

The University of Texas at Tyler
Bachelor of Science in Computer Science

Syllabus

Course Number:	COSC 4360
Course Title:	Net-Centric Computing
Course Description:	Introduces the structure, implementation, and theoretical underpinnings of computer networking and the applications that have been enabled by that technology.
Pre-requisites:	COSC 2336
Credits:	3 Semester Hours
Text(s):	<i>Computer Networks and Internets with Internet Applications, 4th ed</i> , Douglas Comer, 2005, ISBN 0-13-143351-2. <i>Introduction to ASP.Net (2003)</i> , Kate Kalata. Course Technology, 2005, ISBN 0-7356-1905-0 (or equivalent text).
Languages Used: (if applicable)	ASP.Net using Visual Studio 2003/5 with VB.Net

Topics:		
	Topics	Hours
1.	Event-driven programming	3
2.	Introduction to net-centric computing	3
3.	Communication and networking	3
4.	Network security	3
5.	The web as an example of client-server computing	4
6.	Building web applications	4
7.	Network management	3
8.	Compression and decompression	3
9.	Multimedia data technologies	3
10.	Wireless and mobile computing	3
11.	Object-oriented programming	3

Additional Materials:	Microsoft Visual Studio 2003/5 Documentation
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Evaluation Method: (only items in dark print apply)	
1. Examination/Quiz	2. Homework
3. Paper/Report	4. Computer Program
5. Project	6. Presentation
7. Class Participation	8. Peer Review

	Course Objectives¹: By the end of this course students are expected to:
1.	Demonstrate an understanding of event-driven programming [1,2,3,4,5,7].
2.	Demonstrate an understanding of net-centric computing [1,2,3,4,5,7].

3.	Demonstrate an understanding of data communication and networking [1,2,3,4,5,7].
4.	Demonstrate an understanding of network security [1,2,3,4,5,7]
5.	Demonstrate the web as an example of client-server computing [1,2,3,4,5,7].
6.	Build web applications [1,2,3,4,5,7].
7.	Demonstrate an understanding of network management [1,2,3,4,5,7].
8.	Demonstrate an understanding of compression and decompression [1,2,3,4,5,7].
9.	Demonstrate an understanding of multimedia data technologies [1,2,3,4,5,7].
10.	Demonstrate an understanding of wireless and mobile computing [1,2,3,4,5,7].
11.	Demonstrate an understanding of object-oriented programming [1,2,3,4,5,7].

¹ Numbers in bracket refer to method(s) used to evaluate the course objective.

Relationship to Program Outcomes²:	
This course supports the following Computer Science Program Outcomes (only items in dark print apply), which state that our students at the time of graduation are expected to:	
1.	Posses knowledge of the fundamentals of mathematics, science, and technology [3,4].
2.	Be able to use modern computational tools and techniques in the practice of computer science [1,2,3,4,5,6,7,8,9,10,11].
3.	Be able to develop logically sound and efficient algorithms [1,2,3,4,5,6,7,8,9,10,11].
4.	Be prepared to implement algorithms in multiple programming languages, on multiple hardware platforms, and in multiple operating system environments [1,2,3,4,5,6,7,8,9,10,11].
5.	Be able to perform analysis, design, implementation, testing, and maintenance of computer-based systems, stressing software engineering principles [1,2,3,4,5,6,7,8,9,10,11].
6.	Be prepared to seek continuing professional development, graduate studies, or professional certifications related to computer science.
7.	Demonstrate effective written, visual and oral communication skills.
8.	Posses an educational background to understand the global context in which computer science is practiced, including: <ul style="list-style-type: none"> a. Knowledge of contemporary issues related to computer science; b. The impact of computers on society; c. The role of ethics in the practice of computer science.
9.	Be able to contribute effectively as members of a project development team [1,2,3,4,5,6,7,8,9,10,11].
10.	Recognize the need to pursue continued learning throughout their professional careers.

²*Numbers in brackets refer to course objective(s) that address the Program Outcomes.*

Prepared By: George M. Whitson	Date: 12-3-04
	Revised: