Subject code: IFI7124	Course title: Digital Knowledge Ecosystem	
Amount 4 ECTS	**Approximate amount of contact lessons and independent work:** Contact lessons 26 Independent work 52	**Study semester**: Autumn
Objective:	The course will create opportunities for students to develop an understanding of the main principles of a digital knowledge ecosystem as a distributed socio-technical system, including theories and methods used for its analysis, design and evaluation. Students will have the opportunity to develop and practice skills for analysing, designing and evaluating these systems, and present the result of their work to fellow students.	
Course description: (incl. description of the content of independent work in accordance with the determined amount of independent work)	This course will investigate digital ecosystems as distributed adaptive open socio-technical systems. For this purpose, we will be looking at a number of social computing technologies (such as weblogs, wikis, social networking tools and social tagging) and their use in enterprise settings. Special emphasis will be placed on the impact of these technologies on knowledge creation, representation and sharing. Theoretical perspectives will cover communities of practice, distributed cognition and knowledge maturing. Students in this course will learn how to analyze socio-technical systems and their impact on knowledge ecologies from a theoretical point of view, how to design interventions for knowledge management in an enterprise setting using social computing technology and how to evaluate these interventions. In the course, we will have opportunities for practical hands-on trials using some of the technologies. Independent work covers required reading that enables the student to take part in online or class discussions and answer exam questions. Also students will be required to design or evaluate a concrete software intervention in a small group project.	
Learning outcomes:	Students develop an understanding of the concept of a digital knowledge ecosystem as a distributed socio-technical system including its main principles and components. Students develop an understanding of the theories of distributed cognition, communities of practice and knowledge maturing including an understanding of the main principles, the methods employed and the relevance for knowledge ecosystems.	

	Students develop an understanding of the main features of social software and their role for emergence in knowledge ecosystems. Students develop skills to critically analyse a digital knowledge ecosystem using the theories, and to design or to evaluate support for a digital knowledge ecosystem using social software drawing on the respective theories. Students apply skills to present their work, convincingly argue for its relevance and give critical and constructive feedback to fellow students.
Form of evaluation:	Active participation in online and class discussions (25%) Written Exam (25%): assessing understanding of required reading of the theoretical models: open questions, short paragraph Written report collaboratively written in a small group (25%) Oral Presentation of the report in a class session (25%)
Lecturers:	Tobias Ley
Title in English:	Digital Knowledge Ecosystems
Prerequisite subjects:	
Compulsory literature:	Readings for all: Schmidt, A.; Hinkelmann, K.; Ley, T.; Lindstaedt, S.; Maier, R. & Riss, U. (2009), Conceptual Foundations for a Service-oriented Knowledge and Learning Architecture: Supporting Content, Process and Ontology Maturing, *in Sebastian Schaffert; Klaus Tochtermann & Tassilo Pellegrini*, ed., 'Networked Knowledge - Networked Media: Integrating Knowledge Management, New Media Technologies and Semantic Systems' , Springer, .

	Ullrich, C.; Borau, K.; Luo, H.; Tan, X.; Shen, L. & Shen, R. (2008), Why web 2.0 is good for learning and for research: principles and prototypes, *in* 'Proceeding of the 17th international conference on World Wide Web' , ACM, New York, NY, USA , pp. 705--714 . Halverson, C. A. (2002), 'Activity Theory and Distributed Cognition: Or What Does CSCW Need to DO with Theories?', *Computer Supported Cooperative Work* **11** (1) , 243--267 . Hollan, J.; Hutchins, E. & Kirsh, D. (2000), 'Distributed cognition: toward a new foundation for human-computer interaction research', *ACM Trans. Comput.-Hum. Interact.* **7** (2) , 174--196 . Wenger et al. (2002). Cultivating Communities of Practice. Harvard Business School. (Selected Chapters) Wenger et al. (2009). Digital Habitats. CPSquare (Selected Chapters) Group Readings: Kimmerle, J.; Cress, U. & Held, C. (2010), 'The interplay between individual and collective knowledge: technologies for organisational learning and knowledge building', *Knowledge Management Research &38; Practice* **8** (1) , 33--44 . Lux, M. & Dösinger, G. (2007), 'From Folksonomies to Ontologies: Employing Wisdom of the Crowds to Serve Learning Purposes', *International Journal of Knowledge and Learning (IJKL)* **3** (4/5) , 515-528 . (more to be distributed in class)
Replacement literature:	
Requirements for participating in	Students must attend 80% of the lessons to take the exam

studies and taking exams/assessments	
Requirements for independent work	Online Course discussions, individual writing assignment and group project work are presented in a an online environment with the possibility to comment eachothers' work
Exam evaluation criteria or minimum level necessary to pass assessment	Quality of contributions to discussions: High Quality contributions show an understanding of the topic, draw inferences, show independent thinking and are formulated in own words, integrate the different ideas and principles from the course and reference work of others accordingly Quality of the individual writing assignment: Understanding of the theories and their general principles, ability to draw inferences, ability to give examples of how theories are applied Quality of the group presentation and project: Understanding of the theories and their general principles, ability to apply theoretical principles to the project work, clarity of argumentation and presentation in written and spoken communication when project is presented
Additional information on course content, division of course by topics, incl. times of contact lessons taking place in the form of seminar. .	**14.9.2011, 18:15-19:45, T416 Seminar Room** Introduction to the course: Socio Technical Systems, Digital Knowledge Ecosystem, Web2.0 in Enterprises Theory Ia: Distributed Cognition Readings: Distributed Cognition o Halverson (2002) o Hollan, Hutchins & Kirsch (2000), p. 174-183 **28.9.2011, 16:15-17:45, T416 Seminar Room** Theory Ib: Distributed Cognition and Knowledge Representation Theory IIa: Communities of Practice Compulsory Reading, Answering Questions in Discussion Forum, Short Presentation, Discussion in Class Readings and Questions: Distributed Cognition • Hollan, Hutchins & Kirsch (2000), p. 183-192 • Wenger et al. (2002), skim Ch. 1, read Ch. 2 • Wenger, White, & Smith (2009), read Ch. 1 • Wenger (2004), read Ch. 1 **12.10.2011, 16:15-17:45, T416 Seminar Room** Theory IIb: Communities of Practice Theory III: Knowledge Maturing Compulsory Reading, Answering Questions in Discussion Forum, Short Presentation, Discussion in Class

	Readings and Questions: Communities of Practice • Wenger, White, & Smith (2009), read Ch. 2, skim Ch. 3, read Ch. 4-6 Knowledge Maturing – Schmidt et al. (2008) **31.10.2011, 16:15-19:45, T510 Media Lab** Theory IV: Principles of Emergence Enterprise Social Software: Introducing some Systems Group Formation, Trying out Software, Agreeing a Workplan for a Project Readings and Questions (for all): • Ullrich et al, 2008, WWW http://www2008.org/papers/pdf/p705-ullrichA.pdf Readings (Groups only) • will be distributed in class **01.11.2011, 16:15-19:45, T510 Media Lab** Enterprise Social Software: Software Trials, Project Work Group Project Work **07.11.2011, 16:15-19:45, T510 Media Lab** Enterprise Social Software: Software Trials, Project Work Completing Group Project Work, Starting to Write a Group Report **28.11.2011, 16:15-17:45, T416 Seminar Room** Enterprise Social Software: Presentation of Results Presentation of Group Work Results **29.11.2011, 16:15-17:45, T416 Seminar Room** Enterprise Social Software: Presentation of Results Presentation of Group Work Results **05.12. 2011, 16:15-17:45, T416 Seminar Room** Enterprise Social Software: Emergent Properties, Evaluating Social Systems, Closure Presentation Literature:

Unit in charge of subject:	Institute of Informatics
Name of person compiling course	Prof Tobias Ley

programme:	
Signature:	
Date:	O5.09.2011

Course programme registered in the academic unit

Date	05.09.2011
Name of study assistant	Hanna-Liisa Pender
Signature	

Appendix 1
Subject course: Bachelor´s thesis

	A	B	C	D	E
Skill of topic selection and problem statement					
Relevance of topic to main speciality or minor speciality	Topic of thesis is related to speciality and choice of topic proves high professional competence	Topic of thesis is related to speciality and choice of topic proves very good professional competence	Topic of thesis is related to speciality and choice of topic proves professional competence	Topic of thesis is related to speciality, but choice of topic shows poor professional competence	Topic of thesis is remotely related to speciality and choice of topic shows poor professional competence
Topicality of problem and clarity of problem statement	Author has proven topicality, originality and practicality of problem. The problem is justified, particular, defined, expresses a new point of view.	Author has proven topicality of problem. The problem is particular, defined and suitable.	Author has proven topicality of problem to some extent, but problem statement is unclear. The problem is interesting, realizable.	Author has somewhat proven topicality of problem . The problem itself and approach are conventional , there is ambiguity in problem statement.	Author has proven topicality of problem insufficiently. The problem is conventional, diffusive and unclear.
Research question	Research question in thoroughly developed in order to answer the research problem.	Research question is developed in order to answer the research problem.	Research question is developed enough to answer the research problem.	Research question is poorly developed in order to answer the research problem.	Research question is not developed.
Unison of problem, objectives, tasks and their suitability to topic	Author has formulated the problem, objectives and tasks, these are mutually in accordance and correspond to topic of thesis.	Author has formulated the problem, objectives and tasks, which are not clearly in accordance, but the problem , objectives and tasks correspond to topic of thesis.	Author has formulated the problem and objective or tasks, which are in accordance with topic of thesis.	Author has briefly described the problem, formulated objective or tasks, which are not in accordance, but are connected to topic of thesis.	Author has briefly described the problem, formulated an objective or tasks, which are not in accordance and are remotely connected to topic of thesis.