School of Computer Science

Course Title: Windows Components Technology **Date:** November 4, 2003

Course Number: COP 4009

Number of Credits: 3

Subject Area: Systems	**Subject Area Coordinator:** Masoud Sadjadi **email:** sadjadi@cis.fiu.edu
Catalog Description: Component-Based and Distributed Programming Techniques: C#, Common Type System, Windows and Web Forms, Multithreading, Distributed Objects	
Textbook:	
References: MSDN online documentation	
Prerequisites Courses: COP 4226 or COP 4005	
Corequisites Courses: None	

Type: Elective

Prerequisites Topics:

- Programming in Java
- Event Driven Programming
- GUI programming

Course Outcomes:

O1. Master the C# Programming Language

O2. Master User Interface Components

O3. Master Database Access components

O4. Master Internet-Based Application Development

O5. Be familiar with Web Services

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Outline

Topic	Number of Lecture Hours	Outcome

• Introduction to C#
  ○ Common Types
  ○ Classes
  ○ Inheritance
  ○ Events and Event Handling
	6	O1

• User Interface Design
  ○ Windows Forms
  ○ Toolbars
  ○ Menus
  ○ Data Binding
	6	O2

• Data Access
  ○ Data Access Architecture
  ○ Data Readers
  ○ Data Sets
  ○ Data Presentation
  ▪ Data Grid
	9	O2, O3

• Internet-Based Applications
  ○ Web Forms
  ○ State Management
  ▪ Cookies
  ▪ Query Strings
  ▪ Session Variables
  ▪ View State
  ○ Security
	9	O2, O4

• Web Services
  ○ XML
  ○ SOAP
  ○ Web Service Applications
  ○ Web Service Consumers
	6	O5

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Course Outcomes Emphasized in Laboratory Projects / Assignments

Outcome	Number of Weeks
O1, O2	3
O1, O2, O3	3
O1, O2, O2	3
O1, O5	2

Oral and Written Communication:

Number of written reports: **None**

Approximate number of pages for each report:

Number of required oral presentations: **None**

Approximate time for each presentation:

Social and Ethical Implications of Computing Topics

Topic	Class time	student performance measures
N/A		

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Approximate number of class hours devoted to fundamental CS topics

Topic	Core Hours	Advanced Hours
Algorithms:		
Software Design:		.5
Computer Organization and Architecture:		
Data Structures:		
Concepts of Programming Languages:		.5

Theoretical Contents

Topic	Class time
N/A	

Problem Analysis Experiences

1.	**N/A**

Solution Design Experiences

1.	Programming in C#
2.	Data Access using C# and Data Access Objects and Win Forms
3.	Data Access using C# and Data Access Objects and Web Forms
4.	Web Service Application and Web Service Consumer Application

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The Coverage of Knowledge Units within Computer Science Body of Knowledge[1]

Knowledge Unit	Topic	Lecture Hours
PL2, PF5	Introduction to C#	3
HC5	User Interface Design	6
NC5	Internet-Based Applications	9

[1]See http://www.computer.org/education/cc2001/final/chapter05.htm for a description of Computer Science Knowledge units