Course Description

During the last decades we witnessed a growing importance of Information Systems (IS) in the business world along with faster and faster innovation cycles. A case in point is the growing IS-related expenditure of corporations, forecasted to total EUR 4.5 trillion by the year 2017 – an average yearly growth of 3.6 % (Gartner 2013). Ranging from the enrichment of routine working tasks (e.g., employee portals to integrate disparate applications, data, and processes (Daniel and White 2005)) to the e-enabled integration of entire business eco-systems (e.g., platform-based integration of supply chains (Kroenke 2010) in cloud, on-premise and hybrid environments) – IS have become a vital backbone of businesses.

Consequently, the ability to use IS in a way supporting the overall value proposition of a corporation has become a central success determinant for many firms. Accordingly, the “Development and Management of Information Systems” course is designed to introduce students to the nature, role, and potentials of IS in corporations and enable them to serve as a meaningful interface between technology and business.

Once filling this role in a business context, the future IS professionals are likely to be facing two major trends: the increasing industrialization of IS (Brenner et al. 2007; Daberkow and Radtke 2008; Walter et al. 2007) and a shift towards service-orientation in IT organizations and processes (Hochstein et al. 2005; Roewekamp 2007). This brings about challenges such as, among others, managing the trade-off between efficient execution and effective offering or recognizing and mitigating conflicting expectations and goals among the many entities (e.g., software producers, consultants, corporate users, customers) and roles (e.g., business professionals, technical staff, corporate management) involved in an IS. In order to be able to deal with these challenges, the “Development and Management of Information Systems” course is designed to introduce students to the various stages of the life cycle of an IS. Starting with the initial idea and conception of a system, the course will cover the process from development to introduction and, finally, application and value creation. In doing so, students will get to know the various entities, concepts and roles involved in IS development and management.

Course Objective

The primary objective of the course is to enable students to play a vital role at the intersection of technology and business, being able to bridge the gap between a company’s end users and IT experts. The key overall objective is that students understand that IS transcend mere technological artifacts, but constitute complex socio-technical phenomena. In doing so, they shall gain the following knowledge, skills, and competencies:

Knowledge:

- Know definitions and conceptual foundations of information systems
- Know basic objectives and approaches to plan, organize and execute projects targeting IS implementations
• Know basic terms of software development approaches, software architectures, software requirements and ways of eliciting and managing requirements
• Know how organizations can select, implement, manage, and derive business value from the usage of information technology

Skills:
• Develop and implement business value-adding software systems for organizations
• Assess the appropriateness of different software development approaches

Competencies:
• Judge the acceptance, management, controllability of large complex enterprise-wide software systems
• Develop strategies and methods to ensure organizations’ users can derive business value from the usage of information systems

Course Requirements
This course is offered to all B.Sc. students enrolled in the Business Informatics degree program of the University of Mannheim. There are no prerequisites for attending this course. Exchange students are welcome.

Course Grading
This course has the following grading components:

• Final exam

Students have to prepare for class by reading and preparing the mandatory readings assigned to each block. Moreover, optional readings are provided for each section to facilitate students’ learning experience and to help deepen and extend the topics discussed in class.

Course Materials
Students will be provided with a slide deck per session. The readings indicated in this syllabus are available from the internet of via the university’s electronic library resources: http://www.bib.uni-mannheim.de/140.html

Course Outline
The course is organized around several sections. The sections are structured along the career path of a specialist in the information systems discipline.

Sections’ materials will be taught throughout individual sessions. Beyond the sessions presenting individual section’s materials, the first session will familiarize students with the motivational background of studying information systems. Furthermore scenario-based exercise sessions and an exam preparation session will assist students in leveraging their learning experience. A more detailed description of the various sessions of the course can be found in the following table.
# Course Structure

<table>
<thead>
<tr>
<th>Session</th>
<th>Section</th>
<th>Topics</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>A.1</td>
<td>Welcome and introduction</td>
<td>• Course structure, organizational setup, motivation</td>
</tr>
<tr>
<td></td>
<td>A.2</td>
<td>Requirements engineering and development approaches</td>
<td>• Foundations and definitions of IS</td>
</tr>
<tr>
<td>02</td>
<td>B.1</td>
<td>IS project management</td>
<td>• IS project management methods and tools</td>
</tr>
<tr>
<td></td>
<td>B.2</td>
<td>IS implementation</td>
<td>• Managing project teams</td>
</tr>
<tr>
<td></td>
<td>A.3</td>
<td>Course Block A Exercise: “Young IT Consultant”</td>
<td>• Multi-project management and portfolio management</td>
</tr>
<tr>
<td></td>
<td>B.3</td>
<td>Course Block B Exercise: “Senior Manager”</td>
<td>• IS implementation methods and tools</td>
</tr>
<tr>
<td>03</td>
<td>C.1</td>
<td>IS delivery</td>
<td>• Managing project teams</td>
</tr>
<tr>
<td></td>
<td>C.2</td>
<td>IS management</td>
<td>• IS strategy and management</td>
</tr>
<tr>
<td></td>
<td>D.1</td>
<td>IS use</td>
<td>• Governance and business alignment</td>
</tr>
<tr>
<td>05</td>
<td>D.2</td>
<td>IS business value</td>
<td>• Process management</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• IS adoption</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• IS success</td>
</tr>
<tr>
<td>06</td>
<td>C.3</td>
<td>Course Block C Exercise: “Executive Assistant”</td>
<td>• Roles of IS departments in organizations</td>
</tr>
<tr>
<td></td>
<td>D.3</td>
<td>Course Block D Exercise: “Chief Information Officer”</td>
<td>• Value contribution of IS</td>
</tr>
<tr>
<td></td>
<td>Prep</td>
<td>Exam preparation</td>
<td>• Models of IS business value</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Apply gained knowledge and competencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Apply gained knowledge and competencies</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Brief review of course structure and contents</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Q&amp;A session</td>
</tr>
</tbody>
</table>

## Reading Materials

The reading material for this class provides students with both content and background for the topics introduced and discussed in the course. Optional readings provide students with the opportunity to extend their understanding beyond the material discussed in class and introduce the students to scientific work on the topics. The complete reading list along with further details for preparation will be provided to students in class.
References


