



## Module Guide

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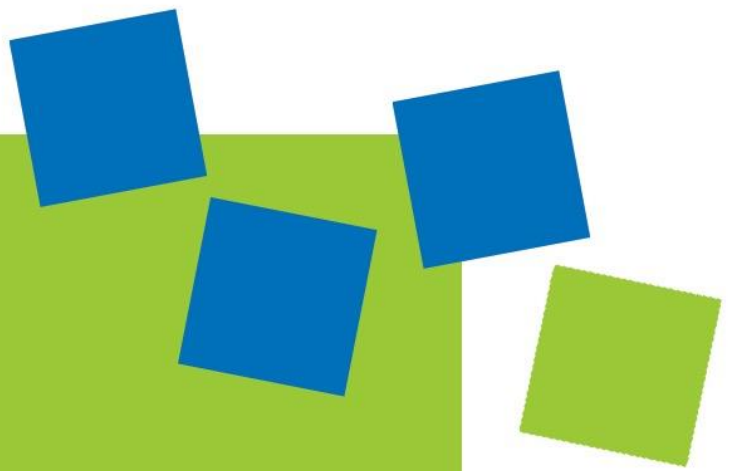
*International Product and Service Management - Master*

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*Faculty of Economics*

*Winter term 2021/22*

Stand: 2021-08-10



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# 1 Introduction to the course of studies

Course of studies			
Short form:	IPM	SPO-Nr.:	HSAN-20161-1
Course management:	Prof. Dr. Barbara Hedderich		
Student advisory service:	Prof. Dr. Barbara Hedderich & Prof. Dr.-Ing. Anke Knoblauch		
ECTS:	90 points (+30 ECTS-points bridging modules for 6+4 Bachelor's programs or the need for a professional bridging semester)		
Standard period of study:	3 or 4 Semester (Depending on the length of the Bachelor's degree; 6 or 7 semesters or the need for a professional bridging semester)		
Admission requirements:	<ol style="list-style-type: none"> <li>1. a university degree or equivalent with an overall examination mark of 2.0 or better in a course of study at a German or foreign university lasting at least six semesters</li> <li>2. proof of sufficient knowledge of German (at least Goethe-Zertifikat A1) and <b>English (proven in the selection interview)</b></li> <li>3. <b>proof of above-average motivation as a special qualification requirement</b> through a selection interview, especially for grades between 2 and 3</li> </ol>		
Usability:	Master International Product and Service Management		
<b>Learning Outcomes:</b>			
<p>The aim of the Master course "International Product and Service Management" is to convey the future master's graduates the professional, methodological and social skills that are necessary for the independent development and application of scientific knowledge and processes. The graduates also should learn how to act responsible in business and society.</p> <p>With the academic degree "Master of Arts", short form: "M.A.", the graduates receive the qualification for doctoral studies.</p> <p>The students should acquire the requirements to face successfully the challenges of an internationalised world. The students should develop their personality to be able to:</p> <ul style="list-style-type: none"> <li>• think and act entrepreneurially,</li> <li>• actively shape innovations,</li> <li>• reflect ethically on their actions.</li> </ul> <p>It is important to enable them to act as bridge builders between the disciplines. They should be able to analyze complex contexts and to react flexibly in them. Therefore, corresponding knowledge, skills and abilities are established. The focus of the Master course "IPM" is the application-oriented, science-based preparation of the students for occupational acting.</p>			
<b>Content:</b>			
Each semester, students acquire 30 credit points.			

In the summer semester (1st or 2nd semester), a core module is offered. The operational processes are reflected in their complex entirety. The focus is the holistic and interdisciplinary consideration of the product. The core module is created as a cross-course module with combined, interdisciplinary courses, projects and case studies.

In the winter semester, students can specialize in a focus module according to their personal inclinations in the technical or business area. In all orientations, the focus is on the product and the processes that are arranged around it. The focus modules are supplemented by elective modules (also language courses) and interdisciplinary, team-oriented project works or case studies. In Ansbach, the focus "Technologies" is offered. With this specialisation in the technical field, students can qualify as intermediaries between the disciplines of engineers and businesspeople. At the TH Valencia, the focus is on „Service Management“.

The last semester concludes the course with the preparation of a master's thesis.

Because of the international cooperation, the language of instruction is English.

**Graduation / Academic degree:**

Master of Arts (M.A.)

## 2 Description of Modules

## 2.1 Core Module

<b>Product Management</b>			
<b>Module abbreviation:</b>	IPM-ProductManagement	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master	compulsory module	1
<b>Responsible for module:</b>	Studiengangleiter/in		
<b>Lecturers:</b>	IPM-ProductManagement: Durst, Carolin; Eichinger, Roberto; Hedderich, Barbara; Hoyer, Johannes; Kaiser, Norbert; Knoblauch, Anke; Schnurpfeil, Roland; Schugk, Michael; Slama, Stefan		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	30 ECTS / 0 SWS		
<b>Workload:</b>	Contact hours:		270 h
	Self-study:		630 h
	Total:		900 h
<b>Subjects of the module:</b>	Product Management (IPM-ProductManagement)		
<b>Lecture types:</b>	IPM-ProductManagement: Prj - project		
<b>Examinations:</b>	seminar paper and presentation (during the examination period)		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Knowledge:</b> The students should be acquainted with all relevant topics concerning all the different phases of the product process. They should especially know how interdependent those different parts are and how they influence each other.</p> <p><b>Professional skills:</b> The students are able to organize themselves into efficient groups and solve the challenges posed by projects in the area of product development. They are also able to evaluate their own progress and develop strategies for improving their performance.</p> <p><b>Social skills:</b> Students enhance their team competence. They are able to work in intercultural environments. They get experience in communicating in interdisciplinary settings</p>			
<b>Content:</b>			
The core module combines project work with theoretical stimuli. Students will work on the project in groups and as far as possible independently. They will be attended to by a coach who will introduce into the project and will be there for the students whenever difficulties and questions arise. The project is complex enough			



to require students to attend to all the tasks required in a complete product process thus enabling them to experience firsthand all the interdependences of a real life project. A project can never cover in a systematic way all relevant aspects of the product process. Therefore theoretical stimuli will be offered to the students parallel to the project work. Those stimuli give some relevant theoretical background and confront students with some examples of current research work allowing them some insights and possibilities for reflection even into those parts of the product process that might not be present or not in the foreground of their own project. At the same time the students get through the stimuli the chance to know our experts in those fields relevant to their project who will also be available for questions that might arise during their own project work.

The project will always be a product or a service that has developed for market launch. It can be a product or a service offered to us by a firm or it can be one that we hope might be marketable. Projects will always start with describing to the group a problem and the development of a convincing solution during the semester will be expected. Depending on the concrete project there will be challenges from different areas to be confronted while preparing designs, technical solutions and a business plan. The development of the solution has to be presented in three milestones.

The first milestone will have a didactic character in the sense that students will get a feedback showing them areas where they have to develop further. Grades will take into account that this is the first feedback opportunity for the students. The presentations of the other two milestones will be evaluated following strictly professional criteria. In the last milestone a finished business plan has to be presented. According to the different phases of the product process the stimuli offer the following subjects:

- Innovation: An introduction of the two relevant perspectives will be offered. The economic perspective allows students to classify their own project according to different approaches that are currently discussed. Apart from the economic content work with research tools will be introduced. The business perspective offers some insights into change management and the necessity of customer orientation of innovation.
- Product Development and Planning: Some insights into technological and business determinants for preparing the marketability of products, introduction into some relevant methods like the KANO model
- Product Realisation: Planning the layout of the plants and the workflow of the production process. Looking at concepts like lean production and the interdependence of the development and the production of the products.
- Sales, Service and Product Disposal: Concepts of technical sales will be introduced, current issues discussed, soft skills like intercultural skills will also mentioned.

**Literature:**

will be given by professors

<b>Master Thesis</b>			
<b>Module abbreviation:</b>	IPM-MasterThesis	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master	compulsory module	3
<b>Responsible for module:</b>	Studiengangleiter/in		
<b>Lecturers:</b>	IPM-MasterThesis:		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	30 ECTS / 0 SWS		
<b>Workload:</b>	Contact hours:		0 h
	Self-study:		900 h
	Total:		900 h
<b>Subjects of the module:</b>	Master Thesis (IPM-MasterThesis)		
<b>Lecture types:</b>	IPM-MasterThesis: MAr - master thesis		
<b>Examinations:</b>	report		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p>Knowledge: The students get a deep insight into the topic they treat</p> <p>Professional Skills:</p> <ul style="list-style-type: none"> <li>• The students should be able to raise a given theme in a proper academic way, that includes</li> <li>• Finding a relevant problem or project.</li> <li>• To list the main parts of a research work as well as to establish research goals. To establish a regular/periodic meetings schedule with the adviser.</li> <li>• To look for documents related to the theme and to select the most appropriate according to the research work, which means the candidate must know the State of the Art. This State of the Art may not be the same for an academic and a professional Final Research Project, e.g. the literature and journals used can vary. But even if taking into account the differences between the two approaches the basic requirement of using the scientific method stays the same. Students have to look in a project thesis for an adequate method to analyze e.g. a firm specific problem and to find based on this analysis an adequate method for solving it, showing in their thesis their deliberation process and as such showing that they master the relevant literature.</li> </ul>			

- To use main tools and resources for collecting information: observation, interview, survey, etc.
- To write down bibliography and references of consulted documents in an adequate way

**Social Skills:**

Students are able to organize their work on their own (constitution of project structure (time schedule, work packages). They master the challenge of applying scientific methods to a given problem in a given time frame.

**Content:**

The master thesis can have a more theoretical or a more applied research focus. In the latter case it will normally be based on a project developed at firm.

The student will define and realize her/his research project independently and set down its results in a final academic paper. She/he will be advised by a professor.

The project should belong to the field of Product and Service Management. A master thesis with a more theoretical orientation implies a deeper state of the art revision and a content development based on standard guidelines which are similar to a research paper. It implies to expand the limits of scientific knowledge in a specific area know but not excluding other approaches; since in most cases it could imply the starting point of the Doctoral dissertation.

In a more applied final project a revision of the state of the art is also expected when choosing an adequate methodology for handling the firm specific problem.

Especially important is the well adapted transfer of the chosen methodology to the problem at hand which includes the evaluation of the solution following academic standards.

**Literature:**

none

## 2.2 Focus Modules

"Technologies"

<b>Biomaterials in Medicine</b>			
<b>Module abbreviation:</b>	IPM-BiomaterialsinMedicine	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Boger, Andreas		
<b>Lecturers:</b>	IPM-BiomaterialsinMedicine: Boger, Andreas		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Biomaterials in Medicine (IPM-BiomaterialsinMedicine)		
<b>Lecture types:</b>	IPM-BiomaterialsinMedicine: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 60 minutes		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p>Goals:</p> <p>Professional Skills:</p> <p>Background on Biomaterials used in Medicine as described above.</p> <ul style="list-style-type: none"> <li>• Making a research on a topic / question for themselves, followed by sharing and discussing the findings with the other participants (think-per-share).</li> <li>• By doing the research the students will learn to evaluate a special application concerning the questions: <ul style="list-style-type: none"> <li>○ do it really address a clinical need,</li> <li>○ what are the relevance for the patients,</li> <li>○ what are the pros and cons. Possible drawbacks and risks for the user of the product and the patient</li> <li>○ how the IP-situation looks like on the field of application</li> </ul> </li> </ul> <p>Social Skills: The one connected to the teaching method think-per-share as mentioned above. The student has the competence to synthesize information from a wide range of sources, is able to present and document the work results systematically and is a team player.</p>			
<b>Content:</b>			
<p>Content:</p> <p>Introduction to Biomaterials in Medicine by the contents asking the following questions:</p>			

- Why do we need / for what do we need Biomaterials especially in orthopedic: goals of fracture treatment?
- How Biomaterials are defined?
- Out of what materials (metals, ceramics, polymers, composite) Biomaterials made for a given application and why?
- Which different kinds - as defined by the origin of the Biomaterials exists ?
  - Synthetic Biomaterials, Allografts, Autografts, Xenografts etc.)
- What are the special properties from those materials?
- What are the different applications of Biomaterials in Medicine and open questions behind them?
- What are the reason behind; using the Biomaterial (material group) for the given application (several examples will be discussed)?.
- How to define and describe the functional and Design requirements of Biomaterials products in principle?

**Literature:**

## Literature:

Paulo Jorge Bártolo, Bopaya Bidanda; Bio-Materials and Prototyping Applications in Medicine; Springer, 10.12.2007

Buddy D. Ratner, Allan S. Hoffman, Frederick J. Schoen, Jack E. Lemons; Biomaterials Science: An Introduction to Materials in Medicine; 2<sup>nd</sup> Edition, Elsevier Academy Press. 2004.

Biomaterials – Journals: Copyright © 2012 Elsevier Ltd. <http://www.sciencedirect.com/science/journal/01429612>

<b>Chemical and Biotechnological Products and Production Processes</b>			
<b>Module abbreviation:</b>	IPM-ChemBiotechnProductsProductionProc	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Gaisser, Sibylle		
<b>Lecturers:</b>	IPM-ChemBiotechnProductsProductionProc: Gaisser, Sibylle		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Chemical and Biotechnological Products and Production Processes (IPM-ChemBiotechnProductsProductionProc)		
<b>Lecture types:</b>	IPM-ChemBiotechnProductsProductionProc: SU/Pr - tuition in seminars/practical training		
<b>Examinations:</b>	seminar paper and presentation (during the examination period)		
	Basic understanding in natural sciences Voraussetzungen für die Vergabe von Leistungspunkten, ist das Bestehen der jeweiligen Modulprüfung gem. SPO bzw. Studienplan.		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p>Knowledge: The students are familiar with additive manufacturing and enzymatic, prokaryotic and eukaryotic production systems in the chemical and pharmaceutical sector. The students will understand the nature and the current state of the art of additive manufacturing. They have broad knowledge of the drug developmental pipeline, the applied research tools and develop an understanding of the mode of action of biopharmaceutical products.</p> <p>Professional Skills: Students are able to assess additive manufacturing strategies and biotechnological processes and their implications for an industrial production process. They have basic skills in some aspects of practical microbiological methods and polymerization methods. The students will be able to select appropriate methods of additive manufacturing, depending on the specific requirements for the part(s) in question.</p>			
<b>Content:</b>			
<p>The course is split in two parts.</p> <p>Part 1: Additive Manufacturing – more than 3D printing:</p> <ul style="list-style-type: none"> <li>- polymerization methods</li> <li>- sintering/melting-based methods</li> <li>- lamination methods</li> </ul>			

- extrusion-based methods
- powder/binder methods
- additive manufacturing for biological systems
- applications for rapid prototyping/tooling/manufacturing

#### Part 2: Biotechnological Production

Introduction to biotechnology in general and with a focus on the pharmaceutical sector, relevant markets and products (e.g. drugs, vitamins, OTC-products).

- Basics in biology
- Introduction into genetic engineering
- The immune system
- General knowledge of production methods such as fermentation and biotransformation
- Bioproduct purification
- Legal requirements for recombinant protein production

#### Literature:

Pharmaceutical biotechnology: Concepts and applications. Wiley

Thieman, Palladino: Introduction to Biotechnology, Pearson/Benjamin Cummings, 2019



<b>Computer Simulation Technologies and Control Engineering</b>			
<b>Module abbreviation:</b>	IPM-CompSimulTechnoContrEngi	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Moog, Mathias		
<b>Lecturers:</b>	IPM-CompSimulTechnoContrEngi: Moog, Mathias		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		49 h
	Self-study:		101 h
	Total:		150 h
<b>Subjects of the module:</b>	Computer Simulation Technologies and Control Engineering (IPM-CompSimul-TechnoContrEngi)		
<b>Lecture types:</b>	IPM-CompSimulTechnoContrEngi: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 60 minutes		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Goals of the Sub-Module Computer Simulation Technologie:			
Knowledge:			
The students are able to...			
<ul style="list-style-type: none"> <li>locate starting points for the successful use of simulation technologies in product development</li> <li>understand and judge the use of different simulation tools in various application fields</li> <li>get an insight in possibilities and limitations of simulation technologies</li> </ul>			
Professional Skills:			
They are..			
<ul style="list-style-type: none"> <li>familiar with basic concepts of computer simulation</li> <li>able to choose the correct simulation techniques and the adequate simulation tools in complex problems and use them target-oriented</li> </ul>			
Social Skills:			
They develop the ability to...			
<ul style="list-style-type: none"> <li>communicate clearly and intelligibly about the use of computer simulation technologies</li> <li>distribute tasks and to coordinate individual tasks with a team in projects containing simulation aspects</li> </ul>			

- asking target-oriented questions to simulation experts

Goals of the Sub-Module Control Engineering:

Knowledge:

The aim of the lecture is to give an introduction to control engineering and automation which means for the students on the one hand to gain an overview of the topics (a) single loop control and (b) feedback loop control in principle and on the other hand to get experienced with common control systems, actuators and sensors in real systems. Furthermore, a very broad overview is given on computer controlled machines.

Professional Skills:

The students understand the principles and differences of single loop control systems and feedback loop control systems. By means of an integrated practical training, including three units, they are trained in the basics of pneumatics and designing of a pneumatic system (consisting of sources, drives, sensors and logic elements), corresponding to a simple control problem. The participants understand the principles of NC machines, rapid prototyping and robotics. They understand common methods for automated process control such as SPC (statistical process control) and APC (advanced process control).

Social Skills:

The students learn cooperation and mutual learning especially in the practical training units. Furthermore, they extend their English vocabularies by many technical terms and use them frequently in technical discussions.

#### Content:

Content of the Sub-Module Computer Simulation Technologie:

- Reasons for the use of computer simulation
- Classification of simulation tools, engineering and applications
- Dynamical systems, models of growth, parameter sensitivity
- Modelling e.g.: CO<sub>2</sub> in atmosphere
- Biological Reaction Engineering: operation modes, models and applications
- Event Driven Systems: state charts, application fields
- Computational Fluid Dynamics: analysis of flows, problems. CFD workflow, application fields in product development and optimization

Content of the Sub-Module Control Engineering:

1. Control Systems
2. Sensors and Actuators
3. Signals and Systems
4. Feedback Control Systems
5. Computer-controlled Machines
6. Automated Process Control

#### Literature:

Literature of the Sub-Module Computer Simulation Technologie:

- Velten, Kai: Mathematical modeling and simulation - introduction for scientists and engineers, WILEY-VCH, 2009
- Gould, Harvey e.a.: An introduction to computer simulation methods - applications to physical systems, Pearson-Addison-Wesley, 2007
- Hannon, Bruce; Ruth, Matthias: Dynamic modeling, Springer, 2001

- Gershenfeld, Neil: The nature of mathematical modeling, Cambridge Univ. Press, 2003
- Acheson, David: From calculus to chaos - An introduction to dynamics, Oxford University Press, 1997

Literature of the Sub-Module Control Engineering:

- Norman S. Nise, Control Systems Engineering, Wiley; 6th edition (December 14, 2010)
- Festo didactic interactive course on pneumatics theory and applications with videos, schematic depictions and multiple choice tests (English version); <http://www.festo-didactic.com/gb-en/>

<b>Food Technology</b>			
<b>Module abbreviation:</b>	IPM-Food Technology	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Knoblauch, Anke		
<b>Lecturers:</b>	IPM-Food Technology: Knoblauch, Anke		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 3 SWS		
<b>Workload:</b>	Contact hours:		48 h
	Self-study:		102 h
	Total:		150 h
<b>Subjects of the module:</b>	Food Technology (IPM-Food Technology)		
<b>Lecture types:</b>	IPM-Food Technology: SU/Ü/Pr - tuition in seminars/exercise/practical training		
<b>Examinations:</b>	seminar paper and presentation		
	Prerequisites for attending according to SPO: According to SPO or rather curriculum. Notes: Prerequisite for the granting of credit points is the passing of the respective module examination in accordance with the SPO or curriculum. Participation in the hygiene instruction is required for participation in the practical training.  Winter term 21/22: 3 SWS (2 SWS Seminaristischer Unterricht, 1 SWS Praktikum)		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Goals: Professional and methodological skills: The student knows processes for food production as well as some basics in the fields of food sensory analysis, nutrition, food packaging and food hygiene. The student is able to describe and evaluate processes and consider aspects of sustainability. Occupational skills: The student understands food production processes, can discuss and analyse them from different points of view. New fields of knowledge can be developed, presented, analysed and discussed. Social skills: The student has the competence to synthesize information from a wide range of sources, is able to present and discuss the work results systematically and can work as team player.			

**Content:**

Content:

Current topics in the field of food technology, examples are chosen from the following areas:

- flow charts
- influence of processing parameters
- unit operations (for example drying, freezing, separation processes)
- quality management
- nutritional aspects
- sensory analysis
- packaging
- hygiene and food preservation
- sustainability

The module includes seminaristic teaching and practical training. Each participant gives a presentation on a specific topic.

**Literature:**

Literature:

Vaclavik, Christian. (2020). Essentials of Food Science. Springer.

Campbell-Platt, Geoffrey (Hrsg.). (2017). Food Science and Technology. Wiley-Blackwell.

For latest topic-specific technical literature, search e.g. via

[https://dbis.uni-regensburg.de//dbliste.php?bib\\_id=fhban&colors=31&ocolors=40&lett=f&gebiete=48](https://dbis.uni-regensburg.de//dbliste.php?bib_id=fhban&colors=31&ocolors=40&lett=f&gebiete=48)

Form of media:

Blended learning

<b>Introduction to Chemistry and Physics for Non-Scientists</b>			
<b>Module abbreviation:</b>	Intr. to Chem. and Physics f. Non.-Scientists	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Wilisch, Christian		
<b>Lecturers:</b>	Intr. to Chem. and Physics f. Non.-Scientists: Rychkov, Dmitry		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		60 h
	Self-study:		90 h
	Total:		150 h
<b>Subjects of the module:</b>	Introduction to Chemistry and Physics for Non-Scientists (Intr. to Chem. and Physics f. Non.-Scientists)		
<b>Lecture types:</b>	Intr. to Chem. and Physics f. Non.-Scientists: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper and presentation		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan.			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
A basic understanding of scientific principles is essential in our technological world. This course is specifically aimed at non-scientists or non-engineers to help them gain sufficient understanding to facilitate, for instance, the discussions between project scientists and product managers.			
<b>Content:</b>			
Chemistry: structure of matter, types of chemical bonds, nuclear chemistry, chemical reactions and equilibria, catalysis, introduction to organic chemistry, chemistry and the environment			
Physics: basic concepts of: mechanics, electricity and magnetism, molecular physics and modern physics			
<b>Literature:</b>			
Chemistry: the central science, global ed., Theodore Brown et al., Pearson, Harlow (UK), 2018			
Physics: Fundamental Concepts of Physics, Michael J. Cardamone, Universal Publishers, 2007			

<b>Plastics Processing Technology</b>			
<b>Module abbreviation:</b>	IPM-PlasticsProcessingTech	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		
<b>Responsible for module:</b>	Sover, Alexandru		
<b>Lecturers:</b>	IPM-PlasticsProcessingTech: Sover, Alexandru		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Plastics Processing Technology (IPM-PlasticsProcessingTech)		
<b>Lecture types:</b>	IPM-PlasticsProcessingTech: undetermined		
<b>Examinations:</b>	written exam, 90 minutes		
	Recommended Requirements: Interest in technical field and motivation Conditions for Participation: According to the study and examination regulations and the study plan. Grading Requirements/Remarks: Requirements for the award of credit points are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<b>Knowledge:</b> The students have knowledge of the basics of plastic materials, their properties and processing technologies as well as their economic importance. They understand the main production methods and the possible applications. <b>Professional Skills:</b> The students are able to understand the difference between the essential plastic materials and the processing technologies used for the production of different components. <b>Social Skills:</b>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>- Introduction to plastics materials (structure, monomers, polymers)</li> <li>- Development and economic importance of polymer materials</li> <li>- Classification of plastics (thermoplastics, thermosets and elastomers; description, structure and</li> </ul>			

- properties)
- Rheology (brief overview)
  - Processing of plastics: Extrusion; Injection Moulding; Thermoforming; Casting; Rapid prototyping
  - Design and development of plastic components
  - Plastic assembly techniques (welding)
  - Applications with examples

**Literature:**

- Understanding Polymer Processing, Tim A. Osswald, 2nd Edition, 2018
- Polymer Processing- Principles and Modeling, Jean-Francois Agassant, Pierre Avenas, Pierre J. Carreau, Bruno Vergnes, Michel Vincent, 2nd Edition, 2017



## 2.3 Elective Modules

<b>Business English - Advanced Writing and Cultural Studies</b>			
<b>Module abbreviation:</b>	IPM-BusinEnglAdvanWritCultStud	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	McIntosh, Sabine		
<b>Lecturers:</b>	IPM-BusinEnglAdvanWritCultStud: McIntosh, Sabine		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		24 h
	Self-study:		126 h
	Total:		150 h
<b>Subjects of the module:</b>	Business English - Advanced Writing and Cultural Studies (IPM-BusinEnglAdvanWritCultStud)		
<b>Lecture types:</b>	IPM-BusinEnglAdvanWritCultStud: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 90 minutes		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
	Conditions for participation: According to the study and examination regulations and the study plan, participants will submit homework assignments regularly.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
English knowledge according to the European Frame of Reference level B2/C1; Students of Business Administration should have passed Written and Oral Communication Skills			
<b>Objectives:</b>			
Professional and methodological competence			
<ul style="list-style-type: none"> <li>Acquisition of the ability to work in an international/English-speaking company by consolidating technical terminology</li> </ul>			
Operational competence			
<ul style="list-style-type: none"> <li>Consolidation of written and oral communicative competence in the foreign language</li> </ul>			
Social competence			
<ul style="list-style-type: none"> <li>Ability to integrate in international companies by acquiring in-depth language skills and knowledge of intercultural aspects.</li> </ul>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>Analysis and discussion of texts dealing with the economic sector or cultural aspects</li> </ul>			

- Superior understanding of the writing process and writing techniques (memos, reports, minutes etc.)
- Stylistic elements of text production and creative writing with special regard to sentence structure and punctuation
- Analysis and evaluation of differences in intercultural communication
- Who are we - cultural backgrounds, attitudes and values
- Identifying the challenges faced by people working in an intercultural environment
- Dimensions of culture: some models

**Literature:**

Script, additional material in Moodle

<b>Business English - Oral Communication Skills</b>			
<b>Module abbreviation:</b>	IPM-BusEnglOralComSkills	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	McIntosh, Sabine		
<b>Lecturers:</b>	IPM-BusEnglOralComSkills: Zürn, Martina		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		48 h
	Self-study:		102 h
	Total:		150 h
<b>Subjects of the module:</b>	Business English - Oral Communication Skills (IPM-BusEnglOralComSkills)		
<b>Lecture types:</b>	IPM-BusEnglOralComSkills: SU - tuition in seminars		
<b>Examinations:</b>	oral exam, 15 minutes		
	Requirements for the award of credit points are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan.			
<b>Recommended prerequisites:</b>			
Students of Business Administration should have passed Written Communication Skills			
<b>Objectives:</b>			
Professional and methodological competence:			
<ul style="list-style-type: none"> <li>Ability to speak fluently in English using appropriate grammar, vocabulary and pronunciation on an intermediate to advanced level</li> </ul>			
Operational Competence:			
<ul style="list-style-type: none"> <li>Ability to use spoken English in a business and international context</li> </ul>			
Social Competence			
<ul style="list-style-type: none"> <li>Understanding of intercultural aspects</li> <li>Development of working skills through group and pair work, online and individual studies</li> </ul>			
<b>Content:</b>			
In this course, students will improve their proficiency, accuracy and vocabulary in spoken English and improve their listening skills.			
<ul style="list-style-type: none"> <li>Introduction into regional and cultural aspects of English speaking countries with special emphasis on intercultural aspects and behaviour</li> </ul>			

- Improvement of English language functions such as requesting, greeting, clarifying, apologizing, inviting and so on in business situations (face to face)
- Organizing or running a debate or discussion and stating one's own opinion in business situations (meetings)
- Ability to understand difficult and complex subjects and to rephrase them (telephoning)
- Making and delivering a presentation
- Interpreting and explaining graphs and charts

**Literature:**

Script, additional material in Moodle

<b>Business English - Written Communication Skills</b>			
<b>Module abbreviation:</b>	IPM-BusEnglWrittComSkills	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	McIntosh, Sabine		
<b>Lecturers:</b>	IPM-BusEnglWrittComSkills: Gilg, Andrea		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		48 h
	Self-study:		102 h
	Total:		150 h
<b>Subjects of the module:</b>	Business English - Written Communication Skills (IPM-BusEnglWrittComSkills)		
<b>Lecture types:</b>	IPM-BusEnglWrittComSkills: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 90 minutes		
	Requirements for the award of credit points are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
English knowledge according to the European Frame of Reference level B2/C1			
<b>Objectives:</b>			
Professional and methodological competence			
<ul style="list-style-type: none"> <li>Acquirement of intermediate to advanced skills in written interaction using appropriate terminology and expressions in business contexts.</li> </ul>			
Operational competence			
<ul style="list-style-type: none"> <li>Ability to use the English language in relation to a specialized and professional context in an international environment.</li> </ul>			
Social competence			
<ul style="list-style-type: none"> <li>Awareness of intercultural differences and diversity</li> </ul>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>Repetition and consolidation of grammatical knowledge and emphasis on syntactical structures</li> <li>Expansion of basic language skills and proficiency</li> <li>Analysis and discussion of specially selected authentic articles from magazines, newspapers and textbooks</li> </ul>			

- Expansion of language skills with regard to specific and general business situations
- Individual writing of texts with a focus on business and economic topics on the one hand and on the requirements of later professional life on the other hand. Writing business letters in English is a major objective of this class.
- Knowledge of the internationally used terminology (INCOTERMS)

**Literature:**

Advanced Commercial Correspondence - B2/C1 (Cornelsen Verlag, ISBN: 3-464-02790-2); Script; additional documents in Moodle

<b>Business Excellence</b>			
<b>Module abbreviation:</b>	IPM-BusinessExcellence	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Kaiser, Norbert		
<b>Lecturers:</b>	IPM-BusinessExcellence: Kaiser, Norbert		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Business Excellence (IPM-BusinessExcellence)		
<b>Lecture types:</b>	IPM-BusinessExcellence: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper and presentation		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students are becoming familiar with success factor analysis and the EFQM Excellence Model as a success factor based framework for corporate management. They understand model criteria and criterion parts for a systematic corporate development, identify cause and effect chains by using Key Performance Indicators (KPI) and are getting acquainted with EFQM's Business Excellence concepts. Benchmarking and Self-Assessment are focused as kick-off concepts for corporate change.</p> <p><b>Professional Skills:</b> Students are able to get a holistic view of an organization by using the EFQM Excellence Model. They are able to identify the drivers for an organization's future success, how approaches are deployed and results are measured by appropriate key performance indicators. Students learn how to assess an organization by using the EFQM Excellence Model. They have the skills for using the lecture as a drive-up ramp for EFQM's licensed assessor trainings.</p> <p><b>Social Skills:</b> The students are able to discuss case study results in groups, achieve consensus by critical but constructive discussions and present final work results as a team in their research study project.</p>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Introduction to Success Factor Research and Success Factor Analysis,</li> <li>• EFQM Excellence Model - Model Development, Criteria, Criterion Parts,</li> </ul>			



- Fundamental Concepts of Excellence and RADAR® Methodology (Overview),
- Case Study - Good Practice Analysis and Presentation,
- Self-Assessment und Change Management,
- Benchmarking - Methodology and Practical Case Study.

**Literature:**

EFQM Publications, Brussels, [www.efqm.org](http://www.efqm.org).

<b>Business German - Oral Communication Skills</b>			
<b>Module abbreviation:</b>	IPM-BusinGermOralCommunSkil	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Zürn, Martina		
<b>Lecturers:</b>	IPM-BusinGermOralCommunSkil: Junek, Teresa		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Business German - Oral Communication Skills (IPM-BusinGermOralCommunSkil)		
<b>Lecture types:</b>	IPM-BusinGermOralCommunSkil: SU - tuition in seminars		
<b>Examinations:</b>	oral exam, 15 minutes (electronic remote exam § 2 Abs. 3 BayFEV)		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan. Conditions for Participation: According to the study and examination regulations and the study plan		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
Students of Business Administration should have passed Written Communication Skills			
<b>Objectives:</b>			
Knowledge:			
<ul style="list-style-type: none"> <li>Professional and methodological competence,</li> <li>Improvement of the lexical and grammatical knowledge of the German language</li> </ul>			
Professional Skills:			
<ul style="list-style-type: none"> <li>To be able to meet the requirements in one's studies, everyday life and business in writing as well as orally</li> </ul>			
Soft Skills:			
<ul style="list-style-type: none"> <li>To be able to take part in student life, business and spare time activities</li> </ul>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>Relevant oral skills in difficult everyday situations, study and business</li> <li>Improvement of articulation and intonation, use of non-verbal and para-verbal skills</li> <li>Detailed knowledge in the correct use of prepositions</li> </ul>			

- Clarification of verbal structures, verbs with prefixes
- Business letters
- Oral presentations

**Literature:**

Földeak, H., Sags besser! Arbeitsbuch für Fortgeschrittene Teil 2, 2. Auflage, Ismaning  
Hall, K. / Scheiner, B., Übungsgrammatik Deutsch als Fremdsprache für Fortgeschrittene, 1. Auflage, Ismaning

<b>Business German - Written Communication Skills</b>			
<b>Module abbreviation:</b>	IPM-BusinGermWrittCommunSkil	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Zürn, Martina		
<b>Lecturers:</b>	IPM-BusinGermWrittCommunSkil: Schmidt, Budimir		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Business German - Written Communication Skills (IPM-BusinGermWrittCommunSkil)		
<b>Lecture types:</b>	IPM-BusinGermWrittCommunSkil: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 90 minutes		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p>Knowledge: Competence in subject and methodology: Ability to activate, reinforce and enhance vocabulary and grammar knowledge of the German language</p> <p>Professional Skills: To be able to meet oral and written standards needed for successful participation in academic courses taught in German</p> <p>Social Skills: Ability to better integrate in day-to-day activities of student life as well as recreation</p>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Listening comprehension of advanced audio and video material covering current events in economy, technology, politics, culture and civilization; oral and written reproduction, summaries or reports are required</li> <li>• Ability to answer questions and complete tasks based on advanced texts, interpretation of graphs, production of conclusions or summaries, writing reports</li> </ul>			

- Knowledge of noun-verb complements and ability to produce and transform temporal, causal, conditional, concessive, final and modal relations
- Linguistic preparation of presentations and papers

**Literature:**

Földeak, Hans, Sag`s besser! Arbeitsbuch für Fortgeschrittene Teil 1, 2. Auflage, Ismaning  
Dreyer/ Schmitt, Lehr- und Übungsbuch der deutschen Grammatik, 1. Auflage Ismaning

<b>Business Spanish - Oral Communication Skills</b>			
<b>Module abbreviation:</b>	IPM-BusinSpanOralCommunSkil	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Gebhard, Christian		
<b>Lecturers:</b>	IPM-BusinSpanOralCommunSkil: Gebhard, Christian		
<b>Language of instruction:</b>	Spanish		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Business Spanish - Oral Communication Skills (IPM-BusinSpanOralCommunSkil)		
<b>Lecture types:</b>	IPM-BusinSpanOralCommunSkil: SU - tuition in seminars		
<b>Examinations:</b>	oral exam, 15 minutes		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Qualification aims:			
<ul style="list-style-type: none"> <li>• Gaining fluency in oral communication in business contexts on an intermediate to advanced level</li> <li>• Using Spanish appropriately in given business related contexts</li> <li>• Consolidation of intercultural competence</li> </ul>			
Knowledge:			
<ul style="list-style-type: none"> <li>• Students know technical vocabulary for oral communication for business purposes (presentations, telephone conversations, etc.)</li> <li>• Students know grammar structures of the Spanish language as indicated below</li> <li>• Students gain an insight into business structures and financial issues of the Spanish speaking world</li> </ul>			
Professional skills:			
<ul style="list-style-type: none"> <li>• Students apply their knowledge about Spanish speaking countries in formal situations</li> <li>• Students establish business contacts in the Spanish speaking world</li> </ul>			
Social skills:			
<ul style="list-style-type: none"> <li>• Students understand and apply the communication style of Spanish speaking cultures</li> </ul>			

- Students work together in small groups

**Content:**

- Consolidation and broadening of grammatical structures
- Practicing oral communication in business contexts with a special focus on strategies and behavior for discussions, presentations and phone calls, both alone and in teams
- Business subjects will be treated highlighting their cultural specificities on the background of a particular Spanish speaking country
- Practicing fluent and appropriate oral expressions of summarizing and describing complex facts and circumstances and expressing one's personal opinion

**Literature:**

Teaching Material:

- Script

Recommended:

- Meta profesional. B1.
  - Kursbuch + Audio-CD: 978-3-12-515470-4
  - Übungsbuch + Audio-CD: 978-3-12-515471-1
- Tano, Marcelo (2009): Expertos. Curso avanzado de español orientado al mundo del trabajo. Difusión/Klett.
  - Libro del alumno + Audio-CD + DVD: 978-3-12-515595-4 (3-12-515595-9)
  - Cuaderno de ejercicios + Audio-CD: 978-3-12-515596-1
- Abegg, Birgit / Martínez Cestero, Antonio (2006): Comunicación empresarial. Hueber.
  - Students' book: 978-3-19-004030-8
  - Audio-CD: 978-3-19-034030-9
- Additional material will be distributed via the web-based learning platform ILIAS.

<b>Business Spanish - Written Communication Skills</b>			
<b>Module abbreviation:</b>	IPM-BusinSpanWrittCommunSkil	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Gebhard, Christian		
<b>Lecturers:</b>	IPM-BusinSpanWrittCommunSkil: Gebhard, Christian		
<b>Language of instruction:</b>	Spanish		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Business Spanish - Written Communication Skills (IPM-BusinSpanWrittCommunSkil)		
<b>Lecture types:</b>	IPM-BusinSpanWrittCommunSkil: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 90 minutes (multiple choice § 8 c APO)		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Knowledge:			
<ul style="list-style-type: none"> <li>• Students know technical vocabulary for written communication for business purposes (letters, newspaper articles, applications, etc.)</li> <li>• Students know grammar structures of the Spanish language as indicated below</li> <li>• Students gain an insight into business structures and financial issues of the Spanish speaking world</li> </ul>			
Professional Skills:			
<ul style="list-style-type: none"> <li>• Students apply their knowledge about Spanish speaking countries in formal situations</li> <li>• Students establish business contacts in the Spanish speaking world</li> </ul>			
Social Skills:			
<ul style="list-style-type: none"> <li>• Students understand and apply the communication style of Spanish speaking cultures</li> <li>• Students work together in small groups</li> </ul>			



**Content:**

- Practicing different strategies for handling and understanding economic texts from course books, journals, the business section of papers and economic publications of governmental institutions or trade organisations
- Debate and written discussion of articles related to business topics from the press
- Composition of simple short essays, summaries and comments on business topics
- Revision and consolidation of grammar structures
- Two topics related to national economics will be treated in class
- The Modules Business Spanish 1 - Written Communication Skills and Business Spanish 2 - Oral Communication Skills should enable the student to communicate in business contexts using the appropriate language.
- Business Spanish 1 - Oral Communication Skills is focused on the written language and economic contexts.

**Literature:**

Teaching Material:

- Script

Recommended:

- Meta profesional. B1.
  - Kursbuch + Audio-CD: 978-3-12-515470-4
  - Übungsbuch + Audio-CD: 978-3-12-515471-1
- Abegg, Birgit / Martínez Cestero, Antonio (2006): Comunicación empresarial. Hueber.
  - Students' book: 978-3-19-004030-8
  - Audio-CD: 978-3-19-034030-9
- Tano, Marcelo (2009): Expertos. Curso avanzado de español orientado al mundo del trabajo. Difusión/Klett.
  - Libro del alumno + Audio-CD + DVD: 978-3-12-515595-4 (3-12-515595-9)
  - Cuaderno de ejercicios + Audio-CD: 978-3-12-515596-1

<b>Cross-cultural Management and Communication</b>			
<b>Module abbreviation:</b>	IPM-CrossCulturMgmtComm	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Schugk, Michael		
<b>Lecturers:</b>	IPM-CrossCulturMgmtComm: Schugk, Michael		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Cross-cultural Management and Communication (IPM-CrossCulturMgmtComm)		
<b>Lecture types:</b>	IPM-CrossCulturMgmtComm: SU/Ü - tuition in seminars/exercise		
<b>Examinations:</b>	written exam, 90 minutes and seminar paper		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Knowledge: <ul style="list-style-type: none"> <li>• Knowledge of extensive theoretical basics for identification of intercultural differences and management practices</li> </ul> Professional Skills: <ul style="list-style-type: none"> <li>• Capability to select situation specifically the relevant theoretical basics for different situations in business practice</li> <li>• Capability to apply situation specifically the relevant theoretical basics in the field of cross-cultural management for problem-solving</li> </ul> Social Skills: <ul style="list-style-type: none"> <li>• Development of intercultural (communication) competence</li> </ul>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Definition and models in regard to the culture term</li> <li>• Intercultural manifestations and instruments for interpersonal intercultural communication</li> <li>• Culture-comparing studies according to Kluckhohn and Strodtbeck, Hall, Hofstede, Trompenaars and House</li> <li>• Cultural neuroscience</li> <li>• Intercultural communication psychology</li> </ul>			

**Literature:**

Browaeyns, Marie-Joelle; Price, Roger: Understanding Cross-Cultural Management. 2nd edition. Prentice Hall, 2011

<b>Data science and empirical research in business and economics</b>			
<b>Module abbreviation:</b>	Data science and empirical research	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	NN		
<b>Lecturers:</b>	Data science and empirical research: NN		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		52 h
	Self-study:		98 h
	Total:		150 h
<b>Subjects of the module:</b>	Data science and empirical research in business and economics (Data science and empirical research)		
<b>Lecture types:</b>	Data science and empirical research: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper		
	Voraussetzungen für die Vergabe von Leistungspunkten, ist das Bestehen der jeweiligen Modulprüfung gem. SPO bzw. Studienplan.		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
Basic statistics			
<b>Objectives:</b>			
<p>Expertise and methodological skills:</p> <p>Students become familiar with different data types and with one data set, the Linked Personnel Panel, in particular. They learn how to handle the programming language R in order to conduct basic descriptive analyses. They learn how to write and structure an empirical research paper and know the major guidelines of academic writing.</p> <p>Practical skills:</p> <p>This course enables students to conduct basic data analyses. They can critically assess the validity of other empirical results that they are confronted with in corporate environments and can distinguish between correlation and causation. They will create value-added for firms with their ability to familiarize themselves quickly with new complex tasks, sort information, and comprehensively visualize and present results. In the short run, this course prepares the students to write an (empirical) master thesis and makes them more attractive for firms who look for interns or employees. In the medium run, this course is a good preparation for continuing courses in data analysis, and in the long run, this course prepares students for a career in data science-related jobs.</p> <p>Social skills:</p>			

**Content:**

The progressing digitization implies that institutions and firms collect more and more data, for example, on production processes, employees, and customers. Firms can use these data to better forecast business developments or to analyze the impact of management decisions.

In this practical course, students learn hands-on how to handle and exploit real data in order to answer business-related problems. The students apply basic statistical methods and the programming language R and learn to distinguish between correlation and causality. Moreover, students learn how to visualize, document, and present the results of their data analysis comprehensively in a structured research paper.

The course comprises lectures and practical sessions. Moreover, groups of students analyze data themselves to answer a given research question. Grading is based on a five page thesis (excluding tables and figures) that summarizes the results of the group work.

The major outline of the course :

- Why conduct empirical research?
- Introduction to the Linked Personnel Panel (LPP) and the programming language R
- Dealing with complex data (data management, data preparation, data analysis)
- Structuring a research paper/thesis
- Tipps for academic writing

**Literature:**

Kronthaler, Franz and Zöllner, Silke (2020): Data Analysis with Rstudio: An Easygoing Introduction, Springer Spektrum, Berlin.

<b>E-Business</b>			
<b>Module abbreviation:</b>	IPM-EBusiness	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Knüpfer, Wolfgang		
<b>Lecturers:</b>	IPM-EBusiness: Knüpfer, Wolf		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 2 SWS		
<b>Workload:</b>	Contact hours:		23 h
	Self-study:		127 h
	Total:		150 h
<b>Subjects of the module:</b>	E-Business (IPM-EBusiness)		
<b>Lecture types:</b>	IPM-EBusiness: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 90 minutes		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Knowledge:</b> The students know about the potentials and limits of e-business. They are familiar with the economic effects in the "new economy" and the basic structure business models in e-business and they have basic knowledge of methods to manage e-business projects.</p> <p><b>Professional Skills:</b> The students are able to evaluate the business models of existing offerings on the internet and they can develop concepts of sustainable e-business solutions. They are familiar with the tasks and problems that have to be solved in order to implement and operate such solutions.</p> <p><b>Social Skills:</b> The students are familiar with the most important impacts of e-business on society. They understand the interdisciplinary problems within e-business project teams and know approaches to handle them.</p>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Introduction to e-business (definition and potential, most important current developments),</li> <li>• Impacts of e-business on society and vice versa,</li> <li>• Evaluation and development of business models for e-business,</li> <li>• Characteristics and management of e-business projects,</li> </ul>			

- Specific problems of the implementation and the operation of e-business systems.

**Literature:**

1. D. Chaffey: E-Business and E-Commerce Management; Strategy, Implementation and Practice. 4th Edition. Prentice Hall 2009.
2. E. Turban: Electronic Commerce 2010. A Managerial Perspective. 6th Edition. Prentice Hall 2010.

<b>English for Specific Purposes</b>			
<b>Module abbreviation:</b>	English f. specific purposes	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	McIntosh, Sabine		
<b>Lecturers:</b>	English f. specific purposes: McIntosh, Sabine		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		30 h
	Self-study:		120 h
	Total:		150 h
<b>Subjects of the module:</b>	English for Specific Purposes (English f. specific purposes)		
<b>Lecture types:</b>	English f. specific purposes: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper and presentation		
	<p>In the classroom sessions, students identify topics, which they work on in group and partner work. They develop goals and strategies and then prepare those independently (individually, in small groups - also virtually) for the plenary.</p> <p>The work of the individual groups forms the basis for the examination and will be combined into a complete work at the end. The course has a high practical and exercise component, whereby the active participation of those present and the feedback of other students plays an essential role, which requires regular attendance.</p> <p>Project Work:</p> <ul style="list-style-type: none"> <li>• Presentation (15-20 min.): Oral presentation of a topic defined in the course in individual or group presentation (10 minutes per student) during the semester</li> <li>• Submission of an individual written paper of 3 - 10 pages in the target language.</li> </ul>		
<b>Prerequisites according examination regulation:</b>			
Requirements for the award of credit points are the passing of the respective module examination according to the study and examination regulations and the study plan.			
<b>Recommended prerequisites:</b>			
English knowledge according to the European Frame of Reference level B2/C1			
<b>Objectives:</b>			
Professional and methodological competence:			
<ul style="list-style-type: none"> <li>• Students deepen existing language knowledge in a specific subject area and expand their knowledge of specific terminology.</li> <li>• Students apply existing subject knowledge and competences from the two other fields of study (business and culture) in the foreign language.</li> <li>• Students independently access information via the Internet.</li> </ul>			



- Students describe and evaluate strategies and concepts from the chosen subject area, orally or in writing, depending on the task.
- They further develop existing meeting strategies, expand their subject-related techniques for discussion, moderation and presentation and improve their negotiation skills with special consideration of intercultural relations and intercultural communication.

Personal competence:

- Students reflect on the goals they have reached and design the necessary processes independently and sustainably.

Social competence:

- Students engage responsibly and in a collegial manner in the team and solve problems and tasks together and with foresight.
- They explain complex topics in an understandable and correct way, argue their point of view and develop it further with their peers.
- Students give their fellow students appreciative feedback within the framework of their presentation
- They describe and evaluate strategies and concepts from the chosen topic area, orally or in writing, depending on the assignment.

Operational competence:

- The students design the processes necessary for the development of the subject area in a goal-oriented and efficient way, taking into account the team constellation as well as their own goals, and use the necessary linguistic means correctly.
- They design their texts in the target language in an inclusive, fair and gender-neutral way.

Specific competence:

- Intercultural competence:

Students are aware of the cultural diversity in modern companies and the need for special consideration of intercultural relations and intercultural communication in everyday professional life.

- Language competence:

Students have a competent command of appropriate specialised language.

- Digital competences:

Students use electronic tools to organise their group work, to communicate in the target language and to create presentations, posters, etc.

#### Content:

- The module teaches context-related specialist language from a professionally relevant thematic target area at level B2/C1. The target area can vary depending on the students' interests.
- The module introduces the conventions of subject-oriented communication in a global context. Students determine and apply specialised language, which they will use in their future professional environment. They develop strategies to promote effective addressee-specific specialised language competence. These are either specific skills (e.g. creating a professional application portfolio) or appropriate specialised language register, e.g. for the chosen focus.
- Subject areas may include:

- Job Application / Recruitment / Human Resources
- Hospitality and Tourism
- Accounting and Finance / International Trade
- Marketing / International Management / Working Across Cultures

**Literature:**

will be announced in course, additional material in Moodle

<b>German 1 as a Foreign Language (beginners)</b>			
<b>Module abbreviation:</b>	IPM-Germ1ForeignLanguaBegin	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Zürn, Martina		
<b>Lecturers:</b>	IPM-Germ1ForeignLanguaBegin: Wittmann, Dimitra		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	German 1 as a Foreign Language (beginners) (IPM-Germ1ForeignLanguaBegin)		
<b>Lecture types:</b>	IPM-Germ1ForeignLanguaBegin: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Knowledge:</b> The students have command of the basic principles of the German language so that they can interact in a simple way successfully. Students can ask and answer simple questions (eg for the way, time, library matters, lunch in university canteen etc.), initiate and respond to simple statements in areas of immediate need or on very familiar topics. Students can discuss everyday practical issues in a simple way e.g. what to do, where to go and make arrangements to meet. Students learn understand everyday expressions aimed at the satisfaction of simple needs of a concrete type. Furthermore the students become familiar with cultural specifications of Germany.</p> <p><b>Professional Skills:</b> Reception and production strategies are employed constantly during interaction. Students can recognize familiar names and words and very basic phrases on simple notices in the most common everyday situations. The Students can get an idea of the content of simpler informational material and short descriptions. Students can understand phrases and the highest frequency vocabulary related to areas of most immediate relevance eg. shopping, local area, employment, university issues. Students can catch the main points in short, clear messages and announcements which is essential eg. for travelling etc.</p>			
<b>Content:</b>			
It is the subject of the course to offer exchange students the chance to communicate easily and intercultur-ally adequate in a German environment and continually advance their language competences in order to deal with different subjects in different situations and scenarios in Germany effectively.			

<b>Literature:</b>
none

<b>German 2 as a Foreign Language (intermediate)</b>			
<b>Module abbreviation:</b>	IPM-Germ2ForeignLanguaInterm	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Zürn, Martina		
<b>Lecturers:</b>	IPM-Germ2ForeignLanguaInterm: Wittmann, Dimitra		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	German 2 as a Foreign Language (intermediate) (IPM-Germ2ForeignLanguaInterm)		
<b>Lecture types:</b>	IPM-Germ2ForeignLanguaInterm: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Knowledge:</b> The students can understand main points of clear standard of familiar matters regularly encountered at university and areas linked (internship) etc., they can make arrangements and understand topics of personal or professional interest. They can enter unprepared into conversation on topics that are familiar, of personal interest or pertinent to everyday life. The students can deal with most situations likely to arise whilst travelling in an area where the language is spoken.</p> <p><b>Professional Skills:</b> The students can understand texts that consist mainly of high frequency everyday or job-related language. Reception and production strategies are employed constantly during interaction. They can describe experiences, events and ambitions which are university- and job-related issues (concerning internship). They can communicate with colleagues at their internships in an adequate way if communication is based on topics which are familiar. The students can briefly give reasons and explanations for opinions and plans in an appropriate way (related to B1-level). Furthermore, the students become familiar with cultural specifications of Germany especially related to professional environments.</p>			
<b>Content:</b>			
It is the subject of the course to offer exchange students the chance to communicate easily and intercultur-ally adequate in a German environment and continually advance their language competences in order to			

deal with different subjects in different situations and scenarios in Germany effectively. On an adequate level according to level B1.

**Literature:**

DaF kompakt A1-B1 (German as a Foreign language compact A1-B1), Klett Publishing House, Stuttgart

<b>Global Marketing</b>			
<b>Module abbreviation:</b>	IPM-Global_Marketing	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Schugk, Michael		
<b>Lecturers:</b>	IPM-Global_Marketing: Schugk, Michael		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Global Marketing (IPM-Global_Marketing)		
<b>Lecture types:</b>	IPM-Global_Marketing: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Knowledge:			
<ul style="list-style-type: none"> <li>• Competence and applicability in the learned theoretical contents with an orientation towards problems which arrive when coordinating</li> <li>• The ability to use one's learned problem solving skills in all parts of International Marketing</li> </ul>			
Professional Skills:			
<ul style="list-style-type: none"> <li>• Complete overview over the approach towards International Marketing according to Backhaus et al</li> <li>• Expertise in Going international and Being international as fundamental topics of International Marketing</li> <li>• Understanding of the special features of International Marketing</li> </ul>			
Soft Skills:			
<ul style="list-style-type: none"> <li>• Recognition of international and intercultural differences</li> <li>• Development of soft skills in an international context</li> </ul>			
<b>Content:</b>			
Going international:			
<ul style="list-style-type: none"> <li>• Problem of coordination concerning International Marketing</li> </ul>			

- Evaluation and selection of markets
- Strategies for market entry

Being international:

- Problem of coordination on markets growing together
- Coordination strategies on markets growing together
- Strategies for market entry
- Coordination demand covering strategies
- Coordination demand reducing strategies

**Literature:**

Backhaus, Klaus; Büschken, Joachim; Voeth, Markus: International Marketing. Houndmills; Basingstoke; Hampshire; New York: Palgrave MacMillan, neueste Auflage



<b>Introduction to Quality Management</b>			
<b>Module abbreviation:</b>	Introduction to Quality Management	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Wilisch, Christian		
<b>Lecturers:</b>	Introduction to Quality Management:		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 3 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Introduction to Quality Management (Introduction to Quality Management)		
<b>Lecture types:</b>	Introduction to Quality Management: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper and presentation		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
Quality management (QM) is an indispensable tool not only in production environments but in all aspects of commerce.			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• What is 'quality'?</li> <li>• Historical context of quality management</li> <li>• Financial aspects of quality management</li> <li>• Quality techniques and their applications</li> <li>• Process control techniques</li> <li>• Critical assessment of QM approaches</li> </ul>			
<b>Literature:</b>			
<ul style="list-style-type: none"> <li>• Imai, Masaaki: Gemba Kaizen, 2nd ed., McGraw- Hill, New York, 2012</li> <li>• Chalkiadakis, Ioannis: New Product Development with the Use of Quality Function Deployment, Lambert, Mauritius, 2019</li> <li>• Montgomery, Douglas C.: Introduction to Statistical Quality Control, Wiley, New York, 2019</li> </ul>			

<b>Lean Production - Manufacturing Excellence</b>			
<b>Module abbreviation:</b>	IPM-LeanProductManufactExcell	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Slama, Stefan		
<b>Lecturers:</b>	IPM-LeanProductManufactExcell: Slama, Stefan		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Lean Production - Manufacturing Excellence (IPM-LeanProductManufactExcell)		
<b>Lecture types:</b>	IPM-LeanProductManufactExcell: SU - tuition in seminars		
<b>Examinations:</b>	seminar paper and presentation		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Knowledge:</b> Students are becoming familiar with expert knowledge and scientific concepts and methods in the field of Lean Production and Manufacturing Excellence. They understand the most important aims of production without waste of resources, lean thinking in processes and organization, helpful tools and they will know methods and tasks to solve problems in efficiency.</p> <p><b>Professional Skills:</b> Students are able to solve tasks autonomous and are able to asses problems in the field of Lean Production</p> <p><b>Social Skills:</b> The students are able to discuss case study results in groups, achieve consensus by critical but constructive discussions and present final work results as a team, also their research study project</p>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>• Definition, Meaning, Opportunities, Method Overview and Structure of Lean Production</li> <li>• Team Work, 5S, Standards</li> <li>• Muda Elimination, TPM (Total Productive Maintenance), JIT (Just In Time)</li> <li>• Employee Involvement, Quality First, etc.</li> </ul>			

- Strengthening of key aspects with additional trainings and exercises in team-work, critically considerations of effects/needs and presentation of results

**Literature:**

own script

<b>Plastics Processing Technology</b>			
<b>Module abbreviation:</b>	IPM-PlasticsProcessingTech	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		
<b>Responsible for module:</b>	Sover, Alexandru		
<b>Lecturers:</b>	IPM-PlasticsProcessingTech: Sover, Alexandru		
<b>Language of instruction:</b>	German		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Plastics Processing Technology (IPM-PlasticsProcessingTech)		
<b>Lecture types:</b>	IPM-PlasticsProcessingTech: undetermined		
<b>Examinations:</b>	written exam, 90 minutes		
	Recommended Requirements: Interest in technical field and motivation Conditions for Participation: According to the study and examination regulations and the study plan. Grading Requirements/Remarks: Requirements for the award of credit points are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
None			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<b>Knowledge:</b> The students have knowledge of the basics of plastic materials, their properties and processing technologies as well as their economic importance. They understand the main production methods and the possible applications. <b>Professional Skills:</b> The students are able to understand the difference between the essential plastic materials and the processing technologies used for the production of different components. <b>Social Skills:</b>			
<b>Content:</b>			
<ul style="list-style-type: none"> <li>- Introduction to plastics materials (structure, monomers, polymers)</li> <li>- Development and economic importance of polymer materials</li> <li>- Classification of plastics (thermoplastics, thermosets and elastomers; description, structure and</li> </ul>			

- properties)
- Rheology (brief overview)
  - Processing of plastics: Extrusion; Injection Moulding; Thermoforming; Casting; Rapid prototyping
  - Design and development of plastic components
  - Plastic assembly techniques (welding)
  - Applications with examples

**Literature:**

- Understanding Polymer Processing, Tim A. Osswald, 2nd Edition, 2018
- Polymer Processing- Principles and Modeling, Jean-Francois Agassant, Pierre Avenas, Pierre J. Carreau, Bruno Vergnes, Michel Vincent, 2nd Edition, 2017

<b>Project Management</b>			
<b>Module abbreviation:</b>	IPM-ProjectManagement	<b>Reg.no.:</b>	
<b>Curriculum:</b>	<b>Programme</b>	<b>Module type</b>	<b>Semester</b>
	Internationales Produkt und Servicemanagement - Master		1
<b>Responsible for module:</b>	Hager, Uwe		
<b>Lecturers:</b>	IPM-ProjectManagement: Hager, Uwe		
<b>Language of instruction:</b>	English		
<b>Credit points / SWS:</b>	5 ECTS / 4 SWS		
<b>Workload:</b>	Contact hours:		45 h
	Self-study:		105 h
	Total:		150 h
<b>Subjects of the module:</b>	Project Management (IPM-ProjectManagement)		
<b>Lecture types:</b>	IPM-ProjectManagement: SU - tuition in seminars		
<b>Examinations:</b>	written exam, 120 minutes and seminar paper		
	Requirements for the award of credit points, are the passing of the respective module examination according to the study and examination regulations and the study plan.		
<b>Prerequisites according examination regulation:</b>			
According to the study and examination regulations and the study plan			
<b>Recommended prerequisites:</b>			
None			
<b>Objectives:</b>			
<p><b>Professional Skills:</b> The students know the basics of project management as a project employee and a project manager. They master the problem solving phase, the planning phase, change management, risk management, and the WBS. They understand the connections in parallel and serial processes and the associated risks.</p> <p><b>Knowledge Skills:</b> They master the problem solving phase, the planning phase, change management, risk management, and the WBS. The students are able to all problems in the project cycle to identify themselves. The students know the basics of project management as a project employee and a project manager. The students gain experience in a real project work.</p> <p><b>Social Skills:</b> Students get an overview of team building and leadership skills. The students know the basics of project management as a project employee and a project manager.</p>			
<b>Content:</b>			
<p>Besides the basics, such as definition, meaning and structure of project management, there will be forms of organizations, approach and project management tools critically considered.</p> <p>Management of staff and teams are discussed and practiced. Various forms of communication and techniques of facilitation and presentation will be practiced.</p> <p>The goal is a holistic project management approach.</p>			

<b>Literature:</b>
own script