Karlsruhe Institute of Technology

INSTITUTE OF INFORMATION SYSTEMS AND MARKETING
Research Group "Information Systems and Service Design" (ISSD)
Prof. Dr. Alexander Maedche
http://issd.iism.kit.edu/

Syllabus
Lecture: Business Intelligence Systems

Course Description

Systems targeting to achieve business advantages by enhancing enterprise transparency and improving decision-support effectiveness have been designed and developed over the last 40 years. Today, they are subsumed under the heading business intelligence (BI). This lecture aims to provide a holistic understanding of the area of BI, including a management, organizational and technical perspective. Students will get in this lecture the theoretical knowledge of major concepts of the area, as well as a more practically oriented view of tools and their actual use. From a practically oriented perspective, students will expand the theoretical foundations by carrying out a capstone project and create a BI solution for a particular business scenario by themselves. The capstone project in the BI lecture is in cooperation with KPMG and students will work with a real dataset from KPMG customers. Moreover, students will learn how to work with SAP HANA and PowerBI tools to create a BI solution by doing the capstone project.

Course Objectives

The aim of this course is to introduce theoretical foundations, concepts, tools, and current practice of BI systems. Thereby, the students:

- Get an understanding about the theoretical foundations of key BI concepts supporting decision-making.
- Explore key capabilities of state-of-the-art BI systems.
- Learn how to successfully implement and run BI systems from multiple perspectives, e.g. architecture, governance, implementation projects, post-implementation management.
- Get hands-on experience by working with SAP HANA and PowerBI tools to create a BI solution with real-world data.

Course Requirements

The course is offered by the Institute of Information Systems and Marketing (IISM) at the Department of Economics and Management of KIT. It is designed for master students in industrial engineering & management as well as information engineering & management. Students from other disciplines (e.g. computer science, mechanical engineering) are also invited to participate.

Grading

The course has two grading components: Exam (60%) and Capstone Project (40%). **First**, there will be a 60 minutes closed-book / closed-notes exam consisting of short-answer, multiple-choice and analytical questions covering lecture material and business talks. **Second**, teams work in a capstone project with real-world data provided by KPMG. Each team has to present its results in the form of a (1) management presentation as well as a (2) paper (max 10 pages) which presents the corresponding findings and recommendations. Both grading components need to be passed (grade 4.0 or better). A fail in either the exam or the capstone project results in a fail of the entire course. There is no retake possibility for the capstone project. Thus, if you fail the capstone project, you need to retake the entire course in the upcoming year.

Registration and Organization

Please register via the learning platform ILIAS to the course. For specific dates and location of the lecture, please check the Website or portal. All questions regarding content, organization, and certificates are an-

swered by the responsible single point of contact (Darius Azarfar; darius.azarfar@kit.edu) for the lecture as documented on the research group Website.

Course Materials
For each course session a dedicated slide deck is provided. Additionally, a list of reference publications (book sections, conference papers, journal articles) is made available for download on the learning platform.

Course Outline