

**Provisional
Module Descriptions**

for the

Master's Program Course

Business Information Systems

**University of Applied Sciences
Heilbronn**

**University of Applied Sciences
Furtwangen**

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M.Sc. Business Information Systems – Curriculum

MBA IT Management						
Modules and Course Units	Exam	Weight	1	2	3	4
B1 Business Administration						
B1.1 Introduction to Business Administration	W 120	4	6 (4)			
B1.2 Scientific management approaches	W 60	2	2 (2)			
B1.3 Strategy-oriented techniques	W 60	2	2 (2)			
B1.4 Human Resource Management	W 120	4	4 (4)			
B1.5 Intercultural Management	W 60	2	2 (2)			
B1.6 Marketing & Communication	W 120	4	6 (4)			
B1.7 Economics	W 120	4		6 (4)		
B2 Accounting & Finance						
B2.1 Accounting	W 120	4	4 (4)			
B2.2 Finance	W 60	2		2 (2)		
B2.3 Controlling	W 60	2		2 (2)		
B3 Methods in Management						
B3.1 Project Management	W 120	4	6 (4)			
B3.2 Data-Warehouse and Business Intellig.	W 120	4	4 (4)			
B3.3 Research Methods	W 120	6			6 (6)	
IT1 Information Technology						
IT1.1 Information Technology Essentials	W 120	4		6 (4)		
IT1.2 Information Systems Design	W 120	4		6 (4)		
IT1.3 Database Systems	W 120	4			6 (4)	
IT1.4 System Architectures	W 120	4			6 (4)	
IT1.5 Distributed Systems	W 60	2		2 (2)		
IT1.6 Computer Networks	W120	4		6 (4)		
IT2 IT-Systems Mmgt & Leadership						
IT2.1 Management of Info-Systems	W 120	4		6 (4)		
IT2.2 Management Skills in IT	W 120	4		6 (4)		
IT2.3 Remote Leadership	W 120	4			6 (4)	
IT2.4 Business Process Management	W 120	4			6 (4)	
IT2.5 Strategic IT Management	W 120	4			6 (4)	
IT2.6 Business Processes in integrated Standardsoftware	W 120	4			6 (4)	
IT3 Project and Thesis Seminar						
IT3.1 IT Management Project	P	10				12 (10)
IT3.2 Master Thesis Seminar	P	4				4 (4)
MT1 Thesis						
MT1.1 Master Thesis	P	16				20 (16)
		120	36 (30)	36 (30)	36 (30)	36 (30)

Abbreviations:

W written exam (the number next to the „W“ indicates the duration in minutes)
 P paper

Module: B1 Business Administration

B1.1 Introduction to Business Administration

This course focuses the knowledge transfer of basic business administration. Dynamic and complexity of business administration is the main content of this course. The center of this course is the operational transparency and structure of business administration and organization. In this course the students will be able to master the term of normative, strategic and operational management. The students will be able to build simple economic models and business plans and being fluent in the usage of business terms.

B1.2 Scientific management approaches

Being successful in management demands knowledge of approaches and how to use them in an efficient way. In permanent changing environments and business situations it is necessary to have knowledge of various approaches how to manage organisation and people. The unit focuses on important scientists and their main topics: Porter (Value chain management, Five forces, Competitive Strategies), Kaplan/Norton (BSC, Strategy focused organisation), Hamel (Core competences), Traacy/Wiersema (Market-Leadership), Rappaport (Shareholder value), Goleman (Emotional Intelligence), Mintzberg (Nature of Managerial work), Drucker (Managing for results), Naisbitt (Megatrends).

B1.3 Strategy-oriented techniques

The students get to know a variety of techniques analysing business structures in organisations. Completing this unit students will be able to analyze the essential aspects of organisations. They will be trained in using strategy oriented tools like SWOT, break-even-analyse, cost-structure-analyse, 7S-model, ABC-Analyse, XYZ-Analyse; Target-Group-Analyse, GAP-Analyse, Vision/Mission, Portfolioanalyse.

B1.4 Human Resource Management

Human resources are a key asset for international companies to stay competitive. Therefore human resource departments have an important strategic role in making company decisions and are no longer focused on administration. This unit introduces the students to the most important tools and task of HR in a national and international context. Theoretical approaches will be illustrated and reflected through practical examples and case studies from the industry – both national and international. This approach allows for interlinking theory and practice and transferring the course's content to real-life problems in organisations.

B1.5 Intercultural Management

The mandatory unit "Intercultural Management", explores the origin, significance and complexity of the knowledge constructs "culture", "corporate culture" and of other cul-

ture-related psychological and ethnographic issues in an international business environment. After investigating the principles, strategies and tools of "Intercultural" and "Crosscultural Management", critical incidents and case studies will enable the students to tackle and resolve real-life issues and to gain hands-on experience in this field.

On completing this unit, students will

- comprehend the predominant theories in which the term "culture" is embedded
- have a sound understanding of the cultural dimensions of international business and appreciate the challenges posed by cultural diversity to executives
- benefit from current research to analyse intercultural problems and propose solutions;
- be in a position to assess their own intercultural behaviour,
- have developed strategies to conduct cross-cultural business negotiations successfully,
- be also aware of ethical, political and organisational sensitivities in cross-cultural situations.

Moreover, the participants will have enhanced the following skills: self-management and self-awareness, interpersonal and team relations, problem solving, decision making, oral communication.

B1.6 Marketing & Communication

This course sets the basic of market behaviours and customer relationship management. Deduce from the strategic management the marketing strategy and marketing concept will be defined. The students will be able to target the marketing goals and selection the classical and modern marketing tools. In conjunction with business cases the students will be able to define marketing strategy and marketing mix in service and production industry. The knowledge of behaviour sciences and marketing strategy will enable the students to define in selected categories of business models the marketing concepts and its related marketing mix.

B1.7 Economics

In economics students will be introduced to the models of economics. Not focusing the theory it is the intention of this course to mediate the relation between the business administration and economics. Beside this relation this course will contain the elements of ethics behaviour.

The students will able to differentiate the political dilemma between direct invention by state and its related mechanism to the business administration. Therefore business cases will explain the several dilemma situations in terms of financial policy, social policy, competition and environment.

The theory of economics will be practical related to the world economic development and its relation to the globalisation effect.

Module: B2 Accounting & Finance

B2.1 Accounting

The students will enable to use the basics of international accounting. This course contains the annual accounts, financial statements and balance sheets. It will be related to the strategic and operational management decision.

Therefore the students will be introduced to the accounting processes, reporting procedure, administrative accounting and reporting rules. The objective of this course is to interpret figures, index and to learn to read balance sheets and its related profit & loss statement and the balance report.

The third part is the cash flow analysis and structuring. With international business cases the students will be able to define cash flow business models which are the basics for decision process on management level.

B2.2 Finance

Beside general knowledge of financing the students will be able to name the key elements of finance management within a company (especially cash management and capital budgeting). In addition the knowledge contains accounting specific indicators which will be used in business cases in several sectors and benches (e. g. key figures on management accounting). Furthermore the course will also cover the basics of the financing market and financial principles (e. g. the time value of money).

B2.3 Controlling

The content of this course is the strategic and operational controlling. Students will learn to understand the politics and policies of companies and the importance of controlling as key information system. The basic workload of controlling and operation will be transmitted by usage of business cases.

Module: B3 Methods in Management

B3.1 Project Management

In this unit, the students familiarize themselves with the major tools and techniques of integrated project management. Special emphasis is placed on the thorough planning of all project stages. Moreover, the participants learn to identify the potential risks involved in project management and how to cope with them. They also acquire the capability to meet budgetary constraints and quality requirements, to communicate efficiently in a multinational project team and to motivate people across cultural boundaries.

B3.2 Data-Warehouse and Business Intelligence

The students will understand Data Warehouse Design and Management. Application areas like controlling and marketing will be explained. They get to know fields of Data Warehouse Applications/BI and understand how to implement Data Warehouse and Business Intelligent Solutions. Various solutions will be presented. Fundamentals like ETL, OLAP and data mining will be explained. They learn the architecture of data warehouse and Business Intelligence. Finally steps into future will be discussed.

B3.3 Research Methods

This module focuses on the knowledge and skills required to understand, conduct and evaluate research. It seeks to develop the students' research capability in two ways. Firstly, by focusing on the methods relevant to business-related research projects, and, secondly, by developing the skills necessary to carry out research projects and to produce their Master's Thesis.

Module: IT1 Information Technology

IT1.1 Information Technology Essentials

This class includes broad coverage of technology concepts and trends underlying current and future developments in information technology, and fundamental principles for the effective use of computer-based information systems. There will be a special emphasis on networks and distributed computing, including the World Wide Web. Other topics include: hardware and operating systems, software development tools and processes etc.

IT1.2 Information Systems Design

The course deals with the development of information systems with the business organization and the analysis of systems to fill the total needs of the organizations traditional and structured analysis and design technique are covered, including information gathering, input and output design, file design and real time and batch processing.

IT1.3 Database Systems

This course deals with database and file management systems. Students will develop an understanding of the role of data modelling, file management and database systems in information systems. At the completion of this course, they can develop an appreciation of the role of data, files and databases in information systems and understand the database development activities during the System Development Life Cycle (SDLC). Also, they will be familiar with data modeling concepts (E-R and Class diagrams) used in database development and be able to create databases and pose complex SQL queries of relational databases. For maintenance issues, a broad range of data management issues including data integrity and security are included in this course.

IT1.4 System Architectures

In this course the students get to know the evolution of computer architecture and the factors influencing the design of hardware and software elements of computer systems. Topics may include: instruction set design; processor micro-architecture and pipelining; cache and virtual memory organizations; protection and sharing; I/O and interrupts; in-order and out-of-order superscalar architectures; VLIW machines; vector supercomputers; multithreaded architectures; symmetric multiprocessors; and parallel computers.

IT1.5 Distributed System

The Students are introduced in the different architectures of distributed systems e.g. Client-server, 3-tier architecture, N-tier architecture, Distributed objects, loose or tight coupling, peer-to-peer, Space based.

Topics are also concurrency, Multiprocessor systems, Multicore systems, Multicomputer systems, Computing taxonomies, Computer clusters, Grid and Cloud Computing.

IT1.6 Computer Networks

Computer Networks form the basis of modern distributed IT infrastructures and the business built on top. They are therefore a central part of the actual information technology. Students will develop an understanding of the most important internet protocols like HTTP, SMTP, DNS, TCP, IP and related applications. They will understand the implications of these protocols on the architectures of distributed applications and on requirements like availability, responsiveness, reliability and security. Based on a knowledge of local area network

(LAN) protocols with focus on Ethernet they will learn how to build robust and scalable local networks. An introduction to network management approaches to understand the basis for monitoring and configuring networks completes the course.

Module: IT2 IT Systems Management and Leadership

IT2.1 Management of Information Systems

This course is designed to familiarize students with the issues, problems, and opportunities that information systems (IS) executives and general managers face when managing IS resources in their organizations. The objective of this course is three-fold: (1) to expose students to the issues a chief information officer (i.e., CIO) has to examine and control as the information services function evolves over time, (2) to provide students with essential tools and knowledge that a manager must possess to successfully lead and manage IS projects, and (3) to inform students the latest development in the field.

IT2.2 Management Skills in IT

This course provides students with skill and comfort in the understanding and use of IT in business from the point of view of a business manager, an IT manager and an employee like a new graduate from this master-course. We will look at a range of successful practices and guidelines that have been derived from both research and experience, give you the opportunity to practice your skills, and provide you with feedback to help you strengthen them. Focus will be on leadership and decision making around IT project management, based on the lifecycle of a project from initial need and justification through selection or development to installation and integration with existing systems to deployment and organizational changes necessary to get business value.

IT2.3 Remote Leadership

Completing the module the students will be able to design and carry through remote projects in an international context. They can assess and optimize computer-mediated communication processes considering their psychological implications regarding cognitive, social and communication aspects. The students transfer their methodological competencies to an international and remote working environment. Thereby they further develop and improve their skills and are able to carry them out in a global virtual environment – skills like managing projects, moderating teams, delivering presentations, facilitating decision processes, generating ideas and leading group processes.

IT2.4 Business Process Management

In this course students will gain a perspective of the strategic role of and issues in managing IT as manifested in e-business applications, as a driver and enabler of business processes and business transformation, and as an underlying infrastructure resource for all businesses. Industries themselves are rapidly changing form and

business methods due to IT. It is clear that, in an increasingly competitive global world, businesses must transform themselves to be more productive, to gather and store customer and competitive information and to capture the "tacit" knowledge that employees hold in their heads. Large software packages such as SAP, Baan, i2, Siebel, and Oracle hold the potential to re-design business processes, and transform operations, supply chains, and customer relationships. A successful implementation of one of these packages can provide new or better information to an organization's decision makers, and enable global manufacturing and distribution processes. On the other hand, the critical path to business success is not the technology itself, but changing the business process and the work supported by the technology.

IT2.5 Strategic IT Management

The strategic importance of information technology is now widely accepted. It has also become increasingly clear that the identification of strategic applications alone does not result in success for an organization. A careful coordination of strategic applications, information technologies, and organizational structures must be made to attain success. This course addresses strategic, technological, and organizational connectivity issues to support effective and meaningful integration of information and systems. In this course the students achieve the capability to initiate and guide change processes in companies.

IT2.6 Business Processes in integrated Standardsoftware

The students will be trained in business processes implemented in an integrated Standardsoftware. They learn the complexity of the software and how to manage it. They will get knowledge of dependencies between controlling oriented and logistic oriented business processes. Based on a precustomized system the students have to work on various case studies in finance, controlling, project management, procurement, production, maintenance and sales.

Module: IT3 Project and Thesis Seminar

IT3.1 IT Management Project

The IT Management Project is intended to be carried out with a project from a real client. Embedded in this environment, students learn to solve a real world problem in a team. This may be the customization of a system including feasibility study, requirement analysis, design, implementation, testing and delivery to the client. In the project, the students need to employ the methods they have learned, function effectively in a project group and communicate in a professional way.

The project includes formulating a research proposal or project definition and a project design. Successful completion of this unit also requires the submission of a comprehensive project report.

IT3.2 Master Thesis Seminar

The Master Thesis Seminar is a colloquium in which the students deliver a presentation on their master thesis. Each student has to give a effective and coherent report on content, approach, and findings of his or her master thesis, prepare an adequate hand-out, and motivate and facilitate a discussion on the thesis. As a presenter as well as a member of the audience the students have to show their conceptual and academic skills, make appropriate inferences and recommendations, show the ability to reason in a consistent methodological manner at an abstract level, and deal with criticism and close scrutiny constructively.

Module MT1 Thesis

MT1.1 Master Thesis

The Master Thesis provides the students with the opportunity to conduct in-depth research in an area of particular interest and to reflect upon specific aspects of IT Management. The resulting piece of work is intended to show the candidate's masterly command of her/his topic.

The thesis is ultimately an individual self-managed effort. It requires the student to identify primary and secondary sources and to consult academics, customers, managers and other professionals.

The students develop planning, self-management and communication skills which will be of advantage for the student's future careers.

In order to complete their thesis successfully, students will need to demonstrate an understanding of their context of investigation by reference to published material. They will be expected to apply research methods appropriate to the topic, draw suitable analytical and realistic conclusions and, above all, make a contribution to the received knowledge in their chosen area.

In this module the students

- demonstrate the skills of planning necessary to undertake collection and analysis of information leading to conclusion formulation
- demonstrate an understanding of the context of the investigation by reference to published material
- formulate and apply research methods appropriate to the topic
- draw suitable analytical and realistic conclusions
- make a contribution to knowledge or understanding in their chosen area
- conduct research and produce a report using appropriate professional and academic terms