Study regulations of the
FH Master's course

ERP Systems and Business Processes Management

To obtain the academic degree

Master of Arts in Business,
abbreviated to MA

as an appendix to the statutes of the FH Kufstein Tirol

Organizational form: part-time
Duration: 4 semesters
Scope: 120 ECTS
Places for beginners per academic year: 23 part-time

Version 1

Decided by the FH Faculty Council on October 07, 2020

Content

With the amendment to the University Act 2020, the so-called "University of Applied Sciences Studies Act (FHStG)" has been renamed "University of Applied Sciences Act (FHG)". Accordingly, a necessary editorial adjustment was made in this document on January 13th, 2021 and the name FHStG was replaced by FHG.

1 OCCUPATIONAL PROFILES

1.1 Occupational fields

Graduates of the program may be employed in the following professional fields of activity:

(1) **Consultants in Organizational Consultation and IT/ERP Systems**
Consultants in the field of organization and ERP systems are characterized by their extensive specialist knowledge and high level of leadership competence. They quickly understand the operational environment of their clients and the tasks assigned to them. This includes planning and designing IT architectures, supporting the development of IT strategies and advising on the selection of suitable IT systems. In the organizational field, they create organizational concepts, lead improvement projects, conduct audits and support change management.

(2) **Information management in companies**
Information management is the management of information and communication in an organization. This includes design, operational and monitoring tasks that must be performed against the background of an increasingly dynamic corporate and competitive environment. In addition to basic knowledge of the structure and functional principles of IT systems and a sound understanding of the mechanisms in a digital economy, this requires increased competence in the implementation of complex, multi-person restructuring processes in business organizations. Other areas of activity include auditing and the management tasks of a relevant company.

(3) **Project management of process improvement projects and IT/ERP projects**
The management of projects in the fields of company-wide business excellence initiatives or ERP implementation and migration projects requires both leadership expertise and an overview of the options and techniques of process management and information technology. Interpersonal skills in particular are required, such as leading difficult conversations, creating acceptance and moderating solution workshops.

(4) **Process Manager**
The Process Manager is responsible for sub-processes or end-to-end processes in the company. He/she aligns the process with strategic requirements and customer concerns. He/she regularly monitors performance and initiates improvement projects for which he/she also acts as sponsor. In many companies, he/she forms a matrix with the existing line organization.

(5) **Process Coach/Process Support**
A Process Coach supports project leaders, process managers and line managers in methodological questions. The ever-increasing wealth of technical and methodological tools that help to improve performance in companies requires the experience of proven experts. He/she has knowledge of applying statistical process analysis tools as used in Six Sigma and TQM and has experience with lean management tools. Process Coaches also support the selection of process improvement projects. In addition, he/she advises project managers on questions of implementation and creating acceptance for new organizational and IT solutions.

(6) **Quality Managers**
Quality Managers are in charge of deriving quality strategies from the corporate guidelines. They help to establish quality management systems in companies by documenting processes, defining quality criteria, conducting internal audits, preparing external audits and stimulating continuous improvement. They select suitable methods for quality assurance and train employees in their application.

(7) **Requirements Manager**

- Requirements Managers form the link between operational requirements and their implementation in IT/ERP solutions. The requirements manager understands the operational problems and knows the options offered by modern information systems. By knowing the terms/language of both areas, they bridge the communication issues that occur very often in practice. He/she creates the conditions for IT/ERP projects to deliver results that lead to satisfied customers.

(8) **Customizing of ERP systems**
Standard business software is adapted to the requirements of companies (customized). The

customizing tasks are based on the company-specific features. By parameterizing the ERP systems, they are tailored to the needs of the customers.

(9) **Responsibility for ERP modules**
Responsibility for ERP modules requires detailed knowledge of a module. The development and especially the continued development of the module is the task of the person responsible for the module, who is involved in all decision-making processes from the conception to the documentation and maintenance of the module.

1.2 Qualification profile

The qualification aims and learning outcomes of the Master's course program[Thema] correspond both to the academic and professional requirements and to ISCED level 0788[1] (International Standard Classification of Education). The contents taught qualify the graduates for the specified professional fields of activity.

Professional fields of activity / competencies / modules

Occupational field of activity	Task	Competence description	Competence allocation	Curriculum/modules
Consultant in Organizational Consulting and IT/ERP Systems **Information Manager**	Planning, design of IT architectures. Support in the development of IT strategies Advice on the selection of IT systems Creation of organizational concepts Leading improvement projects Performing process audits	Understands operational processes Can survey, document, analyze and improve processes Can make demands on IT systems Is familiar with ERP systems	Professional-academic	Operational processes ERP systems Process & quality management
		Can implement business solutions and IT systems	Human Resources and Social Affairs	Social Skills
Project management of Process Improvement / IT and ERP Projects	Project management Dealing with resistance Conflict resolution Implementing solutions	Can set up projects organizationally Can communicate with clients Can deal with resistance in the project team and during implementation	Human Resources and Social Affairs	Social Skills

[1] Example 4: A program consisting of 40% engineering (071), 30% business (041) and 30% languages (023) should be classified as 0788 ("Inter-disciplinary programs and qualifications involving engineering, manufacturing and construction") as no field predominates but 07 is the leading broad field. If engineering and business were equally important and greater than languages (e.g. 40%, 40% and 20%), the program would be classified as either 0788 or 0488 depending on which program, engineering (071) or business (041), is listed first in the program title (or, if not in the title, in the curriculum or syllabus).

Process Manager, Quality Manager	Responsible for process performance Connecting process/quality with divisional strategy Setting of process goals Monitoring performance Performing audits Initiating improvements Implementing solutions	Understands their process Can break down superordinate strategies into process/quality goals Can perform process audits Knows how to improve processes Can deal with conflicts between departments Can communicate new solutions to those concerned	Professional-academic Human Resources and Social Affairs	Operational processes Process & quality management Social Skills
Process Coach / Process Support	Defines PM methods Provides support in the application of PM methods Collects process data Organizes review meetings	Knows PM methods Can collect and analyze process data Can design process dashboards	Professional-academic	Process / quality management
Requirements Manager / Customizing of ERP systems / Responsible for ERP modules	Establishes requirements for IT systems from the business side Creates functional and performance specifications Communicates with IT department Initiates implementation of new releases	Can identify and prioritize requirements for IT systems Knows functionalities of ERP systems Can make modifications to the ERP system Can analyze and prepare data from ERP systems	Professional-academic	ERP systems Data management IT management

2 CURRICULUM

2.1 Curriculum Data

	PT	Comment if applicable
First year of study (YYY/YY$_{+1}$)	2021/2022	
Standard duration of study (number of semesters)	4	
Obligatory WSH (Total number for all sem.)	53	
Course weeks per semester (number of weeks)	15	
Obligatory course hours (Total for all sem.)	825	
Obligatory ECTS (Total for all sem.)	120	
WS start (Date, comm.: poss. CW)	CW 40	
WS end (Date, comm.: poss. CW)	CW 5	
SS start (Date, comm.: poss. CW)	CW 11	
SS end (Date, comm.: poss. CW)	CW 28	
WS weeks	15	
SS weeks	15	
Obligatory semester abroad (semester specification)	No	
Language of instruction (specify)	German	The proportion of English-language courses amounts to [Company Address]% of the WSH
Internship (semester information, duration in weeks per semester)	No	
Resulting from the merging of the degree programs or from the separation from the degree program (StgKz; to be specified only for merging or separation)		

2.2 Curriculum matrix

Module assignment overview

Module	Module title	Course title	WSH	ECTS	Sem.
BTP	Operational processes	Data protection & Law	1.5	3	3
		Process Monitoring & Business Reporting	1.5	3	1
		Supplier Management & Customer Relationship Management	2	4	1
DAT	Data management	Business Intelligence & Analytics (E)	4	6	3
		Data Engineering for ERP Systems (E)	3	5	2
ERP	ERP - Systems	ERP Systems 1: Administration & Disposition Systems	3	6	1
		ERP Systems 2: Planning & Monitoring Systems	2	3	2
		ERP Systems 3: Selection & Introduction	2.5	4	3
		ERP Systems 4: Customizing, Modification	1.5	3	4
ITM	IT management	IT infrastructure	1.5	3	1
		IT management	1.5	3	2
		Requirements Engineering	1.5	3	1
		Workflow Management	2	4	2
MAS	Master thesis	Colloquium for the Master thesis	1	2	4
		Master thesis	0	22	4
		Academic Methods	1	2	3
PQM	Process & quality management	Business Process Management	2	4	2
		Business Process Modelling & Optimization	3.5	6	1
		Lean Quality Management (E)	2.5	5	1
PXT	Practical Transfer	Practical Project	2	4	3
		Study trip (E)	2	3	2
SSK	Social Skills	Change Management	1	2	2
		Conflict Management & Negotiation Techniques	1.5	3	3
		Moderation & Presentation Techniques	1	2	2
		Project Management (E)	2	4	2
WPF	Elective subject	Agile Product Development (elective)	2	4	3
		Application-oriented Analysis Platforms (elective)	2	4	3
		Business Platforms & Cloud Computing (elective)	2	4	3
		Data Visualization & Visual Analytics (elective)	2	4	3
		Internet of Things (elective)	2	4	3
		Human-Computer Interaction (elective)	2	4	3
		Process Automation (elective)	2	4	3
		Quantitative Process & quality management (Six Sigma) (elective)	2	4	3
		Trends in Data Science (elective)	2	3	4
		Trends in ERP (elective)	2	3	4
		Trends in Smart Products(elective)	2	3	4
		Trends in Web Technologies(elective)	2	3	4
			53.0	**120**	

In the following curriculum matrix, some courses are offered as elective courses together with the Web Communication and Information Systems, Smart Products and Solutions and Data Science and Intelligent Analytics Master programs. In the third semester, students select 1 course from a bundle of 4 non-technical courses and 1 course from a bundle of 4 technical courses. In the fourth semester, they select a course from a bundle of 4 courses. The following courses are included:

Non-technical elective courses in the third Semester (1 out of 4):

- Agile Product Development
- Data Visualization and Visual Analytics
- Human-computer Interaction
- Quantitative Process & quality management (Six Sigma)

Technical elective courses in the third. Semester (1 out of 4):

- Application-oriented Analysis Platforms
- Business Platforms and Cloud Computing
- Internet of Things
- Process Automation

Elective courses in the fourth Semester (1 out of 4):

- Trends in Data Science
- Trends in ERP
- Trends in Smart Products
- Trends in Web Technologies

1st semester

Course no.	Course title	Course type	T	E	eLV	WSH	No. of groups	AWSH	ALVS	MODULE	ECTS
BTP.1	Supplier Management & Customer Relationship Management	ILV			20%	2	1	2	30	BTP	4
BTP.2	Process Monitoring & Business Reporting	ILV			15%	1.5	1	1.5	22.5	BTP	3
ERP.1	ERP Systems 1: Administration & Disposition Systems	ILV	X		15%	3	1	3	45	ERP	6
ITM.1	IT infrastructure	ILV	X		50%	1.5	1	1.5	22.5	ITM	3
ITM.3	Requirements Engineering	ILV			50%	1.5	1	1.5	22.5	ITM	3
PQM.2	Lean Quality Management (E)	ILV		X	15%	2.5	1	2.5	37.5	PQM	5
PQM.3	Business Process Modelling & Optimization	ILV			20%	3.5	1	3.5	52.5	PQM	6
Total line:						15.5		15.5	232.5		30
Course hours = Total WSH x course weeks						232.5					

2nd semester

Course no.	Course title	Course type	T	E	eLV	WSH	No. of groups	AWSH	ALVS	MODULE	ECTS
DAT.1	Data Engineering for ERP Systems (E)	ILV	X	X	15%	3	1	3	45	DAT	5
ERP.2	ERP Systems 2: Planning & Monitoring Systems	ILV	X		15%	2	1	2	30	ERP	3
ITM.2	IT management	ILV			15%	1.5	1	1.5	22.5	ITM	3
ITM.4	Workflow Management	ILV	X		20%	2	1	2	30	ITM	4
PQM.1	Business Process Management	ILV			30%	2	1	2	30	PQM	4
PXT.2	Study trip (E)	ILV		X	0%	2	1	2	30	PXT	3
SSK.2	Project Management (E)	ILV		X	20%	2	1	2	30	SSK	4
SSK.3	Moderation & Presentation Techniques	ILV			15%	1	1	1	15	SSK	2
SSK.5	Change Management	ILV			15%	1	1	1	15	SSK	2
Total line:						16.5		16.5	247.5		30
Course hours = Total WSH x course weeks						247.5					

3rd semester

Course no.	Course title	Course type	T	E	eLV	WSH	No. of groups	AWSH	ALVS	MODULE	ECTS
BTP.6	Data protection & Law	ILV			15%	1.5	1	1.5	22.5	BTP	3
DAT.2	Business Intelligence & Analytics (E)	ILV	X	X	15%	4	1	4	60	DAT	6
ERP.3	ERP Systems 3: Selection & Introduction	ILV	X		15%	2.5	1	2.5	37.5	ERP	4
MAS.1	Academic Methods	SE			15%	1	1	1	15	MAS	2
PXT.1	Practical Project	PT			30%	2	2	4	60	PXT	4
SSK.1	Conflict Management & Negotiation Techniques	ILV			15%	2	1	2	30	SSK	3
WPF.1	Quantitative Process & quality management (Six Sigma) (elective)	ILV			15%	2	1	2	30	WPF	4
WPF.2	Application-oriented Analysis Platforms (elective)	ILV	X		15%	2	1	2	30	WPF	4
WPF.3	Internet of Things (elective)	ILV	X		15%	2	1	2	30	WPF	4
WPF.4	Business Platforms & Cloud Computing (elective)	ILV	X		15%	2	1	2	30	WPF	4
WPF.5	Process Automation (elective)	ILV	X		15%	2	1	2	30	WPF	4
WPF.6	Data Visualization & Visual Analytics (elective)	ILV			15%	2	1	2	30	WPF	4
WPF.7	Agile Product Development (elective)	ILV			15%	2	1	2	30	WPF	4
WPF.8	Human-Computer Interaction (elective)	ILV			15%	2	1	2	30	WPF	4
Total line:						17.0		19.0	285.0		30
Course hours = Total WSH x course weeks						255.0					

The following description of the courses does not include the work involved in supervising Master theses. 0.6 weekly semester hours are planned per supervised thesis, i.e. for 23 students an additional 13.8 thesis weekly semester hours, which are incurred in the 4th semester. In total, an AWSH sum of 69.3 AWSH is achieved over all 4 semesters.

4th semester

Course no.	Course title	Course type	T	E	eLV	WSH	No. of groups	AWSH	ALVS	MODULE	ECTS
ERP.4	ERP Systems 4: Customizing, Modification	ILV	X		70%	1.5	1	1.5	22.5	ERP	3
MAS.2	Colloquium for the Master thesis	SE			0%	1	1	1	15	MAS	2
MAS.3	Master thesis	UE			0%	0	1	0	0	MAS	22*
WPF.10	Trends in Data Science (elective)	ILV			0%	2	1	2	30	WPF	3
WPF.11	Trends in Smart Products(elective)	ILV			0%	2	1	2	30	WPF	3
WPF.12	Trends in Web Technologies(elective)	ILV			0%	2	1	2	30	WPF	3
WPF.9	Trends in ERP (elective)	ILV			0%	2	1	2	30	WPF	3
Total line:						4.5		4.5	67.5		30
Course hours = Total WSH x course weeks						67.5					

* The 22 ECTS for the Master thesis are divided into 20 ECTS for the Master thesis and 2 ECTS for the final examination.

Abbreviations	
eLV	E-learning proportion of course in percent
E	Lecture in English language
ECTS	ECTS – Credit points
LV	Course
LVS	Course hour(s)
WSH	Weekly semester hour(s)
T	Lecture with technical background
WP	Elective subject

Summary of curriculum data

Description	WSH	AWSH	ALVS	ECTS
Total number of courses over all semesters	53	55	825	120
Total number of courses in 1st year of study	32	32	480	60
Total number of courses in 2nd year of study	21	23	345	60
Total number of courses in 3rd year of study				
Total number of technical events over all semesters	21.5			38
Percentage of technical courses over all semesters based on WSH / ECTS	40.57%			31.67%
Total number of courses in English over all semesters	13.5			23
Proportion of courses in English over all semesters based on WSH / ECTS	25.47%			19.17%
Proportion of eLearning units over all semesters based on WSH / ECTS	19.15%			16.13%

2.3 Module descriptions

Module number:	**Process & quality management**	**Scope:**	
PQM		**15**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	1st semester		
	2nd semester		
Level	1st semester: Master / 2nd semester: Master		
Previous knowledge	1st semester: not specified / 2nd semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Business process management /ILV / Course no.: PQM.1 / 2nd semester / ECTS: 4 Hammer M., Champy J.; Reeingineering the Cooperation; New York 1993 Gaitanides M.; Prozessorganisation; München 2012; 3rd edition Osterloh M., Frost J.; Prozessmanagement als Kernkompetenz; Wiesbaden 2006; 5th edition Becker J., Kugeler M., Rosemann M; Prozessmanagement. Ein Leitfaden zur prozessorientierten Organisationsgestaltung; Heidelberg 2012; 7th edition Gadatsch A.; Grundkurs Geschäftsprozess-Management; Wiesbaden 2017; 8th edition Schmelzer H., Sesselmann W.; Geschäftsprozessmanagement in der Praxis; München 2013; 8th edition Allweyer Th.; Geschäftsprozessmanagement; Herdecke-Bochum 2005		
	Lean Quality Management (E) /ILV / Course no.: PQM.2 / 1st semester / ECTS: 5 Deming E.W; Out of the Crisis; Cambridge; 2000 Shingo Sh.; Zero Quality Control: Source Inspection and the Poka-yoke System; 1989 Takeda H.; QIP – Qualität im Prozess, Leitfaden zur Qualitätssteigerung in der Produktion; Munich, 2009		
	Business Process Modelling & Optimization /ILV / Course no.: PQM.3 / 1st semester / ECTS: 6 Becker J., Kugeler M., Rosemann M; Prozessmanagement. Ein Leitfaden zur prozessorientierten Organisationsgestaltung; Heidelberg 2012; 7th edition Ohno T.; Toyota Production System, Beyond large scale production; 1988 Liker J.; The Toyota Way; New York 2004 Lunau St., Meran R., John A., Staudter Ch., Roenpage O.; Six Sigma+Lean Toolset: Mindset zur erfolgreichen Umsetzung von Verbesserungsprojekten; 2014; 5th edition George M., Maxey J., Rowlands D., Upton M.; The Lean Six Sigma Pocket Toolbook: A Quick Reference Guide to 70 Tools for Improving Quality and Speed		
Skills acquisition	Business process management /ILV / Course no.: PQM.1 / 2nd semester / ECTS: 4 The graduate, the student: * Understands the benefits of process management. * Can select processes based on strategy and customer requirements. * Can visualize the process performance. * Can perform process audits. * Knows the roles in process management. * Can establish governance for a process. * Is familiar with various process improvement methods. * Knows how organizational interfaces can be overcome with the help of process management. * Is familiar with procedures for implementing process management.		
	Lean Quality Management (E) /ILV / Course no.: PQM.2 / 1st semester / ECTS: 5 The graduate, the student: Quality management in general: * Knows the benefits of quality management * Knows important parameters for the evaluation of QM systems * Knows the difference between quality planning and quality control * Knows the importance of responsibility at company level * Knows the organizational anchoring of QM in the company * Knows the importance of leadership with regard to quality management * Knows processes of quality management (Deming-Cycle, etc.) * Understands the measures that are necessary in the absence of quality Lean Quality: * Understands the zero defect philosophy * Can determine quality costs (cost of poor quality) * Understands the importance of employees in quality management * Is familiar with organizational forms of operational quality management (end-of-line inspection, quality circle, etc.) * Is familiar with defect prevention systems (Poka Yoke, etc.) * Can conduct Poka-Yoke workshops * Can explain the relationship between quality and lead time * Can explain the effects of quality measures on inventory		

	Business Process Modelling & Optimization /ILV / Course no.: PQM.3 / 1st semester / ECTS: 6 The graduate, the student: * Knows the problems of processes in companies * Knows sources of requirements for processes * Can derive measured variables and process goals from requirements * Can conduct process surveys * Knows types of process models and knows when to apply which ones * Can document processes in the most important notations (eEPK, BPMN, DIN) * Knows the most important process modeling software * Can apply selected SW for modeling * Can analyze actual processes * Knows the most important methods of Lean Management * Knows methods for finding solutions
Course contents	Business process management /ILV / Course no.: PQM.1 / 2nd semester / ECTS: 4 * Leveraging Process Management * Process Management Framework * Selecting Processes for Strategic Improvement * Visualizing Process Performance * Performing Process Audits * Establishing Process Governance * Process Interface Management * Implementing Process Management
	Lean Quality Management (E) /ILV / Course no.: PQM.2 / 1st semester / ECTS: 5 * The terms quality, quality assurance and quality management * Types and dimensions of quality * Conflict and the magic triangle of value-added systems * Reasons for quality management systems and their benefits * Historical development of quality management * Quality costs * Overview of methods, techniques, tools for implementing and anchoring QM
	Business Process Modelling & Optimization /ILV / Course no.: PQM.3 / 1st semester / ECTS: 6 * Identifying customer and business requirements * Modeling processes * Applying process modeling tools * Measuring process performance * Analyzing processes * Improving process performance
Teaching and learning methods	Business process management /ILV / Course no.: PQM.1 / 2nd semester / ECTS: 4 Lecture, individual work on own processes, presentation and discussion of tasks
	Lean Quality Management (E) /ILV / Course no.: PQM.2 / 1st semester / ECTS: 5 Lecture, group work, simulation example in the LEAN Lab, presentation and discussion of tasks
	Business Process Modelling & Optimization /ILV / Course no.: PQM.3 / 1st semester / ECTS: 6 Lecture, group work, individual work with software, continuous simulation example in the LEAN Lab, presentation and discussion of tasks
Evaluation Methods Criteria	Business process management /ILV / Course no.: PQM.1 / 2nd semester / ECTS: 4 Examination and presentation
	Lean Quality Management (E) /ILV / Course no.: PQM.2 / 1st semester / ECTS: 5 Oral examination
	Business Process Modelling & Optimization /ILV / Course no.: PQM.3 / 1st semester / ECTS: 6 Written exam

Module number:	**IT management**	**Scope:**	
ITM		**13**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	1st semester		
	2nd semester		
Level	1st semester: Master / 2nd semester: Master		
Previous knowledge	1st semester: according to admission requirements / 1st semester: not specified / 2nd semester: not specified / 2nd semester: None		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	IT infrastructure /ILV / Course no.: ITM.1 / 1st semester / ECTS: 3 Glatz E.; Betriebssysteme: Grundlagen, Konzepte, Systemprogrammierung; 2019, 4th edition, dpunkt Verlag Hellmann R.; Rechnerarchitektur: Einführung in den Aufbau moderner Computer; 2016, 2nd edition, De Gruyter Oldenburg Schreiner R.; Computernetzwerke: Von den Grundlagen zur Funktion und Anwendung; 2014, 5th, extended edition. Munich: Carl Hanser Verlag GmbH and Co. KG Portnoy M., Engel R.; Virtualisierung für Einsteiger; 2012, 1st edition, Wiley-VCH Reinheimer S.; Cloud Computing: Die Infrastruktur der Digitalisierung; 2018, Springer Vieweg		
	IT Management /ILV / Course no.: ITM.2 / 2nd semester / ECTS: 3 Urbach N.; IT-Management im Zeitalter der Digitalisierung: Auf dem Weg zur IT-Organisation der Zukunft; Berlin, 2016 Resch O.; Einführung in das IT-Management: Grundlagen, Umsetzung, Best Practice; 2016 Harich Th.; IT-Sicherheitsmanagement: Praxiswissen für IT Security Manager; Frechen; 2018; 2nd edition		
	Requirements Engineering /ILV / Course no.: ITM.3 / 1st semester / ECTS: 3 Rupp C. et al.: Requirements-Engineering und –Management, Carl Hanser Verlag, 2014 Hammerschall U., Beneken G.: Requirements Engineering, Pearson Studium, 2013 Pohl K., Rupp C.: Basiswissen Requirements Engineering, dpunkt Verlag, 2015		
	Workflow Management /ILV / Course no.: ITM.4 / 2nd semester / ECTS: 4 Richter-von Hagen, C., Stucky, W.: Business-Process- und Workflow-Management, Teubner, 2005 Fischermanns, G.: Praxishandbuch Prozessmanagement, Dr. Götz Schmidt, 2013 Allweyer, Th.: Geschäftsprozessmanagement, W3I, 2005 Gadatsch, A.: Grundkurs Geschäftsprozessmanagement, Springer, 2013 Hofbauer, G., Hellwig, C.: Professionelles Vertriebsmanagement: Der prozessorientierte Ansatz aus Anbieter- und Beschaffersicht, Publicis, 2016 Weske, M.: Business Process Management, Springer, 2012 Quarre, F.: Robotic Process Automation, O'Reilly, 2019		
Skills acquisition	IT infrastructure /ILV / Course no.: ITM.1 / 1st semester / ECTS: 3 The graduate, the student: * Is familiar with the most important components of the IT infrastructure (hardware platforms, operating systems, networks) * Knows developments in hardware platforms (mobile platforms, cloud computing, virtualization) * Can read IT infrastructure plans (networks, IT clusters)		
	IT Management /ILV / Course no.: ITM.2 / 2nd semester / ECTS: 3 The graduate, the student: * Has an overview of the possible elements of IT governance * Has an understanding of the importance and structure of IT strategy * Knows the structure and organization of IT departments * Knows the essential elements of demand management * Has an overview of the tools of IT monitoring and the interaction with IT governance * Knows the basic problems of IT sourcing and can separate IT procurement from regular procurement * Knows selected information management tasks * Knows important elements of IT security (types of threat, measures, standards, legal framework, audits) * Can assess IT risks and define measures including disaster recovery * Knows goals, tasks and important regulations in the field of IT compliance		
	Requirements Engineering /ILV / Course no.: ITM.3 / 1st semester / ECTS: 3 The graduate, the student: * Knows the importance of requirements engineering for the success of a project * Knows different types of requirements (functional, non-functional) * Can take up requirements for ERP, CRM, SCM, SRM systems from business (specification sheet) * Knows the process of requirements engineering * Knows methods to collect customer requirements (e.g. questionnaires, interviews) * Can document requirements (natural, linguistic and model-based) * Can derive test cases from requirements * Can evaluate requirements		

	* Knows methods for validating requirements (e.g. quality criteria for requirements, testing techniques for requirements [reviews, prototypes, tests]) * Can manage the implementation of the requirements
Skills acquisition	* Knows IT tools to support the requirement engineering
	Workflow Management /ILV / Course no.: ITM.4 / 2nd semester / ECTS: 4 The graduate, the student: * Knows the role of IT as a process enabler (benefits) * Knows types of workflow systems * Knows basic components of workflow automation in connection with workflow management and process monitoring * Knows the importance of Robotic Process Automation (RPA) * Knows the most important software providers for WFMS and RPA * Can model processes consistently (e.g. BPMN -> BPEL) * Can identify, systematize and solve topic-related questions with suitable software tools * Can create workflows in selected software
Course contents	IT infrastructure /ILV / Course no.: ITM.1 / 1st semester / ECTS: 3 -Components of IT infrastructure (function, development, * Function of computer systems * Development * Networks, Internet operating systems -development of hardware platforms * Microsystems, system on a chip * Cloud systems * Virtualization
	IT Management /ILV / Course no.: ITM.2 / 2nd semester / ECTS: 3 * IT Governance and IT Strategy * Demand Management * IT Monitoring * IT Sourcing * IT Security and Risk Management * IT Compliance
	Requirements Engineering /ILV / Course no.: ITM.3 / 1st semester / ECTS: 3 * Benefits of requirements engineering * Basic terms of requirements engineering * Types of requirements * Requirements engineering and system development * Requirements engineering process * System analysis in requirements engineering * Business processes and requirements * Techniques for determining requirements * Natural language documentation of requirements * Model-based documentation of requirements * Deriving test cases from requirements * Evaluating requirements * Quality criteria for requirements * Checking requirements * Managing requirements * Tool support
	Workflow Management /ILV / Course no.: ITM.4 / 2nd semester / ECTS: 4 * Basic terms: Business process, workflow, BPMS, WFMS, RPA, etc. * Classification of WFMS/RPA; differentiation of ERP systems * Historical development (from WFMS to BPMS to RPA) * Architecture of WFMS/RPA systems * Overview of process spectrum (from repetitive and predictable, to non-repetitive and unpredictable) * From functional process models to executable process models * Organizational and technical implementation
Teaching and learning methods	IT infrastructure /ILV / Course no.: ITM.1 / 1st semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
	IT Management /ILV / Course no.: ITM.2 / 2nd semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
	Requirements Engineering /ILV / Course no.: ITM.3 / 1st semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
	Workflow Management /ILV / Course no.: ITM.4 / 2nd semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
Evaluation Methods Criteria	IT infrastructure /ILV / Course no.: ITM.1 / 1st semester / ECTS: 3 Written exam
	IT Management /ILV / Course no.: ITM.2 / 2nd semester / ECTS: 3 Written exam

	Requirements Engineering /ILV / Course no.: ITM.3 / 1st semester / ECTS: 3 Examination and presentation
Evaluation Methods Criteria	Workflow Management /ILV / Course no.: ITM.4 / 2nd semester / ECTS: 4 Written exam

Module number:	**Operational processes**	**Scope:**	
BTP		**10**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	1st semester		
	3rd semester		
Level	1st semester: Master / third semester: Master		
Previous knowledge	1st semester: not specified / 1st semester: not specified / 3rd semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Supplier Management & Customer Relationship Management /ILV / Course no.: BTP.1 / 1st semester / ECTS: 4 Ehrmann, H.; Logistik.- Kiehl; Ludwigshafen; 2005. Günther, H.; Tempelmaier, H.; Produktion und Logistik; Berlin; Springer; 2005. Wannenwetsch, H.; E-Supply Chain Management; Gabler; 2004. Chaffey, D.; Digital Business and E-Commerce, 6th edition, Englewood Cliffs, Prentice Hall, 2015 Kollmann, T.; E-Business, 4th edition, 2011		
	Process Monitoring & Business Reporting /ILV / Course no.: BTP.2 / 1st semester / ECTS: 3 Auer K.; Kennzahlen für die Praxis; SWK-Sonderheft; Vienna; 2007 Eckerson W.; Performance Dashboards; Hoboken; 2011		
	Data protection & Law /ILV / Course no.: BTP.6 / 3rd semester / ECTS: 3 Fritz Ch.; Gesellschafts- und Unternehmensformen kompakt; Vienna; 2008 Albrecht F.; Informations- und Kommunikationsrecht; Stuttgart; 2018		
Skills acquisition	Supplier Management & Customer Relationship Management /ILV / Course no.: BTP.1 / 1st semester / ECTS: 4 The graduate, the student: * Knows the benefits of e-procurement * Knows the basics of e-procurement (actors, business models, etc.) * Knows the "procurement" operational function (elements - sourcing, ordering, processes (Rfx), types of goods, etc.) * Knows e-procurement processes depending on different products (SRM, E-Ordering, E-Sourcing) * Knows key performance indicators in procurement * Knows the main suppliers of e-procurement software * Knows the benefits of e-commerce * Knows the basics of e-commerce (actors, business models, etc.) * Knows the "sales" operational function * Knows processes of e-commerce * Knows key performance indicators in sales * Knows the main suppliers of e-commerce software		
	Process Monitoring & Business Reporting /ILV / Course no.: BTP.2 / 1st semester / ECTS: 3 The graduate, the student: * Understands the importance of strategic planning and performance drivers * Can transform strategic planning into operational KPIs (e.g. strategy maps, Hoshin planning) * Understands the importance of holistic KPI systems * Understands the importance of performance KPIs for managing organizations * Understands types of operational KPIs and KPI systems (e.g. accounting based, stock market oriented) * Can present performance KPIs in a comprehensible way (e.g. building dashboards, reports) * Understands reporting possibilities in ERP systems		
	Data protection & Law /ILV / Course no.: BTP.6 / 3rd semester / ECTS: 3 The graduate, the student: * Knows important contents of contract law with special reference to information systems, internet and social media * Knows important contents of labor and company law with special reference to service contracts and the legal situation of executives * Knows important contents of data protection law (special features in handling personal data, anonymization, etc.) * Knows important contents of telecommunications law * Can consider data protection aspects in ERP projects		
Course contents	Supplier Management & Customer Relationship Management /ILV / Course no.: BTP.1 / 1st semester / ECTS: 4 Procurement * Supply Management * Procurement Process * Types of Goods * ABC Analysis * Procurement Strategy * Key Figures Basic Concepts of E-Procurement * Basics of E-Business		

	* Partial Concepts of E-Procurement
Course contents	E-Supply Management as an integrated overall concept * Derivation of E-Supply Management * E-Procurement Sales: * CRM strategies * CRM process * Key figures * CRM lifetime value * Communication channels in customer contact e-commerce: * Basics of e-commerce * Selected IT support (functionalities) * Data exchange with ERP systems
	Process Monitoring & Business Reporting /ILV / Course no.: BTP.2 / 1st semester / ECTS: 3 * Strategic planning * Operational key figures * Key figure systems * Types of operational key figures * Display of performance key figures * Reporting options in ERP systems
	Data protection & Law /ILV / Course no.: BTP.6 / 3rd semester / ECTS: 3 Part contract law, labor law: * Contents of contract law * Basic principles of labor law * Basic principles of commercial law * Basic principles of company law * Basic principles of e-commerce * Copyright law, in particular in the field of software part data protection, IT law: * Introduction to the concept of data protection and its implementation * Definitions * Basic data protection regulation, in particular with regard to specially protected data * Rights of data subjects * Organizational measures for the protection of personal data * Criminal/civil law aspects * Legal particularities of commissioned data processing and cross-border data traffic
Teaching and learning methods	Supplier Management & Customer Relationship Management /ILV / Course no.: BTP.1 / 1st semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
	Process Monitoring & Business Reporting /ILV / Course no.: BTP.2 / 1st semester / ECTS: 3 Lecture, individual work with software, group work, presentation and discussion of tasks
	Data protection & Law /ILV / Course no.: BTP.6 / 3rd semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
Evaluation Methods Criteria	Supplier Management & Customer Relationship Management /ILV / Course no.: BTP.1 / 1st semester / ECTS: 4 Written exam
	Process Monitoring & Business Reporting /ILV / Course no.: BTP.2 / 1st semester / ECTS: 3 Written exam
	Data protection & Law /ILV / Course no.: BTP.6 / 3rd semester / ECTS: 3 Examination and seminar thesis

Module number:	**ERP systems**	**Scope:**	
ERP		**16**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	1st semester		
	2nd semester		
	3rd semester		
	4th semester		
Level	1st semester: Master / 2nd semester: Master / third semester: Master / 4th semester: Master		
Previous knowledge	1st semester: not specified / 2nd semester: not specified / 3rd semester: not specified / 4th semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	ERP Systems 1: Administration & Disposition Systems /ILV / Course no.: ERP.1 / 1st semester / ECTS: 6 Mertens, P.; Integrierte Informationsverarbeitung 1: Operative Systeme in der Industrie; Wiesbaden, Gabler 2009 Benz, J.; Höflinger, M.; Logistikprozesse mit SAP.Vieweg + Teubner Verlag; 2005 Körsgen, F.; SAP ERP Arbeitsbuch: Grundkurs SAP ERP ECC 5.0 / 6.0 mit Fallstudien; Erich Schmidt Verlag		
	ERP Systems 2: Planning & Monitoring Systems /ILV / Course no.: ERP.2 / 2nd semester / ECTS: 3 Mertens, P; Integrierte Informationsverarbeitung 2: Planungs- und Kontrollsysteme in der Industrie.- Wiesbaden: Gabler, 2008 Körsgen, F.; SAP ERP Arbeitsbuch: Grundkurs SAP ERP ECC 5.0 / 6.0 mit Fallstudien; Erich Schmidt Verlag Brinkmann S., Zeilinger A.; Finanzwesen mit SAP R/3 - Betriebswirtschaftliches Customizingwissen für SAP-FI Release 4.0/4.6. 2nd extended edition, Galileo Press, Bonn, 2000 Klenger F., Falk-Kalms E.; Kostenstellenrechnung mit SAP R/3. Mit Testbeispiel und Customizing für Studenten und Praktiker; Vieweg, Wiesbaden; 2005		
	ERP Systems 3: Selection & Introduction /ILV / Course no.: ERP.3 / 3rd semester / ECTS: 4 Gronau N.; Enterprise Resource Planing: Architektur, Funktionen und Management von ERP – Systemen; München; 2014; 3rd edition Görtz M., Hessler M.; Basiswissen ERP-Systeme; Witten; 2007 Lanninger V.; Prozessmodell zur Auswahl betrieblicher Standardanwendungs- software für KMU; Lohmar; 2009 Kähkönen, T. et al.: What Do We Know About ERP Integration? International Conference on Enterprise Information Systems. pp. 51–67 (2013)		
	ERP Systems 4: Customizing, modification /ILV / Course no.: ERP.4 / 4th semester / ECTS: 3 SAP-Bibliothek (2001a). R/3 Customizing Einführungsleitfaden Färber G., Kirchner J.; ABAP Basics; SAP PRESS 2nd edition; 2011 Buck-Emden R.; The SAP R/3 System. An introduction to ERP and business software technology; Addison-Wesley, Munich; 2000 Kunze T., Reinelt D.; SAP S/4HANA Finance – Customizing: FI/CO erfolgreich implementieren; 2020		
Skills acquisition	ERP Systems 1: Administration & Disposition Systems /ILV / Course no.: ERP.1 / 1st semester / ECTS: 6 The graduate, the student: ERP systems in general: * Can communicate the benefits of ERP systems * Knows the characteristics of ERP systems (large, important, etc.) * Knows the requirements of ERP systems (multi-client capability, etc.) * Knows the structure of ERP systems (layer model, etc.) * Knows functions of ERP systems * Knows the most important ERP system manufacturers and tools * Knows SAP (history, most important terms, etc.) * Knows reference processes in SAP SAP - Sales and Distribution Module, Material Management, Production: * Knows reference processes for SD, MM, PP in SAP * Can carry out the procurement cycle for stock and consumable materials, including purchase requisitions, purchase orders, goods receipt, invoice receipt and vendor payment * Knows organizational levels and master data in material planning as well as plan and consumption-controlled disposition * Knows consistency of process adjustment -> adjustment SAP (fields, functions, etc.)		
	ERP Systems 2: Planning & Monitoring Systems /ILV / Course no.: ERP.2 / 2nd semester / ECTS: 3		

	The graduate, the student: SAP - Finance and Monitoring module: * Knows organizational levels and master data in financial accounting and management accounting * Can create master data in the SAP modules FI and CO * Can make basic postings * Knows reference processes for monitoring, finance and accounting in SAP
Skills acquisition	ERP Systems 3: Selection & Introduction /ILV / Course no.: ERP.3 / 3rd semester / ECTS: 4 The graduate, the student: * Is familiar with the development of ERP systems and the demarcation to enterprise system * Is familiar with the most important phases of the ERP life cycle * Is familiar with common ERP systems * Can select ERP systems (criteria, etc.) * Can analyze the usefulness of an existing ERP system for companies * Is familiar with procedures for the implementation of ERP systems (SAP-ASAP, etc.) * Knows how to implement ERP systems (SAP-ASAP, etc.) * Knows elements of the deployment process (introduction, migration, information, documentation, training) * Is familiar with procedures for testing ERP systems (functional tests, usability tests, etc.) * Knows different license models After the basic courses, students will gain an insight into another common ERP system via SAP. * Has an overview of ERP product ranges of a third-party supplier * Knows basic functionalities of the third-party supplier * Can perform selected transactions in the third-party supplier's software * Knows advantages/disadvantages between SAP and the third-party supplier
	ERP systems 4: Customizing, modification /ILV / Course no.: ERP.4 / 4th semester / ECTS: 3 * Knows the difference between customizing and modification * Is familiar with procedures in customizing/modification * Can make program adjustments using SAP ABAP
Course contents	ERP systems 1: Administration & Disposition Systems /ILV / Course no.: ERP.1 / 1st semester / ECTS: 6 * Operational requirements in information management operational and planning tasks * Overview of the structure and functional scope of typical ERP systems (company codes, business areas, processes) * Integration of the individual modules of an ERP system * Overview of ERP system SAP ERP, SAP S4/ Hana, etc. * Specialization in the SAP modules SD, MM, PP.
	ERP systems 2: Planning & Monitoring Systems /ILV / Course no.: ERP.2 / 2nd semester / ECTS: 3 * Modules for presenting information to decision makers * Preparation of information for corporate planning and monitoring * Introduction to SAP modules FI and CO
	ERP systems 3: Selection & Introduction /ILV / Course no.: ERP.3 / 3rd semester / ECTS: 4 * ERP life cycle * Overview of ERP systems * Criteria for selecting ERP systems * Procedures for implementing ERP systems * Procedure for testing ERP systems * Licensing models * Overview of third-party product range (in addition to SAP) * Basic functionality of the third-party vendor * Selected transactions in the third-party vendor's software * Advantages/disadvantages between SAP and the third-party vendor
	ERP systems 4: Customizing, modification /ILV / Course no.: ERP.4 / 4th semester / ECTS: 3 * Procedure for customizing and modifying ERP systems * Software logistics in development and development environments (infrastructure) * Testing software components of a business information system * Practical examples
Teaching and learning methods	ERP systems 1: Administration & Disposition Systems /ILV / Course no.: ERP.1 / 1st semester / ECTS: 6 Lecture, individual work with software, group work, presentation and discussion of tasks

	ERP systems 2: Planning & Monitoring Systems /ILV / Course no.: ERP.2 / 2nd semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
	ERP systems 3: Selection & Introduction /ILV / Course no.: ERP.3 / 3rd semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
	ERP systems 4: Customizing, modification /ILV / Course no.: ERP.4 / 4th semester / ECTS: 3 Lecture, individual work with software, group work, presentation and discussion of tasks
Evaluation Methods Criteria	ERP systems 1: Administration & Disposition Systems /ILV / Course no.: ERP.1 / 1st semester / ECTS: 6 Written exam
	ERP systems 2: Planning & Monitoring Systems /ILV / Course no.: ERP.2 / 2nd semester / ECTS: 3 Written exam
	ERP systems 3: Selection & Introduction /ILV / Course no.: ERP.3 / 3rd semester / ECTS: 4 Written exam
	ERP systems 4: Customizing, modification /ILV / Course no.: ERP.4 / 4th semester / ECTS: 3 Written exam

Module number:	**Social Skills**	**Scope:**	
SSK		**11**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	2nd semester		
	3rd semester		
Level	2nd semester: Master / third semester: Master		
Previous knowledge	2nd semester: not specified / 3rd semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Conflict Management & Negotiation Techniques /ILV / Course no.: SSK.1 / 3rd semester / ECTS: 3 Fisher, R., Ury W.L., Patton B.: Getting to Yes: Negotiating Agreement without Giving in. 29th Edition, Penguin Books, New York 2011 Glasl, F.: Konfliktmanagement. 7th edition, Stuttgart, 2004. Patterson, K., Grenny, J., McMillan R., Switzler, A: Crucial Confrontations: Tools for solve broken promises, violated expectations and bad behavior. McGraw-Hill, New York, 2005. Junk, S.: Wie wir klüger entscheiden: einfach - schnell - konfliktlösend, Styria Print, 2011 Rosenberg, M.: Gewaltfreie Kommunikation – Eine Sprache des Lebens., 12th edition. Junfermann Verlag, Paderborn, 2016. Schulz von Thun, F.: Miteinander Reden, Bd. 1: Störungen und Klärungen. Reinbek 1981		
	Project Management (E) /ILV / Course no.: SSK.2 / 2nd semester / ECTS: 4 Wysocki R., et al: Effective Project Management; Wiley 2013; 7th edition Sutherland J., Sutherland J.J.; Scrum: The Art of Doing Twice the Work in Half the Time; London; 2014 Schwaber and Sutherland, "The Scrum Guide" Goodpasture J.; Project Management the Agile Way: Making it Work in the Enterprise; Plantation; 2016 Kerzner H.; Project Management; Hoboken, 12th edition, 2017		
	Moderation & Presentation Techniques /ILV / Course no.: SSK.3 / 2nd semester / ECTS: 2 Seifert, J. W.; Visualisieren – Präsentieren – Moderieren. Der Klassiker; Offenbach 2013; 33rd edition Haussmann M.; bikablo 2.0: Neue Bilder für Meeting, Training & Learning; München, 2009 Haussmann M.; UZMO - Denken mit dem Stift: Visuell präsentieren, dokumentieren und erkunden; München, 2014		
	Change Management /ILV / Course no.: SSK.5 / 2nd semester / ECTS: 2 Doppler K., Lauterburg Ch.; Change Management: Den Unternehmens-wandel gestalten; Campus, 13th edition, 2014 Berner W.; Change!: 15 Fallstudien zu Sanierung, Turnaround, Prozess-optimierung, Reorganisation und Kulturverän-derung, Schäfer Poschl, 2nd edition, 2015 Kotter J:P:; Leading Change; Harvard; 2012		
Skills acquisition	Conflict Management & Negotiation Techniques /ILV / Course no.: SSK.1 / 3rd semester / ECTS: 3 The graduate, the student: Conflict management: * Can distinguish between types of conflict * Understands causes of conflicts * Recognizes escalation of conflicts * Can apply conflict resolution techniques Negotiation techniques * Knows communication models * Knows characteristics of supportive communication * Can give feedback * Knows characteristics of solution-oriented negotiations		
	Project Management (E) /ILV / Course no.: SSK.2 / 2nd semester / ECTS: 4 The graduate, the student: * Knows project management techniques * Knows project stages and project results * Can plan project goals, scope, tasks, duration and resources * Knows roles and participants in projects * Can design a project organization * Can lead project meetings * Can monitor progress in projects * Can communicate with stakeholders * Knows IT support for project management * Knows the benefits of frameworks such as PMA and PMI * Knows tasks and techniques of multi-project management		
	Moderation & Presentation Techniques /ILV / Course no.: SSK.3 / 2nd semester / ECTS: 2		

	The graduate, the student: Presenting: * Is familiar with the structure of a presentation * Knows principles for the use of classical presentation media * Knows how to use presentation media (flipchart, pinboard, ppt) * Knows principles for effective visualization (moderation font and pictograms)
Skills acquisition	* Can produce presentation documents (flipchart, Power Point) * Knows the basics of presentation rhetoric * Knows techniques regarding stance, voice, language and knows his or her characteristics and strengths in a presentation Moderating: * Can plan and prepare workshops in a target-oriented way * Knows the phases of a moderation * Knows what is important when moderating a workshop * Knows the classic moderation techniques (card request, flashlight, icebreakers)
	Change Management /ILV / Course no.: SSK.5 / 2nd semester / ECTS: 2 The graduate, the student: * Knows the importance of change management for improving processes and for the introduction of ERP systems * Knows the most important approaches, models and terms * Understands the individual and social aspects of change and knows the main causes of resistance and conflicts * Knows process models or methods, techniques and tools for change management * Can integrate the topic of change management in change projects and can apply process models or methods, techniques and tools to specific practical cases
Course contents	Conflict Management & Negotiation Techniques /ILV / Course no.: SSK.1 / 3rd semester / ECTS: 3 Conflict management: * Causes of conflicts * Methods for dealing with conflicts Negotiation techniques: * Solution-focused communication * Non-violent communication * Discussion of classic negotiation models
	Project Management (E) /ILV / Course no.: SSK.2 / 2nd semester / ECTS: 4 Project Management Basics with focus on process improvement and ERP implementation * Setting up a project (goals, scope, timeline, etc.) * Planning project results, tasks, time and resources * Installing a project team and communicating with stakeholders * Managing results, risks, quality, time and budget Agile Project Management Methods: * Challenges in traditional project management * Scrum framework and agile approach and principles * Agile artifacts (Scrum, sprints, backlogs, dailies, retro, etc.) * Release management in agile projects * Hybrid project management methods
	Moderation & Presentation Techniques /ILV / Course no.: SSK.3 / 2nd semester / ECTS: 2 * Moderation writing exercises, flipchart design, pin board layout, pictogram design, standard visualizations * Feedback on stance, voice, speaking, type of presentation and intervention in disruptions * Interdisciplinary presentation and moderation techniques, dialog presentations * All presentations and moderations as exercises in small groups; each participant presents and moderates as an experience in their own right
	Change Management /ILV / Course no.: SSK.5 / 2nd semester / ECTS: 2 * Importance of change management * Individual and social aspects of change * Resistance, conflict and crisis * Basic approaches to change management * Types of change * Models of change (e.g. Lewin, GE-CAP, etc.) * (Project) management of change: Generic phase model and integration in projects * Techniques and tools of change (e.g. target circle, change stretch, WIIFM, Empathy Map, etc.)
Teaching and learning methods	Conflict Management & Negotiation Techniques /ILV / Course no.: SSK.1 / 3rd semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
	Project Management (E) /ILV / Course no.: SSK.2 / 2nd semester / ECTS: 4 Lecture, group work, presentation and discussion of tasks
	Moderation & Presentation Techniques /ILV / Course no.: SSK.3 / 2nd semester / ECTS: 2

	Lecture, group work, presentation and discussion of tasks
	Change Management /ILV / Course no.: SSK.5 / 2nd semester / ECTS: 2 Lecture, individual work, group work, presentation and discussion of tasks
Evaluation Methods Criteria	Conflict Management & Negotiation Techniques /ILV / Course no.: SSK.1 / 3rd semester / ECTS: 3 Presentation

Evaluation Methods Criteria	Project Management (E) /ILV / Course no.: SSK.2 / 2nd semester / ECTS: 4 Written exam
	Moderation & Presentation Techniques /ILV / Course no.: SSK.3 / 2nd semester / ECTS: 2 Presentation
	Change Management /ILV / Course no.: SSK.5 / 2nd semester / ECTS: 2 Examination and presentation

Module number:	**Data management**	**Scope:**	
DAT		**11**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	2nd semester		
	3rd semester		
Level	2nd semester: Master / third semester: Master		
Previous knowledge	2nd semester: not specified / 3rd semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Data Engineering for ERP systems (E) /ILV / Course no.: DAT.1 / 2nd semester / ECTS: 5 Ramez E., Shamkant N.; Fundamentals of database systems, Prentice Hall, 2016 Connolly Th. et al.; Database Systems; Addison-Wesley; 4th edition. 2004 Dyche J.; e-Data; Addison-Wesley; 2000 Bauer A., Günzel, H.; Data Warehouse Systeme; dpunkt; 2013 Clausen N.; OLAP; Addison-Wesley; 1998 Messerschmidt H., Schweinsberg K.; OLAP mit dem SQL Server; dpunkt; 2003		
	Business Intelligence & Analytics (E) /ILV / Course no.: DAT.2 / 3rd semester / ECTS: 6 Runkler Th.; Information Mining; vieweg; 2000 Langit L.; Smart Business Intelligence Solutions with Microsoft SQL Server; Microsoft Press; 2008 Petersohn H.; Data Mining; Oldenbourg; 2005 Provost F., Fawcett T.; Data Science for Business; O'Reilly; 2013 Milton M.; Head First Data Analysis; O'Reilly; 2009 van der Aalst W. M.P.; Process Mining – Data Science in Action; Heidelberg; 2016;. 2nd edition		
Skills acquisition	Data Engineering for ERP systems (E) /ILV / Course no.: DAT.1 / 2nd semester / ECTS: 5 The graduate / the student: * Knows the ERP specific requirements for data * Can design databases (e.g. normalize data) * Can implement databases (e.g. indexing, partitioning) * Knows components of database hardware * Knows how to backup databases * Knows how to assign access rights * Knows methods to ensure data availability * Knows criteria to increase database performance * Knows the most important database vendors * Knows the lifecycle of data * Knows interfaces between databases and challenges		
	Business Intelligence & Analytics (E) /ILV / Course no.: DAT.2 / 3rd semester / ECTS: 6 The graduate / the student: Data warehousing: * Knows the importance of databases and data mining in the field of Business Intelligence (BI) * Knows applications of Business Intelligence * Can raise requirements for BI * Can transform business requirements into data models * Knows types of data and data interfaces * Can convert data into different formats * Knows the OLAP process Datamining / Data Science: * Knows techniques of data mining * Can display results of data mining * Can apply simple mining rules * Knows BI functionalities of ERP systems * Knows manufacturers of BI solutions Process Mining: * Knows goals of process mining * Knows prerequisites for process mining * Knows differences between data/process mining * Knows implementation challenges * Knows manufacturers of process mining software		
Course contents	Data Engineering for ERP systems (E) /ILV / Course no.: DAT.1 / 2nd semester / ECTS: 5 * Distributed databases * Managing distributed data (DDBMS) * Synchronization and recovery of data		

	* Databases for ERP systems
Course contents	Business Intelligence & Analytics (E) /ILV / Course no.: DAT.2 / 3rd semester / ECTS: 6 * Concepts of BI * Application of BI in the context of ERP * Methods of Data/Process Mining * Software to support Data/Process Mining
Teaching and learning methods	Data Engineering for ERP systems (E) /ILV / Course no.: DAT.1 / 2nd semester / ECTS: 5 Lecture, individual work with software, group work, presentation and discussion of tasks
	Business Intelligence & Analytics (E) /ILV / Course no.: DAT.2 / 3rd semester / ECTS: 6 Lecture, individual work with software, group work, presentation and discussion of tasks
Evaluation Methods Criteria	Data Engineering for ERP systems (E) /ILV / Course no.: DAT.1 / 2nd semester / ECTS: 5 Written exam
	Business Intelligence & Analytics (E) /ILV / Course no.: DAT.2 / 3rd semester / ECTS: 6 Written exam

Module number:	**Practical Transfer**	**Scope:**	
PXT		**7**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	2nd semester		
	3rd semester		
Level	2nd semester: Master / third semester: Master		
Previous knowledge	2nd semester: none / 3rd semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Practical Project /PT / Course no.: PXT.1 / 3rd semester / ECTS: 4 Wysocki R., et al: Effective Project Management; Wiley 2013; 7th edition Goodpasture J.; Project Management the Agile Way: Making it Work in the Enterprise; Plantation; 2016		
Skills acquisition	Practical Project /PT / Course no.: PXT.1 / 3rd semester / ECTS: 4 The graduate, the student: * Can lead IT and process improvement projects * Can structure projects/project teams (results, times, resources) * Knows the tasks and responsibilities as a project team member		
	Study trip (E) /ILV / Course no.: PXT.2 / 2nd semester / ECTS: 3 The graduate, the student: * Knows cultural/country-specific characteristics of corporate organizations * Knows cultural influences on process improvement projects * Knows country-specific differences in the selection and implementation of ERP systems		
Course contents	Practical Project /PT / Course no.: PXT.1 / 3rd semester / ECTS: 4 * Working through a specific project in the field of ERP systems/process management with a real client from the field in a team * Carrying out IT/process analysis * Working out the system specification/technical specification/performance specification or process improvement solutions * Preparation of all relevant project (process) documents and product documents		
	Study trip (E) /ILV / Course no.: PXT.2 / 2nd semester / ECTS: 3 * Cultural/country-specific characteristics of corporate organizations * Cultural influences on process improvement projects * Country-specific differences in the selection and implementation of ERP systems		
Teaching and learning methods	Practical Project /PT / Course no.: PXT.1 / 3rd semester / ECTS: 4 Group work		
Evaluation Methods Criteria	Practical Project /PT / Course no.: PXT.1 / 3rd semester / ECTS: 4 Project		
	Study trip (E) /ILV / Course no.: PXT.2 / 2nd semester / ECTS: 3 Report		

Module number:	Elective subject	Scope:	
WPF		11	ECTS
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	3rd semester		
	4th semester		
Level	3rd semester: 2. Study cycle, Master / 3rd semester: Master / third semester: Master's course / 4th semester: Master / 4th semester: Master's course / 4th semester: Master's course		
Previous knowledge	3rd semester: none / 3rd semester: not specified / 3rd semester: No details / 3rd semester: no prerequisites/ 3rd semester: No prerequisites / 3rd semester: not applicable / 4th semester: none / 4th semester: not specified / 4th semester: no prerequisites / 4th semester: no prerequisites		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Quantitative Process & quality management (Six Sigma) (elective)* /ILV / Course no.: WPF.1 / 3rd semester / ECTS: 4 Töpferer, A.; Six Sigma Konzeption und Erfolgsbeispiele für praktizierende Null-Fehler-Qualität; Berlin/Heidelberg/New York 2007; 4th edition George M.; Rowlands D.; Price M.; Maxey J.; The Lean Six Sigma Pocket Toolbook; New York; 2005 Lunau St. (publisher); Six Sigma + Lean Toolset; 5th edition; Heidelberg; 2014		
	Trends in Data Science (elective)* /ILV / Course no.: WPF.10 / 4th semester / ECTS: 3 Due to the changeability of the content, only a few web sources are listed here as examples, which are currently strongly represented in the area of Data Science Trends: - Medium (2020): Towards Data Science (Ed. 1), online, https://towardsdatascience.com/. - KDNuggets (2020): Knowledge Discovery Nuggets (Ed. 1), online, https://www.kdnuggets.com/.		
	Trends in Smart Products(elective)* /ILV / Course no.: WPF.11 / 4th semester / ECTS: 3 Huber W.; Industrie 4.0 kompakt – Wie Technologien unsere Wirtschaft und unsere Unternehmen verändern: Transformation und Veränderung des gesamten Unternehmens; Wiesbaden; 2018 Iyer B., Venkatraman V.; "What comes after smart products?", Havard Business Review; 2015 Roth A.; Einführung und Umsetzung von Industrie 4.0: Grundlagen, Vorgehensmodell und Use Cases aus der Praxis; Wiesbaden; 2016		
	Trends in Web Technologies (elective) /ILV / Course no.: WPF.12 / 4th semester / ECTS: 3 PRIMARY LITERATURE: - European Journal of Information Systems - Information Systems Journal - Information Systems Research - Journal of AIS - Journal of Information Technology - Journal of MIS - Journal of Strategic Information Systems - MIS Quarterly		
	Application-oriented analysis platforms (elective)* /ILV / Course no.: WPF.2 / 3rd semester / ECTS: 4 PRIMARY LITERATURE: - Mishra, A. (2019): Machine Learning in the AWS Cloud: Add Intelligence to Applications with Amazon SageMaker and Amazon Rekognition (Ed. 1), Wiley, Chichester (ISBN: 978-1119556718) - Klinkenberg, R., Hofmann, M. (2016): RapidMiner (Ed. 1), Chapman and Hall, Farnham (ISBN: 978-1482205503) SECONDARY LITERATURE: - Lakshmanan, V. (2017): Data Science on the Google Cloud Platform: Implementing End-to-End Real-Time Data Pipelines: From Ingest to Machine Learning (Ed. 1), O'Reilly Media, Farnham (ISBN: 978-1491974537)		
	Internet of Things (elective)* /ILV / Course no.: WPF.3 / 3rd semester / ECTS: 4 Perry L.; Internet of Things for Architects: Architecting IoT solutions by implementing sensors, communication infrastructure, edge computing, analytics, and security; Birmingham; 2018 Sinclair B.; IoT Inc: How Your Company Can Use the Internet of Things to Win in the Outcome Economy; 2017 Thomas O., Nüttgens M., Fellmann M. (editor); Smart Service Engineering: Konzepte und Anwendungsszenarien für die digitale Transformation; Wiesbaden; 2017		
	Business Platforms & Cloud Computing (elective)* /ILV / Course no.: WPF.4 / 3rd semester / ECTS: 4 PRIMARY LITERATURE: - Erl, T., Puttini, R., Mahmood, Z: Cloud Computing: Concepts, Technology and Architecture. 2013 - Jackson, K., Goessling, S.: Architecting Cloud Computing Solutions: Build cloud strategies that align technology and economics while effectively managing risk. 2018 - Evans, D., Schmalensee, R.: Matchmakers: The New Economics of Multisided Platforms. 2016		
	Process Automation (elective)* /ILV / Course no.: WPF.5 / 3rd semester / ECTS: 4 Reicher M., Weber B.: Enabling Flexibility in Process-aware Information Systems, Springer 2012, chapters 2-4 Quarre, F.: Robotic Process Automation, O'Reilly, 2019 Critchley, S.; Dynamics 365 CE Essentials: Administering and Configuring Solutions, Apress; 2018 Yapa, S.; Customizing Dynamics 365: Implementing and Releasing Business Solutions, Apress; 2019		

	Salatino, M., Aliverti, E.: jBPM 6 Developer Guide; Packt Publishing, 2014 Allweyer, Thomas: BPMN 2.0 - Business Process Model and Notation: Einfuehrung in den Standard fu?r die Geschaeftsprozessmodellierung.- Books on Demand, 2015
	Data Visualization & Visual Analytics (elective)* /ILV / Course no.: WPF.6 / 3rd semester / ECTS: 4 PRIMARY LITERATURE: - Chang, W. (2013): R Graphics Cookbook: Practical Recipes for Visualizing Data (Ed. 1), O'Reilly, Farnham (ISBN: 978-1449316952) - Chen, C.; Härdle, W. K.; Unwin, A. (2008): Handbook of Data Visualization (Ed. 1), Springer, Berlin (ISBN: 978-3-662-50074-3) SECONDARY LITERATURE: - Dale, K. (2016): Data Visualization with Python and Javascript: Scrape, Clean, Explore and Transform Your Data (Ed. 1), O'Reilly, Farnham (ISBN: 978-1491920510) - Murray, S. (2017): Interactive Data Visualization for the Web: An Introduction to Designing with D3 (Ed. 2), O'Reilly, Farnham (ISBN: 978-1491921289)
	Agile Product Development (elective)* /ILV / Course no.: WPF.7 / 3rd semester / ECTS: 4 Pfeffer J.; Produkt-Entwicklung: Lean and Agile; Munich; 2019 Schröder A.; Agile Produktentwicklung: Schneller zur Innovation – erfolgreicher am Markt; 2018
	Human-Computer Interaction (elective)* /ILV / Course no.: WPF.8 / 3rd semester / ECTS: 4 - A. Dix, J. Finlay, G.D. Abowd, R. Beale: Human-Computer Interaction.Third Edition, Prentice Hall 2003, ISBN 978-0130461094 - Cooper, Reimann, and Cronin; About Face 3: The Essentials of Interaction Design; Wiley, 2007. ISBN 0470084111 - Lazar, Feng, and Hochheiser; Research Methods in Human-Computer Interaction; Wiley, 2010. ISBN 0470723378 - Stone, Jarrett, Woodruffe, and Minocha; User Interface Design and Evaluation; Morgan Kaufmann, March 2005. ISBN 0120884364 - A. Kerren, A. Ebert, J. Meyer: Human-Centered Visualization Environments.Springer 2007, ISBN 978-3540719489 - Sarodnick, F., & Brau, H.: Methoden der Usability-Evaluation. Bern: Hans Huber, 2011. - Shneiderman, B., and Plaisant, C.: Designing the user interface (5th ed.). Boston: Addison-Wesley, 2009. - Nielsen, Jakob: Designing Web Usability, engl. Issue, Market and Technology, 2004
	Trends in ERP (elective)* /ILV / Course no.: WPF.9 / 4th semester / ECTS: 3 not specified
Skills acquisition	Quantitative Process & quality management (Six Sigma) (elective)* /ILV / Course no.: WPF.1 / 3rd semester / ECTS: 4 The graduate, the student: * Knows the basics of descriptive and conclusive statistics * Knows how to examine measurement setups for repeatability and reproducibility * Can calculate sample sizes * Can control the stability of process results using statistical control methods * Can evaluate the ability of processes to meet customer requirements * Knows methods to search for the causes of result deviations using test procedures * Knows the basic functions of the Minitab statistics software * Can use Minitab in process analysis
	Trends in Data Science (elective)* /ILV / Course no.: WPF.10 / 4th semester / ECTS: 3 The following learning outcomes are developed in the course: - Students are familiar with current thematic trends in the field of data science. - Students are familiar with current technological developments in the field of data science. - Students are familiar with current practical issues in the field of data science.
	Trends in Smart Products (elective)* /ILV / Course no.: WPF.11 / 4th semester / ECTS: 3 The graduate / the student: * Is familiar with concepts of smart applications such as Smart House, Smart City, Smart Production, Connected Vehicles etc. * Knows the latest trends in the field of these applications
	Trends in Web Technologies(elective)* /ILV / Course no.: WPF.12 / 4th semester / ECTS: 3 The following learning outcomes are developed in the course: - Students will be aware of current thematic trends in the field of web technologies and applications. - Students are familiar with current technological developments in the field of web technologies and applications. - Students are familiar with current practical issues in the field of web technologies and applications.
	Application-oriented analysis platforms (elective)* /ILV / Course no.: WPF.2 / 3rd semester / ECTS: 4 The following learning outcomes are developed in the course: - Students are familiar with a range of application-oriented analysis platforms (e.g. KNIME, RapidMiner, Grafana). - Students can compare the analysis platforms they have learned with regard to their suitability for a specific application. - Students have gained first application experience with the platforms presented.
	Internet of Things (elective)* /ILV / Course no.: WPF.3 / 3rd semester / ECTS: 4

	The graduate, the student: * Knows basic IOT architectures * Knows methods of data generation * Knows basics of data transmission * Knows options of data storage * Knows forms of data visualization * Understands challenges of data security
	Business Platforms & Cloud Computing (elective)* /ILV / Course no.: WPF.4 / 3rd semester / ECTS: 4 The following learning outcomes are developed in the course: - Students will know common business platforms. - Students will know the advantages and disadvantages of business platforms and can select suitable platforms. - Students will know the basics of cloud computing and cloud platforms. - Students know how to define interfaces and how to use them.
	Process Automation (elective)* /ILV / Course no.: WPF.5 / 3rd semester / ECTS: 4 The graduate, the student: * Knows challenges in process automation * Can select processes for automation * Knows procedures and factors for successful process automation * Can create process automation in selected software * Knows interfaces to ERP and CRM systems * Knows procedures for interprocess communication and can implement them * Knows the basic structure of cloud computing-based IT applications for process automation in the operational environment using Microsoft Dynamics 365 as an example * Knows basic and advanced functionalities of process automation under Microsoft Dynamics 365 * Can implement browser and app-based UIs for process automation using Microsoft technologies as an example
	Data Visualization & Visual Analytics (elective)* /ILV / Course no.: WPF.6 / 3rd semester / ECTS: 4 The following learning outcomes are developed in the course: - Students will have basic knowledge of data visualization and visual communication. - Students can develop visualizations independently and use them for communication purposes. - Students can work with different presentation tools and presentation libraries to present data and analysis results in a meaningful way.
	Agile Product Development (elective)* /ILV / Course no.: WPF.7 / 3rd semester / ECTS: 4 The graduate / the student: * Knows agile process methods * Knows organizational roles in the agile process * Knows the flow of an agile project (sprints, dailies, demos, retros) * Can coach an agile project (e.g. question techniques) * Knows the experiences of agile projects from software development * Knows the challenge of developing smart products * Knows methods of product development (e.g. FMEA, TRIZ) * Knows advantages of hybrid process methods * Knows the role of management in the agile process
	Human-Computer Interaction (elective)* /ILV / Course no.: WPF.8 / 3rd semester / ECTS: 4 Graduates know the basics of designing web-based or mobile interaction interfaces and are able to apply them independently in the context of interactive systems. In this context, graduates acquire knowledge of the basic concepts of the work and research field of human-computer interaction: Usability, user experience and user interface design. Graduates acquire the basic knowledge to design interactive applications according to a human-centred design process and to analyze and evaluate user interfaces with usability evaluation methods.
	Trends in ERP (elective)* /ILV / Course no.: WPF.9 / 4th semester / ECTS: 3 The graduate / the student: * Knows current trends in the field of ERP systems
Course contents	Quantitative Process & quality management (Six Sigma) (elective)* /ILV / Course no.: WPF.1 / 3rd semester / ECTS: 4 * Basics of Descriptive Statistics * Measurement System Analysis * Sampling * Statistical Process Control * Process Control Charts * Process Capability Analysis * Components of Variants Analysis (COV) * Repetition Basics of Concluding Statistics * Failure Cause Determination via Hypothesis Testing (T-test, Chi-Sq, ANOVA) * Multiple Regression Analysis
	Trends in Data Science (elective)* /ILV / Course no.: WPF.10 / 4th semester / ECTS: 3 The contents of this course are not set, but will be adapted to the current prevailing trends. Content examples may include: - New technologies in the field of Big Data Processing - Trends in programming languages in data analysis

	- New concepts of data processing (e.g. Data Lake) - New questions in the field of data science research - New questions in data science practice
	Trends in Smart Products(elective)* /ILV / Course no.: WPF.11 / 4th semester / ECTS: 3 * Current best practice approaches and concepts in application areas (e.g. Smart Home, Smart City, Smart Production, Connected Vehicles, etc.) * Current best practice approaches with regard to development processes and tools * Current research and development activities or research and development results
	Trends in Web Technologies(elective)* /ILV / Course no.: WPF.12 / 4th semester / ECTS: 3 The contents of this course are not set, but will be adapted to the current prevailing trends. Content examples may include: - New technologies in the field of web architectures - Trends in the field of programming languages on the web - New design concepts in the field of web applications - New questions in the field of research in web technologies and applications - New questions in the field of web development practice
	Application-oriented analysis platforms (elective)* /ILV / Course no.: WPF.2 / 3rd semester / ECTS: 4 The following content is discussed in the course: - Presentation of different user-oriented analysis platforms (e.g. KNIME, RapidMiner, Grafana) - Presentation of different cloud solutions for data analysis (e.g. Google Cloud, AWS, Azure) - Application of the platforms presented using the example of analysis data sets - Discussion of the different approaches
	Internet of Things (elective)* /ILV / Course no.: WPF.3 / 3rd semester / ECTS: 4 Introduction * IoT architecture (e.g. reference models) * Requirements for IOT systems * IOT data transmission protocols * Use of IOT in an industrial context (examples) * Basics of sensor technology * Basics of embedded systems Implementation * Procedure for implementing IOT * Prototypical implementation of IOT * Selection of sensors * Collection, visualization and evaluation of data * Implementation challenges
	Business Platforms & Cloud Computing (elective)* /ILV / Course no.: WPF.4 / 3rd semester / ECTS: 4 Students are given an overview of common business platforms and cloud computing. In addition, the advantages and disadvantages of the respective platforms are discussed. Students are therefore able to select suitable platforms for a given problem. Students gain practical experience with selected platforms using case studies. In addition, methods for defining interfaces are discussed with the students.
	Process Automation (elective)* /ILV / Course no.: WPF.5 / 3rd semester / ECTS: 4 * Basic terms: Business process, workflow, BPMS, WFMS, RPA, etc. * Selection criteria for workflow engines for process automation * Architecture and integration of workflows for process automation * Overview of interprocess communication * Transactional properties of processes, simulation and code generation * Basics of Microsoft Dynamics 365: Modules and navigation, basic entities and standard workflows * Organizational and technical implementation with configuration and declarative programming
	Data Visualization & Visual Analytics (elective)* /ILV / Course no.: WPF.6 / 3rd semester / ECTS: 4 The following content is discussed in the course: - Evaluation tools with visual orientation, e.g. Bl tools such as MS PowerBl, Tableau, QlikView - Display libraries, e.g. matplotlib.pyplot, gglot2 - Rules of visual communication, e.g. Hichert SUCCESSSS
	Agile Product Development (elective)* /ILV / Course no.: WPF.7 / 3rd semester / ECTS: 4 * Overview of agile process methods * Roles in the agile process * Running an agile project (sprins, dailies, demos, retros) * Coaching an agile project (e.g. question techniques) * Experience with agile projects from software development * The challenge of developing smart products * Methods of product development (e.g. FMEA, TRIZ) * Advantages of hybrid process methods * Role of management in the agile process

	Human-Computer Interaction (elective)* /ILV / Course no.: WPF.8 / 3rd semester / ECTS: 4 The lecture teaches basic concepts from the field of human-computer interaction (usability, user experience, user interface design) and information visualization. This includes the following focal points: User interface architectures; design criteria, guidelines and standards for the creation and modelling of user interfaces of interactive systems; approaches and methods (quantitative and qualitative) for the evaluation of user interfaces of interactive systems; web style guides and evaluation criteria for websites (e.g. with regard to accessibility); basics of information presentation and data visualization; interactive information visualization; the theoretical lecture contents are prepared in the exercise using practical examples and implemented in a small project (usability evaluation) in a team.
	Trends in ERP (elective)* /ILV / Course no.: WPF.9 / 4th semester / ECTS: 3 * Current developments in the field of business application systems with special reference to ERP systems and business process management * Models, examples, best practice cases
Teaching and learning methods	Quantitative Process & quality management (Six Sigma) (elective)* /ILV / Course no.: WPF.1 / 3rd semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
	Trends in Data Science (elective)* /ILV / Course no.: WPF.10 / 4th semester / ECTS: 3 The following methods are used: - Lecture with discussion - Interactive workshop
	Trends in Smart Products(elective)* /ILV / Course no.: WPF.11 / 4th semester / ECTS: 3 Lecture, discussion, exercise
	Trends in Web Technologies(elective)* /ILV / Course no.: WPF.12 / 4th semester / ECTS: 3 The following methods are used: - Lecture with discussion - Interactive workshop
	Application-oriented analysis platforms (elective)* /ILV / Course no.: WPF.2 / 3rd semester / ECTS: 4 The following methods are used: - Lecture with discussion - Processing of exercises - Interactive workshop
	Internet of Things (elective)* /ILV / Course no.: WPF.3 / 3rd semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
	Business Platforms & Cloud Computing (elective)* /ILV / Course no.: WPF.4 / 3rd semester / ECTS: 4 Lecture, group work, presentation and discussion of tasks
	Process Automation (elective)* /ILV / Course no.: WPF.5 / 3rd semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
	Data Visualization & Visual Analytics (elective)* /ILV / Course no.: WPF.6 / 3rd semester / ECTS: 4 The following methods are used: - Lecture with discussion - Interactive workshop - Case studies
	Agile Product Development (elective)* /ILV / Course no.: WPF.7 / 3rd semester / ECTS: 4 Lecture, individual work with software, group work, presentation and discussion of tasks
	Human-Computer Interaction (elective)* /ILV / Course no.: WPF.8 / 3rd semester / ECTS: 4 Lecture, group work (project), presentation and discussion of tasks
	Trends in ERP (elective)* /ILV / Course no.: WPF.9 / 4th semester / ECTS: 3 Lecture, group work, presentation and discussion of tasks
Evaluation Methods Criteria	Quantitative Process & quality management (Six Sigma) (elective)* /ILV / Course no.: WPF.1 / 3rd semester / ECTS: 4 Written exam
	Trends in Data Science (elective)* /ILV / Course no.: WPF.10 / 4th semester / ECTS: 3

	Seminar thesis
	Trends in Smart Products(elective)* /ILV / Course no.: WPF.11 / 4th semester / ECTS: 3 Seminar thesis
	Trends in Web Technologies(elective)* /ILV / Course no.: WPF.12 / 4th semester / ECTS: 3 Seminar thesis
	Application-oriented analysis platforms (elective)* /ILV / Course no.: WPF.2 / 3rd semester / ECTS: 4 Seminar thesis
	Internet of Things (elective)* /ILV / Course no.: WPF.3 / 3rd semester / ECTS: 4 Written exam
	Business Platforms & Cloud Computing (elective)* /ILV / Course no.: WPF.4 / 3rd semester / ECTS: 4 Seminar thesis
	Process Automation (elective)* /ILV / Course no.: WPF.5 / 3rd semester / ECTS: 4 Written exam
Evaluation Methods Criteria	Data Visualization & Visual Analytics (elective)* /ILV / Course no.: WPF.6 / 3rd semester / ECTS: 4 Seminar thesis
	Agile Product Development (elective)* /ILV / Course no.: WPF.7 / 3rd semester / ECTS: 4 Written exam
	Human-Computer Interaction (elective)* /ILV / Course no.: WPF.8 / 3rd semester / ECTS: 4 Seminar thesis
	Trends in ERP (elective)* /ILV / Course no.: WPF.9 / 4th semester / ECTS: 3 Seminar thesis

Module number:	**Master thesis**	**Scope:**	
MAS		**26**	**ECTS**
Degree program	University of Applied Sciences Master's course - ERP Systems and Business Process Management Part-time		
Position in the curriculum	3rd semester		
	4th semester		
Level	3rd semester: Master / 4th semester: Master		
Previous knowledge	3rd semester: not specified / 4th semester: not specified		
Blocked	no		
Participant group	Bachelor graduates, beginners		
Literature recommendation	Academic Methods /SE / Course no.: MAS.1 / 3rd semester / ECTS: 2 Atteslander, P.; Methoden der empirischen Sozialforschung (13. A.). Berlin: Erich Schmidt Verlag; 2010 Bänsch, A.; Wissenschaftliches Arbeiten (11. A.). Berlin: De Gruyter Oldenbourg; 2013 Mayring, P.; Die Praxis der Qualitativen Inhaltsanalyse (2. A.). Weinheim, Basel: Beltz Verlag; 2008 Theisen, M. R.; Wissenschaftliches Arbeiten: Technik - Methodik - Form (15. A.). Munich: Vahlen; 2011		
	Colloquium for the Master thesis /SE / Course no.: MAS.2 / 4th semester / ECTS: 2 Atteslander, P.; Methoden der empirischen Sozialforschung (13. A.). Berlin: Erich Schmidt Verlag; 2010 Bänsch, A.; Wissenschaftliches Arbeiten (11. A.). Berlin: De Gruyter Oldenbourg; 2013 Mayring, P.; Die Praxis der Qualitativen Inhaltsanalyse (2. A.). Weinheim, Basel: Beltz Verlag; 2008 Theisen, M. R.; Wissenschaftliches Arbeiten: Technik - Methodik - Form (15. A.). Munich: Vahlen; 2011		
	Master thesis /UE / Course no.: MAS.3 / 4th semester / ECTS: 22 Atteslander, P.; Methoden der empirischen Sozialforschung (13. A.). Berlin: Erich Schmidt Verlag; 2010 Bänsch, A.; Wissenschaftliches Arbeiten (11. A.). Berlin: De Gruyter Oldenbourg; 2013 Mayring, P.; Die Praxis der Qualitativen Inhaltsanalyse (2. A.). Weinheim, Basel: Beltz Verlag; 2008 Theisen, M. R.; Wissenschaftliches Arbeiten: Technik - Methodik - Form (15. A.). Munich: Vahlen; 2011		
Skills acquisition	Academic Methods /SE / Course no.: MAS.1 / 3rd semester / ECTS: 2 The graduate, the student: * Knows scientific methods * Can formulate research questions and create a disposition to a subject * Can work on a subject with scientific methods * Can research literature independently		
	Colloquium for the Master thesis /SE / Course no.: MAS.2 / 4th semester / ECTS: 2 The graduate, the student: * Knows how to conduct scientific reviews * Knows how to present results to a scientific community * Can critically review scientific findings		
	Master thesis /UE / Course no.: MAS.3 / 4th semester / ECTS: 22 The graduate / the student: * Can independently write a scientific paper on a specialist topic in the field of process management or ERP systems		
Course contents	Academic Methods /SE / Course no.: MAS.1 / 3rd semester / ECTS: 2 * Rules of academic methods * Methodical preparation of the students for preparing the Master thesis * Discussion of the scientific methodology of a Master thesis * Formal design of the Master thesis * Preparation of research hypotheses * Development of a disposition		
	Colloquium for the Master thesis /SE / Course no.: MAS.2 / 4th semester / ECTS: 2 * Accompanying the students during the preparation of the Master thesis. * In the colloquium, the question/hypothesis and structure of the Master thesis are presented and discussed. * In addition, the scientific methodology of the Master thesis is discussed and questioned and advice is given on the formal design of the Master thesis.		
	Master thesis /UE / Course no.: MAS.3 / 4th semester / ECTS: 22 Independent preparation and elaboration of a specialist topic in the field of business application systems or organization theory using scientific methods.		
Teaching and learning methods	Academic Methods /SE / Course no.: MAS.1 / 3rd semester / ECTS: 2 Lecture, individual work, presentation and discussion of tasks		
	Colloquium for the Master thesis /SE / Course no.: MAS.2 / 4th semester / ECTS: 2 Lecture, presentation and discussion of tasks		

Teaching and learning methods	Master thesis /UE / Course no.: MAS.3 / 4th semester / ECTS: 22 Student research project
Evaluation Methods Criteria	Academic Methods /SE / Course no.: MAS.1 / 3rd semester / ECTS: 2 Seminar thesis
	Colloquium for the Master thesis /SE / Course no.: MAS.2 / 4th semester / ECTS: 2 Presentation
	Master thesis /UE / Course no.: MAS.3 / 4th semester / ECTS: 22 Master thesis

2.4 Internship

Internship (semester information, duration in weeks per semester)	No

2.5 Semester Abroad

Obligatory semester abroad (semester specification)	No

3 ADMISSION REQUIREMENTS

The general admission requirements are regulated by section 4 of the FHG (Fachhochschule Studies Act) as amended, according to which the subject-related admission requirement for a Fachhochschule Master's course is a completed University of Applied Sciences Bachelor degree program relevant to the subject or the completion of an equivalent degree program at a recognized domestic or foreign post-secondary educational institution.

1. For the purposes of the present application, Bachelor programs or equivalent post-secondary educational qualifications that cover the core subjects of computer science or engineering or business administration to a total of at least 30 ECTS are considered relevant to the subject.
2. The FH Kufstein Tirol provides in its course architecture for a networking of the Bachelor and Master programs in the sense of the Bologna process: Following successful completion of a Bachelor program, graduates have several options for a Master's degree course at and outside the FH Kufstein Tirol. Graduates of the following FH Kufstein Tirol degree programs (irrespective of the organizational form) would be admitted to the present Master's course based on the above-mentioned professional qualifications:
    - Energy and Sustainability Management
    - Facility and

      Real Estate Management
    - International Business and Management
    - Business Management
    - Web Business and Technology
    - Industrial Engineering and Management

3. The languages of instruction and examination at the FH Kufstein Tirol are German and English across all degree programs. Students from non-German speaking countries must therefore provide appropriate evidence of their German language skills.
4. The examination of the fulfillment of the admission requirements is the responsibility of the program management of the ERP Systems and Business Process Management Master's course.