Course guide 2017/2018

Wageningen University

Department of Social Sciences
Information Technology Group
Hollandseweg 1
6708 KN Wageningen

INF-31306 Information Systems for Managers and Engineers

Name:	Information Systems for Managers and Engineers
Code:	INF-31306
Load:	6 credit points ECTS (168 hours)
Contact person:	Prof.dr.ir. B. Tekinerdogan, room 6023, phone: 0317 485477 e-mail: bedir.tekinerdogan@wur.nl
Lecturers:	Prof.dr.ir Bedir Tekinerdogan, Dr. Sjaak Wolfert, Dr. Cor Verdouw guest lecturers from IT industry
Examiners:	Prof.dr.ir Bedir Tekinerdogan
Scheduling:	6th period, mornings
First lecture:	Monday May 14th 8.30:10:15 C0081
Language:	English
Blackboard:	Available
Contact hours:	see detailed schedule

Contents:

1. PROFILE OF THE COURSE

Aim

This is the preparation course for doing a major at the Information Technology Group.

Target group

Especially MME and MAB students; also MSc students from any WU curriculum with an interest in the topic, management-related.

Benefit for students

Nowadays, information systems form indispensable and business critical assets of organizations. The proper engineering and management of information systems often has a direct impact on the overall success of the organization. Current information systems, however, are complex and include a plethora of modern information technology and trends. This can easily lead to the misalignment between the organization business processes and the information systems. This course targets both future IT managers and engineers, and aims to provide a comprehensive, yet understandable high-level overview of the management and engineering of information systems. The course will provide the appropriate knowledge level of information systems to design, manage, and align business management and information systems in the agriculture and food domain. In addition, we will provide hands-on-experience and teach the important activities of business process modelling, requirements engineering, domain modelling, and high-level architecture design.

Position of the course within study programme

The course is advanced, aiming at students in their Master.

2. INTENDED LEARNING OUTCOMES

After successful completion of this course students are expected to be able to:
- explain why managers and engineers need to be knowledgeable about Information Systems and Information Technology;
- identify the key elements that are part of an ICT strategy;
- demonstrate the importance of implementing an ICT strategy within an organisation or supply chain;
- analyse the relations between ICT strategy and business strategy, in particular logistic strategy, customer relationship management and ERP (Enterprise Resource Planning);
- evaluate BPM (Business Process Modelling) in establishing an ICT strategy;
- create a Business Process Model based on a realistic case study;
- create a software requirements document;
- create a high-level software architecture for a given information system;
- analyse and model the domain of the information system;
- evaluate evolution scenarios and their impact on the information system

3. LEARNING MATERIALS AND RESOURCES

Book

"*Essentials of Information Systems for Managers*" by Gabriele Piccoli, 2012, Wiley, ISBN-13 978-1-118-05711-7

Digital learning material

The course makes use of BlackBoard: the course's Blackboard offers all support material: study guide, links and facilitates the group work. Additional learning material is provided digitally on Blackboard and consists of:

- Power Point presentations by the teachers;
- Detailed schedule of the course

Computer programmes

The course makes use of MS Access, MS Visio, BPM drawing software and other web-based software

4. EDUCATIONAL ACTIVITIES

-take lectures and tutorials on BPM, domain analysis, requirements engineering and architecture design;
- carry out a case study on the development of an Information System in a real company or supply chain.

5. ASSESSMENT STRATEGY (EXAMINATION)

The course is assessed in two complementary ways: an individual evaluation, and an assessment of the team assignment. The individual evaluation consists of three quizzes (35% of final mark), and individual assignment (critical review, 15% of final mark). There is a bottom mark for the individual work of 5.0 (averaged), and for the team work of 5.0. The team project assessment is based on the models that are constructed and the report made about them. The table below links learning outcomes to assessment. Note that it depends on the case which learning outcomes will be covered to which extent; cases are picked from practice as they become available to us, and each case has its focus. The book cases make sure that breadth is maintained.

Learning Objective	Class Work	Case Study
- explain why managers and engineers need to be knowledgeable about Information Systems and Information Technology;	X	X
- identify the key elements that are part of an ICT strategy;	X	X
- demonstrate the importance of implementing an ICT strategy within an organisation or supply chain;		X
- analyse the relations between ICT strategy and business strategy, in particular logistic strategy, customer relationship management and ERP (Enterprise Resource Planning);	X	X
- evaluate BPM (Business Process Modelling) in establishing an ICT strategy;	X	X
- create a Business Process Model based on a realistic case study;	X	X
- create a software requirements document;	X	X
- create a high-level software architecture for a given information system;	X	X
- analyse and model the domain of the information system;	X	X
- evaluate evolution scenarios and their impact on the information system		X

6. THE PRINCIPAL THEMES

The course focuses on both the understanding and the top-level design of information systems. For acquiring the necessary knowledge on information systems we will have plenty of discussions during the lectures. To provide hands-on experience in designing information systems the project will be carried out in groups. The key topics here will be business process modelling, requirements analysis, domain analysis and architecture design.

7. OUTLINE AND SCHEDULE OF THE PROGRAMME OF THE COURSE

Outline and schedule

week	Main focus	highlights
1	Book chapter 1-3	
2	Book Chapter 4-5 Internet of Things	Quiz 1
3	Big Data Book chapter 6-11 and book cases	Quiz 2 Excursion to case site (or sites);
4	Book chapter 12-13 and book cases	Quiz 3
5	Start real-world case study	
6	Real-world case study	
7	Real-world case study	Preliminary presentations
8	Real-world case study	Final presentations to client Hand in individual assignment

Detailed day to day schedule

The detailed schedule is to be found on the course's BlackBoard.