Knowledge Management

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Catalog Description:

This course examines current theories and foundations of knowledge management. Knowledge assets and their organizational value are examined and analytical and managerial tools and techniques for knowledge acquisition, generation, assessment, evaluation, and dissemination are studied.

Rational for the course:

The process of managing all aspects of organizational knowledge is the domain of Knowledge Management (KM). Knowledge Management (KM) is arguably one of the most interesting and powerful IT and Management concepts in decades. Knowledge management issues are said to include developing, implementing, and maintaining appropriate organizational, cultural, technical infrastructures to enable knowledge creation, codification, transfer and realization processes (Grover and Davenport, 2001). It is by utilizing these processes that organizations find, select, organize, disseminate, and transfer important information and expertise necessary for activities: such as problem solving, dynamic learning, strategic planning and decision making. Worldwide spending on knowledge management is expected to reach $20 billion by the end of this year. KM is the key to competitive advantage, better customer care, increased returns, faster turnaround and innovation. Knowledge managers deal with the intellectual capital side of information management issues and must be skilled in ever-changing technology systems used by corporate, government, research and professional organizations. This course provides an awareness of current theories and foundation of knowledge management with an emphasis on profit and not-for-profit organizations. Students are introduced to knowledge assets and their organizational value. Students examine analytical tools and techniques for knowledge acquisition, assessment, evaluation, generation, management and organization and dissemination. This course also provides an analysis of commercially available documents, databases and applications packages, reviews best practices and experiences and addresses knowledge management project design and implementation.

Course Objectives:

Broadly speaking, this course is structured into three parts:

1. Conceptual Foundations and Principles of Knowledge Management
2. Implementations, Strategies and Best Practices in Technologies, Tools and Systems for Managing Knowledge.
3. Management of knowledge workers and knowledge intensive organizations

Specifically, upon completion of this course the students will be able to:

- Understand, and compare and contrast concepts, processes, and constructs used in knowledge management including Knowledge Markets and Economy.
- Understand and define knowledge discovery approaches.
- Examine various latest technologies that are available for organizational knowledge management.
- Examine how information technologies and organization design approaches can be used to build knowledge management enterprises.
- Compare and contrast strategies and best practices in knowledge management.
- Understand issues, opportunities and challenges in managing knowledge workers and knowledge intensive organizations.

Textbook and supplemental Reading requirements:

- References to all reading material for this course including KM articles, cases and other resources will be available on BlackBoard.

Final Exam:

We will have one comprehensive final exam. The final exam is given on the last day of class. We will discuss more details about the format and coverage of this exam in class.

Knowledge Management Project:

We are going to have two hands on projects dealing with one of the most important KM processes. The project deals with knowledge engineering process, where you will be extracting knowledge from an expert and develop a system that mimics the expertise of that expert. We will discuss more details about of this projects in class.

Case Analysis:

We are going to discuss 8 case studies about real life implementation of knowledge management. The short cases have appeared in CIO magazine and can be downloaded from CIO.com. In Blackboard, you will be able to find the URL's for these cases. Starting the second class, and for each class thereafter, we will discuss two cases. You will be required to write a short analysis for each case and be prepared to discuss it in class. I will provide you additional details during the course of the semester. We will spend a few minutes discussing the concepts covered by the assignment and discuss from different points of views.

Instructional Methods:

This course will be delivered by mixing lectures with hands-on computer exercises. In most classes a conceptual/theoretical lecture will be given on a selected topic related to databases. In some classes, the lecture is followed by hands-on exercises. To enhance learning both elementary and advanced KM issues, techniques and concepts covered in this course, we will rely on the textbooks, class lectures, class discussions, in-class exercises, and lab exercises. To further facilitate learning, each database topic covered in class maybe complemented with quizzes, exercises, other Q&A. Homework assignments and class projects challenge the student to apply the knowledge learned in class.

Attendance Policy:

Each student is responsible for all the information and announcements that are made in class. Poor performance in this course is directly related to poor attendance. Students are expected to conduct themselves in a professional manner. A professional shows up for scheduled meetings, is prepared and on time. Any student missing the first two classes without notifying me will be administratively dropped from the course.

Ethical Issues and the Honor Code Policies:

University students are expected to conduct themselves in accordance with the highest standards of academic honesty. Academic misconduct for which a student is subject to penalty includes all forms of cheating, such illicit possession of examinations or examination materials, forgery, or plagiarism. Students will NOT make, borrow, or "share" copies of their lab assignments or files with other students. Plagiarism is defined as "presenting as one's own work that work which is, in whole or in part, the work of another person or persons without giving proper credit to the appropriate source." This includes submitting work done by another, as one's own work. It is understood that what you turn in to me for grade represents your own effort. Plagiarism will be immediately punished with a grade of zero for the assignment in question. Further disciplinary action will be pursued as I deem appropriate. Helping one another is allowed, but copying is cheating. This practice is against the UNCG Honor Code and defeats the purpose of this course. No credit will be received for shared work, and other penalties may be imposed. I will pursue cheating as far as the university allows me.

Grading:

Grades for the course are based on the final exam, case analysis, tech. assessment project and class participation. The course grade will be calculated using the following weights:

Course Components	**Points**	**% of Grade**
Class Participation and case discussions	300	30%
KM Projects Analysis and Write up and Presentation:	400	40%
Final Examination – Integration/ synthesis	300	30%
TOTAL	**1000**	**100%**

The final grade is determined using the following 10-point scale:

970-1000: A+ 930-969: A 900-929: A- 870-899: B+ 830-869: B 800-829: B-
730-799: C 700-729: C- Below 700: F

Tentative Course Outline

Please note: This course outline presented in the next pages is only tentative. We will make every attempt to follow this outline. However, deviations from this outline may become necessary

Date	Objectives
June 29	▪ **Introduce Knowledge Management and what the forces are driving it** ▪ Discuss the differences among knowledge, data, and information ▪ Introduce knowledge as being an important facet of intelligent behavior ▪ Understand the different types of knowledge ▪ Describe various locations of knowledge ▪ Discuss organizational issues related to KM ▪ Explain KM solutions at four levels: (1) KM processes; (2) KM systems; (3) KM mechanisms and technologies; and (4) KM infrastructure ▪ Categorize of KM tools and how they enhance KM strategies ▪ Discuss the relevance of KM in today's dynamic environments with increasing technological complexity ▪ Explain knowledge management systems (KMS) and their role in the organization
July 6	▪ Introduce KM technologies including: search engines, data mining/warehousing software, document management, multimedia databases, GroupWare, brainstorming software, collaborative filtering, and web push technologies, and expert systems-intelligent agents. ▪ Introduce artificial intelligence as a facilitating technology for knowledge management ▪ Introduce knowledge capture systems and knowledge engineering ▪ Explain how knowledge sharing systems help users share their knowledge, both tacit and explicit: ▪ Introduce knowledge-based systems ▪ How to develop knowledge-based systems, the tools and the techniques ▪ Present the different types of knowledge repositories ▪ Explain how to elicit and store organizational and individual knowledge ▪ Discuss the value of organizational storytelling for knowledge capture ▪ Introduce traditional one-on-one interview and variations of the one-on-one interview when more than one person participates ▪ **Exsys Expert System Lab** ▪ **Knowledge Engineering Project is Handed out today** **Case studies:** 1. The Knowledge Crunch: Frito-Lay Sales Force Sells More Through Information Collaboration 2. Portal U: Portals for Collaboration at the University of Maryland
July 13	▪ Understand the impacts of KM on organizations and organizational performance at several levels: People, Processes and Products ▪ Understand the overall performance of KM ▪ Understand why KM solutions might have different impacts on performance, depending on the circumstances ▪ Identify the factors affecting the suitability of alternative KM solutions, and understand the nature of their impacts ▪ Understand assessment of KM and explain the alternative approaches for assessing KM in an organization **Case studies:** 3. Thanks for memories: Knowledge Management at Northrop Grumman 4. Know it all: Acquisition Spree Leaves Marconi in Need of Knowledge Management

July 20	• **Introduce knowledge discovery process (KD)** ❑ How it is different from knowledge elicitation from experts ❑ How it is different from extracting existing knowledge from databases • Introduce the objectives of knowledge discovery ❑ Explanation of past events (descriptive KD) • Prediction of future events (predictive KD) • Introduce the different classes of methods available for KM ❑ Symbolic (induction) ❑ Connectionist (neural networks) ❑ Statistical • Introduce the details of some of the methods used for KD ▪ Explain how knowledge is discovered ▪ Describe knowledge discovery systems, including design considerations, and how they rely on mechanisms and technologies ▪ Explain KD technologies **Case studies** 5. Building a better battleship: Knowledge Management One Step at a Time 6. Dial K for Knowledge: British Telecom Manages Online Inquiries
July 27	▪ Present the benefits and considerations about KM, including an overview of the nature of the KM projects currently in progress at public and private organizations around the world, and the important role that IT plays in KM ▪ Discuss Implementing Knowledge Management ▪ Discuss Knowledge Management at Work in Organizations ▪ Discuss a company's KM strategy ▪ Discuss KM methods to design knowledge-based implementations of strategy in corporations; ▪ Understand how to use the knowledge gap assessment and the dynamics of the value network to develop successful KM strategies ▪ Discuss large investments in KM and the potential benefits, challenges to specific firms ▪ Discuss why knowledge cannot be successfully managed unless it is properly accounted for and measured in terms of the value it adds to corporate core processes **Case studies** 7. Underwriting Knowledge: How CNA Insurance Created a KM Culture 8. A battle to convince employees to participate in knowledge management ▪
August 3	▪ Final Exam ▪ **Presentation of Knowledge Engineering project**