

Course Information Sheet

CSCI 4350

Global Information Systems

Brief Course Description (50-words or less)

Provides intermediate to advanced understanding of the use of Internet, World Wide Web, and network computing (including Java) technologies for management (search, access, integration, presentation) of multimedia information. Topics discussed include key techniques, tools and technologies for creating such systems, developing novel applications, and their impact on business.

Extended Course Description / Comments

Use this section to put additional information that's relevant to whom this course is targeting

This course deals with architecture, infrastructure, enabling technologies and applications of Web-based Information Systems. The topics of interest include information systems and e-services that support large enterprises (e.g., Enterprise Content Management), that span multiple enterprises (e.g., CRM), and are pan-Web (e.g., Internet Search Engines).

This is an advanced course involving topics in Internet/WWW, Database Management, Information Systems, Information Retrieval and other related fields.

Prerequisite for this course is practical skills in database management, good programming skills, and exposure to basic Internet technologies (html, http, scripting, Web servers, etc.). Follow-on courses to this course (that can prepare a student for research in the WWW) include Advanced Databases, and Advanced Topics in Information Systems.

Pre-Requisites and/or Co-Requisites

CSCI 4370
Database Management

Or CSCI 4570
Compilers

Approved Textbooks
(if more than one listed, the textbook used is up to the instructor's discretion)

No textbook is used. The course material includes Web based content, presentations, and articles.

Author(s):
Title:
Edition:
ISBN-13:

Specific Learning Outcomes (Performance Indicators)

This course presents technologies, standards, and tools related to the Service Oriented Architecture and the Semantic Web, and how they are used in developing Web-based applications of global and enterprise scales. At the end of the semester, all students will be able to do the following:

1. Explain and use W3C standards
2. Explain and develop web search engines
3. Use and integrate basic web tools and technologies
4. Explain and develop web services and service oriented architectures
5. Analyze and explain structure of the web
6. Develop and use information classification and extraction techniques
7. Design taxonomies, and ontologies
8. Design and develop semantic web applications

Relationship Between Student Outcomes and Learning Outcomes

		<i>Student Outcomes</i>										
		a	b	c	d	e	f	g	h	i	j	k
<i>Learning Outcomes</i>	1	•								•	•	
	2	•	•	•						•	•	•
	3	•	•	•						•	•	•
	4	•	•	•						•	•	•
	5	•		•							•	•
	6	•	•	•						•	•	•
	7	•	•	•	•					•	•	•
	8	•	•	•	•					•	•	•

Student Outcomes

(These are ABET-specified and should not be changed)

- a. An ability to apply knowledge of computing and mathematics appropriate to the discipline.
- b. An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution.
- 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.
- e. An understanding of professional, ethical, legal, security and social issues and responsibilities.
- 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.
- h. Recognition of the need for and an ability to engage in continuing professional development.
- i. An ability to use current techniques, skills, and tools necessary for computing practice.
- 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.
- k. An ability to apply design and development principles in the construction of software systems of varying complexity.

Major Topics Covered
(Approximate Course Hours)

3 credit hours = 37.5 contact hours
4 credit hours = 50 contact hours

Note: Exams count as a major topic covered

W3C standards (4-hours)
Web search engines (3-hours)
Semantic search (2-hours)
Basic web tools and technologies (3-hours)
Web services and service oriented architecture (4-hours)
Application interoperability (3-hours)
Structure of the web (1-hour)
Documents, data and digital media, and services on the web (2-hours)
Metadata classification (2-hours)
Information extraction techniques (3-hours)
Introduction to semantic web (2-hours)
Taxonomies and ontologies (4-hours)
Semantic web application development (4.5-hours)

Assessment Plan for this Course

Each time this course is offered, the class is initially informed of the Course Outcomes listed in this document, and they are included in the syllabus. At the end of the semester, an anonymous survey is administered to the class where each student is asked to rate how well the outcome was achieved. The choices provided use a 5-point Likert scale containing the following options: Strongly agree, Agree, Neither agree or disagree, disagree, and strongly disagree. The results of the anonymous survey are tabulated and results returned to the instructor of the course.

The course instructor takes the results of the survey, combined with sample student responses to homework and final exam questions corresponding to course outcomes, and reports these results to the ABET committee. If necessary, the instructor also writes a recommendation to the ABET committee for better achieving the course outcomes the next time the course is offered.

How Data is Used to Assess Program Outcomes

Each course Learning Outcome, listed above, directly supports one or more of the Student Outcomes, as is listed in "Relationships between Learning Outcomes and Student Outcomes". For CSCI 4350, Student Outcomes (a), (b), (c), (d), (i), (j) and (k) are supported at different levels.

**Course Master
Course History**

Dr. Budak Arpinar
08/1998 Course Approval in CAPA
02/2012 Course Information Sheet Created