Fakultät für Wirtschaftswissenschaften

Wismar Business School

Master of Business Systems

Module Descriptions

2014

http://studip.hs-wismar.de

Wismar Business School

Master of Business Systems

Aim

This Masters-Programme is primarily designed to develop participants who wish to take greater control over, and make a more direct contribution to change in their organisations via the development and implementation of information systems. Such managers will also wish to improve their knowledge of management and organisations, allowing them to better understand the context of information systems. Professionals who wish to improve the success rate of the information systems they develop may also wish to 'mainstream' their career path by upgrading their management skills and knowledge.

**The Master's Degree of Business Systems (MBS) will be awarded by
Wismar University, University of Technology Business and Design, Wismar, Germany.**

Duration:	2 years (4 Semester)
Prerequisites:	Bachelor degree in Business Administration or similar
Content:	Information Technology in Business – Management – Computer Science – Social Skills
Specialities:	Focus on information technology from the business perspective, distance learning, workplace related, project work integrated, Master Thesis requires an oral defence
Web:	Hochschule Wismar: www.hs-wismar.de Wismar Business School: www.wi.hs-wismar.de WINGS – Wismar International Graduation Service: www.wings.hs-wismar.de
Contact:	Uwe Lämmel, Prof. Dr.-Ing.; uwe.laemmel@hs-wismar.de ☎ +49 3841 753-7617 www.wi.hs-wismar.de/uwe.laemmel
Mail address:	Hochschule Wismar, University of Technology, Business and Design Wismar Business School Post Box 1210, D-23952 Wismar, Germany
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Wismar Business School

Master of Business Systems

Curriculum

The first year programme is aimed at training the student in managerial skills required in technology-oriented companies. In addition to basic courses in project management, information systems knowledge management and business systems, there is a course specifically addressing the question of communicating between engineers or other technical personnel and non-technical professionals. The course allows the student to choose one elective from the list below. Graduates from this course should have acquired skills allowing them assess the merits of IT investment, manage companies that heavily use and/or do business with IT technology, and to integrate the talents and knowledge of all personnel for the benefit of the company's future activities.

The second year deepens the level of skills acquired in the first course, offering highly up-to-date issues in management and technology. It reinforces the skills through a business systems project to be completed in close contact with industry and elevates the student's studies to an advanced academic level through the thesis requirement. While requiring high academic standard in approach, argumentation, and presentation, the thesis will be about problems encountered in the real industrial world. It will show the student's ability to solve down-to-earth problems using scientific methods and his ability to use abstraction to such a degree that creative solutions showing new approaches and thought concepts emerge.

Successful completion of all the courses in the curriculum satisfies the requirements for a Master's Degree of Business Systems (MBS) to be awarded by Hochschule Wismar, University of Technology Business and Design, Wismar, Germany.

Schedule

Subjects Term	1.	2.	3.	4.
Information Technology in Business	5			
Business Process Design	5			
Project Management	5			
Integrative Industrial Thought	5			
Knowledge Management		5		
Database Systems and Data Management		5		
Computer Models for Business Decisions		5		
Business Systems Project 1		5		
Propaedeutic Research (optional)		–		
Software Systems Design and Development			5	
Enterprise Resource Planning Systems			5	
Business Systems Project 2			5	
Elective subject 1			5	
Elective Subject 2			5	
Master Thesis				25
ECTS[1] *:*	**20**	**20**	**25**	**25**

In the third term the student chooses two elective subjects. Possible subjects focus on management topics as well as on more information technology related topics.

Elective Subjects

Subjects Semester:	3.
Human Resource Information Systems	5
Marketing Decision Systems	5
Financing	5
Economic Policy	5
Applied e-Business	5
Contemporary Issues in Business Information Systems	5
Multimedia Applications in Business	5

A propaedeutic research is optional and is offered in the second semester. The propaedeutic research addresses proper approach to research and to scientific writing.

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[1] European credit points ECTS: European Credit Transfer System.

Master of Business Systems			
Module	Code	Credits	Semester
Information Technology in Business	**PM 01**	**5**	**1**

Responsible/ Lecturer	Uwe Lämmel, Prof. Dr.-Ing.	www.wi.hs-wismar.de/uwe.laemmel	++49(0)3841-753 7617
Language	English		
Curriculum	MBS core module		
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.		
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.		
Prerequisites	Computer skills like outlined in the European Computer Driving Licence (ECDL) or ICDL; Workplace experience with information technology systems.		
Goals/ Competencies	Students gain competence to understand the multiple opportunities for the application of information technology in business. Students learn to analyse existing information technology and to model processes or IT systems from the user's perspective using various types of diagrams. Students gain the competence to assess software solutions and to value the possibilities for an effective and efficient application of information systems to ensure the success of an organisation. Students get the ability to design and implement strategies for the processing and management of information technology and can value the social impact of information technology. Working on the topics trains self-management and personal responsibility.		
Content	Use of information technology, including hard- and software in an organization, including: – Basic notions like Computer Science, Informatics, Business Informatics (short), – Development of information systems to support business functions including software lifecycle models and various specification diagrams, like ERD, UML, or EPC. – Evaluation and assessment of software based on ISO criteria – Applications in an organisation; – Data privacy and data security Various systems are examined, with reference to their application and to their benefits for the organisation. Students' work place experiences are evaluated in terms of the evolving world of information technology systems.		
Assessment	Review of case study, application to course project or term paper and an oral presentation. Assessment details will be provided at the beginning of the course.		
Literature	Efraim Turban, R. Kelly Rainer, Richard E. Potter: Introduction to information technology. Wiley 2003 or newer; Other textbooks on information technology may work as well. Following the requirements of the European Qualification Framework (EQF) students will be encouraged to elaborate knowledge on their own by running a literature research on the topics addressed in the lecture notes or the set of slides.		
Notes			

Master of Business Systems			
Module	Code	ECTS	Semester
Business Process Design	**PM02**	**5**	**1**

Responsible/ Lecturer	Jan Helmke Prof. Dr. rer. pol. www.wi.hs-wismar.de/jan.helmke +49 3841 753 7541
Language	English
Curriculum	MBS Core module
Didactic	Private studies according to study notes including textbooks and internet sources. Workshops, case study, discussion group, application to course project. Support is given via the Stud.IP system including information, references, files, as well as various possibilities for communication are used like email, forum, chat, or wiki.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.
Prerequisites	Understanding of projects and their structure. Management and organisational experience.
Goals/ Competencies	Participant gain competencies in the analysis and the development of Business Process Models. They are able to apply methods and tools for analysing and modelling Business Processes. Participants use case studies for business process modelling. They can perform Business Process Re-engineering. Working on the topics trains self-management and personal responsibility.
Content	Business Process consists of a sequence of activities, necessary to fulfil a business task. Under this headline the following will be discussed:

– modelling of business processes by EPC

– reference models for business processes,

– the ARIS architecture

– start of the process: the As-IS-Analysis

– the on-going improvement process

– Business Process Re-Engineering (BPR)

– Continuous Process Improvement

In more detail:

Business Process Design at its best represents the fusion of information technology and management. Information Technology provides the infrastructure and tools, which fundamentally change organizations, but management provides the strategic business vision that transforms technology into competitive advantage. For Business Process Design to succeed two questions must be answered:

What is the strategic vision for the enterprise?

How to get from here to there?

These questions will be answered in the following four primary aspects of Business Process Design:

(1) Strategic Visioning

No matter how powerful an organization's technology is or how effectively you employ management strategies, if you are headed in the wrong direction you won't

succeed. Strategic visioning is essential to any level of organizational transformation and functioning.

(2) Challenge of Business Process Design

Business Process Design is about the simplification of work to achieve higher quality, better results for customers, and lower costs. It is about replacing manual processes with automation, eliminating unnecessary bureaucracy, streamlining and minimizing handoffs across departments, providing the right information at the right time to the right people, eliminating unnecessary work, reducing unnecessary controls, empowering every employee, and getting it right the first time.

(3) Business Process Modelling

This chapter describes the search of a general BPM application architecture that is conceptually comprehensible and meets real-world requirements.

(4) Change methodologies

There are two fundamentally different strategies: Process Improvement and Process Innovation. It is worth noting that no one methodology or approach is right for every organization and there are documented successes and failures for every transformational strategy.

(4a) Continuous Process Improvement (Kaizen)

This change strategy operates under the principle that excellence can be achieved by making a large number of small or incremental improvements continuously over time. The goal is to please both internal and external customers by improving the quality of both processes and outcomes. Work teams and individuals are encouraged and empowered to suggest and implement improvements using a structured set of tools and techniques to correctly identify and define both problems and solutions.

(4b) Business Process Reengineering (BPR)

The Business Process Reengineering method is described by Hammer and Champy as the fundamental reconsideration and the radical redesign of organizational processes, in order to achieve drastic improvement of current performance in cost, services and speed. Value creation for the customer is the leading factor for BPR and information technology often plays an important enabling role.

Assessment	Case study, term paper and oral presentation, application to course project. Assessment details will be provided during the first semester workshop
Literature	Baltzan, Paige; Phillips, Amy: Business Driven Information Systems; 4 th Ed. 2013
	Davis, Rob; Brabänder, Eric: ARIS Design Platform, Getting Started with BPM 2007
	Jeston, John; Nelis, Johan: Business Process Management: Practical Guidelines to Successful Implementations; 3rd Ed. 2014
Notes	

Master of Business Systems				
Module		Code	Credits	Semester
Project Management		**PM 03**	**5**	**1**

Responsible	Herbert Neunteufel www.wi.hs-wismar.de/herbert.neunteufel +49 172 895 7957 Prof. Dr. Dr.
Lecturer	Prof. Dr. Dr. Neunteufel Dr. Roger Silberberg rbs@netactive.co.za +27 834 788 809
Language	English
Curriculum	MBS Core module
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.
Prerequisites	Understanding of projects and their structure. Management and organisational experience.
Goals/ competencies	The module provides a comprehensive understanding of project management and its application. Specifically, the student will be able to: • Analyse problems under real project conditions. • Apply project management tools. • Perform conceptual interpretation of project goals. The student will learn that the analysis, planning and definition of specific project goals derive from effective application of efficient and formal processes. The relevant knowledge of project organisation and comprehensive expertise in structuring projects are key competencies for a business analyst. This module teaches the methods and tools of project management that are core requirements for this function. The student will acquire the concepts of problem solving and systems development that are fundamental to the operation of the organisation, and will be able to apply these effectively. The student will also be able ensure that the organisation executes projects according to recognised project management practices.
Content	Study of project management through workshops and the application of project management techniques in a case study and to the course project. • Project management as an organisational tool • The project planning process as a steering mechanism • Organisational requirements and constraints • Modelling of project phases • Electronic project management
Assessment	Review of case study and an oral presentation; application to course project. Assessment details will be provided at the beginning of the course.
Literature	Information Technology Project Management, K Schwalbe, Thomson 3rd ed Systematic Project Management, Krauss and Westermann 3rd edition
Notes	

Master of Business Systems				
Module		Code	Credits	Semester
Project Management		**PM 03**	**5**	**1**

Responsible	Herbert Neunteufel www.wi.hs-wismar.de/herbert.neunteufel +49 172 895 7957 Prof. Dr. Dr.
Lecturer	Prof. Dr. Dr. Neunteufel Dr. Roger Silberberg rbs@netactive.co.za +27 834 788 809
Language	English
Curriculum	MBS Core module
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.
Prerequisites	Understanding of projects and their structure. Management and organisational experience.
Goals/ competencies	The module provides a comprehensive understanding of project management and its application. Specifically, the student will be able to: • Analyse problems under real project conditions. • Apply project management tools. • Perform conceptual interpretation of project goals. The student will learn that the analysis, planning and definition of specific project goals derive from effective application of efficient and formal processes. The relevant knowledge of project organisation and comprehensive expertise in structuring projects are key competencies for a business analyst. This module teaches the methods and tools of project management that are core requirements for this function. The student will acquire the concepts of problem solving and systems development that are fundamental to the operation of the organisation, and will be able to apply these effectively. The student will also be able ensure that the organisation executes projects according to recognised project management practices.
Content	Study of project management through workshops and the application of project management techniques in a case study and to the course project. • Project management as an organisational tool • The project planning process as a steering mechanism • Organisational requirements and constraints • Modelling of project phases • Electronic project management
Assessment	Review of case study and an oral presentation; application to course project. Assessment details will be provided at the beginning of the course.
Literature	Information Technology Project Management, K Schwalbe, Thomson 3rd ed Systematic Project Management, Krauss and Westermann 3rd edition
Notes	

Master of Business Systems			
Module	Code	Credits	Semester
Integrative Industrial Thought	**PM 04**	**5**	**1**

Responsible	Herbert Neunteufel www.wi.hs-wismar.de/herbert.neunteufel +49 172 895 7957 Prof. Dr. Dr.
Lecturer	Prof. Dr. Dr. Neunteufel Dr. Roger Silberberg rbs@netactive.co.za +27 834 788 809
Language	English
Curriculum	MBS Core module
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.
Prerequisites	Understanding of projects in general. Management and organisational experience.
Goals/ competencies	One view of technology is that it is just a collection of things. Objects and gadgets, or tools that people use in their work. A broader view of technology is the interaction of people and things. With this definition, the technical objects must be considered in the context of the social organization and the cultural understandings of the people that interact with them. Issues of use, maintenance, and appropriateness of a design take on much larger implications if the social and cultural context of a device's use is considered. Industry depends on management to lead, marketing to market, and engineering to produce and design products. Proponents of the three fields frequently have communications problems resulting in delays in getting products to market, deciding on the initiation of new product development, or in decisions concerning production, acquisition, investment. Companies that exhibit a close rapport between the three fields usually are more flexible and quicker in response to a changing business environment. The course will explore the differences in thought processes in management, marketing, and engineering (production and development) with the aim of enabling graduates not only to be able to communicate with their respective partners in such a way that knowledge and methods specific to their fields can be used to maximum efficiency for the benefit of the company. At the same time, bridging the communication gap will enable graduates to avoid irritations and misunderstandings leading to problems preventing optimal collaboration.

Content	- Role of Marketing, Management, and Engineering in the business environment - Function vs. Education, e.g. MBA's as managers vs. engineers as managers - Comparison of the process of problem analysis - Comparison of mutual perception of the professions - Mutual influences between the professions and the public - Philosophical basics of management, marketing, and engineering - Comparative Perception of problems and the approach to solving them - Characteristics of accepted solutions to problems in the three fields - Methodology and heuristics in management, marketing, and engineering (e.g. normative, argumentative, analytical) - Bridging the communications gap - Principles of Integrative Management
Assessment	Case study, term paper and an oral presentation, application to course project. Assessment details will be provided at the beginning.
Literature	Henry Petrowski: Invention by Design, Harvard University Press
Notes	The module is closely linked to the Project Management module

Master of Business Systems				
Module		Code	ECTS	Semester
Knowledge Management		**PM05**	**5**	**2**

Responsible/ Lecturers	Uwe Lämmel, Pro. Dr.-Ing. www.wi.hs-wismar.de/uwe.laemmel +49 3841-7537617 Jürgen Cleve, Prof Dr. rer. nat. www.wi.hs-wismar.de/~cleve +49 3841-7537527
Language	English
Curriculum	Core module in the degree programme Master of Business Systems
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hours self-study required.
Prerequisites	Understanding of projects and their structure. Management and organisational experience. Knowledge in Logic is helpful.
Goals/ Competencies	Students gain competencies in using information technology in knowledge management and in decision making including knowledge representation or mapping real-world situations into (semi-)formal notation. Students are able to apply computer-based knowledge processing, they know its possibilities, applications, and limits. Students learn to see knowledge processing as natural part of knowledge management. Knowledge management requires and trains creative work as well as social skills, since knowledge management includes knowledge sharing. Working on the topics trains self-management and personal responsibility
Content	Knowledge based systems in business applications. Knowledge representation and knowledge processing in business; • Knowledge based decision support systems; • Knowledge representation using business rules including rule engines and applications; • Knowledge management systems using knowledge networks, topic map, or ontologies: Knowledge extraction, knowledge presentation • other IT based knowledge management systems like semantic wiki-systems. By real-world application the process of knowledge management will be discussed.
Assessment	Review of case study, oral presentation and exam. Assessment details will be provided at the beginning of the semester.
Literature	No single textbook exists that covers all the topics addressed in this module. Following the requirements of the European Qualification Framework (EQF) students will be encouraged to elaborate knowledge on their own by running a literature research on the topics addressed in the lecture notes or the set of slides. Some sources: • Ian Graham: Business Rules Management and Service Oriented Architecture: A Pattern Language, Wiley 2007,ISBN: 0-470-02721-5 • The Business Rules Group: www.businessrulesgroup.org. • The JBOSS-DRULES-Project: Business Rules in Java:mandarax.sourceforge.net • Introduction into Topic Maps e.g. at: www.ontopia.net/topicmaps or www.i-views.de/ More references will be given in the learn management system Stud.IP
Notes	Topics are related to data management, business processes, or project management.

MASTER OF BUSINESS SYSTEMS			
Module	Code	ECTS	Semester
Database Systems and Data Management	**PM06**	**5**	**2**

Responsible/ Lecturer	Rüdiger Steffan, Prof. Dr.-Ing. www.wi.hs-wismar.de/ruediger.steffan +49(0) 3841-7537 606
Language	English
Curriculum	Core module in the degree programme Master of Business Systems
Didactic	Preparatory self-studies according to study guides and on-line tutorials. Students on this module are expected to pre-complete exercises using lecture notes, textbooks and internet sources.
	Workshops, case studies and advanced exercises. Independent continuing studies and application to a multidisciplinary course project. Scientific presentation of the results and examination.
	Support is given via student information systems including references and files, as well as various possibilities for communication like web-seminar, email, forum, chat, or wiki-pages.
Study effort	A permanent work on the topics along the semester is required. A full-day workshop. Case study requiring independent and focused attention. Approximately 110 hours self-study required.
Prerequisites	Basic understanding of operating system, database language (SQL) and relational concepts. The references and tutorials will help to prepare or refresh such fundamental database knowledge.
Goals/ Competencies	The module imparts general and multidisciplinary knowledge about database systems as well as advanced concepts and methods for data management. This covers alternative architectures and approaches, enterprise requirements including data security, structures and models for data exchange or integration, analytical information retrieval, web/cloud concepts as well as languages and methods for data modelling and database design especially for data warehouse systems. It is not the goal to get expertise in database administration or in-depth programming tasks.
	Based on strategic data management students obtain skills for making decisions about the right database environment for companies under scientific, social, ethical and business considerations. Another goal is to acquire inquisitive attitude towards research topics in database systems.
	Students will be able to apply the taught methodologies to selected business case studies and to communicate advanced concepts in database systems to other professionals. Competence sufficient to explain and to critique on different database types on a scientific base.
Content	Review the "big picture" of database systems and advanced data management.
	Database Architectures and Organizational Technologies:
	• Modern Database Architecture and Storage Concepts
	• Advanced Information Retrieval, Data Exchange and Data Integration
	• Cloud Data Management and Database Security
	Sophisticated Data Models and Business Decisions:
	• Advanced Conceptual Modeling, Design and Implementation for Business
	• Object-Relational and Multidimensional Techniques and Methods
	• Pervasive BI-Tools, Packaged Analytic Applications and Web Applications
	Hands-on case studies to apply the methods and techniques to business problems.
Assessment	Review of case study project, oral scientific presentation and exam.
	Assessment details will be provided during the first semester workshop.
Literature	• R. T. Watson: Data Management: Database & Organizations, Wiley, 2005.
	• R. Elmasri & S. Navathe: Fundamentals of Database Systems, Prentice Hall, 2010.
	• W. Lehner, K-U. Sattler: Web-Scale Data Management for the Cloud, Springer, 2013.
	• M. Golfarelli, S. Rizzi: Data Warehouse Design: Modern Principles and Methodologies, Mcgraw-Hill, 2009.
	• R. Kimball, M. Ross: The Data Warehouse Toolkit: The Definitive Guide to Dimensional Modeling, Wiley & Sons, 2013.
	• L. Ashdown, T. Kyte: Oracle Database Concepts 12.1, Oracle Corp., E17633-21, 2013.
	• Research Papers (provided during the lecture).
Notes	Topics are related to Business processes and management, Computer Models for Business Decisions and Knowledge Management.

Master of Business Systems			
Module	Code	Credits	Semester
Computer Models for Business Decisions	**PM07**	**5**	**2**

Responsible/ Lecturers	Prof. Dr. rer. nat. Jürgen Cleve Prof. Dr.-Ing. Uwe Lämmel	www.wi.hs-wismar.de/juergen.cleve www.wi.hs-wismar.de/uwe.laemmel	+49 3841-753-7527 +49 3841-753-7617
Language	English or German		
Curriculum	Core module in the degree programme Master of Business Systems		
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.		
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study requiring independent and focused attention. Approximately 110 hours self-study required.		
Prerequisites	Knowledge in mathematics to NQF level 5; skill in the application of spreadsheet software.		
Goals/ Competencies	Students gain competencies in the assessment of data mining potentials in business and the application of data analysis in business decision processes. Students learn the business value of data and gain competencies in knowledge extraction out of such data. Students learn to manage Data Mining projects. They know the "state of the art" in Data Mining. Participants gain competencies in all steps of a data mining process in business: Chances and benefits of data mining in business decisions or processes can be estimated; the quality of data and challenges related to the management of mass data can be assessed. Students know the pro and cons of various data mining techniques related to their application areas and know to assess and to present data mining results in order to motivate business decisions; Participants become aware about the possible dangers of data mining that can injure data privacy. Working on the topics and especially on the term paper task trains self-management and personal responsibility.		
Content	Five key areas are addressed: • Principles of data mining, • Types of data; structured, semi-structured, and unstructured data, • The data mining process as part of the decision process: data pre-processing, analysis and interpretation, • Various data mining techniques like classification, clustering, prognosis, or association rules are assessed, using typical real-world situations, • Assessment of results. All areas are expected to be addressed in project work. System used: • KNIME: Konstanz Information Miner, http://www.knime.org Other systems like RapidMiner or WEKA are mentioned and used as well.		
Assessment	Review of case study, oral presentation of results, exam. Assessment details will be provided at the beginning of the semester.		
Literature	Ian H. Witten, Eibe Frank, Mark A. Hall: Data Mining: Practical Machine Learning Tools and Techniques, 3rd ed, Morgan Kaufmann, 2011. Evans, James R. Statistics, Data Analysis, & Decision Modeling, Upper Saddle River: Pearson Education, 2007. Sander, J.; Ester, Martin: Knowledge Discovery in Databases. Springer, latest edition. Cleve, J.; Lämmel, U.: Data Mining, Hanser, 2014. Other books on Data Mining may work as well. Following the requirements of the European Qualification Framework (EQF) students will be encouraged to elaborate knowledge on their own by running a literature research on the topics addressed in the lecture notes or the set of slides.		
Note	The subjects relate to Knowledge Management, Database systems, and Integrated Business Systems (ERP).		

Master of Business Systems			
Module	Code	Credits	Semester
Business Systems Project	**PM 08/PM 11**	**5 / 5**	**2 and 3**

Responsible/ Lecturer	Uwe Lämmel, Prof. Dr.-Ing. www.wi.hs-wismar.de/uwe.laemmel +49 3841-753 7617
Language	English
Curriculum	MBS core module
Didactic	Self-management- application of project management skills; discussions at the workplace; Support is given via various communication channels, including email, forum, chat, or wiki. The project work is a major contribution to the workplace study approach of the MBS. Every student will be supervised by a faculty member who is a specialist in the topic of the project. The project work is a preparation for the master thesis.
Study effort	A full day workshop, approximately 100 hours self-study per semester is required. Focused work throughout the semester is required including communications as well with the supervisor as with colleagues.
Prerequisites	Skills as provided in the core modules of the MBS in the 1st semester
Goals/ Competencies	The student gain competencies in identifying and addressing real-world problems related to IT in business. The student gains the competence to apply information technology effectively and efficiently to ensure the success of the enterprise. Student's ability to solve down-to-earth problems using scientific methods will be improved. Communication skill will be trained in the necessary discussions at the workplace and in the presentation of the results to the class. Personal skills such as self-management are developed by working on a problem as a personal project.
Content	Students will complete a project in cooperation with industry. The project will focus on the application or the introduction of IT-technologies, or the adaptation or optimization of corporate processes to work seamlessly with IT-systems. A faculty member will simulate the contractor. Students will commence work on the project, the results of which, at its conclusion, are formally presented to their peers and the project supervisors. A final project report will have to be prepared.
Assessment	Project report and oral presentation
Literature	Literature on scientific writing, e.g.: Evans, Gruba: How to write a better thesis, Melbourne University Press, 2010. Supervisors will give literature hints related to the project topic.
Notes	The project aims at bringing all the subjects of the programme together.

Master of Business Systems				
Module	Code	Credits	SWS/Art	Semester
Software Systems Design and Development	**PM09**	**5**		**3**

Lecturers	Prof. Dr. oec. Erhard Alde www.wi.hs-wismar.de/erhard.alde +49 3841-753 7618
Language	English
Curriculum	MBS core module
Didactic	Lecture series, computer-supported presentations, internet, using software and process modelling tools, e-learning seminars, workshops and work on the project
Study effort	Lecture sessions plus regular and independent practice is essential. Approximately 125 hours' study required including 109 hours of independent study, test preparation and examination.
Prerequisites	▪ Knowledge of systems analysis and software development techniques ▪ Competence in project and personnel management ▪ Knowledge of business application systems
Goals/ Competencies	Software is a component of Business Systems. The module is based SSDD widened to previously acquired in the Bachelor's degree in economics and IT technical basic knowledge and skills in terms of the objectives of the program MBS and deepened. Special emphasis is on the required instrumental skills (especially the competence to participate in the design and development projects), systemic skills (especially the competence to manage design and development projects) and communicative competence (particularly focused on the work in interdisciplinary teams) placed. Focus is on achieving the following practical competencies: ▪ Justification of systems design applied to business information systems ▪ Capability for participating in the design of software development and implementation projects ▪ Capability for applying current design methodologies and tools
Content	The following main issues are addressed: ▪ Work packages of system development ▪ Software management ▪ Quality Management, Capability Maturity Model Integration (CMMI) ▪ Application of the Unified Modeling Language (UML) and the Business Process Model and Notation (BPMN) in systems development projects More detailed: 1. Software Engineering in the context of Business Systems 2. Typical business processes and the main use cases in a company 3. Modelling Processes (BPMN), Software (UML) and Architecture, Introduction into the Software Tool Signavio 4. Documentation standards, Introduction into the Software Tool Arc42
Assessment	A written examination of two hour duration, alternatively an oral examination or project work.
Literature	Allweyer, Thomas: BPMN 2.0, Introduction to the Standard for Business Process Modeling, Books on Demand Miles, Russ and Hamilton, Kim: Learning UML 2.0, O'REILLY Silver, Bruce: A Levels-Based Methodology for BPMN Process Modeling and Improvement, Cody-Cassidy Press Sommerville, Ian: Software Engineering, Pearson Education International Edition
Notes	

Master of Business Systems			
Module	Code	Credits	Semester
Enterpise resource Planning Systems	**PM 10**	**5**	**3**

Responsible	Prof Dr J Helmke www.wi.hs-wismar.de/jan.helmke +49 3841 753 7541
Language	English
Curriculum	MBS Core module
Didactic	Workshops, case study, discussion group, application to course project, individual study. Private studies according to study notes including literature research using textbooks, or other sources Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including term paper requires independent and focused attention. Approximately 110 hour self-study required.
Prerequisites	General understanding of business operations, Business process experience.
Goals/ Competencies	The purpose of this module is to examine some of the most important and interesting issues, cases, and ideas associated with ERP systems. It focuses on those issues that are critical to consultants and managers. This module does not impart only a theoretical analysis of ERP-systems. It contains also case studies with SAP ERP, the market leader of ERP-Systems in major corporations. The module imparts a fundamental understanding and also specific skills in the application of enterprise management systems, specifically: • Implementation of enterprise resource management systems • Customisation of enterprise resource management systems such as SAP ERP • Using of an ERP-system to gain a competitive advantage • Using of an ERP-system to achieve strategic goals of a company The student will understand and be able to: • adapt SAP ERP to specific business requirements based on case studies; • integrate business processes • manage implementation projects of ERP systems
Content	Enterprise Resource Planning (ERP) systems are the backbone of information systems in companies and administrations. This module includes the following contents: (1) Technology: A wide range of information and other technologies are necessary to drive ERP systems, including client server computing, networks, relational database systems and software concepts. (2) The market of ERP systems: This aspect examines who are the ERP vendors? Enterprise resource planning firms do not implement all the software they sell. Instead they typically work with a wide range of partners in order to implement the software. (3) Common features of ERP systems: ERP systems provide firms with transaction processing models that are integrated with other activities of the firm, such as production planning and human resources. By implementing standard enterprise

	processes, that spans the range of enterprise activities and locations, ERP systems provide integration across multiple locations and functional areas. (4) Choosing an ERP system: This chapter examines how firms choose between different ERP systems. Two primary approaches are used to guide ERP choice: requirement analysis and gap analysis. This chapter defines these approaches and examines the advantages and disadvantages of each. (5) Implementing ERP systems: Big Bang and Phased are the two primary approaches used to implement ERP systems. This chapter investigates what these terms mean. It also analyzes the choice of the implementation technology in light of organization size, complexity, and structure and in terms of the overall extent of the implementation. (6) Customization of ERP systems: An ERP system is an integrated information system that coordinates key internal processes of a firm across multiple functional areas. So adoption is a major challenge. What are the project factors that promote high customization? What are the environmental factors that promote high customization?
Assessment	Term paper, project work and oral presentation, alternatively a 2 hours written exam; assessment details will be fixed at the beginning of the semester
Literature	Leon, Alexis: Enterprise Resource Planning, 3rd Ed. 2014 Magal, Simha R.; Word, Jeffrey: Integrated Business Processes with ERP Systems 2011 Monk, Ellen; Wagner, Bret: Concepts in Enterprise Resource Planning, 4th Ed. 2013
Notes	

Master of Business Systems			
Module	Code	Credits	Semester
Thesis	**PM 14**	**25**	**4**

Responsible/ Lecturer	All faculty members
Language	English
Curriculum	Final module of the degree programme
Didactic	Self-management- application of project management skills; discussions at the workplace; Support is given via various communication channels, including email, forum, chat, or wiki. Students will be supervised by a faculty member who is a specialist in the topic of the thesis topic.
Study effort	Focused work on the research topic during the semester is required: Approximately 600 hours of working on the research topic and the dissertation including communication with the supervisor.
Prerequisites	All but one module have to be passed before the work on the thesis can begin:
Goals/ Competencies	The aim of a master thesis is defined in the examination regulations. The thesis should demonstrate that the candidate is able to work independently on a problem in his field within a given period using scientific methods. Candidates deepen their knowledge in the field related to the thesis´ topic and develop their competence in research. Personal skills are extended as well: self-management is developed by running the thesis research as a project. Writing and Communication skills are improved.
Content	A master thesis covers a question of scientific interest. By the master thesis the candidate demonstrates that he or she is capable solving a problem - autonomously - within a specified period and - by using scientific methods. The candidate shows that he or she is able to express his or her ideas and conclusions in a scientific text in a sensible and comprehensible manner. A scientific problem is characterized by the line of questioning. It is not a scientific contribution if someone limits himself to a description of research contributions achieved by other people. It is neither a scientific contribution if the course of a project is recorded. The work is scientifically as well if a practical question is answered, e.g. a question raised in industry, by applying scientifically accepted methods. The problem, the issue, or the question is then the »cause« of a scientific investigation.
Assessment	The master's thesis is an examination that concludes the study. The written thesis must be submitted on time to the Central Examination Office at the in triplicate. The dissertation is assessed by two examiners. The supervisor of the thesis is one of the examiners. In a colloquium the candidate has to present the result of his/her research and has to defend his/her thesis.
Literature	Literature on scientific writing, e.g.: Evans, Gruba: How to write a better thesis, Melbourne University Press, 2010. Supervisors will give literature hints related to the thesis topic.
Notes	See the examination regulation for administrative issues

MASTER OF BUSINESS SYSTEMS				
Module	Code	Credits	SWS/Art	Semester
Human Resource Information Systems	**EM01**	**5**		**3**

Responsible	Prof. Dr. oec. Erhard Alde www.wi.hs-wismar.de/erhard.alde +49 3841-753 7618
Language	English
Curriculum	MBS elective module
Didactic	Lecture series, computer-supported presentations, internet, software development, seminars, workshops and work on the project
Study effort	Lecture sessions plus regular and independent practice essential. Approximately 125 hours study required, 16h for contact session and online discussions and 109 to independent study, test preparation and examination.
Prerequisites	Understanding of human resource management, project management and business application systems. Understanding of Software Systems and Development
Goals/ Competencies	The student will develop a fundamental understanding of the development, implementation and application of human resource information systems both within and outside the human resource department. Specifically, application competence in the following areas is achieved: • Justification for the development and implementation of employee relationship management systems as an important application of business informatics • The ability to develop employee relationship management systems (development layer) • The ability to cooperate in the implementation of inter-disciplinary software projects (application layer)
Content	A Human Resource Information System (HRIS) is a software or online solution for the data entry, data tracking, and data information needs of the Human Resources, payroll, management, and accounting functions. The following issues are addressed: • Current concepts in the development and application of human resource information systems as an element of comprehensive and integrated enterprise application architectures. • Components of human resource information systems • The development of an employee relationship management system; • Application of Unified Modelling Language and Business Process Modelling Language tools in the development of human resource information systems; More detailed: 1. Trends in Human Resource Management: HR development, HR controlling, value creation orientation, Outsourcing 2. Functions in HRIS: HR business processes, payroll, staff work time logging, HR management, organisation development, recruiting, knowledge management 3. HRIS as part of ERP systems: architecture of ERP systems, integration into ERP systems, development models for ERP systems, market survey The systems are discussed referring to their applications and their benefits for the organization. Student's work experiences are put into the world of HRIS.
Assessment	Project work or alternative accomplishment (term paper) and oral presentation.
Literature	1. Richard Charles Starling: Checklist of Human Resource System Requirements: A Practical Workbook for Rapidly Specifying the Requirements of Your New Human Resource System 2. Alan Price: Human Resource Management in a Business Context 3. Society for Human Resource Management: HR Technology: Leveraging the Shift to Self-Service-It's Time to Go Strategic
Notes	

Master of Business Systems			
Module	Code	ECT	Semester
Marketing Decision Systems	**EM02**	**5**	**3.**

Responsible	Kai Heuer, Prof. Dr. rer. pol. www.wi.hs-wismar.de/kai.heuer +49 3841-753 7578
Language	English
Curriculum	Core module in the degree programme Master of Business Systems
Didactic	Private studies according to study notes including textbooks and internet sources. Workshops, case study, discussion group, application to course project. Support is given via the Stud.IP system including information, references, files, as well as various possibilities for communication are used like email, forum, chat, or wiki.
Study effort	A permanent work on the topics along the semester is required. A full-day workshop, online communications. Case study requiring independent and focused attention. Approximately 110 hours self-study required
Prerequisites	Understanding of projects and their structure. Management and organisational experience.
Goals/ Competencies	Participants gain skills in using information technology for decision situations in marketing. Participants learn to prepare and create market surveys and market analysis as well as to perform, evaluate and interpret it.
Content	Objectives of marketing research, marketing research processes, decision situations, Case studies for creating questionnaires, preparation and running of interviews and enquiries, data analysis, interpretation and representation of results, using software for the steps, connection to databases, data mining, knowledge management
Assessment	Review of case study, application to course project, and oral presentation. Assessment details will be provided during the first semester workshop
Literature	Will be provided at the beginning of the course.
Notes	

Master of Business Systems			
Module	Code	ECTS	Semester
Financing	**EM03**	**5**	**3**

Responsible	Kai Heuer, Prof. Dr. rer. pol. www.wi.hs-wismar.de/kai.heuer	+49 3841-753 7578
Language	English	
Curriculum	MBS Elective module	
Didactic	Private studies according to study notes including textbooks and internet sources. Workshops, case study, discussion group, application to course project. Support is given via the Stud.IP system including information, references, files, as well as various possibilities for communication are used like email, forum, chat, or wiki-pages.	
Study effort	A permanent work on the topics along the semester is required. A full-day workshop, online communications. Case study requiring independent and focused attention. Approximately 110 hours self-study required	
Prerequisites	---	
Goals/ Competencies	Participants recognise and understand the connections between the corporate concept of an organisation, the business plan and financing methods. They learn to use finance plans and hybrid financial instruments.	
Content	– Introduction (current value of money, risk and revenue, estimation of capital costs) – Decisions for investments – controlling of floating capital (Cash Management, account management, asset management) – financing decisions (structure of capital, financing instruments, financing of the financing the capital equipment, financing projects, decision on buy or lease)	
Assessment	Term paper assessment and oral presentation.	
Literature	Will be provided at the beginning of the semester.	
Notes		

Master of Business Systems			
	Code	ECTS	Semester
Economic Policy	**EM04**	**5**	**3.**

Responsible	Michael Schleicher, Prof. Dr. rer. pol.	www.wi.hs-wismar.de/michael.schleicher	+49 3841-753 7615
Language	English		
Curriculum	Elective module in the degree programme Master of Business Systems		
Didactic	Private studies according to study notes including textbooks and internet sources. Workshops, case study, discussion group, application to course project. Support is given via the Stud.IP system including information, references, files, as well as various possibilities for communication are used like email, forum, chat, or wiki-pages.		
Study effort	A permanent work on the topics along the semester is required. A full-day workshops, online communications. Case study requiring independent and focused attention. Approximately 110 hours self-study required		
Prerequisites			
Goals/ Competencies	Participants get an overview on macro economic solutions for economic problems. They can use economic approaches as well as assess them. Participants are able to transform the results of economic analyses into business decision processes.		
Content	Representation and analysis of macro economic data, introductory macro economic models for short and long terms; effects of monetary policies and fiscal policies; representation of the Phillips-curve relation.		
Assessment	Term paper and oral presentation		
Literature	Blanchard, Oliver: Macroeconomics, latest edition		
Notes			

MASTER OF BUSINESS SYSTEMS				
Module	Code	Credits	SWS/Art	Semester
Contemporary Issues in Business Information Systems	**EM01**	**5**		**3**

Responsible	Uwe Lämmel, Prof. Dr.-Ing. www.wi.hs-wismar.de/uwe.laemmel +49 3841-753 7617
Teachers	
Language	English
Curriculum	MBS elective module
Didactic	Private studies according to study notes including textbooks and internet sources. Workshops, case study, discussion group, application to course project. Support is given via the Learn Management System Stud.IP including information, references, files, and various communication channels are used, including email, forum, chat, or wiki-pages
Study effort	Lecture sessions plus regular and independent practice essential. Approximately 125 hours study required in total and about 110h for self-studies.
Prerequisites	No special prerequisites beside skills from the mandatory subjects of the MBS programme in the 1st and 2nd semester
Goals/ Competencies	Students gain further competencies in subjects currently under discussion. Students may suggest topics to be addressed in the module. Students learn to follow the development in BIS and to value these developments.
Content	Current developments in business information systems will be considered and topic of special interest will be offered.
Assessment	Project work or alternative accomplishment (term paper) and oral presentation.
Literature	Will be specified at the beginning of the course depending on the topic
Notes	

Master of Business Systems				
Module	Code	Credits	SWS/Art	Semester
Applied e-Business	**EM05**	**5**		**3**

Responsible/ Lecturer	Herbert Neunteufel www.wi.hs-wismar.de/herbert.neunteufel +49 3841-753 7528 Prof. Dr. Dr.
Language	English
Curriculum	MBS elective module
Didactic	Lecture sessions, computer-supported presentations, project work and computer use. Internet presentations
Study effort	Lecture sessions plus regular and independent practice essential. Approximately 110 hours self-study is required
Prerequisites	Good knowledge of internet tools and a fundamental understanding of marketing and business communications
Goals/ Competencies	Students learn to evaluate the technical as well as the operational aspects of e-commerce, and are enabled to apply this knowledge effectively in practice. Students are able to formulate and evaluate business plans for internet-based business approaches They are enabled to assess the relevance of new trends and developments in the field of e-commerce Students learn to recognise opportunities, benefits and risks associated with the application of the internet as a critical element of modern business. They are able to deduce the demands and requirements for internet applications in the real business world, and implement effective solutions
Content	Introduction to computer-supported communication in business, Technical fundamentals, Types of e-commerce and their application, Advantages and weaknesses in e-commerce, The role of e-commerce related to conventional business interaction, Rules and pre-requisites for success, e-Markets, e_payment and security in e-commerce, Constructing relevant e-commerce business plans • Online-Advertising (eAdvertising) • Online market research • Online Customer Relationship Management (eCRM) • Conversion Marketing • Search Engine Optimization • E-mail marketing • Affiliate Marketing International (i.e. cross-cultural) aspects of online marketing will be discussed as well.
Assessment	Term paper and oral presentation
Literature	Electronic Commerce and Electronic Business, Rainer Thome, Heiko D. Schinzer, Martin Hepp ISBN: 3800628244
Notes	

Master of Business Systems			
Module	Code	Credits	Semester
Multimedia Application in Business	**EM07**	**5**	**3**

Responsible	Jan Helmke, www.wi.hs-wismar.de/jan.helmke +49 3841-753 7541 Prof. Dr. rer. pol.
Language	English
Curriculum	MBS elective, elective for Master Wirtschaftsinformatik
Didactic	Lecture series, computer-supported presentations, internet, software development, seminars, workshops and work on the project Lecture series, computer-supported presentations, internet, software development, seminars, workshops and work on the project. Multimedia study material. (CD, DVD)
Study effort	Lecture sessions plus regular and independent practice essential. Approximately 110 hours of self-study required.
Prerequisites	Knowledge and competence in information technologies is recommended
Goals/ Competencies	The module provides the development of multimedia and social media strategies to achieve strategic goals of a company. Students learn to realize a social customer relationship management. . Specific competencies imparted include: • Using multimedia techniques • Creating value innovation by multi-/social media • Creating social platforms • Developing a social media strategy
Content	The following key topics are addressed: • Multimedia and social media techniques • Customer Relationship Management • Value Innovation • Web 2.0 • Creating of competitive advantages by using multimedia and social media
Assessment	Term paper, project work and oral presentation, alternatively a 2 hours written exam; assessment details will be fixed at the beginning of the semester
Literature	Andrews, Adrian: Social Media Marketing, 2014 Gordon, Ian H.: Managing the New Customer Relationship – Strategies to Engage the Social Customer and Build Lasting Value 2013 Kim, W. Chan; Mauborgne, Renée: Blue Ocean Strategy: How to Create Uncontested Market Space and Make the Competition Irrelevant 2013
Notes	

Master of Business Systems			
Module	Code	Credits	Semester
Propaedeutic Research	**PROP**	**--**	**2**

Responsible/ Lecturer	Uwe Lämmel, Prof. Dr.-Ing. www.wi.hs-wismar.de/~laemmel/en +49 3841-753 7617
Language	English
Curriculum	MBS propaedeutic
Didactic	Private studies according to study notes including literature research using textbooks, or other sources. Workshop, case study, discussion group. Support is given via the Learn Management System Stud.IP including information, references, or files. Various communication channels are used, including email, forum, chat, wiki-pages or online tutorials. Work-based learning by linking information technology theory with workplace environment and experience.
Study effort	Focused work on the topics during the semester is required. A full-day workshop. Case study including a small term paper requires independent and focused attention. Approximately 50 hours self-study required.
Prerequisites	--
Goals/ Competencies	Students gain competencies in conducting a scientific paper and in giving a presentation on it. That includes structuring a problem, planning a literature research, the writing and the oral presentation. Students will apply their knowledge and competencies immediately to term papers of other modules in the programme. Working on the topics trains self-management and personal responsibility.
Content	The content of the module is structured as a thesis or dissertation itself: • Finding a topic and getting a proper title • Structure of scientific piece of work • Writing a proposal • The introductory chapter • Literature research, literature review and proper referencing • The background chapters • The own work and how it can be described • The result chapter and the conclusion • The oral presentation Proper scientific writing is addressed as well.
Assessment	
Literature	Evans, D.; Gruba, P.: How to Write a Better Thesis, Melbourne Univ. Press 2002. Hofstee, E.: Constructing a Good Dissertation: A Practical Guide to Finishing a Master's, MBA or PhD on Schedule. Exactica, ISBN: 9780958500715
Notes	Every student who has not finished his/her Bachelor study by a thesis or dissertation should take this course. Even if someone has written a thesis but feels unsafe in structuring and writing a scientific work he or she should join the course as well.