

# LV VERZEICHNIS EN

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Course unit

## General English

### General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_GKO_GE1_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.25 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basic e-mail writing (formal and informal register in e-mails)	... to demonstrate awareness of formal and informal register in e-mail writing ... to write simple e-mails in different work-related settings
Basic grammar as required on B2 level (present tense, past tense, present perfect tense, past perfect tense)	... to use grammatical structures (on B2 level) orally and in writing correctly ... to demonstrate awareness of different past and present tense notions ... to talk and write about present and past events using correct tenses and tense forms
Giving directions	... to ask for and give directions in different contexts using appropriate terminology

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Making contact and introductions	... to make small-talk and socialise with people in different everyday life and professional contexts ... to introduce themselves and others

## Required and recommended reading\*

<b>Required reading:</b>	Brieger, Nick; Pohl, Alison: Technical English: vocabulary and grammar; Summertown Publishing  Murphy, Raymond: English grammar in use: a self-study reference and practice book for intermediate students of English with answers; Cambridge University Press
<b>Recommended reading:</b>	Mann, Malcolm; Taylore-Knowles, Steve: Destination B2 Grammar&Vocabulary; Hueber Verlag
<b>Other course materials:</b>	Scientific Journals: topical articles from newspapers, magazines, books Sources on the internet

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	Es sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesterfolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesterfolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	25.50 teaching sessions	19.12 hours
<b>Teaching method:</b>	Lecture, Role play	
<b>Social methods:</b>	Pair work, Group work, Plenum	
<b>Work assignments</b>		5.00 hours
<b>Teaching method:</b>	Excercise, Preparation of written work	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		7.13 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.50 hpw</b>	<b>25.50 teaching sessions</b>
		<b>31.25 hours</b>

### Course unit

## General English

### General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_GKO_GE2_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.25 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English



## Course contents and learning outcomes

Course contents	Learning outcomes
Telephoning (Leaving messages, Making appointments)	Upon successful completion of the course unit, students are able to ... ... to take and make general phone calls ... to leave messages for someone ... to connect an incoming phone call to s. else ... to take messages ... to make arrangements/appointments
Basic grammar as required on B2 level (adjective and adverb, future tenses, prepositions of time)	... to use grammatical structures (on B2 level) orally and in writing correctly ... to produce phrases in future tense and use them when necessary ... to display a good command of prepositions of time ... to distinguish between adjectives and adverbs and use accordingly
Recruitment and training (i.e.: job interview)	... to present themselves in the course of a job interview ... to describe their weaknesses in a positive way ... to highlight their strengths ... to inform about their educational background and their work experience
Letter of application	... to write a letter of application using functional language needed ... to translate a job ad and compose an adequate response
CV	... to compose a CV according to current standards ... to use appropriate English terms to describe their educational background, work experience and skills
Safety precautions (Health and safety at work)	... to inform about safety precautions at their work place

## Required and recommended reading\*

<b>Required reading:</b>	Brieger, Nick; Pohl, Alison: Technical English: vocabulary and grammar; Summertown Publishing  Murphy, Raymond: English grammar in use: a self-study reference and practice book for intermediate students; with answers; Cambridge University Press
<b>Recommended reading:</b>	Mann, Malcolm; Taylore-Knowles, Steve: Destination B2 Grammar&Vocabulary; Hueber Verlag

<b>Other course materials:</b>	Scientific Journals: topical articles from newspapers, magazines, books Sources on the internet
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesterfolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesterfolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		25.50 teaching sessions	19.12 hours
<b>Teaching method:</b>	Lecture, Role play		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			5.00 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Individual work		

<b>Self-directed learning</b>		7.13 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.50 teaching sessions</b>	<b>31.25 hours</b>

Course unit

## Presentation techniques

### General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_TKO_PTE_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 0.75 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Specific, capturing language for presentations	... to use linking words and presentation phrases appropriately ... to engage and capture the audience by using rhetoric skills
Time management	... to present within a given time frame
Fundamental rules for presentations	... to apply different presentation techniques depending on the situation and the audience ... to structure a presentation in a logical way
Body Language	... to use basics of body language

## Required and recommended reading\*

<b>Required reading:</b>	<p>Anderson, Chris: TED Talks: The official TED guide to public speaking: Tips and tricks for giving unforgettable speeches and presentations; Houghton Mifflin Harcourt</p> <p>Erica J. Williams: Business Skills: Presentations in English: Find your voice as a Presenter; Macmillan Education</p> <p>Powell, Mark: Presenting in English: how to give successful presentations; Thomson Publishing</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Permanent assessment of the project/learning progress	Attendance teaching	60.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es verfallen sämtliche in der LV erworbenen Ergebnisse. Für eine positive Beurteilung ist die Ausarbeitung eines praktischen Fallbeispiels inklusive der theoretischen Grundlagen/Betrachtung erforderlich (Gewichtung 100 %). Die Ausarbeitung umfasst einen Zeitaufwand von rund 15 Stunden.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung (Gewichtung 100 %), die aus der Präsentation einer Ausarbeitung eines praktischen Fallbeispiels inklusive der theoretischen Grundlagen/Betrachtung sowie einer mündlichen Prüfung vor einer Kommission besteht.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Lecture, Presentation, Self-reflection, Video analysis		
<b>Social methods:</b>	Group work, Plenum		
<b>Self-directed learning</b>			6.00 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>18.75 hours</b>

### Course unit

## English for Engineers

### General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_TKO_EE1_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.75 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Revision of some technical topics from 1st and 2nd semester (Natural Sciences: Physics, Mathematics; Electrical Engineering; Mechanical Engineering; Computer Sciences)	... to inform in English about contents they learned about during their first year of studies ... to describe technical processes ... to use appropriate English vocabulary

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Technical topics (e.g: research and development, energy, IT, Telco, Engineering)	<ul style="list-style-type: none"> <li>... to discuss technical topics</li> <li>... to use functional language (giving opinion, agreeing, disagreeing, giving examples, ...)</li> <li>... to provide information about technical topics</li> </ul>
Reported Speech	... to convert direct speech into indirect speech
Conditional clauses	... to produce if-clauses using the correct tenses
Summarizing newspaper texts, video clips, listenings	<ul style="list-style-type: none"> <li>... to summarize a technical text/video clip</li> <li>... to compose a coherent text</li> <li>... to identify important information in a text/video clip</li> </ul>
Basic grammar as required on B2 level	... to use grammatical structures (on B2 level) correctly both orally and in writing

## Required and recommended reading\*

<b>Required reading:</b>	<p>Brieger, Nick; Pohl, Alison: Technical English: vocabulary and grammar; Summertown Publishing</p> <p>Murphy, Raymond: English grammar in use: a self-study reference and practice book for intermediate students; Cambridge University Press</p>
<b>Recommended reading:</b>	Mann, Malcolm; Taylore-Knowles, Steve: Destination B2 Grammar&Vocabulary; Macmillan Education
<b>Other course materials:</b>	<p>Scientific Journals: topical articles from newspapers, magazines, books</p> <p>Sources on the internet</p>

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es ist/sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesterfolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesterfolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		25.50 teaching sessions	19.12 hours
<b>Teaching method:</b>	Lecture, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Work assignments</b>			8.00 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			16.63 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.50 teaching sessions</b>	<b>43.75 hours</b>

Course unit

# English for Engineers

## General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_TKO_EE2_4
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Giving instructions for using a machine (operation manual) and describing work processes	... to compose a set of instructions for a machine ... to structure information ... to use appropriate language ... to describe steps of a work process which is familiar to them
Complex sentence structures (relative clause, subordinate clauses of result and purpose)	... to compose complex sentences
Basic grammar as required on B2 level	... to use grammatical structures (on B2 level) correctly both orally and in writing
Describing objects, graphs and charts	... to explain a graph/chart in general ... to display a sound use of tenses necessary for this task ... to make good use of necessary vocabulary ... to inform about the trends the graph/chart displays ... to give a detailed description of an object
Presentation of project on construction and production	... to give a presentation about their project on design ... to display a good use of presentation skills



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... to inform about the advantages of their project compared to others
Technical topics (e.g: robots, electronics, pulp and paper, automotive, logistics, ...)	... to discuss technical topics ... to provide information about technical topics ... to use functional language (giving opinion, agreeing, disagreeing, giving examples, ...)
Passive voice	... to convert active phrases into passive ones

## Required and recommended reading\*

<b>Required reading:</b>	Mann, Malcolm; Taylore-Knowles, Steve: Destination B2 Grammar&Vocabulary; Macmillan Education  Brieger, Nick; Pohl, Alison: Technical English: vocabulary and grammar; Summertown Publishing  Murphy, Raymond: English grammar in use a self-study reference and practice book for intermediate students; with answers; Cambridge University Press
<b>Other course materials:</b>	Scientific Journals: topical articles from newspapers, magazines, books Sources on the internet

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	Es sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesterfolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesterfolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Lecture, Role play	
<b>Social methods:</b>	Group work, Plenum	
<b>Work assignments</b>		11.00 hours
<b>Teaching method:</b>	Preparation of written work	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		26.00 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>62.50 hours</b>

### Course unit

## Business English

### General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_BKP_BE1_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.75 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Describing statistics	<ul style="list-style-type: none"> <li>... to compare and contrast various forms of statistics</li> <li>... to describe graphs, diagrammes</li> </ul>
Discursive essay writing	<ul style="list-style-type: none"> <li>... to structure paragraphs logically</li> <li>... to apply formal linking devices accordingly</li> <li>... to show a high command of idiomatic language phrases</li> <li>... to write discursive essays</li> <li>... to organize ideas in texts according to rules of discursive essays</li> <li>... to weigh advantages and disadvantages of a topic</li> </ul>
Abstract writing	<ul style="list-style-type: none"> <li>... to write informative abstracts</li> <li>... to analyze abstracts and identify good and bad examples</li> <li>... to apply formal phrases of abstract writing</li> <li>... to structure abstracts according to rules</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Emmerson, Paul: Business English handbook: advanced; the whole of business in one book; [B2, C1: for class and self study]; Macmillan Education
<b>Other course materials:</b>	Script Various sources on the internet

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesteifolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesteifolg erreicht wurde, wird für die Ermittlung der Gesamtbewertung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		25.50 teaching sessions	19.12 hours
<b>Teaching method:</b>	Case study, Learning game, Presentation, Role play		
<b>Social methods:</b>	Individual work, Group work		
<b>Work assignments</b>			5.00 hours
<b>Teaching method:</b>	Exercise, Preparation of written work		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			19.63 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.50 teaching sessions</b>	<b>43.75 hours</b>

Course unit

## Business English

### General information

<b>Course unit code:</b>	BB: AT_BA_BB_FP_BKP_BE2_6
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.75 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 6. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Making orders and complaints (on the phone and in writing)	... to make polite complaints on the telephone ... to write formal emails and letters such as complaints, orders, quotations ... to choose the correct register ... to integrate phrases suitable for business emails ... to apply business phrases for telephone calls
Small talk	... to engage a business partner in a conversation ... to show interest in a conversation partner ... to take turns effectively ... to lead a conversation / make small talk with business partners ... to use social English
Report writing	... to write different forms of reports ... to identify phrases necessary for report writing and use them appropriately ... to organize information in an appropriate way ... to choose layout suitable for purpose of report

## Required and recommended reading\*

<b>Required reading:</b>	Emmerson, Paul: Email English: includes phrase bank of useful expressions; Hueber Verlag
<b>Recommended reading:</b>	Emmerson, Paul: Business English handbook: advanced; Macmillan Education  Fine, Debra: The Fine Art of Small Talk. How To Start a conversation in any Situation; Piatkus Verlag  Sillers, Paul: Interantional Business Etiquette 20:20;  Weston, Diane: Small Talk: How to Start a Conversation with others and Make a Killer First Impression; Monkey Publishing
<b>Other course materials:</b>	Script Internet sources Videos

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesterfolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesterfolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Case study, Learning game, Presentation, Role play		
<b>Social methods:</b>	Individual work, Group work		
<b>Work assignments</b>			5.00 hours
<b>Teaching method:</b>	Excercise, Preparation of written work		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			13.25 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>43.75 hours</b>

Course unit

## Computer Science and Computer Architectures

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_IT_COS_CSA_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.50 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Numbers and codes	... convert decimal numbers to binary and hexadecimal numbers and use them for calculations ... use binary representations of floating point and BCD numbers for calculations
Digital and Boolean logic	... calculate with Boolean algebra ... show the truth tables for all basic logical gates ... use Karnaugh tables for simplification of Boolean terms
Logical and sequential components	... explain and draw the most common logical components like multiplexers/ demultiplexers, adders, barrel-shifters, comparators and arithmetic-logical units ... explain and draw the most common sequential components like clock creation and bit storage (flip-flops, latches)
Microprocessor circuitry	... explain and reproduce microprocessor circuits like registers, shifting registers, counters, memory



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Microprocessor architecture	<ul style="list-style-type: none"> <li>... explain and sketch the setup of a computer system, the processor components and the connections of the components</li> <li>... explain and decide about the usefulness of microprocessor features like RISC/CISC, Harvard/Neumann architecture</li> <li>... explain the difference between microprocessor and microcontroller</li> <li>... reproduce the basic program steps in a processor</li> </ul>
Program creation	<ul style="list-style-type: none"> <li>... explain the process of program creation</li> <li>... show the differences and advantages/disadvantages of assemblers, compilers and interpreters</li> <li>... identify basic command groups (arithmetical/logic, memory, input/output commands) and instruction sets</li> <li>... explain instruction and addressing formats</li> </ul>
Examples of existing computer architectures	<ul style="list-style-type: none"> <li>... select processor types for different tasks</li> <li>... make decisions about computing power and peripherals of computer system</li> <li>... distinguish processor families</li> </ul>
Operating systems basics	<ul style="list-style-type: none"> <li>... explain basic functions and mechanisms of an operating system like processes and threads, memory management, file system</li> <li>... distinguish existing operating systems</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Tanenbaum, Andrew: Computer Architecture; Prentice Hall International
<b>Other course materials:</b>	Lecture slides Internet pages

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	70.00 %	50.00 %
Quiz	Attendance teaching	30.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		59.50 teaching sessions	44.63 hours
<b>Teaching method:</b>	Discussion, Lecture, Quiz		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			55.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			25.37 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>3.50 hpw</b>	<b>59.50 teaching sessions</b>	<b>125.00 hours</b>

Course unit

# Smart Automation Introduction and Laboratory

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_SAI_SAI_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 1.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Smart automation introduction	... identify the three base pillars of automation technology in applications
Three base pillars of automation technology	... explain the interaction of electronics, informatics and mechanics in smart automation solutions
Practical applications in automation technology	... tell about experiences with technologies like PLC, microcontroller, IoT, simulation, robotics
Smart automation laboratory	... identify special interests in the wide field of smart automation
Lab safety instructions	... list the safety criteria they have to follow during all lab activities in their study
Set up experiments	... plan the necessary steps to realise an experiment
Analysis of technical processes	... analyse and interpret technical processes they have seen
Documentation of findings	... document findings of experiments traceable for others

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Participation	Attendance teaching	50.00 %	50.00 %
Report	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is an oral examination about a written case example including theoretical considerations (weighting 100 %).		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		29.75 teaching sessions	22.31 hours
<b>Teaching method:</b>	Discussion, Laboratory exercise, Lecture, Station mode		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			27.50 hours
<b>Teaching method:</b>	Exercise, Report		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			25.19 hours
<b>Total</b>	<b>1.75 hpw</b>	<b>29.75 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Software Development

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_IT_SOD_SOD_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.50 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Programming and algorithms	... use algorithmic thinking to solve small problems ... explain basic steps of computer programming ... create working program code (mainly C#) with a software development environment
Instructions and control flow	... decide about the usage of basic instructions ... create assignments, conditional statements and loops with different instructions
Creating software systems	... explain the creation of a software system from requirements engineering to software test and delivery
Software architecture	... model a software system using a methodical approach and UML
Object oriented programming	... explain the principles and concepts of object oriented programming like classes and inheritance, polymorphism, constructor and destructor, overwriting and overloading, access modifiers, exception handling ... use concepts on specific tasks ... show the difference to classical structured programming languages ... explain detailed concepts like abstract data types and virtual methods

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Software programming	... solve problems by using the programming language C# to create software solutions

## Required and recommended reading\*

<b>Required reading:</b>	Deitel, Harvey M.; Deitel, Paul J: Visual C# How to Program; Prentice Hall International
<b>Recommended reading:</b>	Gunnerson, Eric: C#; Galileo Open book online Stroustrup, Bjarne: The C++ Programming Language; Addison Wesley Publishing Kernighan, Brian Wilson; Ritchie, Dennis: C Programming Language; Prentice Hall International
<b>Other course materials:</b>	Lecture slides Online help Internet pages

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Excercise	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	40.00 %	50.00 %
Quiz	Attendance teaching	30.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	59.50 teaching sessions	44.63 hours
<b>Teaching method:</b>	Discussion, Lecture, Programming exercise, Quiz	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		25.00 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		55.37 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>3.50 hpw</b>	<b>59.50 teaching sessions</b>
		<b>125.00 hours</b>

### Course unit

## Electrical Engineering Basics

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EEC_EEB_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes Upon successful completion of the course unit, students are able to ...
Basic electrical quantities: charge, current potential voltage, power energy	<ul style="list-style-type: none"> <li>... explain the electrical charge, potential and voltage</li> <li>... explain the electrical current and current density</li> <li>... estimate current density of practical electrical loads</li> <li>... calculate temperature dependence of resistors</li> <li>... explain and interpret power and energy</li> <li>... explain the behavior of NTC/PTC resistors</li> </ul>
Ohm's law and Kirchhoff's law	... solve standard circuits by applying Ohm's law and Kirchhoff's laws
Thevenin's and Norton's theorem, Superposition theorem	... solve complex circuits by applying Thevenin's and Norton's' theorem
Maximum power transfer theorem	... explain the principle of maximum power transfer
Electrostatics and Coulomb's law	... explain the Coulomb's law and the concept of permittivity
Capacitor and capacitance	... explain the principle of capacitor charging and discharging
Electromagnetism and magnetic circuits	... describe magnetic units and the duality of the magnetic and electric circuit
Magnetic path	... calculate basic magnetic circuits
Force of a magnetic field	... calculate the lifting power of a magnet

## Required and recommended reading\*

<b>Required reading:</b>	Del Toro, Vincent: Electrical Engineering Fundamentals; Prentice Hall International
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\*current editions



## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Lecture		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			15.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			31.31 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# AC Circuit Analysis

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EEC_ACA_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Definitions related to alternating quantity	... calculate the basic parameters of AC signals
AC-voltage applied to resistance, capacitance and inductance	... calculate passive AC-circuits with complex notation ... calculate passive AC-circuits using vector diagrams
Series RL-, RC-, RLC-circuit	... explain and calculate resonance circuits
Three phase circuits: calculation of three phase circuits with balanced and unbalanced star and delta loads	... explain the differences of three phase systems in star and delta configuration ... calculate one line equivalent for balanced loads
Power in one and three phase systems	... explain the measurement of power in one and three wire systems

## Required and recommended reading\*

<b>Required reading:</b>	Del Toro, Vincent: Electrical Engineering Fundamentals; Prentice Hall International
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<b>Recommended reading:</b>	Laughton, M. A.: Electrical Engineer's Reference Book; Elsevier Science & Technology
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Lecture		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			18.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			28.31 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Basics Physics Deepening

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_PHY_BPD_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Oscillations and waves	... explain the theory of oscillations and waves
Introduction to solid state physics	... explain the basics of solid state physics
Vacuum- and vapour deposition techniques	... explain the basics of vacuum generation and its applications
Electromagnetic waves	... explain the origin of electromagnetic waves and its spectra
Geometrical optics	... draw and explain the beam path of simple lenses and describe the construction of a telescope and a microscope
Atomic models	... interpret atomic models from ancient to present age
Wave particle duality	... explain the double slit experiment and the wave – particle duality
Theory of relativity basics	... explain the concept of time dilatation, length contraction and gain of mass as relativistic phenomena
Scanning tunnelling microscope	... explain the function of a scanning tunnelling microscope and its technical applications

## Required and recommended reading\*

<b>Required reading:</b>	Kuhn, Karl: Basic Physics: A Self-Teaching Guide; Wiley-VCH Verlag
<b>Recommended reading:</b>	Shankar, Ramamurti: Fundamentals of Physics: Mechanics, Relativity, and Thermodynamics; Yale University Press  Pople, Stephen: Complete Physics for Cambridge IGCSE * Student book; Oxford University Elt

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Experiment, Lecture, Simulation	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Excercise	
<b>Social methods:</b>	Individual work, Group work	

<b>Self-directed learning</b>		36.31 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Basics Physics Introduction

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_PHY_BPI_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Physics as a natural science	... show the connection of physics as a natural science and technical applications
The international units system	... explain all seven basic units and their correlations to derived units
Mathematics in a nutshell	... apply basic knowledge of calculus in natural science
Kinematics (path, velocity, acceleration, the free fall, oblique throw – example of a connected movement, circular motion, angular velocity, angular acceleration)	<p>... describe basic kinematic correlations</p> <p>... identify acceleration of gravity as a particular case of constant acceleration</p> <p>... explain the interaction of movements at the example of an oblique throw and illustrate the equations in parametric form</p> <p>... explain kinematics in a circular motion as well as calculate basic examples</p>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Dynamics (work, power, mass – force – momentum, kinetic energy – potential energy, energy theorem, friction)	... describe Newton 's laws, momentum conservation and calculate basic examples ... explain the definition of energy ... explain and apply the energy theorem of mechanics ... generalize the energy theorem to all fields of physics ... explain and apply kinds of friction in solid states, fluids and gases
Moment of a torque	... describe and apply the moment of a torque

## Required and recommended reading\*

<b>Required reading:</b>	Kuhn, Karl: Basic Physics: A Self-Teaching Guide; Wiley-VCH Verlag
<b>Recommended reading:</b>	Pople, Stephen: Complete Physics for Cambridge IGCSE * Student book; Oxford University Elt  Hecht, Eugene: Schaum's Outline of College Physics; McGraw Hill Verlag  Shankar, Ramamurti: Fundamentals of Physics: Mechanics, Relativity, and Thermodynamics; Yale University Press

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Experiment, Lecture		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			10.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			24.06 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

### Course unit

## Analysis

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_BAN_ANA_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.50 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English



## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Repetitive course, sets and predicates, numbers, mathematical induction	... use mathematical methods as foundations for further special technical lectures
Elementary functions	... make use of functions to describe the behaviour of technical systems
Complex numbers	... compute with complex numbers and represent them graphically
Limits and continuity	... compute limits and apply them to technical problems
Vector calculus, matrix calculus	... determine limits of functions, solve systems of linear equations and apply them to technical problems (e.g. in mechanics)
Differential calculus with one real variable	... apply the basic differential and integral calculus to technical problems
Differential calculus with several real variables	... evaluate functions of several real variables ... determine extrema of functions with several variables
Power series, Taylor series, sequences and series	... apply power series to technical problems
Integral calculus with one real variable, methods of integration, definite and improper integrals	... compute definite and improper integrals
Ordinary differential equation of first and higher order	... solve differential equations that arise from technical problems for example in mechanical and electrical engineering

## Required and recommended reading\*

<b>Required reading:</b>	Glyn, James: Modern Engineering Mathematics; Prentice Hall International Stroud, Kenneth A.; Booth, Dexter: Engineering Mathematics; Palgrave Macmillan
<b>Recommended reading:</b>	Kreyszig, Erwin: Advanced Engineering Mathematics; Wiley-VCH Verlag
<b>Other course materials:</b>	Distributed documents with the most important definitions, formulas and terms Exercises for strengthening the theoretical foundations and for applying them to specific problems

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	45.00 %	50.00 %
Exam (written/PC)	Attendance teaching	45.00 %	50.00 %
Participation	Attendance teaching	10.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is a written exam of the entire course contents (weighting 90 %). Active class participation of the first attempt (weighting 10 %) will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		59.50 teaching sessions	44.63 hours
<b>Teaching method:</b>	Lecture, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			37.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			43.37 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>3.50 hpw</b>	<b>59.50 teaching sessions</b>	<b>125.00 hours</b>

Course unit

# Time Management

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_TCM_TIM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 1.00 ECTS Credits; 0.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basics of time management (definition of time, planning process, setting priorities)	... define „time“ ... carry out an appropriate time planning process ... set situation-oriented priorities
Time management techniques	... use practically orientated techniques to manage time
Self-organisation and self-management	... identify their time traps ... organise their daily requirements efficiently and effectively ... pay attention to their work-study-life balance

## Required and recommended reading\*

<b>Recommended reading:</b>	Allen, David: Getting Things Done – The Art of Stress-Free Productivity; Penguin Books  Morgenstern, Julie: Time Management from the Inside Out: The Foolproof System for Taking Control of Your Schedule and Your Life; Holt Paperbacks
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Participation	Attendance teaching	80.00 %	50.00 %
Preparation of written work	Work assignments	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt a case example including theoretical considerations has to be written (weighting 100 %).		
<b>Details on third attempt:</b>	At the third attempt again a case example including theoretical considerations has to be written and presented at an oral board examination (weighting 100 %).		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		12.75 teaching sessions	9.56 hours
<b>Teaching method:</b>	Discussion, Learning game, Practical/Case example, Question/Conversation based teaching, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work, Group work		
<b>Work assignments</b>			8.00 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			7.44 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>0.75 hpw</b>	<b>12.75 teaching sessions</b>	<b>25.00 hours</b>

Course unit

# Mechanics Engineering Basics

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_MB_MEB_MEB_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Foundations of Newtonian mechanics	... explain technical mechanics in the field of mechanical engineering ... link and apply the foundations of technical mechanics on the teaching content offered
Linear statics: forces, constraints, equilibrium, friction	... solve problems of rigid body mechanics
Kinematic and kinetic of a mass point	... apply the kinematics and kinetics of a mass point to practical examples
Strength of the material and component strength: linear elasticity, stress and strain analysis for special loads and in general case	... recognize strength problems and apply them to practical examples ... calculate the dimensioning of beams and shafts ... apply linear elasticity to technical problems ... determine deformation analysis for special loads

## Required and recommended reading\*

<b>Required reading:</b>	Gross, Dietmar; Hauger, Werner; Schröder, Jörg: Engineering Mechanics 1, 2, 3; Springer Verlag
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<b>Recommended reading:</b>	Landau, L. D.; Lifshitz, E. M.: Mechanics and Electrodynamics, Vol. 1.; Franklin Book Company, Inc.
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			20.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			26.31 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

## Course unit

# Basics in Mechanical Engineering

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_MB_MEB_BME_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basics of material science: crystal structure, strength and mechanical properties	... explain and assign basic properties of materials
Materials in mechanical engineering: ferroalloys, steels, polymeric materials, ceramic materials, composites	... explain and consider differences in the structure of the material ... carry out material selection for certain components or component groups in the field of mechanical engineering as a function of the load
Classification of manufacturing processes according to DIN 8580	... structure the important manufacturing processes and assess their application areas
Design and calculation of the basic elements of machine design: screw joints, pins, axles and shafts, couplings, belt and chain drives, bearings, gears	... list and explain the basic elements of machine design in the field of fastening- and drive technology ... analyse the load of machine elements ... select machine elements

## Required and recommended reading\*

<b>Required reading:</b>	Callister, William; Rethwisch, David: Fundamentals of Material Science; Wiley-VCH Verlag
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	Rufe, Philip: Fundamentals of Manufacturing; Society of Manufacturing Engineers Mott, Robert; Vavrek, Edward: Machine Elements in Mechanical Design; Pearson Studium Verlag
<b>Recommended reading:</b>	v.A.: European Tools and Mold Making (ETMM); Vogel Business Media

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Lecture	
<b>Social methods:</b>	Individual work, Plenum	
<b>Work assignments</b>		8.12 hours
<b>Teaching method:</b>	Excercise	
<b>Social methods:</b>	Individual work	



<b>Self-directed learning</b>		25.94 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Computer Aided Numerical Calculation and Representation

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_SDA_CAC_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Excel	<ul style="list-style-type: none"> <li>... develop and code solutions in VBA for specific areas of problems</li> <li>... import/export data from/to various data formats</li> <li>... use Excel to solve application-specific examples               <ul style="list-style-type: none"> <li>... use different graphical data visualizations possibilities</li> </ul> </li> <li>... use Excel for calculating statistical parameters of data sets</li> </ul>
Distributions	<ul style="list-style-type: none"> <li>... calculate and visualize Poisson-distributions with Excel</li> <li>... calculate and visualize hypergeometrical distributions with Excel</li> <li>... calculate and visualize binomial distributions with Excel</li> <li>... calculate confidence intervals for various distributions with Excel</li> </ul>
Linear and quasilinear regression	<ul style="list-style-type: none"> <li>... calculate linear regression on given data sets with Excel</li> </ul>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... perform proper transformation of data dependent on the given data set with Excel
Histograms	... create histograms, bar plots and boxplots of data sets with Excel ... calculate specific statistical parameters of given sample data with Excel
Examples	... derive solutions to given examples

## Required and recommended reading\*

<b>Required reading:</b>	Morgado, Flavio: Programming Excel with VBA: A Practical Real-World Guide (English Edition); Apress
<b>Other course materials:</b>	Distributed documents with the most important commands Exercises for the consolidation of the acquired knowledge

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Lecture, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			15.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			19.06 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

### Course unit

## Statistics, Data Analysis and Interpretation

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_SDA_SDI_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Discrete and continuous distributions	<ul style="list-style-type: none"> <li>... find best fitting distribution to given examples</li> <li>... distinguish between random and statistically significant variations</li> <li>... calculate probabilities and confidence intervals</li> </ul>
Fundamentals of probability theory	<ul style="list-style-type: none"> <li>... determine whether events are mutually exclusive</li> <li>... calculate conditional probabilities</li> <li>... calculate probabilities of events</li> <li>... determine, whether events are dependent or independent of each other</li> </ul>
Descriptive statistics	<ul style="list-style-type: none"> <li>... calculate and interpret characteristics of random sample values</li> <li>... visualize data in different variants (e.g. histograms, distribution diagrams, boxplots)</li> </ul>
Statistical tests	<ul style="list-style-type: none"> <li>... apply the basics of statistical process control in real world problems</li> <li>... use suitable tests to problems and interpret the outcome</li> </ul>
Regression analysis, linear regression	<ul style="list-style-type: none"> <li>... transform data - if necessary, in order to calculate the required parameters by linear regression</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Glyn, James: Modern Engineering Mathematics; Prentice Hall International Stroud, K.A; Booth, Dexter: Engineering Mathematics; Palgrave Macmillan
<b>Recommended reading:</b>	Kreyszig, Erwin: Advanced Engineering Mathematics; Wiley-VCH Verlag
<b>Other course materials:</b>	Distributed documents with the most important definitions, formulas and terms Exercises for strengthening the theoretical foundations and for applying them to specific problems

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	90.00 %	50.00 %
Participation	Attendance teaching	10.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is a written exam of the entire course contents (weighting 90 %). Active class participation of the first attempt (weighting 10 %) will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Lecture, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			22.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			24.31 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Electrical Engineering Design and CAD

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EDS_EED_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Electrical engineering design process using ePlan: wiring diagram, CAD-data export, design rules	<ul style="list-style-type: none"><li>... create professional wiring diagrams with ePlan</li><li>... create and manage project pages</li><li>... make use of symbols and macros</li><li>... generate clamp and cable plans</li><li>... create BOMs (Bill of Materials)</li><li>... export design data in industrial data formats</li><li>... use given design rules</li></ul>
Electronic engineering design process using ALTIUM: schematic entry, PCB-Layout, CAD-data export, design rules	<ul style="list-style-type: none"><li>... create professional schematics with ALTIUM</li><li>... explain the layer stack and design rules of multilayer PCBs</li><li>... create multilayer PCBs with ALTIUM</li><li>... export design data in industrial data formats</li><li>... use factory given design rules</li><li>... create schematic and layout library elements</li></ul>

## Required and recommended reading\*

<b>Recommended reading:</b>	Altium: Altium Tutorial: Getting started with PCB Design;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Excercise	Attendance teaching	60.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
Presentation	Attendance teaching	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Laboratory excercise, Presentation, Report	
<b>Social methods:</b>	Individual work, Group work	

<b>Work assignments</b>		20.00 hours
<b>Teaching method:</b>	Excercise, Presentation, Report	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		14.06 hours
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>
		<b>50.00 hours</b>

Course unit

## Basic Analog Circuits

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EDS_BAC_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Passive components R, L, C	... explain the behaviour of basic R, L, C circuits ... design basic R, L, C circuits
Semiconductor: diode and transistor	... explain the behaviour of basic semiconductor components with diodes and transistors ... design basic semiconductor circuits with diodes and transistors ... make use of data sheets
Transistor amplifier	... design basic transistor amplifier circuits
Operational amplifier	... explain the behaviour of basic operational amplifier circuits ... compare characteristics of basic operational amplifier circuits



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... design the basic operational amplifier circuits ... make use of data sheets ... consider errors of operational amplifiers
Circuit simulation with PSPICE and LTSPICE	... simulate the basic behaviour of electronic circuits ... interpret the simulation results

## Required and recommended reading\*

<b>Required reading:</b>	Franco, Sergio: Analog Circuit Design; McGraw Hill Verlag Tobin, Paul: PSpice for Circuit Theory and Electronic Devices; Morgan and Claypool Publishers
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

Full-time

<b>Attendance teaching</b>		21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Self-directed learning</b>			34.06 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Signal Processing

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EDS_SIP_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Sampling and reconstruction	... explain the sampling process and its limitations
The DFT and applications	... use the fourier transform as a tool for analysing the effect of sampling in the frequency domain

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
The z-transform: IIR filter design, FIR filter design	... design a digital filter by using the z-transform ... simulate digital filter with MATLAB ... implement filter algorithms in a high-level programming language

## Required and recommended reading\*

<b>Required reading:</b>	Lyons, Richard G.: Understanding Digital Signal Processing; Pearson Studium Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Lecture	
<b>Social methods:</b>	Individual work, Group work, Plenum	

<b>Self-directed learning</b>		34.06 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Fundamentals of Electrical Measurement

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EML_FEM_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Characteristic parameter of signals	... describe the signal-information in the time
Spectral representation of signals	... describe the signal-information in the frequency domain
Error and thermal noise	... calculate the error budget and the noise influence of measurement circuits
Working principles of electrical meters	... explain the working principle of the basic voltage and current measurement instruments ... calculate current shunt and voltage divider to extend an instrument measurement range
Power measurement	... perform measurement in two and three phase systems
Oscilloscope	... use any analogue and digital oscilloscope

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Resistor measurement	... describe the advantages of different resistor measurement principles
Measurement amplifiers and synchronous demodulator	... select the optimal measurement amplifier for a specific requirement

## Required and recommended reading\*

<b>Required reading:</b>	Helfrick, Albert D.; Cooper, William D.: Modern Electronic Measurement & Instrumentation; Prentice Hall International
<b>Recommended reading:</b>	Golding, E. W.: Electrical Measurement and Measuring Instruments; Pitman Publishing

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Lecture		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			10.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			36.31 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Electronics Laboratory

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_EML_ELL_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Practical measurement basics	... perform measurements with different kind of instruments

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Measurement on AC-circuits	... compare AC-circuit calculation with measurement results
Semiconductor characteristic	... measure the U/I-characteristics of nonlinear devices
RC-Filter and RLC resonator	... measure the transfer function of AC-circuits

## Required and recommended reading\*

<b>Required reading:</b>	Del Toro, Vincent: Electrical Engineering Fundamentals; Prentice Hall International
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Laboratory exercise	Attendance teaching	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on first attempt:</b>	<p>The following assessment criteria are carried out separately for each laboratory exercise and result in a partial performance per exercise.</p> <ul style="list-style-type: none"> <li>- Active class participation (weighting 20 %)</li> <li>- Protocol (weighting 50 %)</li> <li>- Written participation check (weighting 30 %)</li> </ul> <p>Missing a laboratory exercise results in a partial performance of 0 % for this exercise.</p>
<b>Details on second attempt:</b>	<p>For the second attempt only exercises below 50 % partial performance may be repeated, for this a laboratory appointment will be organised.</p> <p>Each exercise with partial performance that is above 50 % achievement in the first attempt will count for the determination of the overall assessment of the second attempt.</p>
<b>Details on third attempt:</b>	<p>The third attempt is an oral board examination in the laboratory (weighting 100 %), where the students have to take measurements, explain, document and evaluate them.</p>

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Laboratory exercise, Presentation, Report	
<b>Social methods:</b>	Individual work, Group work	
<b>Work assignments</b>		31.87 hours
<b>Teaching method:</b>	Presentation, Report	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		14.44 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>
		<b>75.00 hours</b>

### Course unit

## Conflict Management

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_TCM_COM_2
<b>Scope (ECTS Credits; contact)</b>	VZ: 1.00 ECTS Credits; 1.00 hpw



<b>hours per week):</b>	
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basics of conflict management	... define a social conflict ... describe different conflict types ... detect conflict causing aspects
Conflict analysis	... analyse conflictual situations
Conflict phases	... identify different conflict phases
Conflict intervention methods and techniques	... apply appropriate intervention methods and techniques in terms of conflict's solution
Conflict solution strategies	... apply appropriate resolution strategies methods and techniques in regards to solve the conflict

## Required and recommended reading\*

<b>Recommended reading:</b>	Eunson, Baden: Conflict Management; Wrightbooks
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	70.00 %	50.00 %
Participation	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is an oral examination about a written case example including theoretical considerations (weighting 100 %).		
<b>Details on third attempt:</b>	The third attempt is an oral board examination about a written case example including theoretical considerations (weighting 100 %).		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Lecture, Practical/Case example		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			12.25 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>25.00 hours</b>

Course unit

# General English

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_TCM_GEE_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basic grammar as required on B2 level: Tenses (present, past, present perfect, past perfect, future, conditional), prepositions, adverb/adjective, passive, if-sentences	... use grammatical structures orally and in writing correctly ... compose complex sentences correctly
Business correspondence: e-mails, formal business letters	... demonstrate their language skills in the field of business correspondence ... write formally correct business letters and e-mails by using the right idioms and phrases ... make appointments as well as postpone and cancel them politely when necessary ... ask for general and detailed information concerning a product or service range ... place orders and handle terms of delivery and payment ... deal with delays, difficulties and complaints in a customer-friendly way

## Required and recommended reading\*

<b>Required reading:</b>	Raymond, Murphy: Essential Grammar in Use; Cambridge University Press
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	Raymond, Murphy: English Grammar in Use; Cambridge University Press
<b>Other course materials:</b>	Topical articles from newspapers, magazines, books Sources on the Internet

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination consisting of a written examination (weighting 50 %) and an oral examination (weighting 50 %) of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Lecture, Role play	
<b>Social methods:</b>	Individual work, Pair work, Plenum	

<b>Work assignments</b>		10.00 hours	
<b>Teaching method:</b>	Exercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		24.06 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## PLC Programming

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_IT_PNT_PLC_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Structure and setup of a PLC system	... describe the structure, the setup and the I/O interfaces of a PLC ... explain real time capability and cyclic execution ... give a market overview of existing systems and suppliers
Automation technology bus systems	... list the most common bus systems and their basic functionality ... explain the concept of linking PLCs
Sensors and actuators	... list common sensor and actuator types including motors ... select the corresponding I/O modules

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Electrical setup	... plan the installation of a PLC ... connect a PLC and the necessary I/O modules electrically ... set all necessary parameters for the startup
PLC programming languages	... explain the differences and usage of the standardized IEC PLC programming languages (LD, IL, FBD, SFC and ST) ... install and use integrated development environments ... use common programming paradigms like state machines
PLC programming	... plan and do the setup ... solve small automation problems by creating PLC programs

## Required and recommended reading\*

<b>Required reading:</b>	John, Karl Heinz; Tiegelkamp, Michael: IEC 61131-3: Programming Industrial Automation Systems: Concepts and Programming Languages, Requirements for Programming Systems, Decision-Making Aids; Springer Verlag
<b>Other course materials:</b>	Lecture slides Online help Internet pages

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	50.00 %	50.00 %
Programming exercise	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The second attempt is an oral exam (weighting 100 %).
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Discussion, Lecture, Programming exercise, Quiz	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		19.12 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		14.94 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>
		<b>50.00 hours</b>

### Course unit

## Network and Interface Technology

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_IT_PNT_NIT_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
Introduction to networks	Upon successful completion of the course unit, students are able to ... ... explain the terminology ... calculate the theoretical bandwidth ... describe network access methods
Ethernet and TCP/IP-protocol family	... explain the layer model for communication systems ... explain the TCP/IP protocol family ... plan an IP-based network ... create nets and subnets ... setup routing
Field busses and protocols	... describe requirements to network solutions in an industrial environment ... select a field bus communication solution including setup, topology and cabling ... evaluate properties of field bus based solutions ... give an overview and compare profibus, interbus, ASI and CAN-bus ... explain real time systems
Wiring and testing	... explain the testing of cables, signals and noise ... wire LANs and WANs ... select network media (copper, glass fiber, wireless)

## Required and recommended reading\*

<b>Required reading:</b>	Stallings, William: Data and Computer Communications; Prentice Hall International Tanenbaum, Andrew: Computer networks; Prentice Hall International v.A.: IEEE Communications Magazine;
<b>Recommended reading:</b>	Perlman, Radia: Interconnections: Bridges and Routers; Addison Wesley Publishing Comer, Douglas: Computer networks and Internets; Pearson Studium Verlag Odom, Wendell: CCNA Official Exam Certification Library: Exam #640-801; Macmillan Technical Publishing

\*current editions



## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Discussion, Lecture		
<b>Social methods:</b>	Group work, Plenum		
<b>Self-directed learning</b>			46.31 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Computer Algebra

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_TSA_ACA_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
LTI systems	... compute and graphically represent the impulse-, step- and frequency response of LTI systems ... calculate the impulse-, step- and frequency response of LTI systems with MATLAB ... determine and calculate characteristic properties of LTI systems with MATLAB
Laplace and inverse Laplace transform	... compute the Laplace and inverse Laplace transform with MATLAB and use these to solve systems of linear differential equations with constant coefficients
FFT	... represent periodic functions by fourier series with MATLAB ... calculate spectra from sampled values with MATLAB
Systems of differential equations	... generate script files ... generate function files ... perform calculations (integration, differentiation) using the symbolic toolbox of MATLAB

## Required and recommended reading\*

<b>Required reading:</b>	Amos, Gilat: MATLAB - An Introduction with Applications; Wiley-VCH Verlag
<b>Recommended reading:</b>	Moler, Cleve B.: Numerical Computing with Matlab; Society for Industrial and Applied Mathematics
<b>Other course materials:</b>	Distributed documents with the most important commands Exercises for the consolidation of the acquired knowledge

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Lecture, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		14.12 hours
<b>Teaching method:</b>	Excercise	
<b>Social methods:</b>	Individual work, Group work	

<b>Self-directed learning</b>		19.94 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Series, Transformations and System Analysis

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_NW_TSA_STS_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Harmonic analysis, fourier series and transforms, DFT and FFT	... represent periodic functions as fourier series ... calculate the spectra of functions from sampled values and interpret the results
Divers methods for solving single differential equations and systems of differential equations (Laplace transforms, numerical and analytical methods)	... perform Laplace and inverse Laplace transforms and use them for the solution of linear differential equations with constant coefficients
Introduction to mathematical system analysis	... calculate the impulse-, step- and frequency response of LTI systems
Elements of continuous and discrete LTI-systems	... determine and calculate characteristic properties of LTI-systems

## Required and recommended reading\*

<b>Required reading:</b>	Glyn, James: Modern Engineering Mathematics; Prentice Hall International Stroud, K.A; Booth, Dexter: Engineering Mathematics; Palgrave Machmillan
<b>Recommended reading:</b>	Kreyszig, Erwin: Advanced Engineering Mathematics; Wiley-VCH Verlag
<b>Other course materials:</b>	Distributed documents with the most important definitions, formulas and proofs Exercises for strengthening the theoretical foundations and for applying them to specific problems

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	45.00 %	50.00 %
Exam (written/PC)	Attendance teaching	45.00 %	50.00 %
Participation	Attendance teaching	10.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is a written exam of the entire course contents (weighting 90 %). Active class participation of the first attempt (weighting 10 %) will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Lecture, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			22.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			24.31 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Measurement Sensor Principles

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_MES_MES_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
ADC/DAC	... explain the specification parameters of ADC/DAC

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... select the adequate ADC for a given requirement ... demonstrate the technique of oversampling
Sensors producing voltage: differential transformer, hall, bandgap, thermocouple	... explain the basic principle of the sensors and outline their applications
Sensors producing charge: piezo sensor, pyro sensor	... explain the basic principle of the sensors and outline their applications
Sensors producing current: photodiode, CCD	... explain the basic principle of the sensors and outline their applications
Sensors changing the resistance: Pt100, NTC, PTC, thermistor, bolometer, strain gage	... explain the basic principle of the sensors and outline their applications

## Required and recommended reading\*

<b>Required reading:</b>	Fraden, Jacob: Handbook of Modern Sensors; Springer Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			16.87 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			29.44 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

### Course unit

## Embedded Systems Programming

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_EBS_EMP_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Setup of an embedded system	... connect an embedded system (power, input/output, busses)



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ... ... install the development software ... download a given program to the hardware ... run and test the program
Controller setup	... set up clock tree ... set up controller function blocks ... set up ports and other peripherals
Basic programming tasks	... program ports ... program analogue-digital converters ... program timers and counters
Programming	... connect and read out sensors ... use interrupts or DMA for recurring tasks ... program a simple working program

## Required and recommended reading\*

<b>Required reading:</b>	Noergaard, Tammy: Embedded Systems Architecture: A Comprehensive Guide for Engineers and Programmers; Elsevier Science & Technology Yiu, Joseph: The Definitive Guide to the ARM Cortex-M3; Newnes Books
<b>Other course materials:</b>	Lecture slides Online help Internet pages

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Participation	Attendance teaching	50.00 %	50.00 %
Programming exercise	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is an oral exam (weighting 100%).		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Discussion, Lecture, Quiz	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		18.74 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		27.57 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>
		<b>75.00 hours</b>

Course unit

# Embedded Systems

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_EBS_EMS_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Embedded Systems	... explain the difference between embedded and other systems ... list and explain the main components of an embedded system ... evaluate an embedded system
Microcontroller hardware integration	... derive the connection between circuit diagrams, layout, microcontroller and software ... adapt hardware circuitry to match connection needs
Microcontroller families	... explain the differences between several microcontroller families ... sketch the basic structures of microcontroller architectures ... show the advantages and disadvantages of microcontroller families ... select a suitable device and version for a project
Commands	... list the different types of microcontroller commands ... explain the function and side-effects of the commands ... show the connection of registers and peripherals ... show the process of embedded development

## Required and recommended reading\*

<b>Required reading:</b>	Noergaard, Tammy: Embedded Systems Architecture: A Comprehensive Guide for Engineers and Programmers; Elsevier Science & Technology Yiu, Joseph: The Definitive Guide to the ARM Cortex-M3; Newnes Books
<b>Other course materials:</b>	Lecture slides Online help Internet pages

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	50.00 %	50.00 %
Preparation of written work	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Discussion, Lecture, Quiz	
<b>Social methods:</b>	Individual work, Group work, Plenum	

<b>Work assignments</b>		20.13 hours	
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		13.93 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Electrical Machines and Drive Engineering

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_ET_ELM_EMD_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 4.00 ECTS Credits; 3.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basic concepts of electromechanical energy conversion	... explain the concepts involved in the modelling of transformer, DC- and AC-electric machines
Basic machine types: DC motor, brushless DC-motor, asynchronous motor, synchronous motor	... model different machine types ... select the proper machine for given constraints ... carry out measurements to determine a characteristic of a machine
Transformer	... perform transformer design and calculation

## Required and recommended reading\*

<b>Required reading:</b>	Vukosavic, Slobodan N.: Electrical Machines; Springer Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Laboratory exercise	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	51.00 teaching sessions	38.25 hours
<b>Teaching method:</b>	Exercise, Laboratory exercise, Lecture	
<b>Social methods:</b>	Individual work, Plenum	
<b>Work assignments</b>		20.62 hours
<b>Teaching method:</b>	Exercise	

<b>Self-directed learning</b>		41.13 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>3.00 hpw</b>	<b>51.00 teaching sessions</b>	<b>100.00 hours</b>

Course unit

## Database Systems

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_IT_MDS_DBS_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction to databases	<ul style="list-style-type: none"> <li>... explain the usage of database systems</li> <li>... explain the function of database management systems</li> <li>... distinguish between relational and object oriented databases</li> </ul>
Relational databases	<ul style="list-style-type: none"> <li>... explain the terminology</li> <li>... conduct normalisation</li> <li>... select keys</li> </ul>
SQL commands	<ul style="list-style-type: none"> <li>... create tables with their keys</li> <li>... add, modify and delete table entries</li> <li>... select data using calculations, sorting and table joins</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Silberschatz, A.; Korth, H.; Sudarshan, S.: Database System Concepts; Mcgraw Hill Book Co
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Discussion, Lecture, Programming exercise, Quiz	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		19.12 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		14.94 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.25 hpw</b>	<b>50.00 hours</b>



Course unit

# Mobile Solutions

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_IT_MDS_MOS_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Mobile devices	... explain the components of a mobile device ... show the importance and market share of mobile operating systems ... explain the distribution of mobile apps
Apple iOS/Android	... describe the necessary tasks for the creation of an app on the Apple iOS platform and/or the Android platform ... install and use the appropriate development environment ... explain the mechanism of uploading and selling apps
Mobile programming	... explain the creation of programming code and the creation of the layout ... write a simple app for Apple iOS platform and/or the Android platform

## Required and recommended reading\*

<b>Recommended reading:</b>	Keur, Christian; Hillegass, Aaron: iOS Programming: The Big Nerd Ranch Guide; Addison Wesley Publishing  Phillips, Bill; Marsicano, Kristin; Stewart, Chris: Android Programming: The Big Nerd Ranch Guide; Pearson Studium Verlag
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<b>Other course materials:</b>	Online tutorials and documentation of the Apple iOS platform and/or the Android platform Course slides
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	50.00 %	50.00 %
Programming exercise	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is an oral exam (weighting 100 %).		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Discussion, Lecture, Programming exercise, Quiz	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		19.12 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		14.94 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>
		<b>50.00 hours</b>

Course unit

# Communication, Rhetorics and Presentation Techniques

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_CPM_CRP_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 1.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Communication basics (sender receiver model, factual- and relationship level, own perception, information sharing, active listening)	... explain sender receiver model and apply it ... differentiate between factual- and relationship level and apply it ... realize that reality is very subjective ... share information effectively ... listen actively
Basics of rhetoric	... make use of rhetoric's importance ... apply professional vocal and speaking technique
Basic rules for presentations	... make use of fundamental presentation rules [do's and don'ts]
Structure of a presentation	... structure a presentation in a target-group oriented way
Suitable presentation style	... identify their personal presentation style ... apply a proper presentation style
Body language	... make use of body language's basics properly

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Keep your time line	... present within a given time frame

## Required and recommended reading\*

<b>Recommended reading:</b>	Bradbury, Andrew: Successful Presentation Skills; SAB Heinrichs, Jay: Winning Arguments: From Aristotle to Obama – Everything You Need to Know About the Art of Persuasion; Penguin Books Maxwell, John C.: Everyone Communicates, Few Connect: What the Most Effective People Do Differently; Thomas Nelson Theobald, Theo: Develop Your Presentation Skills; Kogan Page
<b>Other course materials:</b>	Handouts

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Participation	Attendance teaching	60.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt a case example including theoretical considerations has to be written (weighting 100 %).		
<b>Details on third attempt:</b>	At the third attempt again a case example including theoretical considerations has to be written and presented at an oral board examination (weighting 100 %).		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Lecture, Presentation, Self-reflection, Video analysis		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			12.25 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>25.00 hours</b>

### Course unit

## Business English

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_CPM_BUE_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Professional meetings	<ul style="list-style-type: none"> <li>... arrange and lead effective meetings</li> <li>... identify the factors leading to unproductive meetings and become aware of the fact that many meetings can be avoided</li> <li>... prepare a meeting efficiently in order to maximize benefit</li> </ul>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... create an effective agenda, choose the right participants, lead the meeting and write the minutes of the meeting
Professional negotiations	... make use of the fact that every negotiating process has different stages, because when it comes to negotiations, not only acquire phrases and idioms which are useful in the negotiating process are important ... apply strategies, which they can employ at different stages, including at the most difficult stage – the handling of prices, as different topics are dealt with at each stage
International business etiquette: communicating political, cultural, social and economic topics in view of their regional and international relevance	... develop cultural awareness with international business partners and the ability to recognize cultural misunderstandings
Socializing: making small talk	... use their abilities for socializing and making small talk

## Required and recommended reading\*

<b>Required reading:</b>	Partridge, Bruce: Effective Meetings: A Practical Guide; Friesen Press Weise, Daniel, Hanson, Matt: Become an Expert Negotiator: Real Life Sales & Negotiation Tactics; DealMakers - Negotiators International Sillers, Paul: International Business Etiquette 20:20; Paul Sillers Fine, Debra: The Fine Art of Small Talk. How to start a conversation in any Situation; Piatkus Verlag v.A.: engine;
<b>Recommended reading:</b>	Stephens, Bryan: Meetings in English: Be effective in international meetings; Macmillan Technical Publishing
<b>Other course materials:</b>	Various sources on the Internet Videos, CDs, interactive CD-ROMs

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination consisting of a written examination (weighting 50 %) and an oral examination (weighting 50 %) of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Case study, Lecture, Presentation, Role play		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			11.00 hours
<b>Teaching method:</b>	Excercise, Presentation		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			23.06 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

# Fluid Technology

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_MB_MDF_FLT_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Fundamentals of pneumatics and oil hydraulics: fluid properties, fundamentals of computation and providing pneumatic energy	... calculate thermodynamic interactions of a pneumatic system
Design of circuits and sequence controllers	... plan and design hydraulic and pneumatic systems independently ... analyse existing installations and to develop suggestions for improvement
Components for hydraulics and pneumatics: valves, actuators, and sensors	... evaluate components based on their design for their suitability ... evaluate fluid systems using circuit diagrams

## Required and recommended reading\*

<b>Required reading:</b>	Totten, George; De Negri, Victor: Handbook of hydraulic fluid technology; Marcel Dekker Inc.
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<b>Recommended reading:</b>	Subramanya, K.: Fluid mechanics and hydraulic machines; Mcgraw Hill Book Co
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Laboratory exercise	Attendance teaching	40.00 %	30.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Laboratory exercise, Lecture	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>	10.00 hours	
<b>Teaching method:</b>	Excercise	
<b>Social methods:</b>	Individual work	

<b>Self-directed learning</b>		24.06 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Mechanical Engineering Design and CAD

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_MB_MDF_MED_3
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 4.00 ECTS Credits; 2.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Technical drawing as an information carrier in product development and in the production process: general rules for technical drawings, standardized object representation, projection methods, editing symbols, tolerances, representation of components and the use of symbols, etc.	<p>... explain the technical drawing as information carrier and are themselves able to draw up standard design drawings for the production of machine and machine parts</p> <p>... make use of the basic principles of mechanical engineering, the dimensioning of machine components and the basic approach in design and development</p>
Basic knowledge in the application of a 3D CAD software: creation of model geometries for simple real objects, working with subassemblies	<p>... use a 3D CAD software to create virtual machine components</p> <p>... apply modelling techniques to create virtual models of machine components and component groups</p> <p>... apply structural modelling strategies</p>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... explain different data formats for CAD systems and to export models to different formats and import them from other systems
Acquisition of basic knowledge in the application of calculation software tools for machine elements and components in the field of mechanical engineering	... apply calculation software tools for machine elements and components in the field of mechanical engineering ... interpret the results of the calculation

## Required and recommended reading\*

<b>Required reading:</b>	Budynas, Richard; Nisbett, Keith: Mechanical Engineering Design; Mcgraw Hill Book Co  Planchard, David: Engineering Design with SolidWorks 2017; SDC Publications
<b>Recommended reading:</b>	v.A.: Digital Engineering Magazine; v.A.: CAD-CAM-Report;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Excercise	Attendance teaching	60.00 %	50.00 %
Participation	Attendance teaching	20.00 %	
Presentation	Attendance teaching	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	46.75 teaching sessions	35.06 hours
<b>Teaching method:</b>	Excercise, Lecture	
<b>Social methods:</b>	Individual work, Plenum	
<b>Work assignments</b>		33.13 hours
<b>Teaching method:</b>	Excercise	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		31.81 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>2.75 hpw</b>	<b>46.75 teaching sessions</b>
		<b>100.00 hours</b>

### Course unit

## Control Engineering Principles

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_SCE_CEB_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Introduction to control	... define control systems ... explain control design methodology
Modelling and simulation	... explain importance of modelling ... summarise the benefits of Simulation ... discuss model validation
Open loop system representation	... formulate transfer functions ... explain time responses ... discuss Bode plots ... construct block diagrams
Closed-loop control	... explain closed-loop control ... illustrate multi-loop and cascade control structures ... examine feed-forward control ... formulate two degree of freedom (2DoF) control structure
Stability	... define sensitivity and steady-state errors ... elaborate on stability of control systems
Controller design	... illustrate design of controllers
Introduction to digital control systems	... define a digital control system
Analysis of control systems with help of simulation	... make use of simulation tools

## Required and recommended reading\*

<b>Required reading:</b>	Dutton, Ken; Thompson, Steve; Barraclough, Bill: The Art of Control Engineering; Prentice Hall International
<b>Recommended reading:</b>	Dorf, Richard C.; Bishop, Robert H: Modern Control Systems; Pearson Studium Verlag Ogata, Katsuhiko: Modern Control Engineering; Pearson Studium Verlag Parr, Andrew: Control Engineering; Butterworth-Heinemann

<b>Other course materials:</b>	<p>Selected lecturing notes          Lab material          Selected Matlab and Simulink examples</p> <p>Math Works: Control System Toolbox Documentation, available at:  <a href="http://www.mathworks.com/help/control">www.mathworks.com/help/control</a>          Control Systems Engineering: Video lectures at UWE Bristol, available at:  <a href="http://www.youtube.com/playlist?list=PL5105727DD6E8DE98">www.youtube.com/playlist?list=PL5105727DD6E8DE98</a></p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Laboratory exercise	Attendance teaching	40.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Each student must attend the laboratory exercises. Each student is marked on both the written laboratory exercises report and performance during the laboratory exercises. Only after the laboratory exercises are completed the student is allowed to attend a written exam.		
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination consisting of a written examination (weighting 50 %) and an oral examination (weighting 50 %) of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Laboratory exercise, Lecture, Simulation		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			18.74 hours
<b>Teaching method:</b>	Exercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			27.57 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

### Course unit

## Systems Theory and Modelling

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_SCE_STM_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes Upon successful completion of the course unit, students are able to ...
Fundamentals of continuous time linear systems	<ul style="list-style-type: none"> <li>... illustrate basic signals</li> <li>... classify basic systems</li> <li>... outline properties of continuous time systems</li> <li>... construct block diagram representation</li> </ul>
Integral transforms	<ul style="list-style-type: none"> <li>... apply Fourier transform</li> <li>... utilise Laplace transform</li> </ul>
Input/output relations	<ul style="list-style-type: none"> <li>... demonstrate impulse and step response</li> <li>... utilise transfer function and block diagram manipulation</li> <li>... formulate canonical forms</li> </ul>
State-space representation	<ul style="list-style-type: none"> <li>... formulate state equation representation and state equation solution</li> <li>... utilise output equation solution</li> <li>... analyse controllability and observability</li> <li>... apply state-space canonical forms</li> </ul>
Stability of linear dynamic systems	<ul style="list-style-type: none"> <li>... interpret the definition of stability</li> <li>... select stability criterion</li> </ul>
Fundamentals of discrete time linear systems	<ul style="list-style-type: none"> <li>... utilise analogue to digital and digital to analogue conversion</li> <li>... classify digital signals and systems</li> <li>... examine properties of digital systems</li> </ul>
z-transform	<ul style="list-style-type: none"> <li>... outline relations between continuous time and digital systems</li> </ul>
Analysis of linear systems with help of simulation	<ul style="list-style-type: none"> <li>... make use of simulation tools</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Chen, Chi-Tsong: Introduction to Linear System Theory; Holt, Rinehart and Winston
<b>Recommended reading:</b>	Chen, Chi-Tsong: Linear System Theory and Design; Holt, Rinehart and Winston  Åström, Karl J.; Wittenmark, Bjorn: Computer-Controlled Systems: Theory and Design; Prentice Hall International  Moler, Cleve: Numerical Computing with MATLAB;



<b>Other course materials:</b>	MIT 6.003 Signals and Systems, Fall 2011: Video lectures at MIT OpenCourseWare: <a href="http://www.youtube.com/playlist?list=PLUI4u3cNGP61kdPAOC7CzFjJZ8f1eMUxs">www.youtube.com/playlist?list=PLUI4u3cNGP61kdPAOC7CzFjJZ8f1eMUxs</a>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	70.00 %	50.00 %
Excercise	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Each student must attend tutorials. All exercises must be completed in order to conclude the tutorial session. Only after the tutorials are successfully concluded the student is allowed to attend a written exam.		
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination consisting of a written examination (weighting 50 %) and an oral examination (weighting 50 %) of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Excercise, Lecture, Simulation	
<b>Social methods:</b>	Individual work, Plenum	

<b>Work assignments</b>		18.74 hours	
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		27.57 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Actuator and Sensor Applications

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_CPS_AST_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Physical effects	... list typical physical effects used in actuator and sensor applications
Types of electrical outputs	... illustrate the most common electrical interfaces between sensor and PLCs
Proximity sensors, displacement sensors, force and pressure sensors, sensors for speed, acceleration and angle, flow measurement, temperature sensors	... make use of application requirements and choose the adequate sensor ... explain the physical and electrical principle of every sensor ... outline constraints and limitations of every sensor

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Actuators	... plan the practical implementation of control systems with industrial sensors and actuators

## Required and recommended reading\*

<b>Required reading:</b>	Bradley, Allen: Fundamentals of Sensing, Training Manual; Rockwell-Automation  Omega Engineering: Transactions in Measurement & Control. Volume 3 (Force Related Measurements) and Volume 4 (Flow & Level Measurements);
<b>Other course materials:</b>	Lecture Exercises

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

Full-time

<b>Attendance teaching</b>		21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			9.60 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			24.46 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Cyber Physical Systems and Internet of Things

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_CPS_CPS_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Specification and modelling	... list the terms

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	<ul style="list-style-type: none"> <li>... write use cases and requirements</li> <li>... draw state machines and data flow</li> <li>... name event based languages</li> </ul>
Hardware	<ul style="list-style-type: none"> <li>... evaluate sensors and actuators</li> <li>... select processors, memory, communication</li> <li>... examine energy efficiency</li> </ul>
System software	<ul style="list-style-type: none"> <li>... list embedded operating systems</li> <li>... use embedded Linux</li> <li>... summarize hardware abstraction layers</li> <li>... explain middleware</li> </ul>
Evaluation and validation	<ul style="list-style-type: none"> <li>... list quality metrics</li> <li>... analyse memory and processor usage</li> <li>... analyse energy consumption</li> <li>... analyse dependability and risks</li> </ul>
Applications	<ul style="list-style-type: none"> <li>... apply scheduling</li> <li>... decide between uniprocessors, multicores and multiprocessors</li> </ul>
Tests and optimization	<ul style="list-style-type: none"> <li>... apply software optimizations</li> <li>... apply compiler optimizations</li> <li>... optimize power and thermal management</li> <li>... use test patterns</li> <li>... apply design for testability</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Marwedel, Peter: Embedded System Design: Embedded Systems, Foundations of Cyber-Physical Systems and the Internet of Things; Springer Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Excercise	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Discussion, Excercise, Lecture, Quiz		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			19.74 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			26.57 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Electable Project 1

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_EPR_EPR_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Project
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Topic selection and theoretical introduction to the selected topic	... acquire and apply detailed knowledge and deeper knowledge through appropriate practical exercises in one of the subject areas listed on the left side (course content)
Project planning	... design, develop and carry out projects ... define technical tasks, estimate the time frame and process the tasks in the form of a project ... divide work among multiple people and define clear interfaces between the work areas
Project implementation	... implement practical work and work in groups ... acquire new knowledge to solve the project independently
Scientific paper	... summarize the project contents in group work in a scientific paper in English
Project presentation	... prepare and present a finished technical project to a professional audience in an appropriate final presentation ... prepare and carry out the final presentation individually
Project documentation	... summarize and document project results

## Required and recommended reading\*

<b>Required reading:</b>	v.A.: are dependent on the project topic selected by the students;
<b>Recommended reading:</b>	v.A.: are dependent on the project topic selected by the students;
<b>Other course materials:</b>	Depending on the project topic, the lecturer provides special documents, scripts, etc.

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	25.00 %	50.00 %
Permanent assessment of the project/learning progress	Attendance teaching	35.00 %	50.00 %
Presentation	Attendance teaching	20.00 %	50.00 %
Project documentation	Work assignments	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		



## Planned learning activities and teaching methods

Full-time

<b>Attendance teaching</b>		51.00 teaching sessions	38.25 hours
<b>Teaching method:</b>	Lecture, Presentation, Project		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			70.62 hours
<b>Teaching method:</b>	Presentation, Project		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			16.13 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>3.00 hpw</b>	<b>51.00 teaching sessions</b>	<b>125.00 hours</b>

Course unit

## Security and Safety

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_RSS_SAS_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Security engineering	... explain security and dependability

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... give examples for phishing, passwords and other human related security issues ... evaluate security policies
Protocols and access control	... list possible attacks ... show protocol and message manipulation mechanisms ... provide examples for access control ... classify hardware protection
Cryptography	... list cryptographic methods ... explain cryptographic functions ... apply cryptography to software and operating systems
Safety engineering	... explain the necessity of machinery safety ... list regulations and standards ... show the conformity process
Risk assessment and reduction	... explain risk assessment ... calculate risk estimations ... apply risk reduction
Safety controls, sensors and protection devices	... design mechanically safe systems ... apply mechanical safety ... apply electrical safety systems ... apply programmable safety systems

## Required and recommended reading\*

<b>Required reading:</b>	Anderson, Ross: Security Engineering; Wiley-VCH Verlag Macdonald, David: Practical Machinery Safety; Newnes Books
<b>Other course materials:</b>	Related ISO norms

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Excercise	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Discussion, Excercise, Lecture, Quiz		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			19.74 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			26.57 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Robotics

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_RSS_ROB_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction to the field of robotics, presentation and explanation of the basic concepts	... explain the basics of robotics
Basics of robot kinematics, robot control and programming	... apply basic skills and definitions for robot control and programming
Robot as the core element of an automated system, design and function of automated systems, peripheral problems, flexible automation and future oriented plant concepts	... create new automation oriented and future oriented concepts ... analyse, determine and reduce negative influences on automated production processes
Robot applications in the industry with a closer look to different industrial applications and a critical lighting of different practical examples	... assess examples from the industry with regard to their plant concepts

## Required and recommended reading\*

<b>Required reading:</b>	Bajd, T.; Mihelj, M.; Lenarčič, J.; Stanovnik, A.; Munih, M.: Robotics; Springer Verlag
<b>Recommended reading:</b>	Siciliano, B., Sciavicco, L., Villani, L., Oriolo, G.: Robotics - Modelling, Planning and Control; Springer Verlag

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	30.00 %
Laboratory exercise	Attendance teaching	40.00 %	30.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Exercise, Laboratory exercise, Lecture	
<b>Social methods:</b>	Individual work, Group work, Plenum	

<b>Work assignments</b>		14.00 hours	
<b>Teaching method:</b>	Exercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		32.31 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Smart Factory

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_HMI_SMF_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Definition of terms and basics of the smart factory	... name the basic components of a smart factory and represent basic processes ... apply basic terms and definitions for system delimitation on own projects
Digital connection of all actuators of the smart factory, its communication and requirements for systematic networking and digitization	... comment on factors of digitization and name types of monitoring ... differentiate between the individual disciplines and identify problems in the planning or conceptualization phase

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Adaptive production networks and flexible system structure of production lines	... present the system structure of adaptive production networks and explain the prerequisites
Concepts for flexible automation technology, Plug & Produce systems	... apply concepts of flexible automation technology and represent the possibilities of integrating classical production systems
Integration of classical production systems in the smart factory	... explain principles of production planning systems

## Required and recommended reading\*

<b>Required reading:</b>	Grunow, Oliver: Smart Factory and Industry 4.0. The Current State of Application; Study lab
<b>Recommended reading:</b>	Schenk, Michael; Wirth, Siegfried; Müller, Egon: Factory Planning Manual; Springer Verlag
<b>Other course materials:</b>	Additional material and handouts dealing with specific smart factory contents will be distributed in class.

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is equal to the first.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			8.12 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			25.94 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

### Course unit

## Human-Machine Interaction

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_HMI_HMI_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 2.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Psychology of human interaction	... explain human thoughts, cognition, emotion and action



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... list the fundamental principles of interaction
Guiding users	... list physical, cultural, semantic and logical constraints ... explain conventions ... apply affordances, signifiers and constraints to objects and software
Bad design	... explain the difference of slips and mistakes ... explain the reporting and detection of errors
Design thinking	... show the design process ... explain standardization ... evaluate new technologies
User interface design	... list user interface models ... summarize computer standards ... evaluate user interface guidelines ... conduct software usability testing
SCADA and visualization systems	... explain the usage of SCADA and visualization systems ... show the methods of data transfer ... list available standard software ... explain trends and alarms

## Required and recommended reading\*

<b>Required reading:</b>	Norman, Don: The design of everyday things; Basic Books
<b>Recommended reading:</b>	Mandel, Theo: The elements of user interface design; Wiley-VCH Verlag
<b>Other course materials:</b>	Lecture slides Internet pages

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Presentation	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt is an oral exam (weighting 100 %).		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		38.25 teaching sessions	28.69 hours
<b>Teaching method:</b>	Discussion, Lecture, Programming exercise, Quiz		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			43.12 hours
<b>Teaching method:</b>	Exercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			3.19 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.25 hpw</b>	<b>38.25 teaching sessions</b>	<b>75.00 hours</b>

Course unit

# Problem Solving Methods

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_CPM_PSM_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 1.00 ECTS Credits; 0.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
What's a problem?	... explain the definition of a problem ... distinguish various types of problems
What's creativity all about?	... explain the definition of creativity ... distinguish various types of creativity ... recognize characteristics of creative people
Why do we need creativity in terms of problem solving process?	... match different types of problems ... follow a creative and systematic problem-solving process
Why do we need creativity in terms of leading a company/enterprise?	... support creativity in professional environment ... encourage teams to be creative ... plan, prepare and conduct an effective creativity workshops

## Required and recommended reading\*

<b>Recommended reading:</b>	Gorman, Michael; Carlson, Bernard: Interpreting invention as a cognitive process – The case of Alexander Graham Bell, Thomas Edison and the telephone; Harvard Business School/Division of Research
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	De Bono, Edward: Serious Creativity: Using the Power of Lateral Thinking to Create New Ideas – a summation of many of De Bono’s ideas on creativity; Harperbusiness
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Attendance teaching	40.00 %	50.00 %
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		12.75 teaching sessions	9.56 hours
<b>Teaching method:</b>	Case study, Excercise, Lecture		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>		5.00 hours	
<b>Teaching method:</b>	Case study		
<b>Social methods:</b>	Individual work, Group work		

<b>Self-directed learning</b>		10.44 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>0.75 hpw</b>	<b>12.75 teaching sessions</b>	<b>25.00 hours</b>

Course unit

## Project Management

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_CPM_PRM_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Project management concepts and definitions, basics of project planning and project controlling	... explain the most important instruments and methods of project management and project controlling and to use them with practical examples
Project planning, stakeholder analysis, project organisation, roles in the project	... formulate a project assignment and to apply the methodology of stakeholder analysis ... distinguish between leadership in line organisation and leadership of a team in a project ... describe and communicate intelligibly the roles in a project
Application of project management tools	... plan a project (mainly Bachelor's thesis) in detail using tools of project management including the creation of a project manual ... create a work breakdown structure ... create a schedule ... create a cost-/resource plan

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
	... create a work package specification
	... conduct project controlling

## Required and recommended reading\*

<b>Recommended reading:</b>	Wenell Management: Applied project management;
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

<b>Performance components at the first attempt</b>			
<b>Assessment methods</b>		<b>Weighting</b>	<b>Minimum achievement per performance component for the positive completion</b>
Project documentation	Work assignments	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Written group work (project manual)		
<b>Details on second attempt:</b>	The second attempt is equal to the first. If no group can be formed the work can be done by one student alone.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	21.25 teaching sessions	15.94 hours
<b>Teaching method:</b>	Practical/Case example, Project	
<b>Social methods:</b>	Individual work, Group work	

<b>Work assignments</b>		23.12 hours	
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>		10.94 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.25 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Bachelor's Thesis 1

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_BAT_BAT_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Project
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
The thematic focus of the Bachelor 's thesis 1 has to be assigned to the chosen Compulsory Elective Course of the fifth semester	... submit the „Application for the Approval of the Bachelor 's thesis“ including a document (appr. 1 - 2 pages) with the following content timely and completely: description of the initial situation, environment, actual situation, description of the problem, interest of investigation, description of the goal, target state, which questions should be answered in the theoretical part, respectively in the practical part? How will the relation to practice be realised
Preparation of the Bachelor 's thesis 1	... prepare and write a Bachelor 's thesis according the basic principles and guidelines for scientific works ... use literature in adequate quality and quantity

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... apply formal criteria for Bachelor`s theses ... write a Bachelor`s thesis with correct spelling and suitable phrasing
Bachelor`s thesis 1 coaching process and advise of students	... solve problems and tasks systematically and self-dependent ... plan and meet deadlines
Technical support of students during their preparation of the Bachelor`s thesis 1	... analyse the problem ... structure a Bachelor`s thesis logically ... visualise content and findings
Presentation of Bachelor`s thesis 1	... present the results of the Bachelor`s thesis 1

## Required and recommended reading\*

<b>Required reading:</b>	v.A.: has to be investigated by the students depending on their thematic focus of the Bachelor`s theses;
<b>Recommended reading:</b>	v.A.: has to be investigated by the students depending on their thematic focus of the Bachelor`s theses;
<b>Other course materials:</b>	The following documents are provided on the learning platform Moodle: „Process Bachelor`s thesis 1“ „Guideline for writing Bachelor`s theses“ „Application for the Approval of the Bachelor`s thesis“ „Application for the limitation of use of a thesis“

\*current editions



## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Bachelor's thesis	Work assignments	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	<p>The assessment of the Bachelor 's thesis 1 and the course unit is carried out within four weeks from submission by means of an assessment sheet.</p> <p>In the standardised assessment sheet the following categories with several criteria are evaluated :</p> <ul style="list-style-type: none"> <li>- Scientific aspect (weighting 35 %) &gt; 30 %: scientific claim, quality and quantity of the literature used, logical structure</li> <li>- Thesis content (weighting 35 %) &gt; 30%: formal criteria, spelling, phrasing, visual implementation of contents</li> <li>- Process (weighting 20 %) &gt; 30 %: situation analysis, systematics and independence of the procedure, achievement of the goals, scheduling and compliance, contacts to the Bachelor 's thesis advisor, completion of the „Application for the Approval of the Bachelor `s thesis“ including the description of the topic</li> <li>- Presentation of the Bachelor 's thesis 1 (no longer than 5 minutes), (weighting 10 %) &gt; 30 %</li> </ul> <p>Less than 30 % for an aforementioned criterion in the assessment sheet lead to a negative assessment of the Bachelor 's thesis.</p>		
<b>Details on second attempt:</b>	<p>If a Bachelor 's thesis is assessed negatively, a new submission has to be done. The number of permissible repetitions of submissions is based on the number of admissible examination retries of course units according to the examination regulations. The submission dates are announced separately by the degree programme management.</p>		
<b>Details on third attempt:</b>	<p>In the case of the last admissible submission and assessment, a second assessor is also appointed by the degree programme management. The degree programme management will determine the final assessment of the Bachelor 's thesis from the assessment proposals of the two assessors.</p>		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion		
<b>Social methods:</b>	Individual work		
<b>Work assignments</b>			0.00 hours
<b>Teaching method:</b>	Bachelor's thesis		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			112.25 hours
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>125.00 hours</b>

The students independently work on the Bachelor 's thesis 1 and are accompanied by the Bachelor 's thesis advisor. The thematic focus of the first Bachelor 's thesis has to be assigned to the chosen Compulsory Elective Course of the fifth semester. In regular case the lecturer of the course is the advisor of the Bachelor 's thesis. On the one hand, the students can contact the advisor on organisational matters and on the other concerning professional questions. The students discuss their progress in a critical reflection with the advisor. Furthermore, the learning platform Moodle serves as a medium for exchanging opinions, experiences and knowledge with the advisor as well as with other students.

The course unit is held on three dates:

On the first date, the documents on the subject of Bachelor 's thesis 1 are distributed and the students are thoroughly informed about the course unit and process. The "Application for the Approval of the Bachelor 's thesis" for Bachelor 's thesis 1 must be submitted no later than two weeks after this date.

On the second date, the students have to present their topic of Bachelor 's thesis 1 and the current progress.

On the third date, the results of the Bachelor 's thesis 1 will be presented.

### Course unit

## Compulsory Elective Course - Product

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_PRS_PTS_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/</b>	Compulsory elective course unit

<b>optional):</b>	
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Case study – Product	... solve problems given by case study
Excursion – Product	... differentiate between theory and practice ... analyse work tasks and compare with study contents ... ask technical questions ... evaluate and assess practical tasks
Project – Product	... independently apply theoretical knowledge to practical tasks

## Required and recommended reading\*

<b>Required reading:</b>	v.A.: see ICU Compulsory Elective Course – Product;
<b>Recommended reading:</b>	v.A.: see ICU Compulsory Elective Course – Product;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Report	Work assignments	10.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		51.00 teaching sessions	38.25 hours
<b>Teaching method:</b>	Case study, Excursion, Experiment, Presentation, Project, Simulation		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			70.00 hours
<b>Teaching method:</b>	Presentation, Project		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>3.00 hpw</b>	<b>51.00 teaching sessions</b>	<b>125.00 hours</b>

Course unit

## Compulsory Elective Course - Production

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_PRS_PNS_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Case study – Production	... solve problems given by case study
Excursion – Production	... differentiate between theory and practice ... analyse work tasks and compare with study contents ... ask technical questions ... evaluate and assess practical tasks
Project – Production	... independently apply theoretical knowledge to practical tasks

### Required and recommended reading\*

<b>Required reading:</b>	v.A.: see ICU Compulsory Elective Course – Production;
<b>Recommended reading:</b>	v.A.: see ICU Compulsory Elective Course – Production;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Report	Work assignments	10.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	51.00 teaching sessions	38.25 hours
<b>Teaching method:</b>	Case study, Excursion, Experiment, Presentation, Project, Simulation	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		70.00 hours
<b>Teaching method:</b>	Presentation, Project	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		16.75 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>3.00 hpw</b>	<b>125.00 hours</b>

Course unit

## Compulsory Elective Course - Process

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_PRS_PSS_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Case study – Process	... solve problems given by case study
Excursion – Process	... differentiate between theory and practice ... analyse work tasks and compare with study contents ... ask technical questions ... evaluate and assess practical tasks
Project – Process	... independently apply theoretical knowledge to practical tasks

### Required and recommended reading\*

<b>Required reading:</b>	v.A.: see ICU Compulsory Elective Course – Process;
<b>Recommended reading:</b>	v.A.: see ICU Compulsory Elective Course – Process;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Report	Work assignments	10.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		51.00 teaching sessions	38.25 hours
<b>Teaching method:</b>	Case study, Excursion, Experiment, Presentation, Project, Simulation		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			70.00 hours
<b>Teaching method:</b>	Presentation, Project		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>3.00 hpw</b>	<b>51.00 teaching sessions</b>	<b>125.00 hours</b>



Course unit

# Scientific Work and Technical Documentation

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_SBA_SWD_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 1.00 ECTS Credits; 0.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Process of creating a scientific document	... create a scientific document or thesis ... create a research design ... show the research design in a diagram
Literature research	... select different sources ... do a successful library search ... distinguish relevant from non-relevant literature
Documentation types	... create a document with a specific purpose
Citations and formatting	... apply correct citations ... use correct formatting ... apply a formal structure
Scientific argumentation	... follow a guiding thread in their document ... provide scientific argumentation
Frame of reference	... create the frame of reference for a current piece of work (mainly Bachelor's thesis)

## Required and recommended reading\*

<b>Required reading:</b>	Glasman-Deal, Hilary: Science Research Writing For Non-Native Speakers Of English; Imperial College Press  v.A.: Guide for the Use of the International System of Units (SI); NIST National Institute of Standards and Technology
<b>Other course materials:</b>	A document about the correct formatting of theses can be downloaded from the online learning platform moodle.

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

Full-time

<b>Attendance teaching</b>		12.75 teaching sessions	9.56 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			12.25 hours
<b>Teaching method:</b>	Preparation of written work, Presentation		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			3.19 hours
<b>Total</b>	<b>0.75 hpw</b>	<b>12.75 teaching sessions</b>	<b>25.00 hours</b>

Course unit

## Business Administration

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_SBA_BUA_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 1.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction to company accounting	... define external accounting as part of company accounting

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
External accounting (balance sheet, income statement and financial statements)	... declare a financial statement with all elements
Internal accounting (cost accounting)	... define internal accounting as part of the accounting system ... select and apply costing methods by using specifications
Basics of marketing management	... explain the term "marketing management" in the context
Marketing and calculation	... establish and describe the connection between marketing mix and costing

## Required and recommended reading\*

<b>Recommended reading:</b>	Skonieczny, Mariusz: The Basics of Understanding Financial Statements: Learn How to Read Financial Statements by Understanding the Balance Sheet, the Income Statement, and the Cash Flow Statement; Investment Publishing  Bragg, Steven: Cost Accounting Fundamentals: Essential Concepts and Examples; Accounting Tools  Horngren, Charles T.; Datar, Srikant M.; Rajan, Madhav V.: Cost Accounting; Pearson Studium Verlag
<b>Other course materials:</b>	Annual Reports of stock listed companies

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The second attempt is equal to the first.
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	29.75 teaching sessions	22.31 hours
<b>Teaching method:</b>	Lecture, Practical/Case example	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Self-directed learning</b>		52.69 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.75 hpw</b>	<b>29.75 teaching sessions</b>
		<b>75.00 hours</b>

### Course unit

## Electable Project 2

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_EPR_EPR_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 3.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Project
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Topic selection and theoretical introduction to the selected topic	... acquire and apply detailed knowledge and deeper knowledge through appropriate practical exercises in one of the subject areas listed on the left side (course content)
Project planning	... design, develop and carry out projects ... define technical tasks, estimate the time frame and process the tasks in the form of a project ... divide work among multiple people and define clear interfaces between the work areas
Project implementation	... implement practical work and work in groups ... acquire new knowledge to solve the project independently
Scientific paper	... summarize the project contents in group work in a scientific paper in English
Project presentation	... prepare and present a finished technical project to a professional audience in an appropriate final presentation ... prepare and carry out the final presentation individually
Project documentation	... summarize and document project results

## Required and recommended reading\*

<b>Required reading:</b>	v.A.: are dependent on the project topic selected by the students;
<b>Recommended reading:</b>	v.A.: are dependent on the project topic selected by the students;
<b>Other course materials:</b>	Depending on the project topic, the lecturer provides special documents, scripts, etc.

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	25.00 %	50.00 %
Permanent assessment of the project/learning progress	Attendance teaching	35.00 %	50.00 %
Presentation	Attendance teaching	20.00 %	50.00 %
Project documentation	Work assignments	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		51.00 teaching sessions	38.25 hours
<b>Teaching method:</b>	Lecture, Presentation, Project		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			0.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Individual work		

<b>Self-directed learning</b>		86.75 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>3.00 hpw</b>	<b>51.00 teaching sessions</b>	<b>125.00 hours</b>

Course unit

## Compulsory Elective Course - Production

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_PRL_PNI_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 7.00 ECTS Credits; 5.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Manufacturing technologies according to DIN 8580 for industrial use (forming, cutting processes, joining, etc.)	... list and explain the different manufacturing technologies
Manufacturing machines and its state of the art technology, metrology and parts quality	... choose the right manufacturing technology for a given part
Advanced and additive manufacturing (different technologies, design for additive manufacturing, rapid prototyping/ rapid manufacturing)	... name advanced manufacturing technologies ... explain different additive manufacturing technologies ... design parts for additive manufacturing
Production-oriented design including design guidelines	... optimize the part design according to the chosen manufacturing technology



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Virtual factory (basics and project planning, production simulation and layout planning)	<ul style="list-style-type: none"> <li>... use the planning steps for a virtual factory on an industrial example</li> <li>... interpret layout information for different manufacturing technologies</li> <li>... simulate and optimize production processes</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Rufe, P.: Fundamentals of Manufacturing; Society of Manufacturing Engineers
<b>Recommended reading:</b>	Bangsow, Steffen: Plant Simulation und SimTalk; Hanser Verlag

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	20.00 %	50.00 %
Excercise	Attendance teaching	30.00 %	50.00 %
Oral exam	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		89.25 teaching sessions	66.94 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			44.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			64.06 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>5.25 hpw</b>	<b>89.25 teaching sessions</b>	<b>175.00 hours</b>

### Course unit

## Compulsory Elective Course - Product

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_PRL_PT1_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 7.00 ECTS Credits; 5.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Product life cycle	... draw the product life cycle and list the stages

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	<ul style="list-style-type: none"> <li>... show the product life cycle of one automation technology product</li> <li>... explain market and sales funnel</li> <li>... explain agile methods</li> <li>... use tools for cost calculations</li> </ul>
Requirements engineering	<ul style="list-style-type: none"> <li>... conduct stakeholder analyses</li> <li>... develop requirements</li> <li>... manage requirements</li> </ul>
System and software architecture	<ul style="list-style-type: none"> <li>... create system architectures</li> <li>... create software architectures</li> </ul>
Creating design elements	<ul style="list-style-type: none"> <li>... apply industrial design</li> <li>... split the product into design elements</li> <li>... do the function development</li> </ul>
Quality and dependability	<ul style="list-style-type: none"> <li>... create and estimate dependability</li> <li>... decide on critical qualities</li> <li>... choose between price and quality</li> </ul>
Manufacturing	<ul style="list-style-type: none"> <li>... find suppliers</li> <li>... find manufacturing partners</li> <li>... decide on make or buy</li> </ul>
Test and approval	<ul style="list-style-type: none"> <li>... explain test methods and approaches</li> <li>... gain approval concerning machinery safety, EMI, ESD, product safety</li> </ul>
Tool usage	<ul style="list-style-type: none"> <li>... decide on the usage of PDM and PLM systems</li> <li>... use versioning systems</li> <li>... decide on the usage of continuous integration and continuous testing systems</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Ulrich, Karl: Product Design and Development; Mcgraw Hill Book Co Saaksvuori, Antti; Immonen, Anselmi: Product Lifecycle Management; Springer Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	20.00 %	50.00 %
Excercise	Attendance teaching	30.00 %	50.00 %
Oral exam	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		89.25 teaching sessions	66.94 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			44.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			64.06 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>5.25 hpw</b>	<b>89.25 teaching sessions</b>	<b>175.00 hours</b>

Course unit

## Compulsory Elective Course - Process

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_PRL_PSI_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 7.00 ECTS Credits; 5.25 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Transmission and conversion of liquids and gases	... select pipes and fittings ... dimension heating and cooling systems ... calculate heat transfer ... dimension heat exchangers
Material handling	... select storage and handling systems ... calculate storage dimensions ... calculate throughput
Thermal process engineering	... list and explain thermal processes like evaporation, crystallisation, absorption, adsorption, drying, distillation, extraction
Mechanical process engineering	... list and explain mechanical processes like comminution, mechanical separation, assembling ... show methods of mechanical treatment of solids, liquids and gases
Chemical process engineering	... list and explain chemical processes and reactions ... transfer laboratory experiments to industrial scale solutions

<b>Course contents</b>	<b>Learning outcomes</b>
Material management	Upon successful completion of the course unit, students are able to ... ... find suppliers of materials and services ... select packaging of products ... select modes of delivery for products and services ... decide about transportation means ... create material flows
Logistics	... conduct procurement ... create a supply chain ... apply Kanban ... apply just-in-time and just-in-sequence concepts ... use software systems for disposition

### Required and recommended reading\*

<b>Required reading:</b>	Perry, Robert H.; Green, Don: Perry 's Chemical Engineers ' Handbook; McGraw Hill Book Co  Lieberman, Norman: A Working Guide To Process Equipment; Mechanical Engineering  Christopher, Martin: Logistics & Supply Chain Management; Pearson Studium Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	20.00 %	50.00 %
Excercise	Attendance teaching	30.00 %	50.00 %
Oral exam	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		89.25 teaching sessions	66.94 hours
<b>Teaching method:</b>	Excercise, Lecture		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			44.00 hours
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			64.06 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>5.25 hpw</b>	<b>89.25 teaching sessions</b>	<b>175.00 hours</b>

Course unit

# Control Engineering Applications

## General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_CEA_CEA_5
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 4.00 ECTS Credits; 2.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction to nonlinear control	... define nonlinear systems ... explain nonlinear control systems ... classify model based control
Modelling of nonlinear systems	... explain parametrical modelling techniques ... explain non-parametrical modelling approaches ... illustrate data based models
System identification	... define system identification ... explain model structure selection ... illustrate parameter estimation
Model based control approaches	... define adaptive control ... explain gain scheduling ... illustrate multiple local model control ... define internal model control ... utilise artificial intelligence in model based control ... explain model predictive control



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Industrial control applications	... illustrate implementation of control strategies in industrial applications ... illustrate control systems specific for automotive industry
Analysis of control systems with help of simulation	... make use of simulation tools

## Required and recommended reading\*

<b>Required reading:</b>	Dutton, K.; Thompson, S.; Barraclough, B.: The Art of Control Engineering; Prentice Hall International  Ljung, L.: System Identification: Theory for the User; Prentice Hall International  Gregorčič G.; Lightbody, G.: Nonlinear model-based control of highly nonlinear processes;
<b>Recommended reading:</b>	Åström, K.J.; Wittenmark B.: Adaptive Control; Addison Wesley Publishing  Maciejowski, J.M: Predictive Control with Constraints; Prentice Hall International  Principe, J.C.; Euliano, N.R.; Lefebvre, W.C: Neural and Adaptive Systems: Fundamentals through Simulations; Wiley-VCH Verlag  Gühmann, C.; Riese, J.; Wolter, T-M.: Simulation and Testing for Automotive Electronics V; Expert Verlag  Gregorčič, G.; Lightbody, G.: Nonlinear system identification: From multiple-model networks to Gaussian processes;  Gregorčič, G.; Lightbody, G.: Gaussian process internal model control;
<b>Other course materials:</b>	Selected lecturing notes Lab material Selected Matlab and Simulink examples

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Laboratory exercise	Attendance teaching	40.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Each student must attend the labs. Each student is marked on both the written lab report and performance during the lab. Only after the labs are completed the student is allowed to attend a written exam.		
<b>Details on second attempt:</b>	At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.		
<b>Details on third attempt:</b>	The third attempt is a board examination (weighting 100 %) consisting of a written preparation and an oral examination of the entire course contents.		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	46.75 teaching sessions	35.06 hours
<b>Teaching method:</b>	Exercise, Laboratory exercise, Lecture, Simulation	
<b>Social methods:</b>	Individual work, Group work, Plenum	
<b>Work assignments</b>		32.50 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work	

<b>Self-directed learning</b>		32.44 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.75 hpw</b>	<b>46.75 teaching sessions</b>	<b>100.00 hours</b>

Course unit

## International and Intercultural Business Aspects and Teamwork

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_FPW_SBA_IIA_6
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 1.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 6. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Basics of teamwork	... outline why to work in a team
Key success factors for high performance teams	... name and realize conditions required for high performance teams
Stages of team development	... be aware of team development stages
Various team roles	... name and handle various roles taken by the team members
Characteristics of virtual teams	... identify conditions required for successful virtual teams
Characteristics of intercultural teams	... explain definition and meaning of "culture" ... identify conditions required for successful intercultural teams

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
How to deal with/lead virtual and/or intercultural teams?	... deal with virtual and/or intercultural teams successfully

## Required and recommended reading\*

<b>Recommended reading:</b>	Schmidt, Steffen: Leading Virtual Intercultural Teams - Recognizing and Counteracting the Problems of Workplace Isolation; Grin Publishing  Sembdner, Stephan: Success Factors of Virtual Teams in the Conflict of Cross-Cultural Team; Diplomica Verlag
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Attendance teaching	40.00 %	50.00 %
Participation	Attendance teaching	30.00 %	
Preparation of written work	Work assignments	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	At the second attempt a case example including theoretical considerations has to be written (weighting 100 %).		
<b>Details on third attempt:</b>	At the third attempt again a case example including theoretical considerations has to be written and presented at an oral board examination (weighting 100 %).		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Lecture, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			12.25 hours
<b>Teaching method:</b>	Case study, Preparation of written work		
<b>Social methods:</b>	Individual work, Group work		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>25.00 hours</b>

### Course unit

## Bachelor's Thesis 2

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_BAT_BAT_6
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 5.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 6. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Project
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
The Bachelor 's thesis 2 has to pick up a topic of the internship and in regular case this topic should also be assigned to the chosen Compulsory Elective Course of the fifth semester. The thematic focus has at least to be assigned to a technical course unit of the degree programme	<p>Upon successful completion of the course unit, students are able to ...</p> <p>... submit the „ Application for the Approval of the Bachelor 's thesis“ including a document (appr. 1 - 2 pages) with the following content timely and completely: description of the initial situation, environment, actual situation, description of the problem, interest of investigation, description of the goal, target state, which questions should be answered in the theoretical part, respectively in the practical part? How will the relation to practice be realised?</p>
Preparation of the Bachelor 's thesis 2	<p>... prepare and write a Bachelor 's thesis according the basic principles and guidelines for scientific works</p> <p>... use literature in adequate quality and quantity</p> <p>... apply formal criteria for Bachelor 's theses</p> <p>... write a Bachelor 's thesis with correct spelling and suitable phrasing</p>
Bachelor 's thesis 2 coaching process and advise of students	<p>... solve problems and tasks systematically and self-dependent</p> <p>... plan and meet deadlines</p>
Technical support of students during their preparation of the Bachelor 's thesis 2	<p>... analyse the problem</p> <p>... structure a Bachelor 's thesis logically</p> <p>... visualise content and findings</p>
Presentation of Bachelor 's thesis 2	<p>... present the results of the Bachelor 's thesis 2</p>

## Required and recommended reading\*

<p><b>Required reading:</b></p>	<p>v.A.: has to be investigated by the students depending on their thematic focus of the Bachelor 's theses;</p> <p>v.A.: has to be investigated by the students depending on their thematic focus of the Bachelor 's theses;</p>
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Bachelor's thesis	Work assignments	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	<p>The assessment of the Bachelor 's thesis 2 and the course unit is carried out within four weeks from submission by means of an assessment sheet.</p> <p>In the standardised assessment sheet the following categories with several criteria are evaluated :</p> <ul style="list-style-type: none"> <li>- Scientific aspect (weighting 35 %) &gt; 30 %: scientific claim, quality and quantity of the literature used, logical structure</li> <li>- Thesis content (weighting 35 %) &gt; 30%: formal criteria, spelling, phrasing, visual implementation of contents</li> <li>- Process (weighting 20 %) &gt; 30 %: situation analysis, systematics and independence of the procedure, achievement of the goals, scheduling and compliance, contacts to the Bachelor 's thesis advisor, completion of the „Application for the Approval of the Bachelor `s thesis“ including the description of the topic</li> <li>- Presentation of the Bachelor 's thesis 2 (no longer than 5 minutes), (weighting 10 %) &gt; 30 %</li> </ul> <p>Less than 30 % for an aforementioned criterion in the assessment sheet lead to a negative assessment of the Bachelor 's thesis.</p>		
<b>Details on second attempt:</b>	<p>If a Bachelor 's thesis is assessed negatively, a new submission has to be done. The number of permissible repetitions of submissions is based on the number of admissible examination retries of course units according to the examination regulations. The submission dates are announced separately by the degree programme management.</p>		
<b>Details on third attempt:</b>	<p>In the case of the last admissible submission and assessment, a second assessor is also appointed by the degree programme management. The degree programme management will determine the final assessment of the Bachelor 's thesis from the assessment proposals of the two assessors.</p>		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion		
<b>Social methods:</b>	Individual work		
<b>Work assignments</b>			0.00 hours
<b>Teaching method:</b>	Bachelor's thesis		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			112.25 hours
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>125.00 hours</b>

The students independently work on the Bachelor 's thesis 2 and are accompanied by the Bachelor ´s thesis advisor. As advisors, the students are usually supported by the lecturers of the chosen Compulsory Elective Course of the fifth semester, alternatively all lecturers of technical subjects are in principle possible.

On the one hand, the students can contact the advisor on organisational matters and on the other concerning professional questions. The students discuss their progress in a critical reflection with the advisor.

Furthermore, the learning platform Moodle serves as a medium for exchanging opinions, experiences and knowledge with the advisor as well as with other students.

The course unit is held on three dates:

On the first date, the documents on the subject of Bachelor ´s thesis 2 are distributed and the students are thoroughly informed about the course unit and process. The "Application for the Approval of the Bachelor ´s thesis" for Bachelor ´s thesis 2 must be submitted no later than two weeks after this date.

On the second date, the students have to present their topic of Bachelor ´s thesis 2 and the current progress.

On the third date, the results of the Bachelor's thesis 2 will be presented.

### Course unit

## Internship

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_INT_INT_6
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 22.00 ECTS Credits; 0.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 6. Semester
<b>Type of course unit (compulsory/</b>	Compulsory elective course unit



<b>optional):</b>	
<b>Mode of delivery:</b>	Work placement
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Transfer and application of teaching content, linking of theory and practice	... continuously transfer the content learned in the individual course units to the operational problems arising from the respective work situation ... consolidate and deepen the content learned by feedback with the lecturer
Social behaviour	... organise reciprocal client and contractor relationships
Ability to solve problems	... pick up, deal with and solve problems in practice ... create reports and presentations in a recipient-oriented manner

## Required and recommended reading\*

<b>Required reading:</b>	v.A.: has to be investigated by the students depending on their thematic focus of the internship;
<b>Recommended reading:</b>	v.A.: has to be investigated by the students depending on their thematic focus of the internship;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

## Planned learning activities and teaching methods

### Full-time

<b>Work assignments</b>	550.00 hours		
<b>Teaching method:</b>	Practical learning		
<b>Social methods:</b>	Individual work		
<b>Total</b>	<b>0.00 hpw</b>	<b>0.00 teaching sessions</b>	<b>550.00 hours</b>

Course unit

## Internship Seminar

### General information

<b>Course unit code:</b>	VZ: SA_BA_VZ_SA_INT_INS_6
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 1.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 6. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Training
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
The internship seminar is available as an accompanying measure for the handling of the internship, in which the students will be informed of the content, duration and scope of the internship respectively of the activities during the training as target of the bachelor's degree programme smart automation	... observe and deal with the requirements concerning the internship
In the fifth semester, students already have the task of finding themselves a suitable internship place. In this respect, the degree programme management is supporting by transmitting announcements from companies as well as existing contacts to companies with potential places	... determine and document a suitable internship place at latest within the framework of the internship seminar at the beginning of the sixth semester

Course contents	Learning outcomes
<p>Students have to apply for internship at the degree programme management by defining the selected internship place, the training tasks and the company advisor. This is to ensure that the students are used and supervised according to their qualification level</p>	<p>Upon successful completion of the course unit, students are able to ...</p> <p>... prepare and submit the Application for the approval of the internship in a duly, completely and timely manner</p>
<p>Experience reports and/or portfolios are prepared by the students, paying attention to a wide range of crosslinking topics (for example interdisciplinary aspects). Particular emphasis is put on the linking of the findings from the study and the experiences of the profession and vice versa</p>	<p>... write an experience report and submit it on time</p> <p>... write an experience report regarding specific links between study and profession and to submit it on time</p> <p>... write an experience report on internationalisation and to submit it on time</p>

## Required and recommended reading\*

<p><b>Other course materials:</b></p>	<p>The following documents are provided on the learning platform Moodle:</p> <p>„Internship in the company“</p> <p>„Application for the approval of the internship“</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	10.00 %	50.00 %
Presentation	Attendance teaching	25.00 %	50.00 %
Project documentation	Work assignments	65.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	<p>At the beginning of the course the "Application for the approval of the internship" has to be prepared, followed by the description of the specific technical activity as well as the elaboration of an example for the linking of study and profession.</p> <p>In addition, a document with an experience report on internationalisation has to be submitted.</p> <p>The presentation of the specific technical activity should not take more than 5 min.</p> <p>Weighting Minimum achievement per partial performance for the positive completion of the course unit in the first attempt</p> <p>Application for the approval of the internship (weighting 10 %) &gt; 50 %</p> <p>Experience report specific technical activity (weighting 30 %) &gt; 50 %</p> <p>Experience report study and profession (weighting 25 %) &gt; 50 %</p> <p>Experience report internationalisation (weighting 10 %) &gt; 50 %</p> <p>Presentation specific technical activity (weighting 25 %) &gt; 50 %</p>		
<b>Details on second attempt:</b>	<p>At the second attempt the partial performances below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the first attempt will count for the determination of the overall assessment of the second attempt.</p>		
<b>Details on third attempt:</b>	<p>At the third attempt the partial performances of the second attempt below the minimum achievement have to be repeated. Each partial performance that is above the minimum achievement in the second attempt will count for the determination of the overall assessment of the third attempt, which is conducted by a board.</p>		

## Planned learning activities and teaching methods

### Full-time

<b>Attendance teaching</b>	17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation	
<b>Social methods:</b>	Individual work	
<b>Work assignments</b>		12.25 hours
<b>Teaching method:</b>	Preparation of written work	
<b>Social methods:</b>	Individual work	
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>
		<b>25.00 hours</b>

During the internship, students are supported by lecturers at the degree programme, with a specific assignment of the professional activities of the student to the special field of the lecturer.

On the one hand, the students can contact the advisors for assistance with selecting the internship places, checking their suitability and organisational interests, as well as in case of any problems between the student, the company and any other institutions. On the other hand, the students submit their reports and discuss them in a critical reflection with the advisor.

Furthermore, the learning platform Moodle serves as a medium for the exchange of opinions, experiences and knowledge, both with the lecturer and with other students.

The course is held on three dates:

On the first date, the documents for the internship will be distributed and the students will be thoroughly informed about the course unit and the process. No later than one week after the date, the "Application for the approval of the internship" has to be submitted.

On the second date, the students will be able to clarify any questions with the advisors concerning the internship, especially with regard to the documents to be drawn up, as well as to work on the documents.

On the third date, students must submit the required documents and present their specific technical activity.

Course unit

## Advanced Control Engineering

### General information

<b>Course unit code:</b>	BB: AT_MA_BB_AT_MAC_ACE_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 4.00 ECTS Credits; 2.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Introduction to dynamic system modeling and identification	... to explain general aspects of dynamic systems model building ... to explain basic approaches and principles of dynamic system identification
RC, RLC circuit modeling and nonparametric identification	... to identify static and dynamic behavior of linear first order and second order processes based on measurement data ... to describe and analyze dynamic behavior of electrical circuit writing the conservation equations that describe the physical phenomena
Mass, spring, dumper system modeling – Lagrange equation	... to use Lagrange equation principle for mechanical systems modeling ... to describe and analyze dynamic behavior of mechanical system writing the conservation equations that describe the physical phenomena
Parametric system identification methods	... to select and apply procedure, engineering methods and tools for parameter system modeling and identification of practical cases
Modeling of Balance control system	... to describe and explain modeling of complex mechatronics systems

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction to state space control system design	... to describe and explain state space controller benefits and behavior ... to describe and explain state space system presentation
Pole placement and linear quadratic controller design	... to describe and explain pole placement and quadratic controller design
Algebraic Riccati equations	... to describe and explain Algebraic Riccati equation solution
Kalman filtering	... to describe and explain Kalman filter design
Introduction to nonlinear control (neural networks, Fuzzy control)	... to describe and explain the enhanced concepts and principles of neural networks and fuzzy logic based computation as an approach to intelligent problem-solving
Digital control systems	... to demonstrate knowledge of digital control systems implementation
Projects	... to analyze, design and implement control systems of larger complexity with use of contemporary design methods ... to evaluate the applicability of design methods and to choose appropriate techniques and tools for control systems design

## Required and recommended reading\*

<b>Required reading:</b>	Raol, Jitendra R.; Girija, Gopalrathnam; Singh, Jatinder: Modelling and parameter estimation of dynamic systems; The Institution of Engineering and Technology Paraskevopoulos, P. N.: Modern control engineering; Marcel Dekker
<b>Recommended reading:</b>	Astrom, Karl: Computer-Controlled Systems: Theory and Design; Dover Publications Wang, Li-Xin: Adaptive Fuzzy Systems and Control: Design and Stability Analysis; Föllinger, Otto: Nichtlineare Regelungen I & II; De Gruyter Oldenbourg Verlag
<b>Other course materials:</b>	Lecture handouts

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	40.00 %	50.00 %
Project documentation	Work assignments	60.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es ist/sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesteifolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesteifolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle mündliche Prüfung (Gewichtung 100 %) mit einer schriftlichen Vorbereitung		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		42.50 teaching sessions	31.88 hours
<b>Teaching method:</b>	Laboratory exercise, Lecture, Simulation		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			40.00 hours
<b>Teaching method:</b>	Project		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			28.12 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.50 hpw</b>	<b>42.50 teaching sessions</b>	<b>100.00 hours</b>



Course unit

# Professional English 1

## General information

<b>Course unit code:</b>	BB: AT_MA_BB_FP_DIS_PE1_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Latest technical developments	... to analyze and discuss different texts about new developments in technical fields and their possible social and environmental consequences
Professional Presentations	... to describe and discuss different problem solving techniques
Business English	... to discuss business issues such as stress management and burnout, different types of leadership, types of companies, working conditions and job satisfaction

## Required and recommended reading\*

<b>Required reading:</b>	Ellis, Mark; O'Driscoll, Nina: Giving presentations; Pearson Longman Verlag HowStuffWorks: <a href="https://www.howstuffworks.com/">https://www.howstuffworks.com/</a> ; Hollett, Vicki: In at the deep end: speaking activities for professional people; Oxford University Press Weka Business Medien: Engine: Englisch für Ingenieure; Weka Business Medien
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<b>Other course materials:</b>	Articles from newspapers, magazines, books, or sources on the Internet Videos, CDs, tapes, interactive CD-R
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	40.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	30.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es ist/sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesteifolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesteifolg erreicht wurde, wird für die Ermittlung der Gesamtbewertung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	25.50 teaching sessions	19.13 hours
<b>Teaching method:</b>	Practical/Case example, Presentation, Role play	
<b>Social methods:</b>	Individual work, Group work	
<b>Work assignments</b>		5.00 hours
<b>Teaching method:</b>	Exercise, Preparation of written work	
<b>Social methods:</b>	Individual work	

<b>Self-directed learning</b>		25.87 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.50 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Professional English 2

### General information

<b>Course unit code:</b>	BB: AT_MA_BB_FP_KOM_PE2_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Communicating political, cultural, social and economic topics in view of their regional and international relevance - Cultural Awareness	... to reflect upon global aspects of technical and social developments ... to analyze cultural misunderstandings in professional contexts
Outlining structures and language of professional meetings and negotiations	... to demonstrate professional abilities and language skills in the fields of meetings and negotiations
International business etiquette: analysing case studies	... to demonstrate cultural awareness with international business partners

### Required and recommended reading\*

<b>Required reading:</b>	Wächter, Kirsten: Pocket Business Training: Meetings in English; Cornelsen Verlag
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	Diverse Autor_innen: engine; WEKA Business Medien Spotlight Verlag: Business Spotlight;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	30.00 %	50.00 %
Oral exam	Attendance teaching	40.00 %	50.00 %
Participation	Attendance teaching	30.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es ist/sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesteifolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesteifolg erreicht wurde, wird für die Ermittlung der Gesamtbewertung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Kommissionelle Prüfung, die sich aus einem schriftlichen und einem mündlichen Teil (Gewichtung je 50 %) zusammensetzt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	25.50 teaching sessions	19.13 hours
<b>Teaching method:</b>	Case study, Presentation, Role play	
<b>Social methods:</b>	Individual work, Group work	
<b>Work assignments</b>		5.00 hours
<b>Teaching method:</b>	Exercise, Preparation of written work	
<b>Social methods:</b>	Individual work	

<b>Self-directed learning</b>		25.87 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.50 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Scientific Discourse

### General information

<b>Course unit code:</b>	BB: AT_MA_BB_FP_KOM_SCD_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Academic writing	... to write academic abstracts and differentiate between informative and descriptive abstracts
Professional presentations	... to give a professional master's thesis presentation and defence
Latest technical developments	... to respond to questions related to different general and specific aspects of their thesis

### Required and recommended reading\*

<b>Required reading:</b>	<p>McCarthy, Michael; O`Dell Felicity: Academic Vocabulary in Use; Cambridge University Press</p> <p>Grussendorf, Marion: Presenting in English: Sicher vortragen, Fragen souverän begegnen; Cornelsen Verlag</p>
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	Diverse Autor_innen: engine; WEKA Business Medien
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Master's thesis presentation	Attendance teaching	40.00 %	50.00 %
Preparation of written work	Work assignments	40.00 %	50.00 %
Presentation	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Es ist/sind jene Teilleistung/en erneut abzulegen, bei der/denen im 1. Antritt der Mindesteifolg nicht erreicht wurde. Jede Teilleistung, bei der im 1. Antritt der Mindesteifolg erreicht wurde, wird für die Ermittlung der Gesamtbeurteilung des 2. Antritts übernommen.		
<b>Details on third attempt:</b>	Der 3. Antritt wird kommissionell beurteilt, ansonsten gelten für den 3. Antritt die leichen Bedingungen wie für den 2. Antritt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Case study, Presentation	
<b>Social methods:</b>	Individual work, Group work	
<b>Work assignments</b>		20.00 hours
<b>Teaching method:</b>	Excercise, Preparation of written work, Presentation	
<b>Social methods:</b>	Individual work	

<b>Self-directed learning</b>		17.00 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>62.50 hours</b>

Department  
**Financial Accounting and Management Accounting**

Bachelor Degree Programme  
**Financial Accounting and Management Accounting**

Course unit

## Economics and Business

### General information

<b>Course unit code:</b>	BB: RC_BA_BB_ENG_EN1_ECB_1	VZ: RC_BA_VZ_ENG_EN1_ECB_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.50 hpw	VZ: 3 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Basic terminology and concepts of business; economics, company types, company organisation, management, controlling, leadership, vision, mission statements, company culture and corporate social responsibility	... write texts, give presentations, participate in discussions and negotiations on selected topics from the German specialist courses, using topic-specific vocabulary
- Additional topics: jobs/careers, general communication in business	

### Required and recommended reading\*

<b>Required reading:</b>	Nickels, W., McHugh, J., McHugh, S.: Understanding Business;
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<b>Recommended reading:</b>	Schiller, B., Gebhardt, K.: The Economy Today;
<b>Other course materials:</b>	The course reader and exercises will be provided by the lecturers.

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Progress check	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Progress check	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Case study, Discussion, Exercise, Practical/Case example, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work	
<b>Synchronous distance learning</b>	8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Case study, Discussion, Exercise, Practical/Case example, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work	
<b>Work assignments</b>		30.00 hours
<b>Teaching method:</b>	Presentation	
<b>Social methods:</b>	Group work	
<b>Self-directed learning</b>		25.50 hours
<b>Teaching method:</b>	Exercise, Independent repetition, Independent study of literature	
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>
		<b>75.00 hours</b>

### Full-time

<b>Attendance teaching</b>	18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Case study, Discussion, Exercise, Practical/Case example, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work	
<b>Synchronous distance learning</b>	8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Case study, Discussion, Exercise, Practical/Case example, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work	

<b>Work assignments</b>		30.00 hours	
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>		25.50 hours	
<b>Teaching method:</b>	Excercise, Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Financial and Cost Accounting

### General information

<b>Course unit code:</b>	BB: RC_BA_BB_ENG_EN1_FCA_2	VZ: RC_BA_VZ_ENG_EN1_FCA_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.50 hpw	VZ: 3 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Key terminology and concepts of Financial and Cost Accounting; the accounting cycle, recording expenses, presenting figures, revenues & expenses vs gains & losses, profit & loss account, the balance sheet, the accounting department, types of costs, cost centers, item costing	... write texts, give presentations, participate in discussions and negotiations on selected topics from the German specialist courses, using topic-specific vocabulary

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Other possible topics: Accrual-Basis Accounting, Depreciation, Intangible Assets	

## Required and recommended reading\*

<b>Required reading:</b>	Arsenovski, D.: English for Accounting and Auditing. Student's Book;
<b>Other course materials:</b>	Skriptum

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Progress check	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Progress check	Attendance teaching	20.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Brainstorming, Discussion, Exercise, Flash light method, Impulse talk, Podcast, Presentation, Question/Conversation based teaching, Quiz		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Exercise, Impulse talk, Learning video, Question/Conversation based teaching, Quiz, Role play		
<b>Social methods:</b>	Individual work, Pair work, Group work		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			25.50 hours
<b>Teaching method:</b>	Exercise, Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>	<b>75.00 hours</b>

## Full-time

<b>Attendance teaching</b>		18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Brainstorming, Discussion, Exercise, Flash light method, Impulse talk, Podcast, Presentation, Question/Conversation based teaching, Quiz, Role play		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Exercise, Impulse talk, Learning video, Question/Conversation based teaching, Quiz, Role play		
<b>Social methods:</b>	Individual work, Pair work, Group work		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			25.50 hours
<b>Teaching method:</b>	Exercise, Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>	<b>75.00 hours</b>

## Course unit

# Compulsory Elective - Corporate Finance Cases

## General information

<b>Course unit code:</b>	BB: RC_BA_BB_ENG_EN2_CFC_6	VZ: RC_BA_VZ_ENG_EN2_CFC_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.25 hpw	VZ: 2.5 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	BB: 6. Semester	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit	
<b>Mode of delivery:</b>	Seminar	
<b>Course unit language:</b>	English	

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Net Present Value and other Investment Criteria, Portfolio Theory and Capital Asset Pricing Model, Cost of Capital, Debt Financing, Working Capital Management, Shareholder Value and Discounted Cashflows, Multiple Valuation	... write texts, give presentations, participate in discussions and negotiations and apply theoretical knowledge to practical cases on selected topics from the German specialist courses, using topic-specific vocabulary.

## Required and recommended reading\*

<b>Required reading:</b>	Asquith, P., Weiss, L. A.: Lessons in Corporate Finance; Brealey, R., Myers, S., Allen, F.: Principles of Corporate Finance;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The work assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The work assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Podcast, Practical/Case example, Presentation, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>62.50 hours</b>



## Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Podcast, Practical/Case example, Presentation, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>62.50 hours</b>

## Course unit

# Compulsory Elective - Group Financial Statements Cases

## General information

<b>Course unit code:</b>	BB: RC_BA_BB_ENG_EN2_GFC_6	VZ: RC_BA_VZ_ENG_EN2_GFC_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.25 hpw	VZ: 2.5 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	BB: 6. Semester	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit	
<b>Mode of delivery:</b>	Seminar	
<b>Course unit language:</b>	English	

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Scope of consolidated statements, Types of Investments and Consolidation Techniques, Analysis of Capital Structure, Liquidity, Current and Non-current Assets, Working Capital, Return on Sales and Capital, Economic Value Added, Value Driver Analysis	... write texts, give presentations, participate in discussions and negotiations and apply theoretical knowledge to practical cases on selected topics from the German specialist courses, using topic-specific vocabulary.

## Required and recommended reading\*

<b>Required reading:</b>	Krimpmann, A.: Principles of Group Accounting under IFRS; Bernstein, L., Wild, J.: Analysis of Financial Statements; Peterson Drake, P., Fabozzi, F. J.: Analysis of Financial Statements;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Podcast, Practical/Case example, Presentation, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>62.50 hours</b>

## Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Podcast, Practical/Case example, Presentation, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>62.50 hours</b>

## Course unit

# Compulsory Elective - Controlling Cases

## General information

<b>Course unit code:</b>	BB: RC_BA_BB_ENG_EN2_COC_6	VZ: RC_BA_VZ_ENG_EN2_COC_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.25 hpw	VZ: 2.5 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	BB: 6. Semester	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit	
<b>Mode of delivery:</b>	Seminar	
<b>Course unit language:</b>	English	

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Cost type accounting, cost center accounting, cost unit accounting, Decision making with Variable Costing, Activity Based Costing, Target Costing, Life Cycle Costing, Budgeting and Forecasting	... write texts, give presentations, participate in discussions and negotiations and apply theoretical knowledge to practical cases on selected topics from the German specialist courses, using topic-specific vocabulary.

## Required and recommended reading\*

<b>Required reading:</b>	Brealey, R., Myers, S., Allen, F.: Principles of Corporate Finance; Weygandt, J. J., Kimmel, P.D., Kieso, D. E.: Financial & Managerial Accounting; Taschner, A., Charifzadeh, M.: Management and Cost Accounting: Tools and Concepts in a Central European Context;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The work assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	40.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The work assignments assessed negatively in the first attempt must be repeated. Positively assessed assignments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%) and oral (weighting 50%) committee exam.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Podcast, Practical/Case example, Presentation, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>62.50 hours</b>

## Full-time

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Podcast, Practical/Case example, Presentation, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			30.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			16.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>62.50 hours</b>

Master Degree Programme

# Financial Accounting and Management Accounting

Course unit

## CSR-Reporting

### General information

<b>Course unit code:</b>	BB: RC_MA_BB_FM_REP_CSR_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Economic ethics and business ethics	<p>... explain the scientific use of the terms ethics, morality, business ethics and economic ethics.</p> <p>... analyse the concept of sustainable development for a company.</p> <p>... analyse the concept of social responsibility for a company.</p>
CSR-Reporting	<p>... explain what is meant by corporate social responsibility.</p> <p>... describe and justify the objectives, processes and structures of a CSR-Reporting.</p> <p>... describe the structure and contents of a CSR-Scorecard.</p> <p>... create a CSR-Scorecard for a company.</p>
EU directive on Sustainability Reporting	<p>... analyse the relevance of EU directives for national laws.</p> <p>... give an overview of the contents of the EU Sustainability Reporting Directive in the currently valid version.</p>
The Austrian Sustainability and Diversity Improvement law	<p>... give an overview of the contents of the Austrian Sustainability and Diversity Improvement law in the currently valid version.</p>



<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
	... write a CSR-Report for a company based on the Austrian Sustainability and Diversity Improvement law in the currently valid version.

## Required and recommended reading\*

<b>Required reading:</b>	Hentze, J., Thies, B.: Unternehmensethik und Nachhaltigkeitsmanagement; Lotter, D., Braun, J.: Der CSR-Manager : Unternehmensverantwortung in der Praxis; Neßler, C., Fischer, M.: Social-Responsive Balanced Scorecard : Wie Unternehmen gesellschaftliche Verantwortung in Kennzahlen umsetzen;
<b>Recommended reading:</b>	Altenburger, R.: CSR und Innovationsmanagement: Gesellschaftliche Verantwortung als Innovationstreiber und Wettbewerbsvorteil; European Commission: EU sustainability reporting standards;
<b>Other course materials:</b>	legal text of the EU Directive on Sustainability Reporting in the currently valid version legal text of the the Austrian Sustainability and Diversity Improvement law in the currently valid version

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	30.00 %	50.00 %
Preparation of written work	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The partial performances assessed negatively in the 1st attempt must be repeated. Positively assessed partial performances remain valid.
<b>Details on third attempt:</b>	The 3rd attempt is judged by commission, which consists of a written examination (weighting 50%) and an oral examination (weighting 50%). In total, more than 50 % must be achieved.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Plenum	
<b>Synchronous distance learning</b>	8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Discussion, Question/Conversation based teaching, Webcast	
<b>Social methods:</b>	Plenum	
<b>Work assignments</b>		15.00 hours
<b>Teaching method:</b>	Preparation of written work, Presentation	
<b>Social methods:</b>	Pair work	
<b>Self-directed learning</b>		28.00 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature	
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>
		<b>62.50 hours</b>

### Course unit

## Group Accounting IFRS

### General information

<b>Course unit code:</b>	BB: RC_MA_BB_ATM_RLS_GAC_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit

<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Scope of consolidated financial statements	<p>... explain the scope, purpose and process of the preparation of consolidated financial statements.</p> <p>... determine which companies are obliged to prepare consolidated financial statements in accordance with UGB or IFRS.</p> <p>... determine which enterprises have to be included.</p> <p>... explain the working steps of the preparation of consolidated financial statements, from the preparation of the individual financial statements and HB-II adjustments to necessary consolidation steps.</p>
Changes in the parent 's investment approach	<p>... adjust in consolidated financial statements subsequent changes in the acquisition as well as changes in the parent's investment approach.</p> <p>... adjust subsequent changes of acquisition costs of acquired assets and liabilities.</p> <p>... explain the consequences of changes in the parent company's investment approach (through depreciation, capital increase or grants) and to record them as part of the capital consolidation.</p> <p>... explain the consequences of a share exchange and to make respective consolidation entries.</p>
Deconsolidation	<p>... explain and book the deconsolidation steps in the context of the sale of shares.</p> <p>... calculate the result of the deconsolidation and the difference to the local result.</p> <p>... record a final consolidation with and without minority interests.</p> <p>... carry out changes due to (gradual) disposals of shares.</p>
Consolidation steps	<p>... explain nature and procedure of consolidation of capital, debt, expense/ income and of the elimination of interim results and to make corresponding consolidation entries.</p>
Currency translation	<p>... carry out currency translation in accordance with IFRS and UGB recognized methods.</p>
At-equity-method and capital consolidation	<p>... explain and apply the at-equity-method and to solve further problems of capital consolidation.</p>

Course contents	Learning outcomes
	<p>Upon successful completion of the course unit, students are able to ...</p> <p>... to explain the differences between full goodwill and partial goodwill method as part of the subsequent consolidation capital including minority interests.</p> <p>... to consolidate investments in associated companies using the at-equity-method.</p> <p>... to make changes to the amount of investments in the consolidated financial statements using the at-equity-method.</p> <p>... to explain changes in consolidation due to the acquisition or sale of non-controlling interests and to book and present them accordingly.</p>

## Required and recommended reading\*

<b>Required reading:</b>	Fröhlich, C.: Konzernrechnungslegung kompakt;
<b>Recommended reading:</b>	Fröhlich, C.: Praxis der Konzernrechnungslegung; Wagenhofer, A., Linde Verlag.: IAS/IFRS, Internationale Rechnungslegung;
<b>Other course materials:</b>	Kodex Steuergesetze in der aktuellen Auflage

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	like 1st attempt		
<b>Details on third attempt:</b>	The 3rd attempt is held as an exam (written/PC) assessed by a committee (weighting 100%).		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Discussion, Excercise, Lecture, Question/Conversation based teaching, Quiz		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Discussion, Excercise, Question/Conversation based teaching, Quiz, Webcast		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Self-directed learning</b>			43.00 hours
<b>Teaching method:</b>	Excercise, Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>	<b>62.50 hours</b>

### Course unit

## Investor Relations

### General information

<b>Course unit code:</b>	BB: RC_MA_BB_FM_REP_IVR_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Shareholder Value	... analyse the different objectives of the company's management and the company owners. ... describe the shareholder value approach.
Investor Relations (IR)	... explain what is meant by investor relations. ... explain the advantages of an IR-department for a company. ... analyse the objectives, fields of activity and requirements of an IR-department. ... prepare exemplary reports for the shareholders of a company. ... explain how the IR-department works together with other specialist departments in a listed company.
Initial public offering	... research the legal basis, general terms and conditions and trading standards of the Vienna Stock Exchange. ... explain the requirements for the IR-department, the accounting department and reporting department for a listed company.

## Required and recommended reading\*

<b>Required reading:</b>	Rappaport, A.: Shareholder Value. Ein Handbuch für Manager und Investoren; Schnorrenberg, T.: Investor Relations Management: Praxisleitfaden für erfolgreiche Finanzkommunikation; Kirchhoff, K., Piwinger, M.: Praxishandbuch Investor Relations: Das Standardwerk der Finanzkommunikation;
<b>Recommended reading:</b>	Weber, J., Bramsemann, U., Heineke, C., Hirsch, B.: Wertorientierte Unternehmenssteuerung : Konzepte — Implementierung — Praxis-Statement; Cunningham, L.: Quality Shareholders: How the Best Managers Attract and Keep Them; Wiener Börse: AGB, Gesetzestexte und sonstige Normen; Rechtsinformationssystem des Bundes: Bundesgesetz über die Wertpapier- und allgemeinen Warenbörsen;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Progress check	Attendance teaching	30.00 %	50.00 %
Quiz	Work assignments	10.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The partial performances assessed negatively in the 1st attempt must be repeated. Positively assessed partial performances remain valid.		
<b>Details on third attempt:</b>	The partial performances assessed negatively in the 2nd attempt must be repeated and will be assessed by commission. Positively assessed partial performances remain valid.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Excercise, Lecture, Practical/Case example, Question/Conversation based teaching, Role play		
<b>Social methods:</b>	Pair work, Plenum		
<b>Synchronous distance learning</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Excercise, Practical/Case example, Question/Conversation based teaching, Webcast		
<b>Social methods:</b>	Pair work, Plenum		
<b>Work assignments</b>			5.25 hours
<b>Teaching method:</b>	Quiz		
<b>Social methods:</b>	Individual work		

<b>Self-directed learning</b>		37.75 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>	<b>62.50 hours</b>

Course unit

## SAP Management Accounting

### General information

<b>Course unit code:</b>	BB: RC_MA_BB_IT_SAP_SMA_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Overview of management accounting in SAP S/4HANA	... maintain master data in management accounting in SAP S/4HANA.
Cost Center Accounting	... perform cost center accounting in SAP S/4HANA. ... conduct planning on cost center.
Internal Orders	... maintain master data, actual value flows, closing activities for internal orders. ... conduct planning on internal orders.
Reporting	... conduct main reports in SAP S/4HANA.



## Required and recommended reading\*

<b>Other course materials:</b>	-ACC scripts -Youtube-Clips -Power Point slides
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	90.00 %	50.00 %
Participation	Attendance teaching	10.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The 2nd attempt will be held as written computer exam (weight 100%).		
<b>Details on third attempt:</b>	The 3rd attempt is judged by commission and will be held as written computer exam (weight 100%).		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	27.00 teaching sessions	20.25 hours
<b>Teaching method:</b>	Excercise, Lecture, Software training	
<b>Social methods:</b>	Individual work, Plenum	
<b>Self-directed learning</b>		42.25 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.50 hpw</b>	<b>27.00 teaching sessions</b>
		<b>62.50 hours</b>

Course unit

# SAP Financial Accounting Basics

## General information

<b>Course unit code:</b>	BB: RC_MA_BB_IT_SAP_SF1_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction to SAP S/4HANA	<ul style="list-style-type: none"><li>... explain general structure and tools in SAP S/4HANA.</li><li>... explain the organizational structure in SAP (client, company code, profit center, segment, etc.).</li><li>... explain SAP S/4HANA tools and application.</li><li>... describe financial accounting components in SAP S/4HANA.</li><li>... navigate through SAP S/4HANA.</li><li>... enroll and disenroll to the SAP system.</li><li>... navigate in the menu.</li></ul>
General ledger accounting	<ul style="list-style-type: none"><li>... carry out standard activities in the general ledger in SAP S/4HANA.</li><li>... maintain general ledger master records.</li><li>... post transaction in the general ledger.</li></ul>
Accounts payable	<ul style="list-style-type: none"><li>... conduct basic activities in accounts payable in SAP S/4HANA.</li><li>... create business partner with a supplier role.</li><li>... set payment terms.</li><li>... maintain accounts payable transactions.</li><li>... manage the connection between accounts payable and materials management.</li></ul>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...  ... perform accounts payable closing operations. ... post outgoing payments. ... perform automatic payment run. ... perform reporting in accounts payables.
Accounts receivable	... perform basic activities in accounts receivable in SAP S/4HANA. ... create a business partner with a customer role. ... create a customer invoice. ... manage accounts receivable transactions. ... create accounts receivable dispute cases. ... manage the integration between accounts receivable and sales order management. ... post incoming payments. ... perform accounts receivable closing operations. ... settle open items.

## Required and recommended reading\*

<b>Other course materials:</b>	<ul style="list-style-type: none"> <li>- ACC scripts</li> <li>- YouTube clips</li> <li>- PowerPoint slides</li> </ul>
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	90.00 %	50.00 %
Participation	Attendance teaching	10.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The 2nd attempt will be held as written computer exam (weight 100%).
<b>Details on third attempt:</b>	The 3rd attempt is judged by commission and will be held as written computer exam (weight 100%).

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	27.00 teaching sessions	20.25 hours
<b>Teaching method:</b>	Excercise, Lecture, Software training	
<b>Social methods:</b>	Individual work, Plenum	
<b>Self-directed learning</b>		42.25 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.50 hpw</b>	<b>27.00 teaching sessions</b>
		<b>62.50 hours</b>

### Course unit

## Mergers & Acquisitions

### General information

<b>Course unit code:</b>	BB: RC_MA_BB_FM_WUF_M&A_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.75 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Deal structure and purchase price	... define the object of purchase and explain the options for the purchase price and payment modalities (fixed price vs. adjustments).

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... describe hedging options from the buyer's and seller's point of view.
M&A basics	... describe the motives, the structure and the parties involved in an M&A deal. ... explain takeover-tactics and takeover-defense-mechanisms. ... use screening methods to identify potential targets.
Due diligence	... describe the topics of a due diligence and name the most relevant risks and methods of risk assessment. ... organize and carry out a due diligence process.
M&A valuation	... use valuation methods to determine marginal prices from a buyers and a vendors point of view.
M&A Accounting	... describe the basics of accounting of M&A transactions.
Post merger integration	... name success factors for post merger integration and explain possibilities for using synergies.

## Required and recommended reading\*

<b>Required reading:</b>	Engelhardt, C.: Mergers & Acquisitions: Strategien, Abläufe und Begriffe im Unternehmenskauf; Ernst, D., Schneider, S., Thielen, B.: Unternehmensbewertungen erstellen und verstehen: Ein Praxisleitfaden; Gaughan, P.: Mergers, Acquisitions, and Corporate Restructurings;
<b>Recommended reading:</b>	Dreher, M., Ernst, D.: Mergers & acquisitions : Grundlagen und Verkaufsprozess mittlerer und großer Unternehmen;

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	80.00 %	50.00 %
Quiz	Work assignments	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The 2nd attempt will be held as a written exam (100%).		
<b>Details on third attempt:</b>	The 3rd attempt is judged by commission, otherwise the same conditions apply for the 3rd attempt as for the 2nd attempt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		22.00 teaching sessions	16.50 hours
<b>Teaching method:</b>	Lecture, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Plenum		
<b>Synchronous distance learning</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Practical/Case example, Question/Conversation based teaching, Webcast		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			10.00 hours
<b>Teaching method:</b>	Quiz		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			30.00 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.75 hpw</b>	<b>30.00 teaching sessions</b>	<b>62.50 hours</b>

Course unit

# Employer Branding

## General information

<b>Course unit code:</b>	BB: RC_MA_BB_GMT_HRM_EMB_4
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Introduction	... name and explain definitions and goals of employer branding. ... name the levels of employer branding. ... explain the characteristics of an (employer) brand.
Process and measures	... apply the employer branding process as an example. ... explain employer branding measures.
Employer attractiveness	... analyse the attractiveness of an employer based on strong and weak factors. ... explain the use of attractiveness parameters in employer branding.

## Required and recommended reading\*

<b>Required reading:</b>	Kanning, U.: Personalmarketing, Employer Branding und Mitarbeiterbindung : Forschungsbefunde und Praxistipps aus der Personalpsychologie;
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	Stotz, W., Wedel-Klein, A.: Employer Branding : mit Strategie zum bevorzugten Arbeitgeber;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	30.00 %	50.00 %
Presentation	Attendance teaching	70.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Duration of the exam: 1 teaching unit		
<b>Details on second attempt:</b>	The partial performances assessed negatively in the 1st attempt must be repeated. Positively assessed partial performances remain valid.		
<b>Details on third attempt:</b>	The partial performances assessed negatively in the 2nd attempt must be repeated and will be assessed by commission. Positively assessed partial performances remain valid.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	13.00 teaching sessions	9.75 hours
<b>Teaching method:</b>	Lecture, Presentation	
<b>Social methods:</b>	Group work, Plenum	
<b>Synchronous distance learning</b>	4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Webcast	
<b>Social methods:</b>	Plenum	



<b>Work assignments</b>		20.00 hours	
<b>Teaching method:</b>	Practical/Case example, Presentation		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>		29.75 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>62.50 hours</b>

Course unit

## SAP Financial Accounting Advanced

### General information

<b>Course unit code:</b>	BB: RC_MA_BB_IT_SAP_SF2_4
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Financial closing in SAP S/4HANA	<ul style="list-style-type: none"> <li>... explain the periodic closing process in SAP S/4HANA.</li> <li>... explain the order in which closing activities are carried out.</li> <li>... perform closing activities for assets.</li> <li>... manage closing activities in materials management.</li> <li>... perform closing activities in asset accounting.</li> <li>... enter accruals and deferrals.</li> <li>... post accruals and deferrals manually.</li> <li>... post accruals and deferrals automatically.</li> <li>... perform closing activities in receivables and payables.</li> </ul>

Course contents	Learning outcomes
	<p>Upon successful completion of the course unit, students are able to ...</p> <ul style="list-style-type: none"> <li>... generate balance confirmation.</li> <li>... conduct allowances for doubtful accounts.</li> <li>... reclassify accounts receivables and payables.</li> <li>... prepare financial statements.</li> <li>... prepare the financial statement and P&amp;L structure.</li> <li>... execute the financial statement report.</li> </ul>
Asset accounting in SAP S/4HANA	<ul style="list-style-type: none"> <li>... configure asset accounting.</li> <li>... maintain asset master records.</li> <li>... set asset classes.</li> <li>... conduct daily asset accounting business processes.</li> <li>... post asset transactions.</li> <li>... post asset disposals like sale to third party or scrapping.</li> <li>... perform periodic asset transactions and reporting.</li> <li>... execute the depreciation posting program.</li> <li>... create the asset history sheet.</li> </ul>
Cash management in SAP S/4HANA	<ul style="list-style-type: none"> <li>... conduct basic tasks in cash management in SAP S/4HANA.</li> <li>... maintain bank accounting master records.</li> <li>... upload bank statements to the SAP system.</li> <li>... manage petty cash.</li> </ul>

## Required and recommended reading\*

<b>Other course materials:</b>	<ul style="list-style-type: none"> <li>- ACC scripts</li> <li>- YouTube clips</li> <li>- PowerPoint slides</li> </ul>
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	90.00 %	50.00 %
Participation	Attendance teaching	10.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The 2nd attempt will be held as written computer exam (weight 100%).		
<b>Details on third attempt:</b>	The 3rd attempt is judged by commission and will be held as written computer exam (weight 100%).		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	27.00 teaching sessions	20.25 hours
<b>Teaching method:</b>	Excercise, Lecture, Software training	
<b>Social methods:</b>	Individual work, Plenum	
<b>Self-directed learning</b>		42.25 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.50 hpw</b>	<b>27.00 teaching sessions</b>
		<b>62.50 hours</b>

Course unit

## General English

### General information

<b>Course unit code:</b>	BB: WI_BA_BB_FP_AAE_GEN_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
How to study at home	... locate and retrieve useful web resources ... choose and implement self-study strategies
Pronunciation	... identify and distinguish common pronunciation mistakes in English ... articulate and execute challenging pronunciation features to the best of their abilities
Introduction to the conceptual development and practical implementation of topical presentations	... select a technical topic ... negotiate their role within the group ... identify relevant and reliable resources ... break down and summarise information ... build a presentation ... speak in front of their peers with increased confidence

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	<ul style="list-style-type: none"> <li>... articulate direct and fair feedback to their peers</li> <li>... incorporate received feedback in similar future tasks</li> <li>... improve their self-reflection</li> </ul>
General conversation skills	... articulate themselves more confidently on a range of topics
Grammar as eLearning	... memorise and retrieve essential aspects of English grammar

## Required and recommended reading\*

<b>Required reading:</b>	<p>Mascull, B.: Business Vocabulary in Use Second Edition: Book with answers and CD-ROM.;</p> <p>Emmerson, P.: Business Grammar Builder: Second Edition – Intermediate to Upper-Intermediate / Student's.;</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Participation	Attendance teaching	10.00 %	50.00 %
Preparation of written work	Work assignments	30.00 %	50.00 %
Progress check	Attendance teaching	60.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on first attempt:</b>	There will be three progress checks accounting for 60% of your final grade. The best two grades will be averaged and the lowest grade dropped, allowing you to have a bad day on one of your written tests. The remaining 40% will be comprised by your elearning project (30%) which will be outlined in class and class participation (10%).
<b>Details on second attempt:</b>	Positive parts count for the second attempt. 10 % participation in class are replaced by an essay (also 10 %) that requires a minimum of 50 %.
<b>Details on third attempt:</b>	Your third and final attempt to pass the course will be an oral exam in front of a commission, where you must achieve a grade of at least 50% to pass.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Impulse talk, Moderation, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Preparation of written work	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		14.50 hours
<b>Teaching method:</b>	Independent study of literature	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>50.00 hours</b>

### Course unit

## Business English

### General information

<b>Course unit code:</b>	BB: WI_BA_BB_FP_KWE_BEN_4
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit

<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Introduction to style and register	<ul style="list-style-type: none"> <li>... identify the differences between levels of politeness</li> <li>... categorise different styles and levels of formality</li> <li>... contrast levels of directness between their native language and English</li> <li>... illustrate and explain inappropriate use of register</li> <li>... adapt and re-write incorrect use of register</li> </ul>
CVs, cover letters, job interviews	<ul style="list-style-type: none"> <li>... identify essential aspects of the application process</li> <li>... contrast the job application process between Austria and the Anglosphere</li> <li>... distinguish between different types of job interviews</li> <li>... design their own application documents in English</li> </ul>
Writing skills	<ul style="list-style-type: none"> <li>... infer the importance of structure in paragraph writing</li> <li>... independently write a paragraph incorporating the concepts of unity, cohesions and coherence as well as theme</li> </ul>
False friends	<ul style="list-style-type: none"> <li>... recognise the most common false friends</li> <li>... use the correct English item of vocabulary/idiomatic phrase</li> </ul>
Work and motivation	<ul style="list-style-type: none"> <li>... define the difference between Theory X and Y</li> <li>... infer and analyse information from written texts</li> <li>... draw on previously acquired discussion skills</li> </ul>
General conversation skills	<ul style="list-style-type: none"> <li>... articulate themselves more confidently on a range of topics</li> </ul>
Grammar as eLearning	<ul style="list-style-type: none"> <li>... memorise and retrieve essential aspects of English grammar</li> </ul>
Prepare a professional portfolio	<ul style="list-style-type: none"> <li>... identify key parts of professional portfolios</li> <li>... design their own professional portfolio</li> <li>... defend their choices with regard to their personal professional portfolio</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Emmerson, P.: Business Grammar Builder: Second Edition – Intermediate to Upper-Intermediate / Student's.;
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	Mascull, B.: Business Vocabulary in Use Second Edition: Book with answers and CD-ROM;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Preparation of written work	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Wie 1. Antritt.		
<b>Details on third attempt:</b>	Mündliche komm. Prüfung.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Impulse talk, Moderation, Peer-review, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>		10.00 hours	
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		14.50 hours	
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>50.00 hours</b>



Course unit

## Advanced Business English

### General information

<b>Course unit code:</b>	BB: WI_BA_BB_FP_AEN_ABE_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Abstracts	... .. identify the elements of an abstract ... .. use precise and concise vocabulary for abstracts ... .. communicate their key ideas succinctly
Presentations	... .. overcome fear of presenting in front of an audience ... .. design and structure a presentation for clarity and interest ... .. use body and voice to communicate effectively
Business vocabulary	... .. apply a range of appropriate vocabulary to presentations and professional office communication
Technical conversation skills	... .. discuss technical topics in English
General conversation skills	... .. articulate themselves more confidently on a range of topics
Grammar as eLearning	... .. memorise and retrieve essential aspects of English grammar

## Required and recommended reading\*

<b>Required reading:</b>	<p>Mascull, B.: Business Vocabulary in Use Second Edition: Book with answers and CD-ROM;</p> <p>Emmerson, P.: Business Grammar Builder: Second Edition – Intermediate to Upper-Intermediate / Student's;</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	10.00 %	50.00 %
Preparation of written work	Work assignments	15.00 %	50.00 %
Presentation	Attendance teaching	45.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Your second attempt will be a presentation (50%) plus a written exam (50%).		
<b>Details on third attempt:</b>	Your third attempt will be a presentation (50%) and an oral exam (50%) in front of a commission.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Impulse talk, Learning game, Lecture, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	

<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Preparation of written work	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		14.50 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>50.00 hours</b>

Course unit

## Negotiations & Critical Discussions

### General information

<b>Course unit code:</b>	BB: IT_MA_BB_FP_TUK_NCD_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Logical fallacies and critical thinking	... identify misleading and/or illogical statements and arguments ... critically judge the logic of statements and arguments
Rhetoric	... explain the rhetorical triangle ... apply the elements of the rhetorical triangle to their own arguments
Rhetorical analysis of a source	... analyse and judge a source using the rhetorical triangle ... provide constructive feedback on how to improve the rhetorical balance of the source
Negotiations podcasts presentation	... summarize, explain and present the content of a podcast ... assess the cultural transferability of the podcast's content
Tentative/diplomatic language	... contrast the differences between diplomatic/tentative English and their first language ... rewrite and adapt sample texts to different scenarios

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Meeting/debate/negotiation simulations	... practice and apply strategies for successful meetings and negotiations ... provide supportive peer feedback
General conversation skills	... articulate themselves more confidently on a range of topics
Grammar as eLearning	... memorise and retrieve essential aspects of English grammar

## Required and recommended reading\*

<b>Required reading:</b>	Mascull, B.: Business Vocabulary in Use Second Edition: Book with answers and CD-ROM.;  Emmerson, P.: Business Grammar Builder: Second Edition – Intermediate to Upper-Intermediate / Student's.;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	40.00 %	50.00 %
Progress check	Attendance teaching	60.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on first attempt:</b>	There will be three progress checks accounting for 60% of your final grade. The first two progress checks will be written and the final one is a meeting/ negotiation simulation. The best grade of the two written tests will be put together with your grade for the meeting, allowing you to have a bad day on one of your written tests. The remaining 40% will be comprised by your eLearning project.
<b>Details on second attempt:</b>	Your second attempt will be a 750-word business English essay as well as a written exam, where you must achieve a grade of at least 50% in both to pass.
<b>Details on third attempt:</b>	Your third and final attempt to pass the course will be an oral exam in front of a commission, where you must achieve a grade of at least 50% to pass.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Question/Conversation based teaching, Role play	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Preparation of written work	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		27.00 hours
<b>Teaching method:</b>	Exercise, Independent repetition, Independent study of literature	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>62.50 hours</b>

### Course unit

## Communication & Presentation

### General information

<b>Course unit code:</b>	BB: IT_MA_BB_FP_KUC_COP_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/</b>	Compulsory course unit

<b>optional):</b>	
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Presentation of marketing/ economics	... summarise the main schools of economics ... select a topic for their presentation based on the introduced content
General conversation skills	... articulate themselves more confidently on a range of topics
Grammar as eLearning	... memorise and retrieve essential aspects of English grammar
Effective presentations and Presentation Zen	... retrieve key aspects of presentation skills ... clearly contrast the difference between English and German presentations ... recognise the key aspects of effective slide design ... design their own effective slides ... devise and deliver a presentation based on lessons learned ... provide and learn from constructive peer and teacher feedback
PowerPoint Roulette	... confidently execute an unplanned and unprepared presentation ... improvise using the information and skills from previous lessons
Self-analysis of presentation	... review and critically assess a video of their presentation performance

## Required and recommended reading\*

<b>Required reading:</b>	Emmerson, P.: Business Grammar Builder: Second Edition – Intermediate to Upper-Intermediate / Student's.; Mascull, B.: Business Vocabulary in Use Second Edition: Book with answers and CD-ROM;
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	35.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
Progress check	Attendance teaching	25.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Your eLearning task (details will be provided in class) will account for 35% of your grade. The remaining 65% will be accounted for by your progress check(s) and presentation.		
<b>Details on second attempt:</b>	same as the 1st attempt		
<b>Details on third attempt:</b>	Your third and final attempt to pass the course will be an oral exam in front of a commission, where you must achieve a grade of at least 50% to pass.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Presentation, Question/Conversation based teaching, Role play, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			10.00 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Individual work		



<b>Self-directed learning</b>		27.00 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>62.50 hours</b>

Course unit

## Academic discourse & Presentation

### General information

<b>Course unit code:</b>	BB: IT_MA_BB_FP_PFE_ADP_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Seminar
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Presentation of thesis	... confidently execute a presentation ... apply their acquired presentation skills
General conversation skills	... articulate themselves more confidently on a range of topics
Abstract for thesis	... write an abstract of their thesis drawing on previously acquired skills
Defensio preparation	... argue, question and assess statements and opinions in academic discourse ... eloquently articulate academic reasoning and findings

### Required and recommended reading\*

<b>Required reading:</b>	Emmerson, P.: Business Grammar Builder: Second Edition – Intermediate to Upper-Intermediate / Student's;
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	<p>Mascull, B.: Business Vocabulary in Use Second Edition: Book with answers and CD-ROM.;</p> <p>Garr, R.: Presentation Zen.;</p>
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Presentation	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Your final presentation will be the basis for your semester grade.		
<b>Details on second attempt:</b>	Your final presentation will be the basis for your semester grade in the second attempt.		
<b>Details on third attempt:</b>	In the third attempt your final presentation will be graded by a commission.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Peer-review, Presentation, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>		20.00 hours	
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		4.50 hours	
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>50.00 hours</b>



Course unit

## General English 1

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_SPR_GEN_GE1_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Mündliche Textkompetenz Small Talk, die Meinung ausdrücken, Telefongespräche	<p>... mit anderen Personen mündlich in Kontakt zu treten und Phrasen und Vokabel für Small Talk anzuwenden.</p> <p>... sich situationsangemessen vorzustellen.</p> <p>... Getränke anzubieten.</p> <p>... über Reise, Unterbringung etc. zu sprechen.</p> <p>... über Themen des Alltags und allgemeine Themen des Geschäftslebens zu sprechen.</p> <p>... über Familie, Wohnen, Wetter, Sport, persönliche Interessen, Urlaub, Kleiderordnung, etc. zu sprechen.</p> <p>... die eigene Meinung auszudrücken.</p> <p>... zuzustimmen und abzulehnen.</p> <p>... nach der Meinung des Gegenübers zu fragen.</p> <p>... Telefongespräche effektiv zu führen.</p>

Course contents	Learning outcomes
	<p>Upon successful completion of the course unit, students are able to ...</p> <p>... sich vorzustellen, zu verbinden, Nachrichten aufzunehmen und das Gespräch zu beenden.</p> <p>... Treffen telefonisch zu vereinbaren.</p> <p>... mit Beschwerden / schwierigen AnruferInnen umzugehen.</p>
Schriftliche Textkompetenz	<p>... Emails und Briefe in formeller, informeller und neutraler Sprache zu verfassen.</p> <p>... Briefe und Emails zu beginnen und zu beenden.</p> <p>... Emails für verschiedene Zwecke zu schreiben (um Information fragen, einen Termin zu vereinbaren, Einladungen aussprechen, etc.).</p>
Hör- und Leseverständnis	<p>... den Inhalt von Hör- und Lesebeispielen sinngemäß wiederzugeben.</p> <p>... Fragen zu Hör- und Lesebeispielen zu beantworten.</p>
Grammatik	<p>... Grammatikkapitel zu erklären und aktiv anwenden können.</p> <p>... Zeiten (inkl. Verbformen) aktiv anwenden können (future, past, present, present perfect).</p> <p>... Countable und uncountable nouns richtig verwenden können.</p> <p>... Question tasks effektiv einsetzen können.</p>

## Required and recommended reading\*

<b>Required reading:</b>	Duckworth M.: Business Grammar and Practice;
<b>Other course materials:</b>	Werden von den Lehrenden zur Verfügung gestellt.

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	30.00 %	50.00 %
Oral exam	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Bei negativer Absolvierung der Klausur / der mündlichen Prüfung besteht der 2. Antritt aus einer neuerlichen schriftlichen Klausur / mündlichen Prüfung. Positiv bewertete (bzw. noch nicht erbrachte) Teilleistungen bleiben in diesem Fall unberührt und somit erhalten. Bei negativer Mitarbeitsnote besteht der 2. Antritt jeweils aus einer Ersatzleistung (wahlweise schriftliche Arbeit, mündliche Prüfung, schriftliche Klausur, oder anderweitige Ersatzleistung, dies liegt im Ermessen der/des Lehrenden). Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben auch in diesem Fall unberührt.		
<b>Details on third attempt:</b>	Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur und einer mündlichen Prüfung. Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		25.00 hours
<b>Teaching method:</b>	Excercise, Peer-review	
<b>Social methods:</b>	Individual work, Pair work, Group work	

<b>Self-directed learning</b>		24.50 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## General English 2

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_SPR_GEN_GE2_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Mündliche Textkompetenz (Small Talk, die Meinung ausdrücken, Telefongespräche)	<p>... verschiedene (Business English)-Themen in englischer Sprache zu erläutern und zu diskutieren.</p> <p>... fachlich ansprechende Präsentationen zu halten.</p> <p>... Präsentationen in englischer Sprache zu konzipieren und zu strukturieren.</p> <p>... Präsentationen effektiv zu beginnen.</p> <p>... Signposting-Techniken und weitere Sprachtechniken anzuwenden.</p> <p>... eine Präsentation strukturiert zu beenden.</p> <p>... Visual Aids zu erstellen, beschreiben und sinnvoll einzusetzen.</p> <p>... Fragen zur Präsentation zu beantworten.</p>
Schriftliche Textkompetenz	<p>... argumentative Essays in englischer Sprache zu erstellen.</p> <p>... Die eigene Meinung schriftlich auszudrücken.</p> <p>... Vor- und Nachteile zu beschreiben.</p>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Hör- und Leseverständnis	<p>... Texte argumentativ-logisch zu strukturieren.</p> <p>... den Inhalt von Hör- und Lesebeispielen sinngemäß wiederzugeben.  ... basic skimming und scanning skills auf Niveau B2 anzuwenden.  ... mittelschwere Texte (Niveau B2) zu verschiedenen Themen zu lesen und zu erfassen sowie multiple choice Übungen dazu zu beantworten  ... follow up-Aktivitäten auf Basis eines Lesetextes durchzuführen (z.B. weiterführende Fragen / die eigene Meinung ausdrücken).  ... (selbständig) mit authentischen englischsprachigen Medien zu arbeiten (Zeitungen, Webseiten, etc. – dies inkludiert Lernstrategien z.B. zum Lernen von Vokabeln, Benutzung von Wörterbüchern und anderen Quellen, etc.).  ... Verständnisfragen zu mittelschweren bis schweren Videos und Hörbeispielen (Niveau B2) zu beantworten (Überprüfung des Hörverständnisses (global and detailed understanding) in Form von multiple choice exercises).</p>
Grammatik	<p>... Grammatikkapitel erklären und aktiv anwenden zu können.  ... folgende Grammatikkapitel beim Verfassen von eigenen Aussagen / Texten und im Rahmen von Grammatikübungen korrekt anzuwenden: gerund and infinitive, conditionals, reported speech</p>

## Required and recommended reading\*

<b>Required reading:</b>	Duckworth, M.: Business Grammar and Practice;
<b>Other course materials:</b>	Werden von den Lehrenden zur Verfügung gestellt.

\*current editions



## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Bei negativer Absolvierung der Klausur / der mündlichen Prüfung besteht der 2. Antritt aus einer neuerlichen schriftlichen Klausur / mündlichen Prüfung. Positiv bewertete (bzw. noch nicht erbrachte) Teilleistungen bleiben in diesem Fall unberührt und somit erhalten. Bei negativer Mitarbeitsnote besteht der 2. Antritt jeweils aus einer Ersatzleistung (wahlweise schriftliche Arbeit, mündliche Prüfung, schriftliche Klausur, oder anderweitige Ersatzleistung, dies liegt im Ermessen der/des Lehrenden). Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben auch in diesem Fall unberührt.		
<b>Details on third attempt:</b>	Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur und einer mündlichen Prüfung. Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		25.00 hours
<b>Teaching method:</b>	Excercise, Peer-review	
<b>Social methods:</b>	Individual work, Pair work, Group work	

<b>Self-directed learning</b>		24.50 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Business English 1

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_SPR_BEN_BE1_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Mündliche Textkompetenz	<p>... Meetings erfolgreich zu leiten sowie an Meetings teilzunehmen.</p> <p>... Vokabular für Meetings anzuwenden.</p> <p>... eine Agenda zu verfassen.</p> <p>... an einem Meeting / einer Telekonferenz in englischer Sprache aktiv teilzunehmen (andere TeilnehmerInnen höflich zu unterbrechen, auf Unterbrechungen anderer TeilnehmerInnen höflich zu reagieren, nachzufragen, wenn Punkte unklar sind, Vorschläge zu machen, die eigene Meinung zu äußern und zu vertreten).</p> <p>... zwischen formellen und informellen Meetings zu unterscheiden und die Sprache entsprechend anzupassen.</p> <p>... Zustimmung und Widerspruch zu verbalisieren.</p> <p>... ein Meeting zu leiten und zu organisieren.</p> <p>... den Unterschied zwischen guten und schlechten Meetings zu diskutieren.</p> <p>... Trends und Graphiken zu beschreiben.</p>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...  ... dabei Businessvokabular anzuwenden. ... sich diplomatisch auszudrücken. ... über work and motivation zu sprechen. ... Bewerbungsgespräche auf Englisch zu führen.
Schriftliche Textkompetenz	... Job Advertisements zu verfassen und auf diese zu antworten. ... freie Stellen zu beschreiben. ... zu erklären, warum man für eine Stelle geeignet wäre. ... E-Mails zu Geschäftsthemen zu schreiben. ... schriftliche Stellungnahmen zu verfassen. ... schriftliche Kommentare in englischer Sprache zu erstellen (unter Verwendung der entsprechenden Phrasen) ... interkulturelle Unterschiede im Geschäftsleben zu diskutieren.
Hör- und Leseverständnis	... den Inhalt von Hör- und Lesebeispielen sinngemäß wiederzugeben. ... Fragen zu Texten, Videos, Podcasts und Listening Comprehension Tasks zu beantworten und diese zu diskutieren.

## Required and recommended reading\*

<b>Required reading:</b>	Duckworth, M.: Business Grammar and Practice;
<b>Other course materials:</b>	Skripten und weitere Unterlagen (Podcasts, Videos, Listening Comprehensions, etc.) werden von den Lehrenden zur Verfügung gestellt.

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	30.00 %	50.00 %
Project documentation	Work assignments	40.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Mündliche Prüfung in Gruppen, wobei das Thema „Meetings" praktisch erarbeitet wird (Abhaltung eines Meetings, Diskussion, etc.). Die mündliche Prüfung dauert in der Gruppe maximal 30-45 Minuten für 4-6 Kandidat*innen. Projekt Work: CV, cover letter, Bewerbungsvideo, schriftliches Feedback Continuous Assessment: Vokabelarbeit, schriftlicher Kommentar, E-Learning		
<b>Details on second attempt:</b>	Bei negativer Absolvierung der Projektarbeit/der mündlichen Prüfung besteht der 2. Antritt aus einer neuerlichen Projektarbeit/mündlichen Prüfung. Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben von der negativen Absolvierung eines Teilbereiches unberührt. Bei negativer Absolvierung des Teilbereichs „Continuous Assessment" besteht der 2. Antritt für diesen Teilbereich aus einer Ersatzleistung (schriftliche Arbeit, mündliche Prüfung, schriftliche Klausur oder anderweitige Ersatzleistung, je nachdem, welche Leistungen der/die Studierende im Rahmen der negativen Note nicht erbracht hat). Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben auch in diesem Fall unberührt.		
<b>Details on third attempt:</b>	Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur (50%) und einer mündlichen Prüfung (50%). Für eine positive Note müssen beide Teilbereiche positiv bewertet werden. Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			25.00 hours
<b>Teaching method:</b>	Excercise, Peer-review		
<b>Social methods:</b>	Individual work, Pair work, Group work		
<b>Self-directed learning</b>			24.50 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>75.00 hours</b>

### Course unit

## Business English 2

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_SPR_BEN_BE2_4
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
Mündliche Textkompetenz	<p>Upon successful completion of the course unit, students are able to ...</p> <p>... verschiedene (Business English)-Themen in englischer Sprache zu erläutern und zu diskutieren.</p> <p>... Dinge sprachlich auf den Punkt zu bringen.</p> <p>... komplexe Zusammenhänge zusammenzufassen.</p> <p>... über die Gründung von Unternehmen unter Verwendung des dafür notwendigen Business-Vokabulars zu sprechen (entrepreneurship, Voraussetzungen dafür).</p> <p>... verschiedene Finanzierungsformen von Unternehmen zu nennen und zu diskutieren.</p> <p>... eine innovative Unternehmensidee zu beschreiben und zu diskutieren.</p> <p>... Motivationsfaktoren im Unternehmenszusammenhang zu benennen, zu beschreiben und zu diskutieren.</p> <p>... Einfluss eines kreativen Arbeitsumfeldes auf die Innovationstätigkeit eines Unternehmens zu analysieren.</p> <p>... kurze, überzeugende Präsentationen (sogenannte pitches) in englischer Sprache zu halten.</p>
Schriftliche Textkompetenz	<p>... Reports zu schreiben.</p> <p>... Vor- und Nachteile von Themen (siehe auch mündliche Textkompetenz) strukturiert zu beschreiben und zu bewerten.</p>
Hör- und Leseverständnis	<p>... Finanzberichte sinnerfassend zu lesen und diskutieren zu können.</p> <p>... Verständnisfragen zu mittelschweren bis schweren Themen zu beantworten.</p>

## Required and recommended reading\*

<b>Required reading:</b>	Duckworth, M.: Business Grammar and Practice;
<b>Other course materials:</b>	<p>The Medici Effect: What Elephants and Epidemics Can Teach Us about Innovation: What You Can Learn from Elephants and Epidemics; Frans Johansson</p> <p>Skripten und weitere Unterlagen (Podcasts, Videos, Listening Comprehensions, etc.) werden von den Lehrenden zur Verfügung gestellt.</p>

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Attendance teaching	40.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
Participation	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	<p>Mündliche Prüfung in Zweiergruppen (Diskussion von Themen, die Rahmen der Lehrveranstaltung behandelt wurden, Beantwortung von Fragen), 20 Minuten pro Paar</p> <p>Projektarbeit (Fallstudie): Verfassen eines Reports (die Anforderungen und Kriterien werden von der Lehrperson kommuniziert)</p> <p>Mitarbeit: aktive Mitarbeit (Beteiligung im Unterricht), Vokabelarbeit, Präsentationen im Unterricht, etc. Die genaue Aufteilung des Punktes Mitarbeit obliegt dem jeweiligen Lektor / der jeweiligen Lektorin und wird zu Beginn des Semesters vom Lektor / von der Lektorin kommuniziert</p>		
<b>Details on second attempt:</b>	<p>Bei negativer Absolvierung der mündlichen Prüfung / der Projektarbeit besteht der 2. Antritt aus einer neuerlichen mündlichen Prüfung / Projektarbeit. Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben von der negativen Absolvierung eines Teilbereiches unberührt. Bei negativer Mitarbeitsnote besteht der 2. Antritt für den Teilbereich Mitarbeit aus einer Ersatzleistung (schriftliche Arbeit, mündliche Prüfung, schriftliche Klausur oder anderweitige Ersatzleistung, je nachdem, welche Leistungen der/die Studierende im Rahmen der negativen Mitarbeitsnote nicht erbracht hat. Kommt es im zweiten Antritt zu einer weiteren mündlichen Prüfung so entspricht diese im Aufbau nicht der eigentlichen mündlichen Prüfung, um Redundanzen zu vermeiden). Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben auch in diesem Fall unberührt.</p>		
<b>Details on third attempt:</b>	<p>Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur (50%) und einer mündlichen Prüfung (50%). Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.</p>		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			25.00 hours
<b>Teaching method:</b>	Excercise, Peer-review		
<b>Social methods:</b>	Individual work, Pair work, Group work		
<b>Self-directed learning</b>			24.50 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>75.00 hours</b>

### Course unit

## Economics Case Studies

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_WI_WIV_ECS_4
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.50 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English



## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Case Studies	<p>... To solve case studies independently with the help of economic fundamentals and specializations.</p> <p>... Estimate the impact of (global) economic developments on business decisions.</p>

## Required and recommended reading\*

<b>Other course materials:</b>	<p>Issue of case studies</p> <p>Recent articles that are summarized and prepared into case studies</p>
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Für den 2. Antritt gelten die gleichen Bedingungen wie für den 1. Antritt.		
<b>Details on third attempt:</b>	Der 3. Antritt wird kommissionell beurteilt. Kommissionelle Begutachtung 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Case study		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			24.50 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			0.25 hours
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>37.50 hours</b>

### Course unit

## Smart Technologies

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_TEC_WUN_SMT_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory elective course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
the way to Industry 4.0 Overview of various intelligent systems	... be able to reproduce historical aspects and the path to digitization as well as modern intelligent technologies and to name their typical fields of application.

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
transferability and Risks of Digitization and Industry 4.0	... assess the transferability and applicability to a business environment.
concept development for the implementation of smart systems in existing structures	... to develop a concept for a specific application and to carry out an applicability assessment.

## Required and recommended reading\*

<b>Required reading:</b>	Ayhan, F.: Several Dimensions of Innovation, Technology and Industry 4.0;
<b>Other course materials:</b>	Subject-specific literature depending on the selected field of application Self-made teaching materials of the students

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Klausurarbeit, 100%		
<b>Details on third attempt:</b>	Kommissionelle mündliche Prüfung, 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Lecture, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Work assignments</b>			20.00 hours
<b>Teaching method:</b>	Project		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			29.50 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>	<b>75.00 hours</b>

### Course unit

## Technical English 1

### General information

<b>Course unit code:</b>	BB: IN_BA_BB_SPR_TEN_TE1_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Produktionsprozesse	... technische Produktionsprozesse zu beschreiben.

Course contents	Learning outcomes
	<p>Upon successful completion of the course unit, students are able to ...</p> <ul style="list-style-type: none"> <li>... Produktionsanlagen in Firmen zu beschreiben und zu diskutieren.</li> <li>... Produktionsprozesse zu beschreiben und zu diskutieren.</li> <li>... Maschinen und Materialien für den Produktionsprozess zu beschreiben.</li> <li>... Sicherheitsanweisungen zu verfassen und zu diskutieren (Verwendung von Modalverben).</li> <li>... Gefahren in Produktionsbetrieben zu beschreiben und zu diskutieren.</li> <li>... Sicherheitsmaßnahmen vorzuschlagen.</li> <li>... Schutzkleidung zu beschreiben und deren Verwendung zu diskutieren.</li> <li>... einen Sicherheitsvorfall zu beschreiben (Verwendung von Modalverben inklusive past modals sowie Verwendung des passive voice).</li> <li>... Verletzungen durch Arbeitsunfälle zu beschreiben und zu erklären (Verwendung von Adjektiven und Adverbien).</li> </ul>
Forschung und Entwicklung, wissenschaftliches Arbeiten	<ul style="list-style-type: none"> <li>... Forschungs- und Entwicklungsbestrebungen in Firmen zu beschreiben.</li> <li>... die Rolle von Forschung und Entwicklung in technischen Unternehmen zu beschreiben.</li> <li>... Forschungs- und Entwicklungsprozesse zu beschreiben und zu diskutieren.</li> <li>... Forschungsergebnisse unter Zuhilfenahme des notwendigen Fachvokabulars und der spezifischen sprachlichen Strukturen zu beschreiben.</li> <li>... Abstracts zur eigenen Bachelorarbeit zu verfassen.</li> <li>... Technische Texte auf Fehler zu scannen und Fragen dazu zu beantworten.</li> <li>... Abstracts (Inhalt, Aufbau, Zweck, etc.) zu beschreiben.</li> <li>... gute und schlechte Abstracts zu diskutieren.</li> <li>... ein Abstract zu einer technischen Bachelorarbeit unter Berücksichtigung der sprachlichen Konventionen zu verfassen.</li> <li>... Abstracts bzw. Absätze von anderen Studierenden zu kommentieren, Feedback zu geben und Verbesserungsvorschläge zu machen.</li> </ul>
Posterpräsentation	<ul style="list-style-type: none"> <li>... Poster zu technischen Themen zu präsentieren.</li> <li>... ein Poster für eine Konferenz zu einem technischen Thema zu erstellen.</li> <li>... ein Poster bei einer Konferenz zu präsentieren.</li> <li>... verschiedene Industrien unter Verwendung spezifischen Fachvokabulars zu beschreiben und kritisch zu hinterfragen.</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	Ibbotson, M.: Cambridge English for Engineering;
<b>Recommended reading:</b>	Brieger, N.; Pohl, A.: Technical English. Vocabulary and Grammar;
<b>Other course materials:</b>	Die Kurswebseite sowie Skripten, Links und weitere Unterlagen werden von der/dem Lehrenden zur Verfügung gestellt. Weiterführende Literatur: Academic Vocabulary in Use / McCarthy, O´Dell / Cambridge Writing Academic English / Oshima, Hogue / Pearson Longman The Craft of Scientific Writing / Alley / Springer Cambridge English for Scientists / Armer / Cambridge

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Attendance teaching	25.00 %	50.00 %
Permanent assessment of the project/learning progress	Work assignments	75.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on first attempt:</b>	<ul style="list-style-type: none"> <li>▪ Mündliche Prüfung: Synchronous E-tivities (&gt; 50% sind für eine positive Absolvierung erforderlich)</li> <li>▪ Laufende Beobachtung des Projekt-/Lernfortschritts: Asynchronous E-tivities (&gt; 50% sind für eine positive Absolvierung erforderlich)</li> </ul>
<b>Details on second attempt:</b>	<p>Wird der erste Antritt der mündlichen Prüfung (Synchronous E-tivities), negativ beurteilt, so besteht der zweite Antritt aus einer mündlichen Prüfung. Bereits erbrachte Teilleistungen (laufende Beobachtung des Projekt-/Lernfortschritts) bleiben aufrecht.</p> <p>Bei negativer Absolvierung der laufenden Beurteilung des Projekt-/Lernfortschritts (Asynchronous E-tivities) kommt es zu einer Ersatzleistung (schriftliche oder mündliche Prüfung, schriftliche Ersatzarbeit, das liegt im Ermessen des*der Lektors*Lektorin). Bereits erbrachte Teilleistungen (mündliche Prüfung) bleiben aufrecht.</p>
<b>Details on third attempt:</b>	<p>Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur (50%) und einer mündlichen Prüfung (50%).</p> <p>Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.</p> <p>Für eine positive Note müssen beide Teilbereiche positiv bewertet werden.</p>

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	24.00 teaching sessions	18.00 hours
<b>Teaching method:</b>	Discussion, Exercise, Lecture	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Synchronous distance learning</b>	2.00 teaching sessions	1.50 hours
<b>Teaching method:</b>	Chat, Discussion	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		40.00 hours
<b>Teaching method:</b>	Exercise, Learning video, Peer-review, Preparation of written work	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Self-directed learning</b>		15.50 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature	
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>
		<b>75.00 hours</b>

Course unit

# Technical English 2

## General information

<b>Course unit code:</b>	BB: IN_BA_BB_SPR_TEN_TE2_6
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 6. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
- Mündliche Textkompetenz – Präsentationen, Diskussionen, - Schriftliche Textkompetenz, - Hör- und Leseverständnis, - Bionik, - Klimawandel, - Design Thinking	... - die Begriffsbildung und Geschichte der Bionik zu diskutieren, - erfolgreiche Produkte, die auf bionische Innovationen zurückgehen, zu nennen und zu erklären, - den Unterschied zwischen einem Cyborg und einem* einer Träger*in einer bionischen Prothese zu definieren, - die Gründe und Konsequenzen der Klimaveränderung respektive der globalen Erwärmung zu erklären und zu diskutieren, - die Auswirkungen ihrer Ernährung auf ihren CO2-Fußabdruck zu erklären und zu diskutieren, - verschiedene Aspekte der Klimaveränderung und Maßnahmen, die damit verbunden sind (Abholzung, Green Cities, etc.) zu hinterfragen und kritisch zu diskutieren, - Design Thinking nach dem Ansatz von David Kelly/IDEO zu beschreiben und zu diskutieren, - verschiedene Design Thinking-Methoden, Konzepte und Tools zu erläutern, - fachspezifisches Vokabular zu verschiedenen technischen Themen (beispielsweise Elektrotechnik) zu verwenden,

## Required and recommended reading\*

<b>Other course materials:</b>	Unterlagen und Links werden online zur Verfügung gestellt.
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\*current editions



## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Oral exam	Synchronous distance learning	25.00 %	50.00 %
Permanent assessment of the project/learning progress	Work assignments	75.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	<ul style="list-style-type: none"> <li>▪ Arbeitsaufträge außerhalb der Präsenz: Asynchronous E-tivities (&gt; 50% sind für eine positive Absolvierung erforderlich)</li> <li>▪ Präsenzunterricht: Synchronous E-tivities (&gt; 50% sind für eine positive Absolvierung erforderlich)</li> </ul>		
<b>Details on second attempt:</b>	<p>Wird der erste Antritt des Synchronen E-Learnings (Synchronous E-tivities) negativ beurteilt, so besteht der zweite Antritt aus einer mündlichen Prüfung. Bereits erbrachte Teilleistungen (Arbeitsaufträge außerhalb der Präsenz) bleiben aufrecht.</p> <p>Bei negativer Absolvierung der Arbeitsaufträge außerhalb der Präsenz (Asynchronous E-tivities) kommt es zu einer Ersatzleistung (schriftliche oder mündliche Prüfung, schriftliche Ersatzarbeit, das liegt im Ermessen des*der Lektors*Lektorin). Bereits erbrachte Teilleistungen (Präsenzunterricht) bleiben aufrecht.</p>		
<b>Details on third attempt:</b>	<p>Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur (50%) und einer mündlichen Prüfung (50%).</p> <p>Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.</p> <p>Für eine positive Note müssen beide Teilbereiche positiv bewertet werden (&gt;50%).</p>		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		24.00 teaching sessions	18.00 hours
<b>Teaching method:</b>	Discussion, Excercise, Lecture		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		2.00 teaching sessions	1.50 hours
<b>Teaching method:</b>	Chat, Learning video		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			46.00 hours
<b>Teaching method:</b>	Excercise, Learning video, Peer-review, Project		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Self-directed learning</b>			9.50 hours
<b>Total</b>	<b>1.50 hpw</b>	<b>26.00 teaching sessions</b>	<b>75.00 hours</b>

als Online-Lehrveranstaltung abgehalten.

Zu Beginn der Lehrveranstaltung gibt es eine synchrone Onlinephase, in der das Lehrveranstaltungs-konzept dargelegt wird.

In Folge werden die drei Themenblöcke mit Hilfe von Videos, Podcasts, Einzelaufgaben, kollaborativen Aufgaben, Quizzes etc. erarbeitet, wobei die Lehrenden für Fragen und Feedback zur Verfügung stehen. Gegen Ende jedes Themenblocks findet eine Online-Präsenzeinheit mit der Lehrperson statt, in der Themenbereiche gemeinsam diskutiert werden. Nicht zuletzt soll in der Online-Präsenzeinheit der persönliche Face-to-Face-Austausch zwischen Lehrenden und Studierenden im Mittelpunkt stehen.

Course unit

## Innovation Marketing

### General information

<b>Course unit code:</b>	BB: IN_MA_BB_BMI_SIM_IMA_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
introduction, fundamentals and peculiarities of innovation and technology marketing, differentiation from traditional marketing, B2B marketing; methods of market research in general as well as qualitative market research	<p>... recite theoretical contents in the field of technology marketing on the basis of real practical problems and to apply them on the basis of practical examples.</p> <p>... formulate one or more scientific research questions independently due to a real business management task in the field of marketing for high-tech products or derive from it.</p> <p>... independently prepare, conduct and evaluate qualitative interviews (survey of experts or potential customers).</p>
definition of market, market segmentation, target groups; customers, customer requirements, lead users,; adoption, diffusion, assimilation	<p>... define target groups and market segments in high-tech marketing.</p> <p>... answer marketing questions in the fields of technology, innovation and B2B.</p>

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
innovation processes and management, open innovation, community based innovation; value chains, business models; pricing, willingness to pay	... apply open innovation and community based innovation concepts. ... develop value chains and business models for innovation projects.

## Required and recommended reading\*

<b>Recommended reading:</b>	Brem, A.; Viardot, E.: Adoption of Innovation: Balancing Internal and External Stakeholders in the Marketing of Innovation;  Trommsdorff, V.; Steinhoff, F.: Innovationsmarketing; Vahlen Franz GmbH Vahlen Franz GmbH  Bruhn, M.: Marketing: Grundlagen für Studium und Praxis;
<b>Other course materials:</b>	course script, presentation handouts articles

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	board examination, 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Practical/Case example, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Self-directed learning</b>		49.50 hours
<b>Teaching method:</b>	Exercise, Independent repetition, Independent study of literature	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>75.00 hours</b>

### Course unit

## Strategic Management

### General information

<b>Course unit code:</b>	BB: IN_MA_BB_GMT_UFG_STM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Business Strategies; Corporate Strategies; Technology Strategies; The students read and analyze case studies. The essential contents are filtered and presented. The students learn and practice how to analyze corporate strategies and evaluate and develop strategic options for further direction finding.; Internal Environment Analysis; External Environment Analysis	<p>... apply the tools of strategic management in case studies in a practical way.</p> <p>... analyze and evaluate corporate strategies.</p> <p>... name fields of application for specific methods and instruments of strategic management.</p> <p>... evaluate business and technology strategies.</p> <p>... carry out internal and external environmental analyzes from a strategic point of view.</p>

## Required and recommended reading\*

<b>Recommended reading:</b>	Stacey, R. D.; Mowles C.: Strategic Management and Organisational Dynamics;  Carpenter, M.; Sanders, G: Strategic Management: Concepts: A Dynamic Perspective;
<b>Other course materials:</b>	course script case studies in an international context

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on third attempt:</b>	board examination, 100%
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## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Case study	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		39.00 hours
<b>Teaching method:</b>	Case study, Independent study of literature	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		10.50 hours
<b>Teaching method:</b>	Excercise, Independent repetition, Independent study of literature	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>75.00 hours</b>

### Course unit

## Digital Transformation

### General information

<b>Course unit code:</b>	BB: IN_MA_BB_TEM_TMV_DIT_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
causes of digital transformation (technologies, infrastructures, applications)	... classify technologies according to their influence and impact. ... recognize, evaluate and evaluate the causes of the digital transformation.
utilization potential of digital transformation	... identify digital exploitation potential on the entrepreneurial and social level. ... assess the degree of impact of digital transformation and identify potential fields of application in the enterprise. ... develop "digital" business models.
effects of digital transformation on individuals, companies, society and science	... evaluate the impact of digital transformation on society. ... develop concepts for the redesign of organizational structures based on digital transformation.

## Required and recommended reading\*

<b>Recommended reading:</b>	<p>Urbach, N.; Röglinger M.: Digitalization Cases: How Organizations Rethink Their Business for the Digital Age; Springer Gabler</p> <p>Rogers, D.L.: Digitale Transformation. Das Playbook: Wie Sie Ihr Unternehmen erfolgreich in das digitale Zeitalter führen und die digitale Disruption meistern; mitp</p> <p>Oswald, G.; Krcmar, H.: Digitale Transformation: Fallbeispiele und Branchenanalysen; Springer Gabler</p> <p>Gassmann, O.; Sutter, Ph.: Digitale Transformation gestalten: Geschäftsmodelle Erfolgsfaktoren Checklisten; Carl Hanser Verlag GmbH &amp; Co. KG</p>
<b>Other course materials:</b>	<p>course script, handout of presentations</p> <p>articles</p>

\*current editions



## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Project results	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	board examination, 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Discussion, Lecture, Practical/Case example, Question/Conversation based teaching	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		25.00 hours
<b>Teaching method:</b>	Project	
<b>Social methods:</b>	Group work	
<b>Self-directed learning</b>		24.50 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>75.00 hours</b>

Course unit

# Future Technologies

## General information

<b>Course unit code:</b>	BB: IN_MA_BB_TEM_TMV_FUT_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.50 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
selection and evaluation of technologies	... evaluate technologies based on their potential for change and select them for in-depth analysis. ... analyze technologies for their impact on industries and business models.
understand selected technologies	... assess the possibilities of employing selected technologies in the business environment.

## Required and recommended reading\*

<b>Other course materials:</b>	course script, handout of presentations articles
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
Project results	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	board examination, 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Lecture, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Plenum		
<b>Work assignments</b>			14.75 hours
<b>Teaching method:</b>	Project		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			10.00 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>37.50 hours</b>

Course unit

# Innovation Leadership Experience

## General information

<b>Course unit code:</b>	BB: IN_MA_BB_ILS_LSD_ILE_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 1.50 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
success factors of leadership behavior in the environment of radical innovations; personal success stories of business leaders	... call success factors of Innovation Leadership. ... reflect individual entrepreneurship recipes and transfer them to your own requirements.
different innovation-supporting leadership styles; the impact of corporate culture and climate	... distinguish and reproduce different leadership styles. ... present the connection between corporate culture and leadership behavior.

## Required and recommended reading\*

<b>Recommended reading:</b>	Pinnow, D. F.: Leadership - What Really Matters: A Handbook on Systemic Leadership; Springer Yukl, G.: Leadership in Organizations; Pearson Higher Education Kaudela-Baum, S.; Holzer, J.; Kocher, P.: Innovation Leadership: Führung zwischen Freiheit und Norm; Springer Gabler
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<b>Other course materials:</b>	course script article handout of presentations
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Paper	Work assignments	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	board review, 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Lecture		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			24.75 hours
<b>Teaching method:</b>	Independent study of literature, Paper		
<b>Social methods:</b>	Individual work		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>37.50 hours</b>

Course unit

## Transferprojekt 3

### General information

<b>Course unit code:</b>	BB: IN_MA_BB_PRW_TR2_TP3_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 2.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Project
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
assignments from the European Youth Award with context "Digital Social Innovations"; after a short analysis phase the work will be done in groups of 5-7 students in collaboration with the winners of the award; The coaching takes place depending on individual needs by the lecturers of the course.	... independently select and successfully use methods and tools of strategic innovation management depending on the specific task. ... identify problems, to identify the main contents and to come up with solutions.
gain insights from in-house and out-of-company data to support management decisions; In short projects, company tasks are processed under time pressure in order to prepare meaningful strategic management decisions based on internet research (business intelligence).	... research and prepare essential data for decision-making in a short time. ... prepare data and information in a meaningful way and present it logically under limited resources.

## Required and recommended reading\*

<b>Other course materials:</b>	course script articles
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Project results	Work assignments	50.00 %	50.00 %
Project results	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	board review and examination, 100%		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	34.00 teaching sessions	25.50 hours
<b>Teaching method:</b>	Project	
<b>Social methods:</b>	Group work	
<b>Work assignments</b>		49.50 hours
<b>Teaching method:</b>	Project	
<b>Social methods:</b>	Group work	
<b>Total</b>	<b>2.00 hpw</b>	<b>34.00 teaching sessions</b>
		<b>75.00 hours</b>

The course deals with tasks from the European Youth Award. After a short analysis phase, the work will be done in groups of 5-7 students in collaboration with the submitters of the award. The coaching takes place according to individual needs by the lecturers of the course. (EYA)  
In the short projects, operational tasks are processed under time pressure in order to prepare meaningful strategic management decisions based on internet research.

(BI)



Course unit

## Business English 1

### General information

<b>Course unit code:</b>	BB: MS_BA_BB_SPR_IBE_BE1_1	VZ: MS_BA_VZ_SPR_IBE_BE1_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.75 hpw	VZ: 3 ECTS Credits; 1.75 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester	VZ: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Talking/Oral communication	... Competently talk about general business topics
Writing	... Write short messages (notes, e-mails, memos with a word count of 40-50 words) including succinct instructions and information using formal and informal language, as appropriate
Reading	... Read texts about professional topics and answer questions on the content (level B2)
Listening	... Answer listening task questions dealing with general business topics
Business English – Topics and vocabulary	... Discuss the topics tackled in class using business terminology and relevant phrases

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... Lead informed discussions about the following topics: international marketing, purchases, sales, logistics, etc. in the B2B sector, jobs and education
Grammar	... Apply the grammar chapters dealt with in class in grammar exercises, when writing texts and in the course of oral communication

## Required and recommended reading\*

<b>Required reading:</b>	Cotton, D.; Falvey, D.; Kent, S.: Market leader : Upper intermediate business English, Course book; New York: Pearson  Emmerson, P.: Business grammar builder : intermediate to upper-intermediate ; clear explanations for real situations; München: huemer
<b>Recommended reading:</b>	McCarthy, Michael; McCarten, Jeanne; Clark, David; Clark, Rachel: Grammar for Business; Cambridge: Cambridge University Press

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	55.00 %	50.00 %
Excercise	Work assignments	15.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The second attempt consists of both, a written and an oral exam. Grades for work assignments that have either been completed positively or not been completed so far, remain valid. In case of a negative grade for the exercise (homework), the second attempt consists of a written work assessment. Grades for positively completed assessments remain valid.
<b>Details on third attempt:</b>	Written (weighting 50%, minimum achievement > 50%) and oral (weighting 50%, minimum achievement > 50%) committee exam. Any prior assessment completed positively becomes void.

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	55.00 %	50.00 %
Excercise	Work assignments	15.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt consists of both, a written and an oral exam. Grades for work assignments that have either been completed positively or not been completed so far, remain valid. In case of a negative grade for the exercise (homework), the second attempt consists of a written work assessment. Grades for positively completed assessments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%, minimum achievement > 50%) and oral (weighting 50%, minimum achievement > 50%) committee exam. Any prior assessment completed positively becomes void.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Synchronous distance learning</b>	30.30 teaching sessions	22.73 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Flash light method, Impulse talk, Learning video, Presentation, Question/Conversation based teaching, Quiz, Role play	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	

<b>Work assignments</b>		13.00 hours	
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		39.27 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.75 hpw</b>	<b>30.30 teaching sessions</b>	<b>75.00 hours</b>

2,3 LE Online schriftliche Prüfung und Online mündliche Prüfung

#### Full-time

<b>Synchronous distance learning</b>		30.30 teaching sessions	22.73 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Flash light method, Impulse talk, Learning video, Presentation, Question/Conversation based teaching, Quiz, Role play		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>		13.00 hours	
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		39.27 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.75 hpw</b>	<b>30.30 teaching sessions</b>	<b>75.00 hours</b>

2,3 LE Online schriftliche Prüfung und Online mündliche Prüfung

#### Course unit

## E-Commerce

### General information

<b>Course unit code:</b>	BB: MS_BA_BB_SAL_DMS_ECO_2	VZ: MS_BA_VZ_SAL_DMS_ECO_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.00 hpw	VZ: 2.5 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester	VZ: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	

<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
E-Commerce Basics	<p>... describe the meaning and development of e-commerce in Austria compared with other countries</p> <p>... describe supplier concepts, basic conditions and give practical examples</p> <p>... describe shop systems and give practical examples for their application</p>
Business Models and Success Factors	<p>... name different business and revenue models of e-commerce and describe them by giving practical examples</p> <p>... describe the meaning of Gamification and evaluation systems with regard to online shops</p> <p>... describe the success factors of online shops</p>
Processes and Measures	<p>... develop measures of online sales for a company's product</p> <p>... describe the purchasing process in Digital Sales and develop key elements for customer and purchasing analysis</p> <p>... describe the relevant organisation for Operations and Fulfillment of e-commerce and give examples</p>

## Required and recommended reading\*

<b>Required reading:</b>	<p>Chaffey, Dave: E-Business and E-Commerce Management Strategy, Implementation and Practice; Saddle River: Prentice Hall</p> <p>Schneider, Gary.: Electronic Commerce; Mason, OH: Cengage Learning</p> <p>Larsson, T.: Ecommerce evolved : the essential playbook to build, grow &amp; scale a successful ecommerce business; Reno, Nev. : Eigenverlag Tanner Larsson</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	50.00 %	50.00 %
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Written exam Homework Written assignment The written assignment may take part in groups, pairs or individual papers.		
<b>Details on second attempt:</b>	Grades for work assignments that have been completed positively, remain valid.		
<b>Details on third attempt:</b>	Committee oral exam		

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	50.00 %	50.00 %
Exam (written/PC)	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on first attempt:</b>	Written exam Homework Written assignment The written assignment may take part in groups, pairs or individual papers.
<b>Details on second attempt:</b>	Grades for work assignments that have been completed positively, remain valid.
<b>Details on third attempt:</b>	Committee oral exam

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	15.00 teaching sessions	11.25 hours
<b>Teaching method:</b>	Discussion, Exercise, Lecture, Question/Conversation based teaching	
<b>Social methods:</b>	Pair work, Plenum	
<b>Synchronous distance learning</b>	4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Question/Conversation based teaching, Webcast	
<b>Social methods:</b>	Plenum	
<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Case study	
<b>Social methods:</b>	Pair work	
<b>Self-directed learning</b>		38.25 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature	
<b>Total</b>	<b>1.00 hpw</b>	<b>19.00 teaching sessions</b>
		<b>62.50 hours</b>

### Full-time

<b>Attendance teaching</b>	15.00 teaching sessions	11.25 hours
<b>Teaching method:</b>	Discussion, Exercise, Lecture, Question/Conversation based teaching	
<b>Social methods:</b>	Pair work, Plenum	
<b>Synchronous distance learning</b>	4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Discussion, Question/Conversation based teaching, Webcast	
<b>Social methods:</b>	Plenum	

<b>Work assignments</b>		10.00 hours	
<b>Teaching method:</b>	Case study		
<b>Social methods:</b>	Pair work		
<b>Self-directed learning</b>		38.25 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>19.00 teaching sessions</b>	<b>62.50 hours</b>

Course unit

## Digital Marketing

### General information

<b>Course unit code:</b>	VZ: MS_BA_VZ_SAL_DMS_DMK_2	BB: MS_BA_BB_SAL_DMS_DMK_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.00 hpw	BB: 2 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Digital Marketing Basics	<ul style="list-style-type: none"> <li>... explain the possibilities of Digital Marketing by using a practical example</li> <li>... name success factors and risks of Digital Marketing</li> <li>... describe the challenges of the digital customer journey, derive and implement actions on behalf of the company</li> <li>... describe the context of Digital Marketing by explaining a practical example</li> </ul>
Digital Marketing Strategy	<ul style="list-style-type: none"> <li>... present web-based marketing (website design principles, SEO and SEA), e-marketing and basics of mobile marketing</li> </ul>



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... develop a digital strategy by means of targets, plan and implement specific channel applications and actions along the steps of the Marketing Funnel
Digital Marketing Tools	... name digital Marketing tools and types of platforms, their advantages and disadvantages for a specific case ... choose requirements for a tool for a certain target and subsequently chose an adequate tool

## Required and recommended reading\*

<b>Required reading:</b>	Hanlon, A., Sage Publications.: Digital marketing : strategic planning & integration; Los Angeles : London : SAGE  Jacobsen, Jens;Meyer, Lorena: Praxisbuch Usability und UX; Bonn: Rheinwerk  Hahn, Martin: Webdesign; Bonn: Rheinwerk
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Same as first attempt		
<b>Details on third attempt:</b>	Commissional assessment		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Same as first attempt		
<b>Details on third attempt:</b>	Commissional assessment		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		15.00 teaching sessions	11.25 hours
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>			0.00 hours
<b>Teaching method:</b>	Discussion, Question/Conversation based teaching, Webcast		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			11.00 hours
<b>Teaching method:</b>	Learning video, Practical/Case example, Presentation		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			27.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>15.00 teaching sessions</b>	<b>50.00 hours</b>

## Full-time

<b>Attendance teaching</b>	15.00 teaching sessions	11.25 hours	
<b>Teaching method:</b>	Discussion, Lecture, Presentation, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		0.00 hours	
<b>Teaching method:</b>	Discussion, Question/Conversation based teaching, Webcast		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>		11.00 hours	
<b>Teaching method:</b>	Learning video, Practical/Case example, Presentation		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>		27.75 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>15.00 teaching sessions</b>	<b>50.00 hours</b>

## Course unit

# Business English 2

## General information

<b>Course unit code:</b>	VZ: MS_BA_VZ_SPR_IBE_BE2_2	BB: MS_BA_BB_SPR_IBE_BE2_2
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.50 ECTS Credits; 1.75 hpw	BB: 2.5 ECTS Credits; 1.75 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 2. Semester	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Speaking	... Competently discuss complex business-related topics.
Writing	... Write various types of long emails (emails/letters of complaint, answers to complaints, professional emails to customers, etc. with a word count of 160-220 words), using relevant business terminology and formal/informal phrases and structures, as appropriate.
Reading	... Read more complex texts about different Business English topics and answer questions about the content (level B2+).
Listening	... Answer questions to listening tasks dealing with complex business topics (level B2+). ... Lead informed discussions about the following topics: building relationships, customer service and others.
Business English – specialist topics and industry-specific vocabulary	... Discuss the topics dealt with in class using business terminology and relevant phrases
Grammar	... Apply the language structures dealt with in class in both speaking and writing.

## Required and recommended reading\*

<b>Required reading:</b>	Cotton, D.; Falvey, D.; Kent, S.: Market leader : Upper intermediate business English, Course book; New York: Pearson  Emmerson, P.: Business grammar builder : intermediate to upper-intermediate ; clear explanations for real situations; München: huemer
<b>Recommended reading:</b>	Emmerson, P.: Business English handbook : advanced ; the whole of business in one book; Oxford : Macmillan Education  McCarthy, Michael; McCarten, Jeanne; Clark, David; Clark, Rachel: Grammar for Business; Cambridge: Cambridge University Press

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Excercise	Work assignments	10.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Wird die Präsenzquote nicht erfüllt, so wird der erste Antritt zur mündlichen und schriftlichen Prüfung negativ beurteilt. Studierende können zum Haupttermin antreten, wobei dieser Antritt dann als zweiter Antritt zählt.		
<b>Details on second attempt:</b>	Für den 2. Antritt gelten die gleichen Bedingungen wie für den 1. Antritt. Bei negativer Absolvierung der Klausur / der mündlichen Prüfung besteht der 2. Antritt aus einer neuerlichen schriftlichen Klausur / mündlichen Prüfung. Positiv bewertete (bzw. noch nicht erbrachte) Teilleistungen bleiben in diesem Fall unberührt und somit erhalten. Bei negativer Beurteilung der Teilleistung Übungsbeispiel besteht der 2. Antritt aus einer Ersatzleistung (wahlweise schriftliche Arbeit, mündliche Prüfung, schriftliche Klausur, oder anderweitige Ersatzleistung. Dies liegt im Ermessen der Lektorin / des Lektors). Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben auch in diesem Fall unberührt.		
<b>Details on third attempt:</b>	Der 3. Antritt wird kommissionell beurteilt. Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur (Gewichtung 50%) und einer mündlichen Prüfung (Gewichtung 50%), wobei für eine positive Note beide Teile positiv absolviert werden müssen. Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Excercise	Work assignments	10.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	Wird die Präsenzquote nicht erfüllt, so wird der erste Antritt zur mündlichen und schriftlichen Prüfung negativ beurteilt. Studierende können zum Haupttermin antreten, wobei dieser Antritt dann als zweiter Antritt zählt.		
<b>Details on second attempt:</b>	Bei negativer Absolvierung der Klausur / der mündlichen Prüfung besteht der 2. Antritt aus einer neuerlichen schriftlichen Klausur / mündlichen Prüfung. Positiv bewertete (bzw. noch nicht erbrachte) Teilleistungen bleiben in diesem Fall unberührt und somit erhalten. Bei negativer Beurteilung der Teilleistung Übungsbeispiel besteht der 2. Antritt aus einer Ersatzleistung (wahlweise schriftliche Arbeit, mündliche Prüfung, schriftliche Klausur, oder anderweitige Ersatzleistung. Dies liegt im Ermessen der Lektorin / des Lektors). Positiv bewertete bzw. noch nicht erbrachte Teilleistungen bleiben auch in diesem Fall unberührt.		
<b>Details on third attempt:</b>	Der 3. Antritt wird kommissionell beurteilt, ansonsten gelten für den 3. Antritt die gleichen Bedingungen wie für den 2. Antritt. Die kommissionelle Prüfung besteht aus einer schriftlichen Klausur (60 Minuten, Gewichtung 50%) und einer mündlichen Prüfung (20 Minuten, Gewichtung 50%), wobei für eine positive Note beide Teile positiv absolviert werden müssen. Im Fall einer kommissionellen Prüfung wird die Note der kommissionellen Prüfung zur Endnote und bereits erbrachte Teilleistungen verfallen.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Synchronous distance learning</b>	30.30 teaching sessions	22.73 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Excercise, Flash light method, Learning game, Learning video, Presentation, Question/Conversation based teaching, Quiz, Role play	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	

<b>Work assignments</b>		10.00 hours	
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		29.77 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.75 hpw</b>	<b>30.30 teaching sessions</b>	<b>62.50 hours</b>

#### Full-time

<b>Synchronous distance learning</b>		30.30 teaching sessions	22.73 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Excercise, Flash light method, Learning game, Learning video, Presentation, Question/Conversation based teaching, Quiz, Role play		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>		10.00 hours	
<b>Teaching method:</b>	Excercise		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		29.77 hours	
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.75 hpw</b>	<b>30.30 teaching sessions</b>	<b>62.50 hours</b>

#### Course unit

## Business English 3

### General information

<b>Course unit code:</b>	BB: MS_BA_BB_SPR_ABE_BE3_3	VZ: MS_BA_VZ_SPR_ABE_BE3_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.50 ECTS Credits; 1.75 hpw	VZ: 2.5 ECTS Credits; 1.75 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester	VZ: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	

<b>Course unit language:</b>	English
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## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Writing	... Write reports and proposals using formal and informal language, as appropriate, as well as using relevant phrases and structures for each register
Reading	... Read complex texts about different Business English topics which have not necessarily been covered in class and answer questions about the content (level B2-C1)
Listening	... Answer listening task questions dealing with complex business topics including topics which have not been discussed in class (level B2-C1)
Business English – Topics and vocabulary	... Discuss the topics addressed in class using business terminology and relevant phrases ... Lead informed discussions about the following topics: social media and technology in business, teambuilding, raising finance
Grammar	... Apply the grammar chapters dealt with in class in grammar exercises, when writing texts and in the course of oral communication

## Required and recommended reading\*

<b>Required reading:</b>	Cotton, D.; Falvey, D.; Kent, S.: Market leader : Upper intermediate business English, Course book; New York: Pearson Emmerson, Paul: Business Grammar Builder, Intermediate to Upper-Intermediate; München: huemer
<b>Other course materials:</b>	Handouts

\*current editions



## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Excercise	Work assignments	10.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	The second attempt consists of both, a written and an oral exam. Grades for work assignments that have either been completed positively or not been completed so far, remain valid. In case of a negative grade for the exercise (homework), the second attempt consists of a written work assessment. Grades for positively completed assessments remain valid.		
<b>Details on third attempt:</b>	Written (weighting 50%, minimum achievement > 50%) and oral (weighting 50%, minimum achievement > 50%) committee exam. Any prior assessment completed positively becomes void.		

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	60.00 %	50.00 %
Excercise	Work assignments	10.00 %	50.00 %
Oral exam	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	The second attempt consists of both, a written and an oral exam. Grades for work assignments that have either been completed positively or not been completed so far, remain valid. In case of a negative grade for the exercise (homework), the second attempt consists of a written work assessment. Grades for positively completed assessments remain valid.
<b>Details on third attempt:</b>	Written (weighting 50%, minimum achievement > 50%) and oral (weighting 50%, minimum achievement > 50%) committee exam. Any prior assessment completed positively becomes void.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Synchronous distance learning</b>	30.30 teaching sessions	22.73 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Exercise, Flash light method, Impulse talk, Presentation, Question/Conversation based teaching, Quiz, Role play	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		29.77 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video	
<b>Total</b>	<b>1.75 hpw</b>	<b>30.30 teaching sessions</b>
		<b>62.50 hours</b>

### Full-time

<b>Synchronous distance learning</b>	30.30 teaching sessions	22.73 hours
<b>Teaching method:</b>	Brainstorming, Chat, Discussion, Exercise, Flash light method, Impulse talk, Presentation, Question/Conversation based teaching, Quiz, Role play	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		10.00 hours
<b>Teaching method:</b>	Exercise	
<b>Social methods:</b>	Individual work	
<b>Self-directed learning</b>		29.77 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video	
<b>Total</b>	<b>1.75 hpw</b>	<b>30.30 teaching sessions</b>
		<b>62.50 hours</b>

Course unit

## Marketing for Exhibitions and Events

### General information

<b>Course unit code:</b>	VZ: MS_BA_VZ_MAR_DCC_MEE_4	BB: MS_BA_BB_MAR_DCC_MEE_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 3.00 ECTS Credits; 1.50 hpw	BB: 3 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Trade fairs and exhibitions	... illustrate the importance of trade fairs and exhibitions within the framework of marketing tools ... show the importance of trade fairs and exhibitions in the B2B sector ... demonstrate trends and developments in the area of trade fairs ... name criteria for the selection of suitable events
The trade fair concept	... independently plan a trade fair ... define objectives and success indicators ... demonstrate corporate requirements regarding stand design ... prepare a trade fair budget ... organise trade fair participation in detail
On-site trade fair work	... plan trade fair communication and/or the establishing of contacts during the trade fair
Reviewing trade fairs	... carry out a review after trade fairs with reference to establishing contacts with visitors; monitor trade fair success
Evaluating trade fairs and events	... analyse existing trade fairs and critically reflect the general concept

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Events	... describe the specificities and possible fields of application of events ... define the setting of objectives and target groups ... take into account specificities in the planning process

## Required and recommended reading\*

<b>Required reading:</b>	Beech, John; Kaiser, Sebastian; Kaspar, Robert: The Business of Events Management; Upper Saddle River: Prentice Hall  Kirchgeorg, Manfred; et al: Trade Show Management: Planning, Implementing and Controlling of Trade Shows, Conventions and Events; Wiesbaden: Gabler
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	Oral committee exam		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Für den 2. Antritt gelten die gleichen Bedingungen wie für den ersten Antritt		
<b>Details on third attempt:</b>	Kommissionelle mündliche Prüfung		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		20.00 teaching sessions	15.00 hours
<b>Teaching method:</b>	Discussion, Excursion, Lecture		
<b>Social methods:</b>	Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Webcast		
<b>Social methods:</b>	Plenum		
<b>Work assignments</b>			15.00 hours
<b>Teaching method:</b>	Independent study of literature, Learning video, Practical/Case example, Preparation of written work		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			42.00 hours
<b>Teaching method:</b>	Independent repetition		
<b>Total</b>	<b>1.50 hpw</b>	<b>24.00 teaching sessions</b>	<b>75.00 hours</b>

16 Lehreinheiten Lehre (12 Präsenz und 4 Synchron), 8 LE Exkursion Messe  
 Arbeitsauftrag außerhalb der Präsenz: 3 Stunden (4 LE) asynchrone Lehre, Rest Workload Leistungserstellung schriftliche Arbeit

## Full-time

<b>Attendance teaching</b>	20.00 teaching sessions	15.00 hours
<b>Teaching method:</b>	Discussion, Excursion, Lecture	
<b>Social methods:</b>	Plenum	
<b>Synchronous distance learning</b>	4.00 teaching sessions	3.00 hours
<b>Teaching method:</b>	Webcast	
<b>Social methods:</b>	Plenum	
<b>Work assignments</b>		15.00 hours
<b>Teaching method:</b>	Independent study of literature, Learning video, Practical/Case example, Preparation of written work	
<b>Social methods:</b>	Individual work, Group work	
<b>Self-directed learning</b>		42.00 hours
<b>Teaching method:</b>	Independent repetition	
<b>Total</b>	<b>1.50 hpw</b>	<b>24.00 teaching sessions</b>
		<b>75.00 hours</b>

16 Lehreinheiten Lehre (12 Präsenz und 4 Synchron), 8 LE Exkursion Messe  
Arbeitsauftrag außerhalb der Präsenz: 3 Stunden (4 LE) asynchrone Lehre, Rest Workload Leistungserstellung  
schriftliche Arbeit

## Course unit

# Presentations in English

## General information

<b>Course unit code:</b>	VZ: MS_BA_VZ_SPR_EPM_PIE_4	BB: MS_BA_BB_SPR_EPM_PIE_4
<b>Scope (ECTS Credits; contact hours per week):</b>	VZ: 2.00 ECTS Credits; 1.00 hpw	BB: 2 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	VZ: 4. Semester	BB: 4. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Opening a presentation	... Give presentations effectively using the vocabulary and phrases studied throughout the course
Audio-visual aids	... Use and explain (digital) audio-visual aids in English
Impact techniques	... Give a persuasive presentation using the techniques discussed in class and apply said techniques to both ad hoc and prepared presentations on various topics
Closing a presentation	... Conclude a presentation using appropriate language techniques
Handling questions	... Answer all different kinds of questions effectively using appropriate strategies

## Required and recommended reading\*

<b>Required reading:</b>	<p>Powell, Mark: Dynamic Presentations; Cambridge: Cambridge University Press</p> <p>Dignen, Bob: English for Presentations. Down to Business, MiniMax Series; York: York Associates</p> <p>Powell, Mark: How to give successful presentations; Boston, MA: Thomson – Heinle</p>
<b>Recommended reading:</b>	<p>Emmerson, Paul: I; Business English Handbook. The whole of business in one book; New York: MacMillan</p> <p>Reynolds, Garr: Presentation Zen. Simple ideas on presentation design and delivery; Indianapolis: New Riders</p> <p>Emmerson, Paul: Business Vocabulary Builder. Intermediate to Upper-Intermediate. The words &amp; phrases you need to succeed; München: huemer</p>
<b>Other course materials:</b>	Handouts

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Excercise	Work assignments	25.00 %	50.00 %
Oral exam	Attendance teaching	55.00 %	50.00 %
Participation	Synchronous distance learning	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	In case of a negative grade for the excercise/homework the second attempt consists of an oral exam.		
<b>Details on third attempt:</b>	Oral committee exam. Any prior assessment completed positively becomes void.		

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Excercise	Work assignments	25.00 %	50.00 %
Oral exam	Attendance teaching	55.00 %	50.00 %
Participation	Synchronous distance learning	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>



<b>Details on first attempt:</b>	
<b>Details on second attempt:</b>	In case of a negative grade for the exercise (homework), the second attempt consists of an oral exam.
<b>Details on third attempt:</b>	Oral committee exam. Any prior assessment completed positively becomes void.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Synchronous distance learning</b>	19.00 teaching sessions	14.25 hours
<b>Teaching method:</b>	Brainstorming, Chat, Flash light method, Impulse talk, Learning video, Practical/Case example, Presentation, Question/Conversation based teaching, Role play, Video analysis	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		12.50 hours
<b>Teaching method:</b>	Excercise, Peer-review, Presentation	
<b>Social methods:</b>	Individual work, Pair work, Group work	
<b>Self-directed learning</b>		23.25 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video	
<b>Total</b>	<b>1.00 hpw</b>	<b>19.00 teaching sessions</b>
		<b>50.00 hours</b>

asynchrone Lehre 6 LE

### Full-time

<b>Synchronous distance learning</b>	19.00 teaching sessions	14.25 hours
<b>Teaching method:</b>	Brainstorming, Chat, Flash light method, Impulse talk, Learning video, Practical/Case example, Presentation, Question/Conversation based teaching, Role play, Video analysis	
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum	
<b>Work assignments</b>		12.50 hours
<b>Teaching method:</b>	Excercise, Peer-review, Presentation	
<b>Social methods:</b>	Individual work, Pair work, Group work	
<b>Self-directed learning</b>		23.25 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video	
<b>Total</b>	<b>1.00 hpw</b>	<b>19.00 teaching sessions</b>
		<b>50.00 hours</b>

Course unit

# Marketing Management-Case Studies

## General information

<b>Course unit code:</b>	BB: MS_BA_BB_MAR_MCS_MMC_5	VZ: MS_BA_VZ_MAR_MCS_MMC_5
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 4.00 ECTS Credits; 0.75 hpw	VZ: 4 ECTS Credits; 0.75 hpw
<b>Semester when the course unit is delivered:</b>	BB: 5. Semester	VZ: 5. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Project	
<b>Course unit language:</b>	English	

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Working on case studies	<ul style="list-style-type: none"> <li>... prepare a marketing concept for a given example</li> <li>... select strategies and, based on these</li> <li>... develop an operational action plan</li> </ul>

## Required and recommended reading\*

<b>Required reading:</b>	<p>Diverse Autor*innen: Harvard Business Review;</p> <p>Homburg, Christian; Kuester, Sabine; Krohmer, Harley: Marketing Management: A Contemporary Perspective; New York: McGraw-Hill</p> <p>Kotler, P., Keller, K., Opresnik, M.: Marketing-Management; London : Pearson</p>
<b>Recommended reading:</b>	<p>Kotler, Philip; Armstrong, Gary: Principles of Marketing; Saddle River: Prentice Hall</p>

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on third attempt:</b>	Commissional assessment of paper		

### Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	50.00 %	50.00 %
Presentation	Attendance teaching	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Für den 2. Antritt gelten die gleichen Bedingungen wie für den 1. Antritt. (EN)		
<b>Details on third attempt:</b>	Kommissionelle Begutachtung der Projektarbeit		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Synchronous distance learning</b>		6.00 teaching sessions	4.50 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Work assignments</b>			20.00 hours
<b>Teaching method:</b>	Case study, Learning video		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			69.50 hours
<b>Total</b>	<b>0.75 hpw</b>	<b>14.00 teaching sessions</b>	<b>100.00 hours</b>

Präsenzunterricht: 14 LE Leistungsfeststellung - davon 8 LE Präsenz für Endpräsentation und 6 LE synchron für Zwischenpräsentation

Arbeitsaufträge außerhalb der Präsenz: 3 Stunden (4 LE) asynchrones E-Learning für Introduction und Selbstorganisation; Rest Workload Leistungserstellung

### Full-time

<b>Attendance teaching</b>		8.00 teaching sessions	6.00 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Synchronous distance learning</b>		6.00 teaching sessions	4.50 hours
<b>Teaching method:</b>	Presentation		
<b>Social methods:</b>	Group work		
<b>Work assignments</b>			20.00 hours
<b>Teaching method:</b>	Case study, Learning video		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			69.50 hours
<b>Total</b>	<b>0.75 hpw</b>	<b>14.00 teaching sessions</b>	<b>100.00 hours</b>

Präsenzunterricht: 14 LE Leistungsfeststellung - davon 8 LE Präsenz für Endpräsentation und 6 LE synchron für Zwischenpräsentation

Arbeitsaufträge außerhalb der Präsenz: 3 Stunden (4 LE) asynchrones E-Learning für Introduction und Selbstorganisation; Rest Workload Leistungserstellung

Course unit

## Meetings and Negotiations

### General information

<b>Course unit code:</b>	BB: MS_BA_BB_SPR_EPM_MAN_6	VZ: MS_BA_VZ_SPR_EPM_MAN_6
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.50 hpw	VZ: 2 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 6. Semester	VZ: 6. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit	
<b>Mode of delivery:</b>	Integrated course unit	
<b>Course unit language:</b>	English	

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
The language of chairing	... Chair an internal meeting in English
Presenting an argument and opinions	... Express their own opinion and put forward arguments as participants or chairpersons of an internal meeting
Agreeing and disagreeing	... Agree or disagree, as a chairperson or participant, with suggestions of other participants and give reasons for this
Interrupting and clarifying	... Deal with challenging situations using effective phrases as a chairperson or participant
Negotiating	... Conduct negotiations in their daily business lives
Sustainability and social aspects	... Conduct negotiations with regard to working conditions from the point of view of an employer while considering social sustainability aspects

## Required and recommended reading\*

<b>Required reading:</b>	Diverse AutorInnen: Business Spotlight; Goodale, Malcom: The language of meetings; Hove: LTP Business Rogers, Drew: English for International Negotiations – a crosscultural case study approach; Cambridge: Cambridge University Press
<b>Recommended reading:</b>	Mascull, Bill: Business Vocabulary in Use; Cambridge: Cambridge University Press Emmerson, Paul: Business English Handbook; New York: MacMillan
<b>Other course materials:</b>	Handouts

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exercise	Work assignments	15.00 %	50.00 %
Oral exam	Attendance teaching	55.00 %	50.00 %
Participation	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	In case of a negative grade for the homework, the second attempt consists of an oral work assessment.		
<b>Details on third attempt:</b>	Written (weighting 50%, minimum achievement > 50%) and oral (weighting 50%, minimum achievement > 50%) committee exam. Any prior assessment completed positively becomes void.		

## Full-time

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Excercise	Work assignments	15.00 %	50.00 %
Oral exam	Attendance teaching	55.00 %	50.00 %
Participation	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	In case of a negative grade for the homework, the second attempt consists of an oral work assessment.		
<b>Details on third attempt:</b>	Written (weighting 50%, minimum achievement > 50%) and oral (weighting 50%, minimum achievement > 50%) committee exam. Any prior assessment completed positively becomes void.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Synchronous distance learning</b>		25.00 teaching sessions	18.75 hours
<b>Teaching method:</b>	Brainstorming, Chat, Flash light method, Impulse talk, Peer-review, Question/Conversation based teaching, Quiz, Role play, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			19.50 hours
<b>Teaching method:</b>	Excercise, Peer-review, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work		
<b>Self-directed learning</b>			11.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.00 teaching sessions</b>	<b>50.00 hours</b>

### Full-time

<b>Synchronous distance learning</b>		25.00 teaching sessions	18.75 hours
<b>Teaching method:</b>	Brainstorming, Chat, Flash light method, Impulse talk, Peer-review, Question/ Conversation based teaching, Quiz, Role play, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Work assignments</b>			19.50 hours
<b>Teaching method:</b>	Excercise, Peer-review, Self-reflection		
<b>Social methods:</b>	Individual work, Pair work		
<b>Self-directed learning</b>			11.75 hours
<b>Teaching method:</b>	Independent repetition, Independent study of literature, Learning video		
<b>Total</b>	<b>1.50 hpw</b>	<b>25.00 teaching sessions</b>	<b>50.00 hours</b>



Master Degree Programme  
**Digital Marketing Management**

Course unit

## Brand Management

### General information

<b>Course unit code:</b>	BB: DM_MA_BB_MGM_SMA_BRM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Fundamentals of Brand Management	<p>... describe the term brand, branding and brand management in detail and derive their meaning for the company and the customer.</p> <p>... explain the terms brand identity, brand positioning and brand image and understand them in context.</p> <p>... explain the goals and benefits of brands and recognize the opportunities to generate brand equity.</p>
Develop Brand Strategies	<p>... present brand strategies for brand building, brand management, brand architecture strategies as well as strategies for rebranding.</p> <p>... to apply these strategies in the respective context.</p>
Special Aspects of Branding	<p>... discuss selected aspects of branding (e.g. brand management in an international context, naming, legal aspects, brand management in a digital context, sustainability, requirements for branding)</p>

## Required and recommended reading\*

<b>Required reading:</b>	<p>Acker, David; Stahl, Florian; Stöckle, Felix: Marken erfolgreich gestalten: Die 20 wichtigsten Grundsätze der Markenführung; Wiesbaden: Springer Gabler</p> <p>Brandtner, Michael: Markenpositionierung im 21. Jahrhundert: So gewinnen Sie im globalen und digitalen Wettbewerb von heute und morgen; Wien: Linde</p> <p>Sattler, Henrik; Völckner, Franziska: Markenpolitik; Stuttgart: Kohlhammer</p> <p>Esch, Franz-Rudolf: Strategie und Technik der Markenführung; München: Vahlen</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Learning diary	Work assignments	40.00 %	50.00 %
Paper	Work assignments	40.00 %	50.00 %
Presentation	Work assignments	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	2. Antritt wie erster Antritt Positiv erbrachte Teilleistungen aus dem 1. Antritt bleiben aufrecht.		
<b>Details on third attempt:</b>	Schriftliche kommissionelle Prüfung		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		12.00 teaching sessions	9.00 hours
<b>Teaching method:</b>	Discussion, Exercise, Lecture		
<b>Social methods:</b>	Individual work, Pair work, Group work, Plenum		
<b>Synchronous distance learning</b>		5.00 teaching sessions	3.75 hours
<b>Teaching method:</b>	Discussion, Exercise, Webcast		
<b>Social methods:</b>	Pair work, Group work, Plenum		
<b>Work assignments</b>			9.00 hours
<b>Teaching method:</b>	Exercise, Learning diary, Paper, Presentation		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			28.25 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>50.00 hours</b>

### Course unit

## Customer Relationship Management

### General information

<b>Course unit code:</b>	BB: DM_MA_BB_MAR_KMA_CRM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
Fundamentals of CRM	<p>Upon successful completion of the course unit, students are able to ...</p> <p>... explain CRM as a strategic approach for planning, controlling and applying all interactive processes with clients, justify CRM as a success factor in marketing and sales</p> <p>... describe goals, tasks and applications of CRM and allocate them based on examples</p> <p>... describe the terms and tasks of ECRM, Social CRM, Customer Experience Managements and Programmatic CRM and explain them based on examples</p>
Features of CRM	<p>... explain the instruments of operative/analytical CRM as well as cooperative/collaborative CRM and their application possibilities based on examples</p>
Implementing CRM Systems	<p>... design the basic outline of the introduction process of a CRM system and show basic conditions</p>
Application of Software Tools	<p>... list selected software tools and know their functionality</p>

## Required and recommended reading\*

<p><b>Required reading:</b></p>	<p>Hippner, Hajo; Hubrich, Beate; Wilde, Klaus D.: Grundlagen des CRM: Strategie, Geschäftsprozesse und IT-Unterstützung; Wiesbaden: Gabler Verlag / Wiesbaden: Springer Fachmedien Wiesbaden GmbH</p> <p>Helmke, Stefan (Hrsg.): Effektives Customer-Relationship-Management: Instrumente - Einführungskonzepte - Organisation; Wiesbaden: Springer Gabler</p>
<p><b>Recommended reading:</b></p>	<p>Kumar, V.; Reinartz, Werner: Customer Relationship Management; Wiesbaden: Springer Gabler</p> <p>Bruhn, Manfred: Relationship Marketing: das Management von Kundenbeziehungen; München: Vahlen</p>

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	70.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Fallstudie, Ersatzleistung: Paper 70 %, > 50 %; Präsentation, Ersatzleistung: Paper 30 %, > 50 %; Fallstudie und Präsentation, Ersatzleistung: Paper 100 %, > 50 %		
<b>Details on third attempt:</b>	Mündliche Prüfung. Der 3. Antritt wird kommissionell beurteilt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		12.00 teaching sessions	9.00 hours
<b>Teaching method:</b>	Lecture, Presentation		
<b>Social methods:</b>	Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Work assignments</b>			16.00 hours
<b>Teaching method:</b>	Case study		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			22.00 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>16.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

# Complaint Management

## General information

<b>Course unit code:</b>	BB: DM_MA_BB_MAR_KMA_BEM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Fundamentals of Complaint Management	... describe the importance of complaint management in a customer oriented company and derive goals and tasks of complaint management. ... to recognize different types of complaints and to identify the different complaint behavior of companies compared to end customers.
Complaint Management Process	... create the process of complaint handling from an external customer and internal organization point of view. ... to identify personell-political, organizational and/or technological basic conditions of complaint management.
Special Aspects of Complaint Management	... discuss selected aspects of complaint management and reflect on them using examples.

## Required and recommended reading\*

<b>Required reading:</b>	Stauss, Bernd; Seidel, Wolfgang: Beschwerdemanagement: Kundenbeziehungen erfolgreich managen durch Customer Care; München/ Wien: Hanser
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<b>Recommended reading:</b>	Meffert, Heribert; Bruhn, Manfred: Dienstleistungsmarketing: Grundlagen - Konzepte - Methoden; Wiesbaden: Springer Gabler
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\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		13.00 teaching sessions	9.75 hours
<b>Teaching method:</b>	Discussion, Exercise, Lecture		
<b>Social methods:</b>	Individual work, Pair work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Work assignments</b>			8.00 hours
<b>Teaching method:</b>	Exercise, Independent study of literature		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			29.25 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

# Customer Touchpointmanagement

## General information

<b>Course unit code:</b>	BB: DM_MA_BB_MAR_CJO_CTM_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Customer Journey	<ul style="list-style-type: none"><li>... .. to describe the concept of customer journey and discuss its relevance for effective marketing</li><li>... .. to understand the relevance of different target groups for the development of appropriate customer journeys</li><li>... .. to visualise different options of customer journeys</li><li>... .. to understand how sustainability issues from customers' view points can impact the customer journey</li></ul>
Touchpoint Management	<ul style="list-style-type: none"><li>... .. to be able to explain the concept of "Touchpoint Management" and to understand how it relates to the customer journey</li><li>... .. to understand how relevant touchpoint management is for branding</li><li>... .. to distinguish between the different categories of touchpoints and how this impacts different usage scenarios</li><li>... .. to evaluate different ways to monitor and optimise touchpoint usage based on practical examples</li></ul>
Customer Experience	<ul style="list-style-type: none"><li>... .. to appreciate the need for an optimised customer experience as a prerequisite for good touchpoint management</li></ul>



## Required and recommended reading\*

<b>Required reading:</b>	Chaffey, Dave., Hemphill, Tanya., Edmundson-Bird, David.: Digital Business and E-Commerce Management; Pearson Education
<b>Recommended reading:</b>	Keller, Bernhard; Ott, Cirk Sören (Hrsg.): Touchpoint Management: entlang der Customer Journey erfolgreich agieren; Freiburg: München: Stuttgart: Haufe Group, [Ann Arbor]: ProQuest eBook Central

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	90.00 %	50.00 %
Peer-review	Work assignments	10.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	second attempt by written exam worth 100% of LV grade, minimum requirement > 50%		
<b>Details on third attempt:</b>	oral exam in front of commission		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Lecture, Practical/Case example	
<b>Social methods:</b>	Individual work, Pair work, Plenum	

<b>Work assignments</b>		4.00 hours	
<b>Teaching method:</b>	Peer-review, Practical/Case example		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>		33.25 hours	
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Customer Experience in Practice

### General information

<b>Course unit code:</b>	BB: DM_MA_BB_MAR_CJO_CEP_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 0.75 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Customer Experience in Practice	<p>... .. to identify the most appropriate customer journey and its touch points for different sectors and target markets</p> <p>... .. to be able to select the most appropriate customer touchpoints based on the wanted customer experience</p> <p>... .. to discuss different approaches and practical applications of touchpoint management</p>

## Required and recommended reading\*

<b>Required reading:</b>	Chaffey, Dave., Hemphill, Tanya., Edmundson-Bird, David.: Digital Business and E-Commerce Management; Pearson Education
<b>Recommended reading:</b>	Bruhn, Manfred; Hardwich, Karsten (Hrsg.): Customer Experience: Forum Dienstleistungsmanagement; Wiesbaden: Springer Gabler

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Presentation	Attendance teaching	50.00 %	50.00 %
Report	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	second attempt by written exam worth 100% of LV grade, minimum requirement > 50%		
<b>Details on third attempt:</b>	oral exam in front of commission		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	12.00 teaching sessions	9.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Presentation	
<b>Social methods:</b>	Group work, Plenum	
<b>Work assignments</b>		16.00 hours
<b>Teaching method:</b>	Practical/Case example	
<b>Social methods:</b>	Group work	

<b>Self-directed learning</b>			25.00 hours
<b>Total</b>	<b>0.75 hpw</b>	<b>12.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Channel Management

### General information

<b>Course unit code:</b>	BB: DM_MA_BB_DMS_DSA_CMA_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Fundamentals of Channel Management	... describe Channel Management and its tasks, challenges and goals as a specialist discipline and management task
Setup and management of sales- and omni-channel systems	... describe the options of design, structure, control and management of sales and omni-channel systems
Selection of channels	... analyse a sales channel step-by-step based on a realistic example, compare possible solutions and choose the most appropriate
Modern forms of Channel Management	... describe modern sales forms (e.g. online retail, digital channels) and their impact on the sales organisation
Channel Management in various industries	... develop ideas for the solution of specific challenges with regard to various industries
Sustainability	... develop strategies for multidimensional customer relationships to sustainably increase the profitability of the channels

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
	... asses different channels from an ecological perspective and their respective environmental impact

## Required and recommended reading\*

<b>Required reading:</b>	Schögel, Marcus: Distributionsmanagement: das Management der Absatzkanäle; München: Vahlen  Heinemann, Gerrit: Der neue Online-Handel – Geschäftsmodelle und Kanalexzellenz im E-Commerce; Wiesbaden: Springer Gabler  Sheridan, M., Kotria, K.: They ask, you answer : : a revolutionary approach to inbound sales, content marketing, and today's digital consumer; Hoboken, New Jersey : : Wiley,
<b>Recommended reading:</b>	Strauß, Ralf E.: Digitale Transformation: Strategie, Konzeption und Implementierung in der Unternehmenspraxis; Stuttgart: Schäffer-Poeschel  Kollmann, Tobias: E-Business: Grundlagen elektronischer Geschäftsprozesse in der Digitalen Wirtschaft; Wiesbaden: Springer Gabler

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	100.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Paper 100 %, > 50 %		
<b>Details on third attempt:</b>	Mündliche Prüfung. Der 3. Antritt wird kommissionell beurteilt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		16.00 teaching sessions	12.00 hours
<b>Teaching method:</b>	Discussion, Impulse talk, Lecture, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Synchronous distance learning</b>		2.00 teaching sessions	1.50 hours
<b>Teaching method:</b>	Chat		
<b>Social methods:</b>	Group work		
<b>Work assignments</b>			13.00 hours
<b>Teaching method:</b>	Learning video, Peer-review, Practical/Case example		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			48.50 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>18.00 teaching sessions</b>	<b>75.00 hours</b>

Asynchrones E-Learning: Lehrvideo, Peer Review

### Course unit

## Digital Selling

### General information

<b>Course unit code:</b>	BB: DM_MA_BB_DMS_DSA_DSE_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Sales channels and Value Creation Process	... explain the advantages of digital sales channels (Digital Selling), e.g. reduction of transaction costs ... describe and apply the electronic value chain and the Value Creation Process
Product and assortment analyses	... carry out product and assortment analyses ... derive decisions based on analyses for product and assortment
Strategies for Digital Selling	... based on an example develop and justify strategies for Digital Selling
Implementing Digital Selling	... develop an action plan for implementing Digital Selling ... list the challenges of implementing Digital Selling and take them into consideration
Customer-centered design	... apply customer-centered design and usability concepts to digital channels and explain them based on an example
Research and Development	... describe and evaluate aspects of using a specific platform (e-commerce, multi-sided platform) ... develop and incorporate strategies for using a specific platform in Digital Selling

## Required and recommended reading\*

<b>Required reading:</b>	<p>Strauss, Ralf: Digital Business Excellence: Strategien und Erfolgsfaktoren im E-Business ; mit über 250 Unternehmensbeispielen; Stuttgart: Schäffer-Poeschel</p> <p>Barth, Nicolai; Brenner, Marina; Gruber, Georg; Harrold, Nathaniel; Langer, Andreas; Pfurtscheller, Magdalena: Digital Selling: erfolgreiche Strategien und Werkzeuge für B2B-Marketing und Vertrieb; Wien: Linde</p> <p>Jakobsen, Jens; Mayer, Lorena: Praxisbuch Usability und UX: Was jeder wissen sollte, der Websites und Apps entwickelt - bewährte Usability- und UX-Methoden praxisnah erklärt; Bonn: Rheinwerk Computing</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	40.00 %	50.00 %
Preparation of written work	Work assignments	60.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Klausurarbeit (schriftlich oder am PC) 40 %, > 50 %; Schriftliche Arbeit, Ersatzleistung: Paper 60 %, > 50 %		
<b>Details on third attempt:</b>	Mündliche Prüfung. Der 3. Antritt wird kommissionell beurteilt.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		20.00 teaching sessions	15.00 hours
<b>Teaching method:</b>	Discussion, Impulse talk, Lecture, Question/Conversation based teaching		
<b>Social methods:</b>	Individual work, Group work, Plenum		
<b>Synchronous distance learning</b>		5.00 teaching sessions	3.75 hours
<b>Work assignments</b>			10.00 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			46.25 hours
<b>Total</b>	<b>1.50 hpw</b>	<b>25.00 teaching sessions</b>	<b>75.00 hours</b>



Course unit

# Digital Business Models

## General information

<b>Course unit code:</b>	BB: DM_MA_BB_DMS_DBU_DIG_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 3.00 ECTS Credits; 1.50 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Research and Business Model development	... .. to develop a business model that will be successful.
The Basics of Business Models	... .. to articulate a firm's business model(s).
Assessing a business model	... .. to assess whether a firm's business model will remain successful.
Development of Business Models	... .. present, argue and "sell" their model to investors.

## Required and recommended reading\*

<b>Required reading:</b>	Amit, R; Zott, C.: Value creation in E-business;  Osterwalder, A., Pigneur, Y., John Wiley and Sons.: Business model generation : a handbook for visionaries, game changers, and challengers; Hoboken, NJ : Wiley  Zott, C; Amit, R; Massa, L: The Business Model: Recent Developments and Future Research;  DaSilva, CM; Trkman, P: Business Model: What It Is and What It Is Not;  Grassmann, O; Frankenberger, K; Cskik, M: The St. Gallen Business Model Navigator;
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	<p>Tidhar, R; Eisenhardt, KM: Get rich or die trying ... Finding revenue model fit using machine learning and multiple cases;</p> <p>Shepherd, DA; Seyb, S; George, G: Grounding Business Models: Cognition, boundary objects and business model change;</p> <p>Berends, H; Smits, A; Reymen, I; Podoyntysyma, K: Learning while (re)configuring: Business model innovation processes in established firms;</p> <p>Snihur, Y.; Zott, C.: The Genesis and Metamorphosis of Novelty Imprints: How Business Model Innovation Emerges in Young Ventures.;</p> <p>Gundling, E: Disruption in Detroit: Ford, Silicon Valley, and Beyond (A) and (B);</p>
<p><b>Recommended reading:</b></p>	<p>McIntyre, D; Srinivasan, A; Afuah, A; Gawer, A; Kretschmer, T: Multi-sided platforms as new organizational forms;</p> <p>Parker, G; Van Alstyne, M; Jiang, X: Platform Ecosystems: How Developers Invert the Firm.;</p> <p>Chesbrough, H; Vanhaverbeke, W; West, J: Open Innovation—Researching a new paradigm; Oxford University Press</p> <p>Foss, NJ; Saebi, T: Business model innovation: The organizational dimension; Oxford University Press</p> <p>Ghezzi, A; Cavallo, A: Agile Business Model Innovation in Digital Entrepreneurship;</p> <p>Linz, C; Müller-Stewens, G; Zimmermann, A: Radical business model transformation: Gaining the competitive edge in a disruptive world; Kogan Page Publishers</p> <p>Dewel, M; Özcan, L; Koldewey, C; Gausemeier, J: Pattern-based development of digital platforms;</p> <p>Stallkamp, M; Schotter, APJ: Platforms without borders? The international strategies of digital platform firms;</p> <p>Christensen, CM; Raynor, ME; McDonald, R: What is Disruptive Innovation?;</p> <p>Foss, NJ; Saebi, T: Business models and business model innovation: Between wicked and paradigmatic problems;</p> <p>Kirtley, J; O'Mahoney, S: What is a pivot? Explaining when and how entrepreneurial firms decide to make strategic change and pivot;</p> <p>Porter, ME: What is Strategy?;</p>

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Preparation of written work	Work assignments	30.00 %	50.00 %
Preparation of written work	Work assignments	30.00 %	50.00 %
Presentation	Attendance teaching	40.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on first attempt:</b>	assessment consists of article notes and a paper review		
<b>Details on second attempt:</b>	2nd attempt = 1st attempt		
<b>Details on third attempt:</b>	3rd attempt = exam with committee marking		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		20.00 teaching sessions	15.00 hours
<b>Teaching method:</b>	Discussion, Impulse talk, Lecture, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Work assignments</b>			15.00 hours
<b>Teaching method:</b>	Preparation of written work		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			42.00 hours
<b>Total</b>	<b>1.50 hpw</b>	<b>24.00 teaching sessions</b>	<b>75.00 hours</b>

Course unit

## Brand Management

### General information

<b>Course unit code:</b>	BB: SM_MA_BB_MGM_SMA_BRM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Fundamentals of Brand Management	<p>... describe the term brand, branding and brand management in detail and derive their meaning for the company and the customer.</p> <p>... explain the terms brand identity, brand positioning and brand image and understand them in context.</p> <p>... explain the goals and benefits of brands and recognize the opportunities to generate brand equity.</p>
Develop Brand Strategies	<p>... present brand strategies for brand building, brand management, brand architecture strategies as well as strategies for rebranding.</p> <p>... to apply these strategies in the respective context.</p>
Special Aspects of Branding	<p>... discuss selected aspects of branding (e.g. brand management in an international context, naming, legal aspects, brand management in a digital context, sustainability, requirements for branding)</p>

## Required and recommended reading\*

<b>Required reading:</b>	<p>Esch, Franz-Rudolf: Strategie und Technik der Markenführung; München: Vahlen</p> <p>Sattler, Henrik; Völckner, Franziska: Markenpolitik; Stuttgart: Kohlhammer</p> <p>Acker, David; Stahl, Florian; Stöckle Felix: Marken erfolgreich gestalten: Die 20 wichtigsten Grundsätze der Markenführung; Wiesbaden: Springer Gabler</p> <p>Brandtner, Michael: Markenpositionierung im 21. Jahrhundert: So gewinnen Sie im globalen und digitalen Wettbewerb von heute und morgen; Linde</p>
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\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Learning diary	Work assignments	40.00 %	50.00 %
Paper	Work assignments	40.00 %	50.00 %
Presentation	Work assignments	20.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	2. Antritt wie erster Antritt Positiv erbrachte Teilleistungen aus dem 1. Antritt bleiben aufrecht.		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	12.00 teaching sessions	9.00 hours
<b>Teaching method:</b>	Discussion, Exercise, Lecture	
<b>Social methods:</b>	Plenum	

<b>Synchronous distance learning</b>		5.00 teaching sessions	3.75 hours
<b>Teaching method:</b>	Discussion, Exercise, Webcast		
<b>Work assignments</b>			9.00 hours
<b>Teaching method:</b>	Exercise, Learning diary, Paper, Presentation		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>			28.25 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Complaint Management

### General information

<b>Course unit code:</b>	BB: SM_MA_BB_MAR_KMA_BEM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Fundamentals of Complaint Management	... to recognize different types of complaints and to identify the different complaint behavior of companies compared to end customers. ... describe the importance of complaint management in a customer oriented company and derive goals and tasks of complaint management.
Complaint Management Process	... create the process of complaint handling from an external customer and internal organization point of view.

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
	... to identify personell-political, organizational and/or technological basic conditions of omplaint management.
Sepcial Aspects of Complaint Management	... discuss selected aspects of complaint management and reflect on them using examples.

## Required and recommended reading\*

<b>Required reading:</b>	Stauss, Bernd; Seidel, Wolfgang: Beschwerdemanagement: Kundenbeziehungen erfolgreich managen durch Customer Care; München: Wien: Hanser
<b>Recommended reading:</b>	Meffert, Heribert; Bruhn, Manfred: Dienstleistungsmarketing: Grundlagen - Konzepte - Methoden ; mit Fallstudien; Wiesbaden: Springer Gabler

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	13.00 teaching sessions	9.75 hours
<b>Teaching method:</b>	Discussion, Excercise, Lecture	
<b>Social methods:</b>	Individual work, Pair work, Plenum	
<b>Synchronous distance learning</b>	4.00 teaching sessions	3.00 hours

<b>Work assignments</b>		8.00 hours	
<b>Teaching method:</b>	Excercise, Independent study of literature		
<b>Social methods:</b>	Individual work		
<b>Self-directed learning</b>		29.25 hours	
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Customer Relationship Management

### General information

<b>Course unit code:</b>	BB: SM_MA_BB_MAR_KMA_CRM_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Fundamentals of CRM	<p>... explain CRM as a strategic approach for planning, controlling and applying all interactive processes with clients, justify CRM as a success factor in marketing and sales</p> <p>... describe goals, tasks and applications of CRM and allocate them based on examples</p> <p>... describe the terms and tasks of ECRM, Social CRM, Customer Experience Managements and Programmatic CRM and explain them based on examples</p>



Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Features of CRM	... explain the instruments of operative/analytical CRM as well as cooperative/collaborative CRM and their application possibilities based on examples
Implementing CRM Systems	... design the basic outline of the introduction process of a CRM system and show basic conditions
Application of Software Tools	... list selected software tools and know their functionality

## Required and recommended reading\*

<b>Required reading:</b>	Hippner, Hajo; Hubrich, Beate; Wilde, Klaus D.: Grundlagen des CRM: Strategie, Geschäftsprozesse und IT-Unterstützung; Wiesbaden: Gabler Verlag / Springer Fachmedien Wiesbaden GmbH, Wiesbaden  Helmke, Stefan; Uebel, Matthias; Dagelmaier, Wilhelm: Effektives Customer Relationship Management: Instrumente - Einführungskonzepte - Organisation; Wiesbaden: Springer Fachmedien Wiesbaden
<b>Recommended reading:</b>	Kumar, V.; Reinartz, Werner: Customer Relationship Management; Wiesbaden: Springer Verlag  Bruhn, Manfred: Relationship Marketing: Das Management von Kundenbeziehungen; München: Vahlen Verlag

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Case study	Work assignments	70.00 %	50.00 %
Presentation	Attendance teaching	30.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on second attempt:</b>	Fallstudie, Ersatzleistung: Paper 70 %, > 50 %; Präsentation, Ersatzleistung: Paper 30 %, > 50 %; Fallstudie und Präsentation, Ersatzleistung Paper 100 %, > 50 %
<b>Details on third attempt:</b>	Mündliche Prüfung. Der 3. Antritt wird kommissionell beurteilt.

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	12.00 teaching sessions	9.00 hours
<b>Teaching method:</b>	Lecture, Presentation	
<b>Social methods:</b>	Group work, Plenum	
<b>Synchronous distance learning</b>	4.00 teaching sessions	3.00 hours
<b>Work assignments</b>		16.00 hours
<b>Teaching method:</b>	Case study	
<b>Social methods:</b>	Group work	
<b>Self-directed learning</b>		22.00 hours
<b>Teaching method:</b>	Independent study of literature	
<b>Total</b>	<b>1.00 hpw</b>	<b>16.00 teaching sessions</b>
		<b>50.00 hours</b>

### Course unit

## Budgeting with Focus on the Sales Market

### General information

<b>Course unit code:</b>	BB: SM_MA_BB_SMT_VMA_BDA_1
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	BB: 1. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
External and internal framework conditions of sales budgeting	... explain the external and internal parameters of sales budgeting and the significance of the sales budget for overall planning
From targets to specific plans	... explain the importance of clearly defined sales objectives, describe how these objectives are derived, and comment on how they relate to the overall business plan
Sales budget preparation	... independently prepare a sales, turnover, and cost plan using plausible and commonly accepted budgeting methods for a clearly defined area of responsibility
Key performance indicators in the context of sales budgeting	... compile an appropriate control system of KPIs to monitor the achievement of objectives

## Required and recommended reading\*

<b>Required reading:</b>	Rieg, R.: Planung und Budgetierung Was wirklich funktioniert; Springer Gabler Shim, K., & Siegel, J.: Budgeting Basics & Beyond; John Wiley & Sons Inc
<b>Recommended reading:</b>	Grund T., Schönbohm A., & Tran, K.: Unternehmensplanung im Zeitalter der Digitalisierung; Schwering, A: Ehrlichkeit in der Budgetierung; Winkelmann, Peter: Vertriebskonzeption und Vertriebssteuerung: die Instrumente des integrierten Kundenmanagements - CRM; diverse Autor_innen*: aktuelle themenbezogene Artikel; diverse Autor_innen*: aktuelle themenbezogene Artikel;

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	70.00 %	50.00 %
Practical/Case example	Work assignments	30.00 %	
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	Wie 1. Antritt		
<b>Details on third attempt:</b>	mündliche kommissionelle Prüfung		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		18.00 teaching sessions	13.50 hours
<b>Teaching method:</b>	Brainstorming, Discussion, Impulse talk, Lecture, Management game, Question/Conversation based teaching		
<b>Social methods:</b>	Group work, Plenum		
<b>Synchronous distance learning</b>		3.00 teaching sessions	2.25 hours
<b>Work assignments</b>			5.00 hours
<b>Teaching method:</b>	Independent study of literature, Practical/Case example, Quiz		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>			29.25 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

# Customer Experience in Practice

## General information

<b>Course unit code:</b>	BB: SM_MA_BB_MAR_CJO_CEP_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 0.75 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
Customer Experience in Practice	Upon successful completion of the course unit, students are able to ...  ... .. to identify the most appropriate customer journey and its touch points for different sectors and target markets  ... .. to be able to select the most appropriate customer touchpoints based on the wanted customer experience  ... .. to discuss different approaches and practical applications of touchpoint management

## Required and recommended reading\*

<b>Required reading:</b>	Chaffey, Dave., Hemphill, Tanya., Edmundson-Bird, David.: Digital Business PDF EBook; Harlow: Pearson Education, Limited
<b>Recommended reading:</b>	Bruhn, Manfred; Hardwich, Karsten (Hrsg.): Customer Experience: Forum Dienstleistungsmanagement; Wiesbaden: Springer Gabler Verlag

\*current editions

## Course unit assessment

The course unit is concluded with continual assessment.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Presentation	Attendance teaching	50.00 %	50.00 %
Report	Work assignments	50.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	second attempt by written exam worth 100% of LV grade, minimum requirement > 50%		
<b>Details on third attempt:</b>	oral exam in front of commission		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		12.00 teaching sessions	9.00 hours
<b>Teaching method:</b>	Discussion, Practical/Case example, Presentation		
<b>Social methods:</b>	Group work, Plenum		
<b>Work assignments</b>			16.00 hours
<b>Teaching method:</b>	Practical/Case example		
<b>Social methods:</b>	Group work		
<b>Self-directed learning</b>			25.00 hours
<b>Total</b>	<b>0.75 hpw</b>	<b>12.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

# Customer Touchpoint Management

## General information

<b>Course unit code:</b>	BB: SM_MA_BB_MAR_CJO_CTM_2
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.00 hpw
<b>Semester when the course unit is delivered:</b>	BB: 2. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Lecture
<b>Course unit language:</b>	English

## Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
Customer Journey	<ul style="list-style-type: none"><li>... to describe the concept of customer journey and discuss its relevance for effective marketing</li><li>... to understand the relevance of different target groups for the development of appropriate customer journeys</li><li>... to visualise different options of customer journeys</li><li>... to understand how sustainability issues from customers' view points can impact the customer journey</li></ul>
Touchpoint Management	<ul style="list-style-type: none"><li>... to be able to explain the concept of "Touchpoint Management" and to understand how it relates to the customer journey</li><li>... to be able to explain the concept of "Touchpoint Management" and to understand how it relates to the customer journey ... to understand how relevant touchpoint management is for branding</li><li>... to distinguish between the different categories of touchpoints and how this impacts different usage scenarios</li><li>... to evaluate different ways to monitor and optimise touchpoint usage based on practical examples</li></ul>
Customer Experience	<ul style="list-style-type: none"><li>... to appreciate the need for an optimised customer experience as a prerequisite for good touchpoint management</li></ul>

## Required and recommended reading\*

<b>Required reading:</b>	Chaffey, Dave., Hemphill, Tanya., Edmundson-Bird, David.: Digital Business PDF EBook; Harlow: Pearson Education, Limited
<b>Recommended reading:</b>	Keller, Bernhard (Hrsg.); Ott, Cirk Sören (Hrsg.): Touchpoint Management: entlang der Customer Journey erfolgreich agieren; Freiburg: München: Stuttgart: Haufe Group, [Ann Arbor] : ProQuest eBook Central

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	90.00 %	50.00 %
Peer-review	Work assignments	10.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>
<b>Details on second attempt:</b>	second attempt by written exam worth 100% of LV grade, minimum requirement > 50%		
<b>Details on third attempt:</b>	oral exam in front of commission		

## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>	17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Discussion, Lecture, Practical/Case example	
<b>Social methods:</b>	Individual work, Pair work, Plenum	



<b>Work assignments</b>		4.00 hours	
<b>Teaching method:</b>	Peer-review, Practical/Case example		
<b>Social methods:</b>	Individual work, Group work		
<b>Self-directed learning</b>		33.25 hours	
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.00 hpw</b>	<b>17.00 teaching sessions</b>	<b>50.00 hours</b>

Course unit

## Key Account Management

### General information

<b>Course unit code:</b>	BB: SM_MA_BB_SMT_SKM_KAM_3
<b>Scope (ECTS Credits; contact hours per week):</b>	BB: 2.00 ECTS Credits; 1.25 hpw
<b>Semester when the course unit is delivered:</b>	BB: 3. Semester
<b>Type of course unit (compulsory/ optional):</b>	Compulsory course unit
<b>Mode of delivery:</b>	Integrated course unit
<b>Course unit language:</b>	English

### Course contents and learning outcomes

<b>Course contents</b>	<b>Learning outcomes</b>
	Upon successful completion of the course unit, students are able to ...
The necessity and relevance of Key Account Management (KAM)	... explain the need of KAM in a more and more globalized business environment (e.g. more international brands, more global procurement)
The objectives and functions of KAM	... describe the objectives and functions of KAM
The determination of Key Accounts	... define and to use the criteria for the determination of Key Accounts (how many and which)

Course contents	Learning outcomes
	Upon successful completion of the course unit, students are able to ...
Multifunctional teams and Interface-Management	... explain multifunctional teams and Interface-Management and to comment the necessity of integration of all departments in the own company
Emotional Selling in B2B	... to outline the importance of emotional selling in B2B markets

## Required and recommended reading\*

<b>Required reading:</b>	Grant, Stewart: Successful Key Account Management In A Week; Teach Yourself  Cheverton, Peter: Key account management: tools and techniques for achieving profitable key supplier status; London [u.a.]: Kogan Page
<b>Recommended reading:</b>	Sieck, Hartmuth: Key Account Management: KAM erfolgreich einführen und professionell weiterentwickeln; BoD - Books on Demand  Capon, Noel: Key Account Management and Planning; London: Kogan Page  Beitler, Michael A.: Strategic Organizational Change, A Practitioner's Guide for Managers and Consultants; PPI  Blokdyk, Gerardus: Key Account Manager A Complete Guide; 5STARCOOKS  Homburg, Christian; Schäfer, Heiko; Schneider, Janna: Sales Excellence: Vertriebsmanagement mit System; Wiesbaden: Springer Gabler  diverse Autor_innen*: aktuelle themenbezogene Artikel; M.E. Sharpe

\*current editions

## Course unit assessment

The course unit is concluded with final examination.

### Extra-occupational

Performance components at the first attempt			
Assessment methods		Weighting	Minimum achievement per performance component for the positive completion
Exam (written/PC)	Attendance teaching	100.00 %	50.00 %
<b>Summe</b>		<b>100,00 %</b>	<b>&gt; 50,00 %</b>

<b>Details on third attempt:</b>	Mündliche Prüfung. Der 3. Antritt wird kommissionell beurteilt.
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## Planned learning activities and teaching methods

### Extra-occupational

<b>Attendance teaching</b>		17.00 teaching sessions	12.75 hours
<b>Teaching method:</b>	Brainstorming, Discussion, Impulse talk, Lecture, Practical/Case example, Question/Conversation based teaching		
<b>Social methods:</b>	Plenum		
<b>Synchronous distance learning</b>		4.00 teaching sessions	3.00 hours
<b>Self-directed learning</b>			34.25 hours
<b>Teaching method:</b>	Independent study of literature		
<b>Total</b>	<b>1.25 hpw</b>	<b>21.00 teaching sessions</b>	<b>50.00 hours</b>

Exam 1 LE