



Bachelor of Science

International Operations and Logistics Management and Production Management



Preliminary list of Core Courses (taught in English) for Exchange Students 2019/2020







General information on core courses

Dear exchange student: You may select your subjects out of the core courses listed below.

In this course catalogue, you will find core courses offered for exchange students in our IOM Bachelor programmes. You will find additional courses in our course catalogue for additional courses ("satellites").

How to register for the core courses

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What	Deadline winter semester	Deadline summer semester	Where/ with whom
Application deadline	15 May	15 November	Your respective exchange coordinator
Preliminary course selection	15 July	15 January	Your respective exchange coordinator
Course counselling	September/ October	March	Your respective exchange coordinator
Final course selection Please confirm your course selection, after this date no add/ drop of courses due to team assignments etc.	Friday, 18 October 2019	Friday, 27 March 2020	Your respective exchange coordinator





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International Operations Management – Core Courses for Exchange students

Core courses for exchange students

- ... are offered without overlapping
- ... end in December (for the winter semester) or in July (for the summer semester)
- ... are taught in English.

Title	Semester level	ECTS Credits	Course start summer semester	End of course summer semester	Course start winter semester	End of course winter semester
Change Management*	Exchange students	6	March	June/ July	October	December
Intercultural Management	Exchange students	6	March	July	October	December
Corporate Finance	Exchange students	6	March	June/ July	October	December
Supply Chain Management Fundamentals	Exchange students	6	March	June/ July	October	December
Strategic Management	Exchange students	6	March	June/ July	October	December
International Marketing*	3 rd year	6	March	July	October	December
Business Management, Management Accounting and Control*	3 rd year	6	March	July	October	December
Human Resources and Organisational Behaviour*	3 rd year	6	March	July	October	December
Lean Management*	3 rd year	6	March	June/ July	October	December

* Limited spots available – the places will be allocated on a "first come, first served"-basis (if necessary).





1. Change Management

Module number	CC 1
Semester	Exchange
Frequency	Every semester
Prerequisites	none
Level	Undergraduate
Lecturer	Claudia Drews
Language of lectures	English
Credits (ECTS)	6
Total work load	180 hours
Contact hours/week	4hrs /week / 60 contact hours
Assessment	Exam (2 hrs)
Teaching method	Lectures with integrated case studies and a project, which has to be worked on in teams.
Learning outcome	 The primary aim of the course is that by the end students are in the position to put into practice the strategy of change management in Business Process Reengineering (BPR). After completing this class, students will be in the position to: Identify business and logistics processes which are suitable for BPR Apply techniques and methods to measure the efficiency and effectiveness of business processes Understand strategies and procedures as to how such a business process can be fundamentally optimised and newly configured Be able to carry out planned changes and deal with any resistance
Contents	Keywords: quality management– TQM – lean management - BPR, process mapping, Value stream mapping, interview techniques, tools for process analysis, management of BPR projects, creative solutions, change management, conflict management and dealing with resistance.
Recommended literature	 Basics: Mike Hammer: The reengineering revolution: A handbook. Harper Business, 1995 Further reading: Best, Eva, Weth, Marting: Geschäftsprozesse optimieren. Gabler Verlag, 2. überarb. Aufl. 2005 Lofts, Norman: Process Visualization, Wiley & Sons, 2002 Scheer, August-Wilhelm, Abolhassai, Ferri: Business Process Change Manag, Springer Verlag Berlin, 2003 Holger Regber u.a.: Change Management in der Produktion:, Moderne Industrie Verlag, 2001





2. Intercultural Management

Module number	CC 2
Semester	Exchange
Frequency	Every semester
Prerequisits	Good English language ability, some initial experience with other cultures or for those coming from a non-German cultural background
Level	Undergraduate
Lecturer	Baldur Veit, Milenka Plavec
Language of lectures	English
Credits (ECTS)	6
Total work load	180 hours
Contact hours /week	4 SWS
Assessment	Presentation and written composition
Teaching method	Lectures, homework and presentations
Learning outcomes	The aim of this class is to bring students closer to different cultural behaviour and intercultural business relationships. Raising awareness of foreign cultures and behaviour patterns is the primary aim of the class. After this class students should be in the position to:
	 Evaluate the influence of intercultural differences in international business relationships and adapt their behaviour according to these differences, Prepare themselves appropriately in advance for new intercultural situations, Understand the influence of cultural differences on management strategies as well as the company's goals and structure.
Contents	 Intercultural comparison of values Aspects of intercultural leadership behaviour Characteristics of intercultural team work Intercultural HR management and development Intercultural conflict management Synergetic effects Specific cultural knowledge transfer for selected industrialised countries and emerging markets in the areas of cultural history, politics, religion, ethics, rules of society, economic background, behavioural and communication rules as well as conducting negotiations
Indicative reading list	 Basics: Béatrice Hecht-El Minshawi/Jutta Berninghausen "Interkulturelle Kompetenz" (Managing Cultural Diversity), 2007 Marie-Joëlle Browaeys und Roger Price "Understanding Cross-Cultural Management", 2008 Hofstede, Geert and Geert Jan Hofstede "Cultures and Organizations - Software of the Mind", 2005 Luthans/Doh "International Management, Culture Strategy, and Behavior", 2009





3. Corporate Finance





4. Strategic Management

Module number	CC 4		
Year / Semester	Exchange		
Frequency	Every semester		
Prerequisites	None		
Level	Undergraduate		
Lecturer	Prof. Dr. Jan Oliver Schwarz		
Language of lectures	English		
Credits (ECTS)	6		
Total hours of study	180 hours		
Contact hours /week	4hrs /week / 60 contact hours		
Assessment	Presentation and Report		
Teaching method	Lectures / Seminars		
	In many practical group tasks the students will apply strategic tools to real business situations and transfer knowledge into applicable solutions.		
Learning outcome	Strategic Management is an analytical and creative process in leading and developing an economic organization in modern societies. To approach the complexity of a globalized business world the students will learn how to build a strategic framework and how to develop corporate strategies.		
Contents	 Corporate normative foundation (Vision, Mission and Values) Strategic target system Significance of strategic business fields and core competences Value-based management vs. values-based management Developing of strategic options Developing process of strategies and the strategic plan Environmental analyses and strategic concepts Strategic marketing Strategic innovation management. 		
Recommended literature	 The Quintessence of Strategic Management: What You Really Need to Know to Survive in Business (2016) Kotler, Philip; Berger, Roland; Bickhoff, Nils. Series: Quintessence Series. Edition: Second Edition. Heidelberg : Springer. Strategic Management (2002) Scholz, C., Zentes, J. Strategic International Marketing (2015) Morschett, D., Schramm- Klein, H., Zentes, J. Strategic Innovative Marketing (2017) Kavoura, A. (Ed), Sakas, D. P. (Ed), Tomaras, P. (Ed) 		





5. Supply Chain Management Fundamentals

Module number	CC 5
Year / Semester	Exchange
Frequency	Every semester
Prerequisites	None
Level	Undergraduate
Lecturer	Jürgen Waas
Language of lectures	English
Credits (ECTS)	6
Total work load	180 hours
Contact hours /week	4hrs /week / 60 contact hours
Assessment	Exam (2 hrs) und presentation (20% of grade)
Teaching method	Lectures / Seminars
Aims / learning outcome	In this class, students learn the challenges but also the opportunities of logistics in international surroundings and learn to evaluate different value chains form a financial and client perspective.
	After this class students will be in the position to evaluate risks and opportunities in logistics networks in different markets, design international logistics networks and to evaluate them with mathematical methods, understand how to manage and optimize these networks from the company point of view.
Contents	Basics: What is a supply chain, what is supply chain management; challenges and opportunities in supply chain management; Customer und Shareholder Value
	External drivers of change: Technology life cycle, industry clock speed, mega trends.
	Internal drivers of change – System dynamics, beer game
	Description of the supply chain with SCOR
	Management, process and product restructuring of the entire supply chain; Push and Pull; finance view of SCM; industry specific supply chain
	Management, process and product restructuring in manufacturing, purchasing (Inbound), distribution (Outbound), transport network and cooperation between partners from a supply chain point of view
Indicative Reading List	Basics:
	Simchi-Levi, D./Kaminsky, P./Simchi-Levi, De: Designing and Managing the Supply Chain, Concepts, Strategie & Case Studies, 6nd edition. New-York: McGraw-Hill, 2003
	Christopher, M.: Logistics and Supply Chain Management. Creating Value-Adding Networks, Prentice Hall, 2004 Corsten, D / Gabriel, C. (2002): Supply Chain Management erfolgreich umsetzen. Berlin: Springer
	Wisner, J.; Leong, K; Than, K-C (2005): Principles of Supplly Chain Management. A balanced Approach: Thomson South-Western





Further Literature
Fine, C.H. (1998): Clockspeed: winning industry control in the age of temporary advantage. New York: Basic Books.
Moore, G. A. (2002): Crossing the chasm: Marketing and selling high- tech goods to mainstream customers. New York, USA: Harper Business





6. International Marketing

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Module number	CC 6
Semester	6
Frequency	Every semester
Prerequisites	Basic understanding of marketing
Level	Undergraduate
Lecturer	Milenka Plavec
Language of lectures	English
Credits (ECTS)	6 ECTS
Total Work Load	180 hours
Contact Hours /Week	4 HPW
Assessment	Two-hour exam
Teaching method	Lecture
Learning Outcomes	Professional competencies: Students will acquire the theoretical
	foundations of international marketing and knowledge of current trends and challenges of cross-border marketing.
	Multidisciplinary skills: In the accompanying case studies and exercises, students learn the practical application of the methods and tools of
	international marketing and are therefore able to cope with practically relevant tasks.
	Social skills : Group discussions, practical exercises, and the handling of current case studies promote teamwork, effective group work with other students, and respect for one another. Students learn to represent their own opinion even against resistance. Ethical aspects of international marketing will be discussed.
	Personal skills: Students will learn to work in teams and enhance their solution and decision-making ability by working on and discussing current issues.
Contents	 Internationalization as a marketing challenge
	 Information bases in international marketing
	 International marketing concept
	- Target definition
	 Market selection and segmentation
	- Strategy development
	- Identify measures
	 Implementation of international marketing
	Marketing control
Indicative	Ghauri, P., Cateora, R.: International Marketing, 2010
Reading List	 Kotabe, M., Helsen, K.: Global Marketing Management, 4th Edition, 2010
	• Kotler, P., Armstrong, G.: Principles of Marketing, 14th Edition 2012





7. Business Management, Management Accounting and Control

Module number	CC 7
Semester	Semester 6
Duration of Module	1 semester
How Frequently is	Every semester
Module Offered	
Admission	
Requirements	
Level	Undergraduate
Lecturers Name	Prof. Dr. Johanna Bath
Teaching Language	English
Credits (ECTS)	6 ECTS
Total Work Load	180 hours
Contact hours /week	4 SWS
Assessment	Two-hour written exam and continuous assessment
Teaching methods	Seminar lectures, case studies, and role playing
Learning Outcomes	Professional skills: Students will have a basic understanding of the role
	and responsibilities of corporate management in companies and
	recognize the interfaces for controlling and support functions. Students
	also understand the essential controlling instruments and their typical
	applications.
	Methodological skills: Students can methodically attack a problem,
	derive concrete tasks, and propose a suitable solution with scientific
	methodology in order to implement the solution themselves.
	Multidisciplinary skills: Students will be able to link theoretical concepts
	with real environments (companies), adapt theoretical models of
	corporate management and controlling to a specific business situation,
	and perform simple empirical research tasks.
	Social skills: Students develop a variety of skills: self-organization,
	problem solving, and the ability to work on project management in small
	groups. Personal skills: Students learn to act responsibly towards other group
	members.
Contents of Module	The role of corporate governance in execution, basic tasks, and
	management methods.
	Controlling systems:
	Applications of controlling
	Tasks and instruments of controlling
	Understanding controlling and controlling loops
	Selected topics:
	Performance measurement systems and performance management
	Budgeting systems
	 Planning and controlling in a company
Indicative	The latest edition of the following books is recommended:
Reading List	Dillerup, R. / Stoi, R.: Unternehmensführung
_	Weber, J. / Schäffer, U.: Einführung in das Controlling
	 Horváth, P. : Controlling
	 Küpper, HU. : Controlling





8. Human Resources and Organisational Behaviour

Madula number	CC 8
Module number Semester	6
Frequency	Every semester None
Prerequesits	
Level	Undergraduate
Lecturer	Prof. Dr. Hazel Grünewald, Ursula Wiehl-Schlenker
Teaching Language	English
Credits (ECTS)	6
Total Work Load	180 Hours (4 HPW/60 contact hours, 120 self-study hours)
Contact Hours /week	4HPW
Assessment	Homework and continuous assessment
Learning Outcomes	Professional competencies: Understanding of key concepts, models, and practices within the field of HR and organizational behavior such as selection, personality, motivation, performance management, team dynamics and effectiveness, organizational learning, decision-making, leadership, organizational design, culture, and change management. Understanding of how theories can be used in practical applications. Methodological competencies : Competence to develop and answer a specific research question, to prepare a paper and a presentation according to scientific standards. The ability to stand back and view complex situations in perspective and to think critically about organizations and what happens in them. Social competencies : Presentation and teamwork skills (through group work and group presentations). Personal competencies : Awareness of the necessary skills to realize an academic project; competence to evaluate other student's academic projects and presentations.
Contents of Module	 The purpose of this course is to learn how to manage people in organizations. Understanding organizational behavior (OB) (at both the individual and organizational levels) and human resource management (HRM) is key to being an effective manager. This course uses an integrative approach to help students understand, predict, and influence how individuals behave at work. In addition, students will be provided with the tools to attract, select, and retain the right employees, while recognizing the role of the organization's culture and strategy and the impact of external forces. This course will use HRM practices to illustrate the importance of understanding OB theories. Many real world examples will be used to provide a relevant and rich learning experience.
Teaching and Learning Methods	 Lectures with case studies, videos, group work, exercises, student presentations, and discussions
Indicative Reading List	 Human Resource Management: Armstrong, Michael. (2012). Armstrong's Handbook of Human Resource Management Practice. 12th edition. London: KoganPage Bosselie, Paul. (2010). Strategic Human Resource Management: A Balanced Approach. Maidenhead: McGraw-Hill Higher Education



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 Millmore, Mike, Lewis, Philip, Saunders, Mark et al. (2007): Strategic Human Resource Management: Contemporary Issues. Harlow: Prentice Hall.
Organizational Behavior:
 Buelens, Marc.; Sinding, Knud; Waldstr
 Gerrig, Richard J., Zimbardo, Philip, Svartal, Frode et al. (2012): Psychology & Life. 18th Edition. European Adaptation Edition. Harlow: Pearson
 Gully, Stanley M., Phillips, Jean M. (2014): Organizational Behavior: Tools for Success. 2nd Edition. International Edition. South-Western: Cengage.
 McShane, Steven L.; von Glinow, Mary Ann. (2010): Organizational Behavior: Emerging Knowledge and Practice for the Real World. 5th Edition & International Edition. New York: McGraw-Hill Higher Education.
 Robbins, Stephen P.; Campbell, Timothy; Judge, Timothy A. (2013): Organizational Behavior. 15th Edition. Upper Saddle River: Pearson.





9. Lean Management

Module No.	SC 9 / 22c or 23c Produktion
Semester	6
Duration of Module	1 semester
Courses Included in the Module	Lean Management
How Frequently is Module Offered	Every semester
Admission	Advanced knowledge of production management and logistics, basic
Requirements	knowledge in supply chain management.
Level	Undergraduate
Lecturers Name	Prof. Dr. Johanna Bath
Teaching Language	English
Credits (ECTS)	6 ECTS
Total Work Load	180 hours
Contact Hours /week	4 HPW
Type of Exam / Requirement for Credits	Two-hour exam and continuous assessment
Learning Outcomes	Structuring change is a key competence for a product manager in an international environment. In a company, lean thinking processes allow businesses to quickly and flexibly respond to new operational challenges and minimize complexity. After the successful completion of this module, students will be more aware about the significance of lean management. Students will know the necessary tools and measures to create and apply lean processes. In addition, students are also aware of the positioning and sustainable assurance of a holistic lean thinking process. Professional Skills: Students will know the philosophy of lean management as well as the key tools and measures to create lean processes in production, administration, and development. Multidisciplinary skills: Through practical case studies, simulations, and case examples, students can apply different tools to evaluate their success and adapt if necessary. Social skills: The development of results in a team with a subsequent presentation promotes teamwork and communication skills. Personal skills: The lectures and the presentation are held in English, which improves the language skills of participants.
Contents of Module	 Supply Chain Management Lean Enterprise Management Lean Manufacturing Lean Administration Lean Development Management of Change
Teaching and Learning Methods	Different teaching methods will be used. In addition to conveying the theoretical foundations, the subject is applied and explained in practical team case studies and exercises. In conclusion, a comprehensive supply chain and production process optimization based on a real problem is





	described. In terms of solution development process, students have to apply the content learned in practice. At the same time, they have to deliberate on the application of lean management methods in relation to an adequate design of change management.
Indicative Reading List	 Rother, Mike: Die Kata des Weltmarktführers. Campus Verlag 2013. Womack, James P., Jones, Daniel T.: Lean Thinking – Ballast abwerfen, Unternehmensgewinne steigern, Campus 2013. Meier, David; Liker, Jeffrey: Der Toyota Weg. Finanzbuchverlag 2007. Regber, Holger; Zimmermann, Klaus: Change Management in der Produktion. MI Fachverlag Landsberg, 2007. A. Smalley: Produktionssysteme glätten: Anleitung zur Lean Production nach dem Pull-Prinzip - angepasst an die Kundennachfrage, Lean Enterprise Institute, 1. Auflage 2005. Goldratt, Eliyahu Moshe; Cox, Jeff: The Goal- A process of ongoing improvement. 3rd revised edition (1st Edition 1984), 20th Anniversary Edition. The North River Press, Great Barrington, MA, USA. 2004. May, Constantin; Schimek, Peter: Total Productive Management: Grundlagen und Einführung von TPM - oder wie Sie Operational Excellence erreichen. Ansbach: CETPM Publishing, 2008. Höfer, Stephan; Geldmann, Udo; Spanagel, Stefanie: Wertstromdesign Lean Production. Das Handbuch für die Praxis. Herausgeber Effizient zum Erfolg GbR, Böhmenkirch. Auflage 2, 2011. Wiegand, Bodo; Franck, Philip: Lean Administration. Lean Management Institut Aachen, 2006.





Bachelor of Science

International Operations and Logistics Management and Production Management



Preliminary list of additional courses for exchange students offered in the IOM programmes (taught in English and German), language Courses, and courses offered by our Reutlingen International Office (RIO) 2019/2020





General information on additional courses

Dear exchange student: In addition to the core courses you may select additional courses out of the courses listed below.

In this course catalogue you will find courses offered in our IOM Bachelor programmes, German language courses and additional courses for exchange students offered by our Reutlingen International Office (RIO).

Please also refer to the list of core courses that are particularly offered to suit the needs of our incoming exchange students.

How to register for the additional courses

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What	Deadline winter semester	Deadline summer semester	Where/ with whom
Application deadline	15 May	15 November	Online application in MoveON
Preliminary course selection	15 July	15 January	Your respective exchange coordinator
Course counselling	September/ October	March	Your respective exchange coordinator
Final course selection Please confirm your course selection, after this date no add/ drop of courses due to team assignments etc.	Friday, 18 October 2019	Friday, 27 March 2020	Your respective exchange coordinator





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Hochschule Reutlingen Reutlingen University

1. International Operations Management – overview additional courses ("satellites") for exchange students

Additional Operations Management courses ("satellites") for exchange students

- ... might be overlapping with other courses
- ... have 2-6 ECTS per course
- ... have different durations and might not end before February (in the winter semester)
- ... are taught either in English or in German.

Title	Semester level	Language of instruction	ECTS Credits	Course start winter semester	Course start summer semester	End of course winter semester	End of course summer semester
Simulation Game Production (pre-semester)*	4th year	English	6	September	February/ March	September/ October	February/ March
Industrial Ecology (short)*	3 rd year	English	4	October	-	December	-
Industrial Ecology (regular)*	3 rd year	English	6	October	March	February	July
Automation in Industrial and Materials Handling, Transportation*	2 nd year	English	5	October	March	February	July
Business Processes and Business Data (consists of the classes ERP Systems and Data Analysis)*	2 nd year	English	6	October	March	February	July



Title	Semester level	Language of instruction	ECTS Credits	Course start winter semester	Course start summer semester	End of course winter semester	End of course summer semester
Quality Management*	2 nd year	English <u>and</u> German	5	October	March	February	July
Procurement and Distribution Logistics	4 th year	English	3	October	March	February	July
Product Life Cycle Assessment*	4 th year	English	3	October	March	February	July
Corporate Social Responsibility* (post- semester course)	3 rd year	English	3	February	July	February	July
International Purchasing	3rd year	English	3	October	March	December	July

* Limited spots available - the places will be allocated on a "first come, first served"-basis (if necessary).

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2. Overview German Language Courses

Title	Semester level	Language of instruction	Department	ECTS Credits	Course start winter semester	Course start summer semester	End of course winter semester	End of course summer semester
Pre-Semester Intensive German Course winter semester (3 weeks)	Level A1 – C1	German	IfF/ RIO	6	September	-	September	-
General German Language courses for International Students (offered on different levels A1-C1)	Level A1 – C1	German	IfF/ RIO	4	October	March	January/ February	July
Besser Deutsch sprechen	German level B1 and B2/C1	German	IfF/ RIO	2	October	March	January/ February	July



3. Overview additional courses for exchange students (offered by the International Office)

Title	Semester level	Language of instruction	Depart- ment	ECTS Credits	Course start winter semester	Course start summer semester	End of course winter semester	End of course summer semester
International Business with Case Studies in Automotive Industry	Exchange Students	English	RIO	4	October	-	December	-
Germany within Europe	Exchange Students	English	RIO	4	October	March	December	July
Wirtschaft auf Deutsch	Suitable for advanced students (B1/B2 level of German)	German	IfF/ RIO	6	October	March	January/ February	July
Marketing für internationale Studierende	Suitable for advanced students (B1/B2 level of German)	German	IfF/ RIO	2	October	March	January/ February	July





3.1. International Business with Case Studies in Automotive Industry

Year / Semester	2
Frequency	Every Winter Semester
Prerequisites	Evolution of Management Thought Functions of a Manager Theories of Motivation and Leadership Organizational Structure and Design
Lecturer	Prof. Dr. Baldur Veit
Language of lectures	English
ECTS points	4
Total hours of study	180 hours
Hrs/week / Contact hours	4 hrs/week / 60 Contact hours plus additional field trips
Level	Undergraduate
Assessment	t.b.d.
Teaching method	Lecture/seminar with field trips
Aims/ Learning outcome	 To provide the students with a contrast to American style of management. To provide the students with an expanded view of management
Contents	This course has two parts. First, the course examines the practice of management within Europe. The course takes a multi- organizational perspective and places the practice of management in a global perspective. The second part of the course uses a series of videotapes to augment the study of multinational enterprises (MNEs) Topics: A. German Unification (Demographics, Economic System, Import / Export) B. How to incorporate in Europe C. Social Security System in Germany D. Germany and the European Union E. The Dual System of Vocational Training in Germany F. German Industry on the Road of Globalization G. German-American Trade Relations H. Automotive Industry in Germany (BMW, Daimler: a) Engine Plant, b) Final Assembly of Cars; Opel, Audi) I Videotapes 1. Globalization & Economic Integration 2. Trade Theory 3. Foreign Direct Investment 4. Foreign Exchange Market 5. Entry Modes 6. Global Strategy
Recommended literature	All handouts will be provided by the professor

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3.2. Germany within Europe

Year / Semester	2
Frequency	Every Semester
Lecturer	Udo Stelzer
Language of lectures	English
ECTS points	4
Total hours of study	120 hours
Hrs/week / Contact hours	4 hrs/week / 60 Contact hours
Level	Undergraduate
Assessment	Midterm 30 %, Final 50 %, 20 % attendance and participation in class
Teaching method	Lecture/seminar
Aims/ Learning outcome	Upon completion of this course the student will be able to: Describe characteristics of Medieval European and German lifestyle, town structures. Explain effects of major historical events on German life. Demonstrate knowledge of periods of German history. Demonstrate comparative analysis of present and historical backgrounds of Germany within its relations to Europe and the U.S. Demonstrate critical thinking through tracing main historical concepts in recent political and cultural traits.
Contents	This course is dedicated to the most important topics in the history of Germany within the context of European history. Emphasis is placed on developing an understanding for major political, social and economic aspects of German history and on tracing back the German historical experience in its structural context. The comparison of historical time periods with European and U.S. history sets German history and German relations with other European countries in perspective. The course concentrates on investigation and analysis of historical trends and structures rather than numbers and data; contemporary developments included.
Recommended literature	AXELROD, Alan; PHILLIPS, Charles: What everyone should know about the 20th century, Adam Publishing, Holbrook MA, 1995
	DÖNHOFF, Marion Gräfin et al.: Weil das Land Versöhnung braucht, Ein Manifest II, Rowohlt, Reinbek bei Hamburg, 1993
	DOREN, Charles van: A History of Knowledge, The pivotal events, People and Achievements in World History, Ballentine Books, New York, 1992
	TARNAS, Richard: The Passion of the Western Mind, Understanding ideas that shaped the Western World View, Random House, Toronto, 1993





4. Course descriptions for additional Operations Management Courses ("satellites")

4.1. Integrative Module: Simulation Game Production

Module No.	SC 1 / 26 Produktion
Semester	7
Duration of module	1 semester
Frequency	Every semester, blocked course before semester start
Prerequisits	
Level	Undergraduate
Lecturer	Sven Bauer
Language of lectures	English
Credits (ECTS)	6 ECTS
Total work load	180 hours (60 contact hours, 120 hours self study)
Contact hours /week	4 HPW
Assessment	Project work
Teaching methods	Seminars (40%) and teamwork (60%)
Learning outcomes	This course enables students to successfully apply business knowledge and techniques that they have acquired during their studies in a interactive simulation game. Moreover, social skills, teamwork, and the use of appropriate communication techniques are decisive for successfully leading a global company. The necessary planning activities include purchasing, production, distribution, marketing, and sales. Alternative decision-making processes and their impact on production, accounting, and financial situation of the company build upon continuous and target-oriented planning. Upon completion of this course, participants will be able to:
	 assess holistic processes of a company link content learned from different disciplines of study recognize and formulate the conditions for economic success deal with complex decision situations
Content	Students get the opportunity to work in a group and develop alternative strategies based on a simulation model, and can test and apply them in a worldwide operating company. The companies run by the students have their headquarters in Europe and distribute a variety of products in the consumer goods industry in currently 4 existing world markets EU (European Union), NAFTA (North American Free Trade Agreement), MERCOSUR (Mercado Común des Sur) und ASEA (Association of Southeast Asian Nations). The course requires students to apply all of the previously acquired management training in the context of strategic decision-making. This helps them achieve successful company policies in conditions of market competition.





Indicative	 Task areas: Business objectives and strategies Section: competitive analysis, marketing mix, product life cycle, product re-launch, product launch, market entry, costing of special transactions, contribution margin accounting, and market research reports as an information basis for marketing decisions R&D: technology, ecology, value analysis Procurement/warehousing: optimal order quantity Manufacturing: investment, dis-investment, own production or external production, capacity planning, ecological production, rationalization, learning curve Personnel: workforce planning, qualifications, productivity, duration of absence from work, turnover Finance and accounting: cost types, cost centers, cost accounting, multi-stage contribution accounting, financial planning, balance sheet and income statement, cash flow Stock price and company value Portfolio analysis "Handbuch TopSim General Management" des Business
reading list	Simulation Game

4.2. Industrial Ecology

Module No.	SC 2 / 19 Produktion
Semester	6
Frequency	Every semester
Prerequesits	None
Level	Undergraduate
Lecturer	Prof. Peter Kleine-Möllhoff
Language of lectures	English
Credits (ECTS)	6 ECTS (4 ECTS for those finishing in December)
Total work load	180 hours (60 contact hours, 120 hours self study)
Contact hours /week	4 HPW
Assessment	1 hour exam
Teaching methods	Lecture (70%), elaboration of special topics in homework and presentations (30%)
Learning outcomes	 Professional skills: Students learn different aspects and dimensions of sustainable management in production. They understand different approaches and methods for the implementation of ecological, economic, and social requirements in the company to implement in practical examples. Students are able to describe and evaluate the advantages and disadvantages of different approaches. Methodological skills: Students learn the basic principles of sustainable management (triple bottom line approach, energy and material flow management, environmental management





	 accounting, etc.) and advanced methods of detection of environmental and economic indicators, such as LCA. Multidisciplinary skills: Through case studies, students develop solutions for practice-relevant problems. Social skills: The course promotes sustainable orientation with respect to environmental, economic, and social issues in business. Personal and normative competencies: Students recognize that sustainable management requires an extension of the code of values and respect for natural and social conditions and moral ideas.
Content	Introduction to the issue of sustainability Environment, economy and social responsibility: • Technology and Environment • Legal conditions • Environmental and sustainability-oriented enterprise valuation • Sustainability Strategies • LCA • Operating energy and material flow management • Conventional energy supply and renewable energy
Indicative reading list	 Compulsory: T. Graedel, B.R. Allenby, Industrial Ecology and Sustainable Engineering, Pearson Education, Upper Saddle River, 2010 Gleich et. al., Industrial Ecology - Erfolgreiche Wege zu nachhaltigen industriellen Systemen, Vieweg-Teubner, 2008 EN ISO 14040, Environmental management - Life cycle assessment - Principles and framework; German and English version, Beuth Verlag, Berlin, 2006 EN ISO 14044, Environmental management - Life cycle assessment - Requirements and guidelines; German and English version EN ISO 14044:2006, Beuth Verlag, Berlin, 2006 Recommended reading list: C. Fussler et. al., Driving Eco Innovation, Pitman Publishing, London, 1996 haJ. Fresner et. al., Ressourceneffizienz in der Produktion – Kosten senken durch Cleaner Production, Syposium

4.3. Automation in Industrial & Materials Handling, Transportation

Module No.	SC 3 / 16 IOL
Semester	3
Frequency	Every Semester
Prerequesits	none
Level	Undergraduate
Lecturer	Prof. Dr. Wolfgang Echelmeyer





Teaching language	English
Credits (ECTS)	5
Total work load	150 hours
Contact hours /week	4 HPW
Assessment	Laboratory Project & Oral Exam
Teaching methology	Lecture, exercises and Simulation Lab
Learning outcomes	Target of the lecture is a basic understanding of material handling in production and logistics processes. Starting with handling of parts in production lines, and with storing and shipping in warehouses or distribution centers. Students are able to understand and analyze basics and advanced state of the art technical logistics systems.
	Learning outcome:
	 Knowledge about logistics equipment and automated systems, robotics and handling technologies.
	- Mapping and analysis of material and information flow
	 Knowledge about different transport systems including Automated Guided Vehicles (AGV)
	 Competence in 3D simulation for automated logistics processes
Contents/	- Robot systems
Indicative syllabus	- Handling technologies
	- Automated Guided Vehicle (AGV)
	- Sorting technologies and distribution centers
	- Autonomous material handling systems
	- Simulation software 3D Create
Indicative reading list	Nof, Shimon Y.: Material Handling Automation in Production and Warehouse Systems in: Springer Handbook of Automation; Springer; ISBN: 978-3-540-78831-7
	Furmans, Kai: Material Handling and Production Systems Modelling - based on Queuing Models; Springer, Dec. 2014

4.4. Business Processes and Business Data

Module No.	SC 4 / 15 IOL
Semester	3
Courses included in the module	4.15.1. ERP Systems and Business Process Management
	4.15.2. Data Analysis and Data Mining
	\rightarrow both courses need to be taken to fulfil module requirements
Frequency	Every semester
Prerequesits	None
	Please note that attendance is mandatory for some dates of ERP (e.g. for mid-terms etc.).





Level	Undergraduate
Module coordinator	Prof. Dr. Dirk Schieborn
Credits (ECTS)	6
Learning outcomes of the module	The module familiarizes students with the basic principles of modern integrated information systems and their relevance for business process management as well as data processing and data analysis in an operational environment.
Examination/ Type of assessment	CA + Written Examination (2hrs.)

4.4.1. Class: ERP Systems and Business Process Management

Lecturer	Prof. Dr. Manfred Estler
Teaching language	English
Contact hours /week	4 HPW
Learning outcomes	Aim of the course is the acquirement of basic principles of modern integrated information systems and their application within a company. Here it is of special importance, to develop the overall context between business process management and the supporting task of integrated information systems for the business processes.
	At the end of the course, students will have gained the following competences:
	 Professional competences: Acquirement of theoretical basic knowledge of modern ERP systems as well as knowledge about its essential functions and typical application within companies. Methodological competences: At the end of the course, students will be able to describe the relation between business process management and the applied ERP system. Practical competences: During a detailed case study, students will learn the comprehensive application ability for the SAP ERP system.
Contents/	Fundamentals of modern ERP systems
Indicative syllabus	Configuration of business processes
	Introduction to the ERP system SAP ERP
	 Introduction to selected topics in information technology (e.g. Advanced Planning and Scheduling for Supply Chain Management, Customer Relationship Management, e- Business, Manufacturing Execution Systems, etc.)
	Business process optimization and business process reengineering with respect to introduction and implementation of integrated information systems





	 New trends: service oriented architectures, web services, SAP Netweaver, etc. Information management
Teaching methology	Lecture and successful completion of a SAP case study
Indicative reading list	 Benz, J., Höflinger, M.: Logistikprozesse mit SAP, Vieweg+Teubner Verlag, Wiesbaden, 2011 Schulz, O.: Using SAP, Galileo Press, 2014 Kurbel, K.: Enterprise Resource Planning and Supply Chain Management. Springer Verlag, 2013 Weske, M.: Business Process Management, Springer Verlag, 2012 Stadtler, H., Kilger, C., Meyr, H.: Supply Chain Management and Advanced Planning, Springer Verlag, 2014 Schmelzer, H., Sesselmann, W.: Geschäftsprozessmanagement in der Praxis, Hanser Verlag, 2013 Dickersbach, J., Keller. G., Weihrauch, K.: Produktionsplanung und -steuerung mit SAP, Galileo Press, 2014 Laudon, K.C., Laudon, J.P.: Management Information System, Pearson Studium, 14th edition, 2015

4.4.2. Class: Data Analysis and Data Mining

Lecturer	Prof. Dr. Dirk Schieborn
Teaching language	English
Contact hours / week	2 HPW
Learning outcomes	Students are able to collect, process, and analyze data using computers. They have gained some insight into the theory behind the basic methods and are able to develop own methods based on this body of knowledge.
Contents/ Indicative syllabus	 Relational Databases, MapReduce, NoSQL Statistical Analysis using R. Regression methods, hypothesis tests, explorative analysis, visualization. Machine learning and data mining. Supervised learning (rules, trees, forests, nearest neighbor, regression), Optimierung (gradient descent,), unsupervised learning. Data privacy
Teaching methology	Lecture and computer lab excercises
Indicative reading list	Witten, Frank, Hall: Data Mining. Morgan Kaufmann, 2011.

4.5. Quality Management

Module No.	SC 5 / 13 IOL
Semester	3





How frequently is the	every semester
module offered	
Admission	Principles of statistics
requirements	
Level	Undergraduate
Lecturer	Dr. Alexander Schloske
Teaching language	Mostly English, some German
Credits (ECTS)	5
Total work load	150 hours
Contact hours /week	4 HPW
Assessment	CA (lab - ungraded) + Written Examination (2hrs.)
Teaching methology	• Lecture
	 Group exercises applying selected QM methods (e.g. QFD, FMEA)
	 Conduction of lab experiments applying statistical methods of QM (e.g. R&R Gage Analysis, SPC, etc.)
Learning outcomes	Aim of the course is the acquirement of the theoretical basis of modern quality management with its most important methods and tools as well as their practical application within an industrial environment. At the end of the course, students shall be able to cope with the fundamentals of modern quality management and understand the importance of quality management for organizations and companies. In addition, students can select and apply important methods and tools of quality management corresponding to a specific problem. At the end of the course, students have achieved the following competences:
	Professional competences: acquisition of the theoretical
	fundamentals of modern quality management including
	important statistical methods of quality management
	 Methodological competences: acquisition of the ability to
	select and properly apply adequate methods of QM
	corresponding to a specific problem
	Practical competences: During the lab, students learn the
	practical application of selected QM methods by practical
	exercises and lab experiments and therefore will be able to
	apply these methods within an industrial context
	 Social competences: group work during practical exercises
	and lab experiments support to ability to work in teams
	Normative competences: students recognize that quality is a
	matter of course, which can be expected from everybody and
	which is nothing else than probity ("Qualität ist das
	Anständige", Theodor Heuss, 1884-1963).
Contents/ Indicative syllabus	Introduction to quality management according to ISO 9000:2008





	Total Quality Management (TQM)
	Management and supervision of measurement systems
	Measurement system analysis, R&R Gage Analysis
	Introduction to various quality methods (QFD, FMEA, etc.)
	Introduction to various statistical methods (SPC, Design of Experiments, etc.)
	Performance figures, performance management systems, Balanced Scorecard
	Quality management and information technology
Indicative	Fundamentals:
reading list	Pfeifer, T.: Quality Management, Hanser Verlag, München, 2002.
	 Schmitt, R., Pfeifer, T.: Qualitätsmanagement, Hanser Verlag, München, 2010
	 Linß, G.: Qualitätsmanagement für Ingenieure, Hanser Fachbuchverlag, Leipzig, 2011. Further reading:
	 Kleppmann, W.: Versuchsplanung – Produkte und Prozesse optimieren, Hanser Verlag, München, 2011.

4.6. Procurement and Distribution Logistics

Module No.	SC 6 / 24b Produkt or 25b Produkt
Semester	7
Frequency	At least annually
Level	Undergraduate
Lecturer	Prof. Dr. Wolfgang Echelmeyer
Teaching language	English
Credits (ECTS)	3 ECTS
Total work load	90 hours (30 contact hours, 60 hours self study)
Contact hours /week	2 HPW
Assessment	One-hour exam and continuous assessment
Teaching	Lectures about the fundamentals, seminars containing methods,
methodology	and applications of the theory in scenarios
Learning outcomes	Students will learn the methods and applications of procurement and distribution logistics in the field of professional qualifications.
Content/ Indicative	Basics of procurement logistics
syllabus	 Basics of distribution logistics
	• 3 methods in 1 and 2
	Applications scenarios
Indicative	Kummer, Jammernegg: Grundzüge der Beschaffung,
reading list	Produktion und Logistik - Logistik, Produktion, Beschaffung,
	Supply Chain Management; Pearson 2013
	 Specht: Distributionsmanagement; Kohlhammer 2005





4.7. Product Life Cycle Assessment

Module No.	SC 7 / 24d or 25d Produkt
Semester	7
Frequency	At least annually
Level	Undergraduate
Lecturer	Sebastian Galindo
Teaching Language	English
Credits (ECTS)	3 ECTS
Total workload	90 hours (30 contact hours, 60 self-study hours)
Contact Hours /week	2 HPW
Assessment	One-hour exam and continuous assessment
Teaching and	Lecture (20%), planning case (50%), and presentations (30%)
learning methodology	
Learning outcomes of the module	 Professional skills: Students gain theoretical knowledge based on the topic of Life Cycle Assessment (LCA) such as defining the scope and objectives of LCA, as well as inventory analysis. The results are interpreted in terms of the product life cycle and environmental impact. Methodological skills: Students learn how an LCA is structured and what steps are required to build it. They know how to obtain the necessary data. Multidisciplinary skills: As part of a business simulation game with LCA software, students model a product, its manufacturing process, product use, and disposal or recycling. They define the scope and objective of the LCA, collect the necessary data, and calculate and evaluate the environmental effects of the product in each phase of its product life. They summarize the results so that decisions can be made to optimize the product. Social skills and key competencies: The simulation is carried out in small groups. Students get practice in team management.
Content/ indicative syllabus	 Introduction of the topic of ecological assessment: Definition of terms Definition of objectives, definition of the scope of investigation Life cycle inventory Impact assessment, allocation problems Interpretation of the results, sensitivity analysis Integration of economic efficiency/economic benefits Reporting Perform an ecological assessment using ecobalance software: Introduction to software Creation of an ecological assessment with the software for a simple product Preparation of an ecological assessment on a complex product in small groups with all the necessary preparatory steps, data collection, modeling, implementation of the software, and evaluation with the software





Indicative reading list	 Walter Klopffer, Birgit Grahl (2009): Ökobilanz (LCA): Ein Leitfaden für Ausbildung und Beruf, Wiley-VCH, Weinheim, 1. Auflage ISBN-13: 978-3527320431 DIN EN ISO 14040 (2006): Umweltmanagement – Ökobilanz – Grundsätze und Rahmenbedingungen (ISO 14040:2006); Deutsche und Englische Fassung EN ISO 14040:2006, Beuth, Berlin
	 DIN EN ISO 14044 (2006): Umweltmanagement – Ökobilanz – Anforderungen und Anleitungen (ISO 14044:2006); Deutsche und Englische Fassung EN ISO 14044:2006, Beuth, Berlin DIN EN ISO 14045 (2012): Umweltmanagement – Ökoeffizienzbewertung von Produktsystemen – Prinzipien, Anforderungen und Leitlinien (ISO 14045:2012); Deutsche und Englische Fassung EN ISO 14045:2012, Beuth, Berlin

4.8. Corporate Social Responsibility

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Module No.	SC 8 / 19 IOL
Semester	4
Frequency	Every semester, in the week after the examination (late Feb for winter term, late July for summer term)
Admission	None
requirements	
Level	Undergraduate
Lecturer	Dr. Carl Ulrich Gminder
Teaching language	English
Credits (ECTS)	3
Total work load	90 hours
Contact hours /week	2 HPW
Assessment	CA (Group: Case studies/ Exercises with presentation ,Individual: Participation)
Teaching and learning methology	Seminar with exercises and case studies
Learning outcomes	Today companies have to take full responsibility in order to solve environmental and social problems linked with their business. Examples are climate change, social dumping/ sweatshops, waste, overuse of resources etc. The drivers are various: legal and/ or market requirements, image and reputation or owner- driven ethics. Therefore companies have to respond by setting up strategies and taking them into action – otherwise they get stuck in NGO confrontation or window-dressing. Those strategies and their implementation are subsumed by the term "Corporate Social Responsibility" (CSR). Aim of the class is to give the students in an interactive manner an understanding of applied CSR in industry. Starting with the need of action, students learn about the design of relevant CSR strategies and their implementation by measures, systems and



	 actions. Students will research and develop their own solutions and present them to the class. The learning outcome is to have a basic know-how of CSR. In addition the students exercise the "St. Galler approach" from
	problem to solution by strategy based CSR management.
Contents/ Indicative syllabus	 Why are environment & society relevant for companies? What are strategies of Corporate Social Responsibility (CSR)
	 Specific CSR markets, e.g. Renewable energy, Fair trade, Emission trade, Environmental technology
	 Measures, management systems and reporting of CSR Standards and Labels for CSR-Marketing
Indicative reading list	Will be presented in lecture

4.9. International Purchasing

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Module number	CC 9
Semester	Exchange
Frequency	Every semester
Prerequisites	None
Level	Undergraduate
Lecturer	James Stone
Language of lectures	English
Credits (ECTS)	3
Total work load	90 hours
Contact hours/week	2 hrs/week / 30 Contact hours
Assessment	Exam (one hour)
Teaching method	Lecture/seminar and group work
Learning outcome	The class familiarizes students with the basic principles of the purchasing function in an international environment. After successful completion of this course the students should have gained the following knowledge and developed the following competencies: Professional competencies: Understand the purchasing process and the main tools and techniques available; Provide a systematic understanding of the environments of international purchasing including social, economic, political, technical, legal, financial and cultural differences and how they impact international purchasing. Methodological competencies: Apply basic concepts of international purchasing in real life examples Apply key techniques for analyzing and evaluating potential suppliers and constructing effective supplier selection processes Social competencies:



	Co-operatively solve problems in small teams
Contents	 The class explores the central concepts of international purchasing and interfaces this to the other areas of an organization. Topics discussed include: Strategic purchasing, Supplier evaluation and selection, Costing, Contracting and negotiation Supplier evaluation and performance management
Indicative Reading List	TBC