



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.

- Become a Master in 2 years: 3 theory semesters and a thesis semester.
- Workplace based learning: Combine your workplace experience with IT management competency.
- Write term papers that apply theory to your company's problems.
- Do action research: Address a real world problem by scientific methods.
- Your studies end with an oral defence (Viva Voce) of your thesis research.

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 a Business related subject
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 Master of Business Systems: wings-fernstudium.de/mbs www.wi.hs-wismar.de/~laemmel/MBS
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The Master of Business Systems runs in co-operation with:

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and

Graduate Centre for Management, Cape Peninsula University of Technology,
Cape Town, South Africa: www.cput.ac.za

contact Dr Michael Darko, darkom@cput.ac.za ☎ +27 21 460 3291

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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. It reinforces the skills through a business systems project to be completed in close contact with industry.

The second part (year) deepens the level of skills acquired in the first year, offering highly up-to-date issues in management of complex systems. The Business Systems project will continue and elevates the student's studies to an advanced academic level through the thesis requirement. The course allows the student to choose one elective from the list below.

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 Wismar University, University of Technology Business and Design, Wismar, Germany.

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 (management, marketing, engineering) for the benefit of the company's future activities

Core Subjects

Subjects	Term	1.	2.	3.	4.
Research and Information Technology in Business		5			
Business Process Design		5			
IT Management and Controlling		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		
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
	ECTS¹:	20	20	25	25

Elective Subjects

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

¹ European credit points ECTS: European Credit Transfer System.

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Core Modules

Subject: Research and Information Technology in Business

Mandatory subject in the first year

Faculty: Uwe Lämmel, Prof. Dr.-Ing.

Content: The module gives an introduction in to research and scientific writing using information technology in Business as a topic. The modules gives overview on the various applications of computer science technologies in business. The students will extend their knowledge in business information systems. It will be shown how information technology can help all individuals in all functional areas to be more effective and efficient. An introduction is given into development models for information technology systems. Various systems design methods will be applied to describe the information flow in real world situations.

ECTS: 5

Subject: Business Process Design

Mandatory subject in the first year

Faculty: Jan Helmke, Prof. Dr.

Content: Business Processes consists of sequences of actions necessary for a certain business task. The module covers the modelling of Business Processes including reference models, the ARIS toolset for process modelling, the process analysis, and the business process reengineering. Students learn to develop business process models and will be able to apply modelling methods, techniques and tools.

ECTS: 5

Subject: IT Management and Controlling

Mandatory subject in the first year

Faculty: Gunnar Prause, Prof. Dr.

Content: The course is intended to develop understanding of both strategic and operational issues of IT – management and Controlling. On completion of the course, the students know the concepts and methods of IT - management, IT – controlling and IT – auditing as well as the applications and ways to analyse, evaluate and control IT – related projects and processes, to identify and assess related risks so that they are able to solve problems and inefficiencies in IT - management.

ECTS: 5

Subject: Knowledge Management

Mandatory subject in the first year

Faculty: U. Lämmel, Prof. Dr. Ing./ J. Cleve, Prof. Dr. rer. nat.

Content: The students get skills in knowledge management with a focus on the representation of business knowledge. Computer-based knowledge processing is used for decision support in management. Business Rules are used to fix experience of enterprise expert in order to improve further decisions. Knowledge Networks can be used to store enterprise knowledge in order to solve the problem: “If Siemens knew what Siemens could know”. Knowledge Networks are usually displayed as Topic Maps. Representation of knowledge will be trained by several case studies. Available software will be used to train knowledge management skills.

ECTS: 5

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Subject: Integrative Industrial Thought

Mandatory subject in the first year

Faculty: Gunnar Prause, Prof. Dr.

Content: Industry depends on management to lead, marketing to market, and engineering to produce and design products. It is a well established fact that proponents of the three fields mentioned 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 (e.g. because all decisions are concentrated in one person) usually are more flexible and quicker in response to a changing business environment. This 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.

ECTS: 5

Subject: Database Systems and Data Management

Mandatory subject in the first year

Faculty: Rüdiger Steffan, Prof. Dr.-Ing.

Content: Database systems and especially data warehouses are the centre applications in an enterprise information system. Students will learn to develop and manage database systems including data structures and data management via the internet, object-relational and multidimensional modelling, database security and data protection. Other topics include: architecture of database systems and online analytical processes (OLAP). Relations to Data Mining or Business Intelligence tools will be outlined. The course is related to other modules like Integrated Business Systems or Computer Models for Business Decisions.

ECTS: 5

Subject: Software Systems Design and Development

Mandatory subject in the second year

Faculty: Erhard Alde, Prof. Dr. oec.

Content: The students learn to analyze a situation in an enterprise and to design a business information system in order to improve this situation. The course introduces principals, methods, techniques and tools for designing and developing large software systems. Topics included are design patterns, frameworks, architectures, implementation and maintenance, application of the Unified Modelling Language (UML) in the design of Business Information Systems. In a small project work students apply their knowledge to a real world case.

ECTS: 5

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Subject: **Computer Models for Business Decisions**

Elective subject in the first year

Faculty: Uwe Lämmel, Prof. Dr.-Ing. / Jürgen Cleve, Prof. Dr. rer. nat.

Content: Decision can be better if more information is available. The course introduces decision support systems and focus on various data mining techniques. Students learn to handle and process large amount of data. They learn to pre-process data in order to apply various data analyzing techniques. Topics include decision tables, analytical hierarchy process, clustering and classification of data like decision trees, nearest neighbour algorithm, k-means, or various architectures of artificial neural networks. Techniques introduced are applied to real world situations in customer relationship management.

ECTS: 5

Subject: **Business Systems Project**

Mandatory subject in the second year

Faculty: all university teachers can work as a supervisor

Content: Students will complete a project in teams 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, together with a company representative. Students will first respond to an RFQ, will, in turn, receive a “contract”, and will then 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.

ECTS: 5

Subject: **Enterprise Resource Planning Systems (ERP)**

Mandatory subject in the second year

Faculty: Jan Helmke, Prof. Dr.

content: The course focuses on the technology, the modelling techniques, and management issues surrounding the introduction and the use of ERP-Systems. The first objective is to learn how to set up database systems that are accessible on the World Wide Web. The second objective is to learn enterprise-wide modelling, which is a necessary prerequisite to building enterprise-wide systems. The third and integrative objective is to get a firm understanding of the issues that organizations face when dealing with implementing pre-packaged ERP systems. The module will consist of at least one lab which will involve looking at a feature of a commercially available ERP system, and several case study discussion lectures. These case studies will be detailed studies of organizations that actually implemented ERP systems.

ECTS: 5

Subject: **Master Thesis**

Second year

Faculty: all faculty members

Content: Every student will work on a personal topic. The topic will usually be extracted from real world situations in our partner companies. Students prepare their thesis and therefore show their skills in problem solving. A written thesis has approximately 70 pages. The results will be presented by the students and in a discussion he or her will defends the results.

ECTS: 25

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Elective Modules

Subject: **Human Resource Information Systems**

Elective subject in the first year

Faculty: Erhard Alde, Prof. Dr. oec.

Content: By the end of the module the student should be able to critically evaluate different models of organisation and their influence on management practice, critically review leadership styles and the concept of managerial effectiveness, and appraise theories of change management and strategies for the management of change; Students will be able to appraise the factors that influence individual and group behaviour within organisations, within an inter-professional and inter-agency context and to critically examine the factors that influence individual motivation and performance and identify strategies for effective staff and personal development; They will also be able to critically evaluate the role of information technology and management in the collection, storage and retrieval of essential data for effective resource management and to demonstrate the ongoing development of reflective skills, focusing on ways in which personal management effectiveness may be enhanced and skills increased

ECTS: 5

Subject: **Marketing Decision Systems**

Elective subject in the second year

Faculty: Kai Heuer, Prof. Dr. rer. pol.

Content: Students learn how to use computer programs to facilitate marketing decision-making, and explore issues using information technology and the information highway. The computer programs may include spreadsheets, suites of programs for specific marketing decisions and information systems as databases. Issues include the future impact on the future of marketing communication and distribution channels (including direct and database marketing), methods for dealing with information load/overload, customer acceptance of interactive media, and the effects of re-engineering on the marketing function.

ECTS: 5

Subject: **Supply Chain Management**

Elective subject in the second year

Faculty: Gunnar Prause, Prof. Dr.

Content: The course is intended to develop understanding of both strategic and operational issues of supply chain management. On completion of the course, the students know the concepts and methods of supply chain management, the applications and ways to analyse multimodal transportation concepts, supply chains and supply relations so that they are able to solve problems and inefficiencies of supply chains..

ECTS: 5

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- Subject: **Economic Policy**
Elective subject in the first year
- Faculty: Michael Schleicher, Prof. Dr.
- Content: The module focuses on key applied macro and microeconomic questions in economies in developed and less developed countries. It seeks to develop an applied analytical command and to give students both a broad survey and key insights into the prime contemporary economic questions.
- ECTS: 5
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- Subject: **Applied e-Business**
Elective subject in the second year
- Faculty: Herbert Neunteufel, Prof. Dr. Dr.
- Content: The course gives an introduction into e-business and e-commerce, its basics, techniques, and applications.
Within the course the participants develop a small Electronic Business Application. Students learn the background and fundamentals of business to customer (B2C) applications. Topics include description of web-based business cases, application of Java beans as well on a server (deployment) as on a client, development of Java Server Pages. Advantages and current problems of e-business applications will be discussed including e-payment or security.
- ECTS: 5
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- Subject: **Contemporary Issues in Business Information Systems**
Mandatory subject in the second year
- Faculty: Wismar: all university teachers will offer a certain module if new trends not covered in other modules will appear
- Content: The subject of the course changes according to current developments in the areas of Business Information Systems or Business Administration. Subjects may include new Web technologies, management systems, software engineering for business applications as well as other issues.
- ECTS: 5
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- Subject: **Multimedia Applications in Business**
Elective subject in the second year
- Faculty: Jan Helmke, Prof. Dr. oec..
- Content: The course gives an introduction into various multimedia applications within Business Information Systems. Applications include marketing or customer training. The students will learn to see the chances of multimedia applications. At the end of the course the students are able to design and develop multimedia applications. Topics included are the use and processing of various media, multimedia equipment, ergonomics, media as a design technique, picture processing, video processing, and computer animations.
- ECTS: 5



Schedule

The students get information and material for their personal use. They study the topics themselves. Advice will be given by our faculty. We are going to use our learn management system Stud.IP for our communication: <http://studip.hs-wismar.de>

For every module a certain amount of contact hours will be offered. At the end the exam takes place.

Schedule for contact hours

- A week at the end of February
- A week at the end of June
- A week in mid-July
- A week at the end of November