

COURSE DESCRIPTION

Dept., Number	CS482	Course Title	Information and Knowledge Management Systems
Semester hours	3	Course Coordinator	Dr. Shlomo Argamon, Associate Professor

Current Catalog Description

This capstone course is designed as a project course whose purpose is to enable students to see how the various algorithms and systems they have learned about in their prerequisite courses can be used in context to create useful knowledge management tools. Students in the course will be divided into groups, each of which will choose a project early in the semester whose results they will present at the end of the semester. Periods will be divided among discussion of design of information and knowledge management systems, lectures on effective project management techniques, and hands-on advising of student project group meetings. (3-0-3) Prerequisites: CS425 and two of the following courses: CS 422, CS 429 or CS 481, or instructor's consent.

Textbook

Knowledge Management in Theory and Practice by Kimiz Dalkir
The 7 Habits of Highly Effective People by Stephen Covey

References

The Complete Idiot's Guide to Knowledge Management by Melissie Clemmons Rumizen

Course Outcomes

Students should be able to:

- Understand the goals and methods of information and knowledge management
- Describe different types of IKMS strategies
- Understand different aspects of organizational culture
- Describe how computational tools can enhance or detract from organizational effectiveness
- Describe different models for measuring IKMS effectiveness
- Implement useful computational tools for supporting collaborative knowledge work
- Critique the effectiveness of different user-interfaces
- Describe how intellectual property issues affect the development and deployment of software systems
- Describe how personal interaction styles can affect team effectiveness
- Develop a personal vision and associated goals
- Develop clear plans to accomplish such goals
- Know how to manage their own time and resources effectively

- Understand how to negotiate win/win agreements
- Create plans for self-improvement in a professional context

Relationship between Course Outcomes and Program Outcomes

The following Program Outcomes are supported by the above Course Outcomes:

- a. An ability to apply knowledge of computing and mathematics appropriate to the discipline
- c. An ability to design, implement and evaluate a computer-based system, process, component, or program to meet desired needs
- d. An ability to function effectively on teams to accomplish a common goal
- f. An ability to communicate effectively with a range of audiences.
- g. An ability to analyze the local and global impact of computing on individuals, organizations and society
- i. An ability to use current techniques, skills, and tools necessary for computing practices.
- j. An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices

Prerequisites by Topic

CS425 (Databases) and any two of:
 CS422 (Data Mining), CS429 (Information Retrieval), CS481 (Artificial Intelligence: Natural Language Processing)

Major Topics Covered in the Course

1. Introduction to Knowledge Management & IKMS	3 hours
2. Project Management	4 hours
3. KM Strategies and case studies	4 hours
4. Organizational culture & Communities of practice	4 hours
5. Intellectual Property issues	3 hours
6. Teamwork and interactional styles	3 hours
7. Business issues in IT	4 hours
8. Data Warehousing	3 hours
9. Measuring Knowledge Management	3 hours
10. Human Computer Interaction	4 hours
11. Personal Management Skills	10 hours
Final Exam	-
	45 hours

Assessment Plan for the Course

End of every semester Course Objective Assessments by CS department. End of semester Course Evaluations by IIT. Reviewed every Spring semester by CS Undergraduate Studies Committee for possible updates in the following Fall. Once every 4-5 years a detailed review of all materials for the course is made by the CS Undergraduate Studies Committee.

How Data in the Course is Used to Assess Program Outcomes (unless adequately covered already in the assessment discussion under Criterion 4)

See the assessment discussion under Criterion 4

For a computer science program

Estimate Curriculum Category Content (Semester hours)

Area	Core	Advanced	Area	Core	Advanced
Algorithms		1.5	Software design		1.5
Data structures			Concepts of programming languages		