

Syllabus
BAE2491 Business Information Systems
Prof. Dr.-Ing. Heiko Thimm
Winter Term 2024-25

Level	Bachelor	
Credits	3	
Student Contact Hours	2	
Workload	90 hours	
Prerequisites	You should have a good understanding of basic information system principles as they are studied in the various programming courses during the first two semesters. Furthermore, students should have knowledge about fundamental information processing activities implied by business functions (e.g., financial accounting, procurement, sales, marketing). This topic area is typically addressed in the business administration courses of the first semesters.	
Time	s. LSF	
Room	s. LSF	
Start Date	s. LSF	
Lecturer(s)	Name	Prof. Dr.-Ing. Heiko Thimm
	Office	T1.3.29
	Virtual Office	Virtual Office Prof. Thimm
	Office Hours	Monday, 13:45-15:15 o'clock (based on appointment)
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	Email	heiko.thimm@hs-pforzheim.de (preferred mode of communication)

Summary

This course covers major aspects of IT applications and their use in businesses. This includes a motivation for such applications from a business point of view, the prominent IS pyramid model to classify different kinds of such systems, and also a study of the major principles of the most widely used types of IT applications. In particular it will be looked at Enterprise Resource Planning Systems (ERP) and Analytical Information Systems.

In the accompanying lab of the course the students can obtain practical experience in the use of an ERP system.

Important Hint: Throughout the semester some classes are announced to be mandatory which means that you have to attend the class. Please note, that you are not permitted to take the final exam if you fail to comply with this obligation. Under certain circumstances exceptions will be made. Please, contact me as soon as possible in corresponding situations.

Outline of the Course

- Principles of Business Information Systems
- Information Systems in Business
- Role of Information for Business Management
- Types of Business Information Systems and their Major Technical Principles
 - TPS Systems
 - Analytical Information Systems
 - Decision Support Systems
- Enterprise Applications, Business Processes, ERP Systems
- Selected Special Topics

Course Intended Learning Outcomes and their Contribution to Program Intended Learning Outcomes / Program Goals

Program Intended Learning Outcomes	Course Intended Learning Outcomes
After completion of the program the students will be able...	After completion of the course the students will be able...
1 Expert Knowledge	
1.3 ...to demonstrate their distinguished and sound competencies in General Business Administration.	...to know major business functions from a business process perspective.
1.7 ...to demonstrate their solid key knowledge in Computer Science.	... to understand basic architectures, concepts and principles of business information systems. They are able to assess data quality and know the criteria for evaluating application systems.
2 Digital Skills	
2.1 ...to know and understand relevant IT software tools used in business and their features and have a solid understanding of digital technologies.	...to understand the characteristics and basic structure of the most common application systems with a focus on ERP systems; they know the interaction of the different application systems in a company, the basic principles of IT-supported business processes and the basic principles of data analytics.
2.2 ...to effectively use and apply information systems to develop solutions in business settings.	...to perform elementary operational data processing activities. They understand the importance of corporate IT and can classify business application systems according to the information system pyramid; they know which application systems address which specific business tasks.
2.3 ...to effectively use digital technologies to interact, to collaborate and to communicate.	... to know principles of intra- and interorganizational information sharing through the use of operational IS and interorganizational IS.
2.4 ...to handle the professional use of digital technologies in a responsible manner.	... to assess operational IS also from the perspective of the business organization They are familiar with issues of IT business alignment.
3 Critical Thinking and Analytical Competence	
4 Ethical Awareness	
...to develop sound strategies in the areas of ethics, sustainable development and social responsibility and are able to apply them to typical economic decision-making problems.	... to use information technology ethically in business.
5 Communication and Collaboration Skills	
6 Internationalization	
6.2 ...to articulate themselves in a professional manner in international business.	...to understand business computing and master related terminology in English.
6.3 ...to successfully demonstrate awareness of cross-cultural differences.	... to apply IS in an international operational environment (multi-language capability, country versions, etc.).

Teaching and Learning Approach

For this course a classical interactive lecture style has been chosen. That is students are called to follow and actively participate in teaching sessions in which the lecturer presents and discusses the course material. The students' active participation is encouraged through a permanent questioning by the lecturer. The slides used for the presentation contain a lot of gaps that will be developed and discussed in the lecture. Some of the aspects will be illustrated by the investigation of corresponding case studies. Furthermore, concrete examples of application systems will be shown through video and other electronic media. Besides the work in class students practice in the associated lab (BAE2492) the use of a widely used ERP system. For a pre- and post-preparation of the teaching sessions a widely used standard text book is available (Laudon & Laudon 2019).

Literature and Course Materials

All class slides are available in the E-Learning system.

Recommended reading material:

- Laudon, K., Laudon, J.: Management Information Systems: Managing the Digital Firm, Edition 16e, 2019, Prentice Hall
- Laudon, K., Laudon, J., Schoder, D.: Wirtschaftsinformatik – Eine Einführung, 2015, Pearson Studium, German (translation of text book)
- Sharda, R., Delen, D., Turban, E.: Business Intelligence and Analytics: Systems for Decision Support, 10th Edition, 2014, Prentice Hall, ISBN 978-0133050905
- Bocij, P., Greasley, A., Hickle, S.: Business Information Systems: Technology, Development & Management, 6th Edition, 2018, Pearson Academic, ISBN 978-1-292-22097-0

Assessment

At the end of the semester the students have to take a final written exam (60 minutes) that covers the entire material discussed throughout the semester. The final mark will be based on the results achieved in this final exam. Students may have the chance to earn bonus points for the final exam through special assignments.

Schedule

Class	Topic
1	Introduction to course and lab organization, teaching approach, literature Foundations of Business Information Systems
2	Foundations of Business Information Systems
3	Foundations of Business Information Systems
4	Organizational Perspective of Business Information Systems
5	Organizational Perspective of Business Information Systems
6	Business Information Processing Activities
7	Business Information Processing Activities
8	Information Systems in the Enterprise
9	Information Systems in the Enterprise
10	Information Systems in the Enterprise
11	Information Systems in the Enterprise
12	Business Information Systems – Special Topics
13	Business Information Systems – Special Topics
14	Business Information Systems – Special Topics
15	Summary, recapitulation, preparation of final exam

Academic Integrity and Student Responsibility

- Register for the class in the eLearning system within the first week
- Read the Syllabus
- If you are asked to complete some preparation for the class, please do so.
- Arrive on time to the lecture and do not leave earlier.
- Do not disturb the lecture.
- Pay attention and involve yourself in the discussion.
- Fill in the gaps of the lecture slides and make notes. Slides primarily contain keywords only! What ultimately counts is the lecturer's spoken word!
- Ask questions.
- Give feedback to the lecturer: Too slow, too fast, too trivial, too difficult, too loud, ...

Code of Conduct for Students

[Link to the Code of Conduct for online Teaching](#)

Teaching Philosophy

I care about your learning, helping you is important to me. If you are having a problem/question with some aspect of the course, do not hesitate to send an email. I will respond quickly and if it is necessary we will make an appointment.

I will do anything to help you learn the subject as well as its real-world implications. If you have problems or questions, please speak up in class. If you do not want to ask in class, please e-mail or see me at my office. If you have problems with your progress in the course or with a teammate or your group please see me as early as possible. The longer you wait the fewer options I will have to help you. I really want you to graduate, but you must earn it!

I do anything I can to help you as long as I can extend the same treatment to other students in the class. Please do not ask for unfair treatment. I really care about you as students and as human beings, but I do not give grades away.

Additional Information

Language:

English

Learning Objectives:

By the end of the course students can

- explain how information processing supports the management of a business
- describe several basic information processing activities of businesses
- explain how information systems support information needs in all functions of the various types of businesses and organizations
- describe the concept of data quality
- explain the basic principles and general architecture of business information systems
- explain how information systems can improve management decision-making effectiveness
- explain central concepts and abstractions described in the information systems research literature including the information system pyramid
- explain the business-IT alignment task
- explain the differences between custom software and pre-packaged software

- explain the main concepts and architectural building blocks of analytical information systems including in particular the data warehousing architecture
- explain what an Enterprise Resource Planning system (ERP) is
- describe current major topics of Business Information Systems