CPE/CSC 581-S05 Computer Support for Knowledge Management Schedule

The following table provides an outline for the course schedule. It lists the topic for a particular week, together with references to the respective entries in the reading list, and to the assignments with their due dates. Material will be made available as the course proceeds, so some links will be broken initially.

Note: The table is generated via XML, and may not display properly on some browsers. You can also use the PDF version, but it may not follow hyperlinks.

Week	Date	Topic	Description	Readings	Assignment	Project	Student Presentation
1	March 29	Introduction	An overview of the course. Knowledge and humans: benefits, problems. Knowledge and computers: knowledge representation, reasoning. Dealing with large accumulations of knowledge: libraries, other repositories. Computer support for dealing with knowledge: storage, retrieval, evaluation, visualization.		Assignment 1: KM Tools	Team formation; brainstorming of ideas; previous team projects	Meike Muckenhaupt: Adaptability in Educational Hypermedia
2	April 5	Knowledge Acquisition, Representation and Manipulation	Basic principles and methods to enable computers to deal with knowledge: Transfer of knowledge from humans to computers, extraction of knowledge from data collections ("data mining"), representation of knowledge in computers (rules, frames, scripts, meta-data, RDF), generating new knowledge from existing knowledge (inference, reasoning).			Milestone Week 2: Requirements, Testing and Evaluation Plan Teams established; project definition	

				Assignment 2: KM Body of Knowledge	
3	*April 12*	***Knowledge Organization***	Establishing relations among knowledge items: explicit vs. implicit relations; special relations such as similarity, part-of, contains, ... Methods for organizing knowledge: hierarchies, categorization schemes, descriptors, ontologies, metadata, Semantic Web.		Requirements definition, tentative schedule
4	*April 19*	***Knowledge Retrieval***	Finding and retrieving relevant knowledge items from large collections: Information retrieval, search engines, relevance ranking.		Milestone Week 4: Prototype 1 (alpha)
				Assignment 3: Knowledge Presentation and Visualization	
5	*April 26*	***Knowledge Presentation***	Presentation of identified relevant knowledge items to the human user: Text, graphics, animation; visualization techniques, alternative presentation methods (e.g. audio); Human-Computer Interface (HCI) and usability aspects.		
6	*May 3*	***Knowledge Exchange***	Sharing knowledge between computers and humans: Knowledge exchange languages, internal representation of knowledge vs. sharing, levels of abstraction, details. Computer-computer vs. computer-human knowledge exchange.		Milestone Week 6: Prototype 2 (beta)
		Usage of Knowledge		Assignment 4: Knowledge	

			knowledge easier for humans: Integration of the aspects discussed earlier into larger systems; balance of conflicting requirements (e.g. levels of abstraction vs. access to specific details); usability considerations.	Integration	
8	*May 17*	***Knowledge Management Techniques***	Processes and methods that help humans utilize computer-based knowledge more effectively: Delphi method, process modeling, Semantic Web, RSS, Wiki.		Milestone Week 8: Final Version
9	*May 24*	***Knowledge Management Tools***	Computer systems and tools that support knowledge management: Topic map tools, ontology development systems, categorization and classification tools, XML-based tools.		Peer evaluation of final version
10	*May 31*	***Knowledge Management in Organizations***	Case studies and trends of computer-based knowledge management in different types of organizations: commercial, educational, informally organized (e.g. Web communities)		Project Presentations, Final Documentation

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