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	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
Required, Elective or Selected Elective	Selected Elective Course
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.
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

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

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)

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