Knight Foundation School of Computing and Information Sciences

Course Title: Windows Components Technology   **Date:** 11/04/2003

Course Number: COP 4009

Number of Credits: 3

Subject Area: Systems	Subject Area Coordinator: Nagrajan Prabakar **email:** prabu@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

Outline

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COP 4009
Windows Components Technology

Topic	Number of Lecture Hours	Outcome

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

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

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

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

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

Assessment Plan for the Course & how Data in the Course are used to assess Program Outcomes

Student and Instructor Course Outcome Surveys are administered at the conclusion of each offering, and are evaluated as described in the School's Assessment Plan: https://abet.cs.fiu.edu/csassessment/

Course Outcomes Emphasized in Laboratory Projects / Assignments

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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		

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	

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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 |

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

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[1]See https://www.acm.org/binaries/content/assets/education/cs2013_web_final.pdf for a description of Computer Science Knowledge units