3rd

ECTS Credits: 2 ECTS

Lecturer: Andreas Fabianek

Learning outcome:

Mode of delivery: Face-to-face

Prerequisites and co-requisites:

**Course content:** Advanced audio-techniques in the post production process. Fokus lies on mastering, synchronization, realtime-synthesis, soundrestauration, pluginarchitecture and programming

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**



## Design & Research 3 (SND)

Course code: 140374324

Course type: Compulsory

Course cycle: Second

Semester: 3rd

ECTS Credits: 2 ECTS

Lecturer: Josef Gruendler

Learning outcome:

Mode of delivery: Face-to-face

Prerequisites and co-requisites:

**Course content:** Lectures alternating with intense phases of research. Students research and work focused on the current developments in their focus. The acquainted knowledge should be transferred between topics and semesters

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Physical Modelling of Sound and Material Science

Course code: 140374323

Course type: Compulsory

Course cycle: Second

Semester: 3rd

ECTS Credits: 2 ECTS

Lecturer: Josef Gruendler

Learning outcome:

Mode of delivery: Face-to-face

Prerequisites and co-requisites:

**Course content:** Basic vibratory systems – starting from simple resonant lumped mass-spring system (dimensionless), cavity resonator and vibrating plates (multi-dimensional resonant systems), sound textures and state-of-the-art sound synthesis methods to rebuild material properties and simple mechanical structures.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Project Work 3 – Product (SND)

Course code: 140374325

Course type: Compulsory

Course cycle: Second

Semester: 3rd

ECTS Credits: 14 ECTS

Lecturer: Josef Gruendler et al.

Learning outcome:

Mode of delivery: Face-to-face

Prerequisites and co-requisites:

**Course content:** Based upon the prototype realised in Project Work 2 a realistic product/scenario is being developed. In this process, the students learn how a visionary, innovative idea of an experimental prototype is turned into a marketable product/scenario.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Sonification and Acoustic Displays

**Course code:** 140374321

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 3 ECTS

**Lecturer:** Katharina Vogt

**Learning outcome:**

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** In the course the following topics will be covered:

- Auditory Scene Analysis and specific aspects of auditory perception as the basis of sonification
- Definition, development and goals of sonification
- Methods of sonification (e.g., audification, parameter mapping, model-based sonification)
- Examples of „spontaneous“ and specifically researched sonifications from various different disciplines
- Examples of sonification in computer music and media arts
- Design-strategies, interdisciplinary communication and evaluation approaches
- Technical preconditions and possibilities (short introduction to specific programming environments and discussion of hardware and practical issues)

After introducing each of the above topics, accompanying exercises will be implemented by the participants.

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** immanent examination character

**Language of instruction:** English

**Literature:**

## Exhibition Design, Master Course(s)

### Project Work 1 – Conception of a Large-scale Exhibition

**Course code:** 140375109

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 1st

**ECTS Credits:** 12 ECTS

**Lecturer:** Karl Stocker, Erika Thuemmel, Tomislav Bobinec et al.

**Learning outcome:** Team work, project timing, implementation strategies, networking.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Starting with an idea - ending up with a concept: important steps to develop an exhibition concept

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** Small group work

**Language of instruction:** English

**Literature:**

Books: specialist literature, project-related

Journals: specialist literature, project-related

## English for Specific Purposes

**Course code:** 140374309

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 2 ECTS

**Lecturer:** Martina Windisch-Koenig

**Learning outcome:** written and spoken communication in English as a foreign language  
=CLIL (content and language integrated learning)

**Mode of delivery:** Face-to-face

### Prerequisites and co-requisites:

**Course content:** written and spoken communication, text and listening comprehension pronunciation; effective Business Meetings: special language of meetings, theory and practice; CV and cover letter - job application in an English speaking country; British & American English; the role of the exhibition designer (from: The Manual of Museum Exhibitions); Paula Antonelli, senior curator at the Museum of Modern Art in NYC: Ted Talk; John Maeda, designer and former president of Rhode Island School of Design: Context in Exhibitions and Ted Talk ; Museum Hours; Jake Barton, media designer: participatory exhibitions, Ted Talk; Sherry Turkle, sociologist: redefining human connection and communication; grammar, selected topics; Master's thesis: phrases for holding a presentation, how to write an abstract

### Recommended or required reading and other learning resources / tools:

**Planned learning activities and teaching methods:** Seminar

**Assessment methods and criteria:** active participation in class

**Language of instruction:** English

**Literature:** Handouts including parts of  
The language of meetings (by Malcolm Goodale),  
The Manual of Museum Exhibitions (by Barry Lord and Gail Dexter Lord),  
Representation. Cultural Representations and Signifying Practices (by Stuart Hall),  
The Designer as Author, Producer, Activist, Entrepreneur, Curator, Collaborator (by Steven McCarthy),  
The Laws of Simplicity (by John Maeda)  
Englisch Aktiv Business (by PONS)  
Spotlight Magazine  
English Grammar in Use (by Murphy)

## Project Work 2 – Realisation of an Exhibition

**Course code:** 140375310

**Course type:** Compulsory

**Course cycle:** Second

**Semester:** 3rd

**ECTS Credits:** 12 ECTS

**Lecturer:** Anke Strittmatter, Erika Thuemmel et al.

**Learning outcome:** Team work, project timing, implementation strategies, networking.

**Mode of delivery:** Face-to-face

**Prerequisites and co-requisites:**

**Course content:** Starting with an idea - ending up with a concept: important steps to develop an exhibition concept

**Recommended or required reading and other learning resources / tools:**

**Planned learning activities and teaching methods:** Project thesis

**Assessment methods and criteria:** Evaluation of the result

**Language of instruction:** English

**Literature:**

Books: specialist literature, project-related

Journals: specialist literature, project-related

## *Research Competence Areas*

Apart from teaching, research and project work play an important role at FH JOANNEUM University of Applied Sciences. The three institutes located on the Bad Gleichenberg campus have developed several Research Competence Areas that actively engage in research and project work. These include:

### Research Unit in Applied Computer Sciences

**Multimedia and Interface Development** (The World Wide Web, multimedia computer systems, smartphones and smart homes: the increasingly rapid pace at which new devices and applications are being developed raises the question of how human machine interfaces should be designed and programmed to ensure that their use is not only intuitive but also fun, and appeals to as many senses as possible).

**Big Data & Business Analytics** (The rapidly advancing digitisation of business and communication processes generates unimaginably large and diverse quantities of data. The challenge is to extract valuable information from the complex data in order to support decision-making by providing timely and analytical forecasts)

**Healthy Ageing – Ambient Assisted Living** (For many people, having assistive technologies within their own four walls can offer an alternative to residential care. The research fields in this area range from smart home applications which provide support in carrying out day-to-day activities, to sensor-based and remote monitoring of the chronically ill, through to care robots).

**Documentation Standards and Data Management in the Health System – HL7, CDISC, DRG** (The quantity and complexity of data generated in routine hospital operations, local practices, and clinical studies is growing rapidly. To this we can add the recent volumes of health data generated by quantified self devices such as fitness wristbands and similar. One important area of research is the development of electronic health records (ELGA))

**Mobile Application and Smart Health Care** (New technologies and framework conditions have triggered a trend away from standard applications and towards mobile and personalised solutions, both in the field of government, science and the economy, as well as the private sphere. The researchers at the Institute of Internet Technologies and Applications use various technological and interdisciplinary approaches to meet these challenges).

**IT Security** (With a Master's programme in IT & Mobile Security, IT security is a strong research focus at the Institute of Internet Technologies and Applications. Research topics include developing secure software, detecting security gaps in different mobile operating systems, creating mobile solutions for enterprises, as well as infrastructure availability and network security in industries such as aviation).



## Research Unit in Management

**Health Management and Public Health** (The experts of the Institute of Health and Tourism Management develop, implement and evaluate health promotion, workplace health management and primary health care projects for the public sector, NGOs and SMEs. They are also involved in developing innovations in participatory health research, health impact assessment and in sports science).

**International Finance Industry** (Research and development at the Institute of Banking and Insurance Industry over the medium to long-term will focus on topics including Islamic finance, integrated value oriented bank management and financing, as well as claims modelling in insurance companies. Both quantitative and qualitative methods are applied as appropriate).

**International Business Strategies and Processes** (Experts at the Institute of International Management develop scientific market entry strategies for international companies, and compile potential analyses for public and private bodies. They help enterprises in knowledge management for international business operations, and research into new business models and entrepreneurship).

**Sustainable (Health) Tourism** (The research team at the Institute of Health and Tourism Management uses scientific methods to manage, analyse and devise sustainable tourism projects in communities, regions and health tourism establishments. Health tourism is an increasingly important factor in businesses operating at the interface between health, leisure and management. Customer structures, supply and stakeholder analyses are conducted according to our clients' requirements. These provide the basis for developing science-based concepts in fields including corporate social responsibility and quality management).

**Competitiveness through Digitisation, Smart Production and Service Engineering** (Industry 4.0 is expected to bring greater efficiency, flexibility and new (digital) business models. Service engineering is designed to strengthen regional competitiveness by allowing businesses with distinctive, hybrid products – product-service systems – to generate greater revenues and profits. The experts at the Institute of Industrial Management support Austrian businesses in developing their individual strategies and procedures, help them devise innovative business models and publish the resulting scientific findings).

**Quality-Oriented Higher Education Development in an International Context** (The Institute of International Management has developed special research expertise in quality-oriented higher education development in an international context. This involves carrying out projects with universities on strategic development towards modern financial and knowledge management, and on strengthening the international competitiveness of universities).

## Research Unit in Building Energy and Society

**Socioecological Urban and Regional Development** (Socioecological research is transdisciplinary. It takes as its starting point new and complex challenges, involves urban ecology, socioecology and environmental sociology, and recommends means of optimising people's urban or local environment – their home base)

**Smart City Modelling and Simulation** (Smart cities require interdisciplinary solutions for dealing with the core areas of energy, mobility and urban development. Due to the extensive quantities of data available, it requires state-of-the-art simulation programs to produce meaningful analyses which reveal the actual dynamic processes and complex relationships within cities and regions).

**Social Inclusion and Innovation** (Inclusion means giving people at the margins of society, or in particularly precarious situations, access to relevant social systems such as education, work, homes, energy and mobility. This requires openness both on the part of the established majority and of disadvantaged people and groups).

**Wood Building and Design** (The expanding timber construction sector is in need of new technological and design solutions. The modern 3-dimensional planning methods available today pose new challenges to manufacturing and the interface with timber production, thus opening up new areas of research).

**Glass Construction** (The focus of research in the field of glass construction lies in determining the flexural tensile strength of various types of glass, as well as developing structures and supporting structures in thin glass with a thickness of two millimetres and less).

**Lifecycle-Based Building Design** (Sustainability, the conservation of resources and energy efficiency are all receiving increasing attention in the construction sector. Consequently, a lifecycle approach incorporating social, ecological and economic aspects is essential both for new and existing buildings).

## Research Unit in Media & Design

**Interaction and Learning in Real and Virtual Environments** (Complex content and procedures demand new and innovative methods of interaction and visualisation. We are developing and applying new forms of input and output devices and methods, such as full-body interfaces, virtual and augmented reality displays, as well as innovative and game-based learning and training methods for specific subject areas).

**Information Design in Media and Interaction Spaces** (We offer our expertise in visual communications, exhibition design and responsive environments. Our focus remains on the user, the public, and on creating a tangible experience).

**Web Literacy** (Research activities at the Institute of Journalism and Public Relations focus on online communication and its prerequisite - web literacy. We explore digital communication processes, journalism, PR and social media, and develop prototypical content strategies for organisations).

**Mobility Design** (This research area examines how transport means and systems can be intelligently designed in order to reconcile ecological objectives, industrial process requirements and regionally differing mobility needs to create new and smart integrated concepts)

**Eco-Innovative Design** (Eco-innovative design research at the Institute of Product & Transportation Design examines the design of products and systems which combine ecological objectives and industrial process requirements to form a new and successful integrated concept).

## Research Unit in Health Studys

**Development of Special Analytical Methods in Biomedicine and Industrial Pharmaceutics** (The Institute investigates the impact of various environmental influences on the human organism and develops medical devices for use in molecular diagnostics in close cooperation with clients in industry and business)

**Development and Evaluation of Evidence-Based Innovative Diagnostic and Therapeutic Procedures** (Interdisciplinary research enables innovative evidence-based diagnosis and therapy to be developed and evaluated taking into account physical, psychological and social influences)

**Health Promotion and Prevention Strategies** (The various occupational groups of the Department of Health Studies work together in close, interdisciplinary cooperation to develop and evaluate public health strategies for health promotion and preventive healthcare. Current focuses include healthy aging and obesity research)

**Health Services Research for the Healthcare Professions** (The Department of Health Studies carries out demand surveys and evaluates existing healthcare concepts and health service structures from the perspective of the various health professions. This is a prerequisite for improving healthcare services and enabling efficient control of the associated processes)

**Innovative Training Concepts for the Healthcare Professions** (The development, implementation and evaluation of modern training concepts provide the basis for sound education and training in the health and nursing professions. This makes it possible to build responsibilities and competencies in accordance with international quality standards).



## Research Unit in Engineering

**Power Electronics in Energy Systems & Mobility** (Modern energy and mobility systems are based on the conversion of electrical energy. The Institute of Electronic Engineering conducts research in this field and, by setting up the JOANNEUM Power Electronics Center, has established a major R&D centre for highly efficient and extremely miniaturised power electronics systems).

**Unmanned Aircraft and Aircraft Systems** (The focus of research at the Institute of Aviation lies in innovative aircraft design, materials and construction methods. Specific areas of expertise include approval aspects of unmanned aircraft, novel multicopter designs, aircraft icing experiments and simulations, and avionics systems).

**Overall Vehicle Engineering – Numerical and Experimental Analysis** (The focus of research at the Institute of Automotive Engineering lies in innovative vehicle design and sustainable mobility, with a focus on the vehicle as a whole. Research fields include virtual system development – model development and simulation – as well as testing: from mechatronic control systems and applications through to components and entire systems).

**Cooperative Education in Engineering** (The employability of graduates in the engineering sciences is currently a popular topic of discussion. Combining a solid academic education with relevant experience in an industrial enterprise is not only an innovative approach in the tertiary education sector, it also provides a means of ensuring the employability of engineering graduates).

**Integrated Development of Innovative Protein Sources for Food and Feed Production** (Supplying populations with high-quality protein has been recognised as a key issue in Europe. One approach to ensuring the economically, environmentally and socially sustainable supply of protein is to turn to alternative food and feed sources, such as insects, fungi, algae and local legumes)).

**Smart Factory** (In Austria, manufacturing industry accounts for 29.3% of total value added. In Styria this figure is even higher, at 35%, making it the most important sector of the economy. Added to this, every second job in Styria is directly or indirectly related to manufacturing industry. Consequently, all disciplines relevant to production technology need to be continuously advanced to ensure that Styria remains an economically and environmentally sustainable place to live and work in the long term).

## General Information on Living in Graz

The following section should provide some practical advice regarding your stay in Graz.

### Climate

The climate of Graz is continental. We have cold winters and hot summers. In winter, we normally get some snow, but it often melts away soon. Don't worry: Houses and dorms are well isolated and have central heating, so at least the indoor temperature is always comfortable. You can find the current weather forecast on [www.wetter.at](http://www.wetter.at)

### Public transportation in Graz

In Graz, you can go around by public transportation easily. Six tram lines and a lot of different bus lines provide a very good public transportation net.

Tickets are available directly in the tram (there is a ticket machine) or in the bus (with the bus driver). You can also buy tickets in any tobacco shop 8Trafik 9 or at the mobility centre.

### Ticket prices

1-Hour-Ticket	2,30€
24-Hour-Ticket	5,10€
10 Zone-Ticket	20,00€
Weekly-Ticket	14,30€
Monthly Ticket	47,60€
Half-year-Ticket	244,00€

### Bicycles

In Graz among students it is very popular to go by bicycle. Indeed, it is a very fast and convenient way of being mobile. Information on renting a bike can be found at <https://grazbike.at/en>. Yet, renting a bike is rather expensive if you want to use it for some weeks. So most probably, it would be cheaper buying a used bike and reselling it upon your departure. The following stores offer used bicycles.

Rebikel: <http://www.rebikel.at/>

Drahtesel:<http://graz.radln.net/cms/beitrag/10895432/28195258/>

Bicycle:<http://www.bicycle.at/de/verkauf/>

You could also search for used bicycles on platforms like [www.shpock.com](http://www.shpock.com) or [www.willhaben.at](http://www.willhaben.at)

## Eating in Graz

People in Graz like eating out. There must be a valid reason, why Graz is labelled as „capital of delight “. A huge variety of different restaurants and bars are waiting for you.

You can find all bars, restaurants and cafes at the Restaurant Guide Graz:  
<http://www.graztourismus.at/en/eat-and-drink/restaurant-guide>.

Most popular by our students is Erasmus Pub...

## Telephone

Austria has one of the highest mobile phone per capital rates in the world. Thus in many apartments there are no conventional telephone networks. If there is a phone in your apartment, ask your flat mates about the prices and cheapest time. It is often cheaper and above all more convenient to buy a mobile phone.

When it comes to international calls, nowadays the best option is to make these calls via online service like Whatsapp, Skype or Facetime.

The phone code for Graz within Austria is 0316, calling from abroad you have to dial ++43 (0043) for Austria and then 316. Emergency Calls Emergency calls are for free and can be made from any phone:

**Ambulance 144**

**Fire brigade 122**

**Police 133**

**Doctor's emergency service 141** (in the evening and on weekends).

## Registration and Visa

Please read the following instructions carefully. Not fulfilling the legal requirements of your stay might have serious consequences.

### Citizens from EU/EAA

Citizens from the EU/EEA (European Economic Area) member states do not have to apply for visa. Nevertheless, you need to make sure to bring a valid travel document (passport, personal identity card) with you. If you are only staying for less than three months, there are no further requirements.

### Stays for longer than three months

If you plan to stay longer than three months in Austria, you have to apply for a “Anmeldebescheinigung” in Graz within these first two months. Contact: Amt der Steiermärkischen Landesregierung, Fachabteilung 7C Paulustorgasse 4, 8010 Graz

Please note that you need to prove sufficient financial resources for your stay. Usually, a scholarship contract would be sufficient, but to be on the safe side, we recommend bringing a bank statement. Please make sure to give notice of your departure by e-mail: [fa7c@stmk.gv.at](mailto:fa7c@stmk.gv.at)

### Citizens from Non-EU-Countries

Which requirements you have to fulfil, depends on the duration of your stay:

#### Stays for less than six months

Non EU- or EEA-citizens staying in Austria for a period of up to six months need a visa and must apply for it at the Austrian embassy in their home countries. Please contact the Austrian embassy/consulate in your country of residence to find out which application documents are required. Please note that visas can NOT be applied for in Austria and can NOT be extended in Austria



## Stays for more than six months

Non EU- or EEA-citizens staying in Austria for more than six months need a residence permit (Aufenthaltsbewilligung) which can be obtained from the Austrian embassy/consulate in your country of residence. Please contact us early enough to provide you with the confirmation of your acceptance.

**EXCEPTION:** Citizens from various countries can apply for the “Aufenthaltsbewilligung” after their arrival in Graz. These countries include for instance Australia, Canada, Japan, Mexico and the USA. For a complete list and more detailed information, please check <https://oead.at/en/to-austria/entryresidence-and-employment/nationals-of-third-countries/#students-with-entrance-examinationstays-for-more-than-6-months>. In this case, trips must be arranged for the students to enter the Schengen Area in Austria (Vienna or Graz)! The process including pick-up of the residence permit card must be completed within the first 90 days of entry into the Schengen Area.

## Registration at the City of Graz

All incomings, no matter if EU citizens or third country nationals, have to register themselves at the city of Graz within the first three days upon their arrival. In order to register you have to fill in a “Meldezettel” (registration form) and get the signature of the owner of your accommodation or the management of the students’ dorm. The registration form can be downloaded at <http://www.graz.at/cms/dokumente/10024916/e05a999a/Meldezettel.pdf>. There is an English guide how to fill in the

**Meldezettel** at the following website:

[https://static.unigraz.at/fileadmin/bib/downloads/studierende/incoming/how\\_to\\_fill\\_in/bi\\_bwww\\_meldezettelhowto\\_en.pdf](https://static.unigraz.at/fileadmin/bib/downloads/studierende/incoming/how_to_fill_in/bi_bwww_meldezettelhowto_en.pdf). Nevertheless, you have to fill in the German form, this is only a guide. Basically, you can do the registration at each service centre of the city of Graz. The addresses of the service centres is available at the following website: <https://www.graz.at/cms/ziel/7829988/DE/>

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Make sure to take your passport with you. The following service centres might be most convenient for you:

### Servicecenter Innere Stadt

Amtshaus, Schmiedgasse 26, 8010 Graz Opening hours: Monday and Wednesday 7 am – 5 pm, Tuesday, Thursday and Friday 7 am – 1 pm

### Servicestelle Stiftingtal

(directly at the stairs leading to the university hospital area) Stiftingtalstraße 3, 8010 Graz Opening hours: Monday: 7 am – 6 pm, Tuesday – Friday: 7 am – 1 pm.

When leaving Austria, you have to give notice of your departure at the service centres again.

## The Campus Graz





