

COM271 C# Programming II

SYLLABUS

Description

The course covers advanced topics and concepts in C# and provides hands-on experience using one of the most popular object-oriented languages to date. Students will learn how to properly design programs using C# as a language leveraging the .NET libraries. Advanced topics will be discussed and utilized including the collection framework, delegates, events, assemblies and generics. The course also provides practical examples that the students need to master the core capabilities of C# and advance their proficiency in developing applications for the .NET environment utilizing Visual C#.

General Course Information

Number of Units/Weeks	8/10
#Hours Lecture/#Hours Laboratory/#Hours Homework	60/40/120
Prerequisite(s)	COM270
Co-requisites (s)	N/A
Date Approved / Last Review	December 2007 / August 2014

Resources

Note: Be aware some websites may change with no notice

Required Resources

Solis, D. (2006) Illustrated C# 2005. New York: Apress.

Supplemental Resources

Northrup, Tony, Shawn Wildermuth, Bill Ryan. Microsoft .NET Framework 2.0 Application Development Foundation. Microsoft Press, 2006

Course Objectives and Outcomes

Upon successful completion of this course, students will be able to:

- Create multi-tier applications
- Create and apply reusable .NET components using Interface Realization
- Apply Advanced Type construction techniques
- Incorporate Serialization and Remoting capabilities into an application
- Recognize Good and bad C# practices

Course Outline (see course schedule for specific dates)

Week	Topic	Chapter or Resource	Activity
1	Introduction Inheritance Constructors Visibility Modifiers	Chapters 1, 2, 3, 4, 6 and 7 (133 pages = 13.3 hours) Student manual lessons 1-4 (25 pages = 3 hours) Week homework hours: 13.3 Week software code analysis: 3	Project 1: Inheritance (2 hours) Week programming activity hours: 2
2	Method and Parameter Modifiers Interfaces - Abstract Classes	Chapter 5, 7 and 17 (99 pages = 9.9 hours) manual lessons 5-6 (21 pages = 2.7 hours) Week homework hours: 9.9 Week software code analysis: 2.7	Project 2: Abstract Classes (5 hours) Week programming activity hours: 5
3	Exception Handling Events Delegates	Chapters 11, 15 and 16 (55 pages = 5.5 hours) Student manual lessons 7-8 (9 pages = 1 hour) Week homework hours: 5.5 Week software code analysis: 1	Practical exercise: Define a set of application-specific Exception classes (2 hours) Practical exercise: Implement and test a delegate chain of actions (minimum 3) based on a method invocation (4 hours) Week programming activity hours: 6
4	Object Lifetime System IO Text File Scenarios	Student manual lessons 9-10 (15 pages = 1.9 hours) Week homework hours: 0 Week software code analysis: 1.9	Project 3: Interfaces (8 hours) Week programming activity hours: 8

Week	Topic	Chapter or Resource	Activity
5	Collections XML and XML Serialization	Chapter 14 (4 pages = .4 hours) Student manual lessons 11-12 (21 pages = 2.7 hours) Week homework hours: 0.4 Week software code analysis: 2.7	Practical exercise: Implement stand-alone serialization module. (6 hours) Week programming activity hours: 6
6	Generics Microsoft SqlServer Connected and Disconnected Objects	Chapter 19 (27 pages = 2.7 hours) Student manual lessons 13-16 (8 pages = 1 hour) Week homework hours: 2.7 Week software code analysis: 1	Midterm Exam Practical exercise: Implement a connection pool of SqlConnection objects using generic data structure (6 hours) Week programming activity hours: 6
7	Microsoft SqlServer Winforms	Student manual lessons 17-19 (22 pages = 2.8 hours) Week homework hours: 0 Week software code analysis: 2.8	Project 4: ATM Machine DB & abstract data types (8 hours) Week programming activity hours: 8
8	Code Best Practices Threading	Handout (26 pages = 2.6 hours) Student manual lesson 21 (4 pages = 0.5 hours) Week homework hours: 2.6 Week software code analysis: 0.5	Continue Project 4: ATM Machine DB access classes (6 hours) Week programming activity hours: 6
9	Web Services	Student manual lesson 22 (13 pages = 1.5 hours) Week homework hours: 0 Week software code analysis: 1.5	Continue Project 4: ATM Machine transaction and error logging threaded functions (10 hours) Week programming activity hours: 10
9	Desktop & Web access portals	Week homework hours: 0 Week software code analysis: 0	Continue Project 4: ATM Machine web portal – secured account information (12 hours) Week programming activity hours: 12
10	SRVY		Final Exam

Week	Topic	Chapter or Resource	Activity
		Total homework hours: 34.4 Total software code analysis: 17.1	Total Programming activities: 69
			Total homework hours: 120.5

Your Grades for this Course

Your final grade for this course will be based on an assessment by the Instructor of your performance on a number of course activities, which may include objective tests, classroom exercises, laboratory demonstrations, project papers, or other types of activities. The chart below indicates in what activities you will engage, how many possible points can be earned for each activity, and the percentage of your final grade that will be accounted for by each activity.

Students in this course should be graded following Coleman University assessment practices and policies. A point system is used in the University to indicate student performance on various required activities or projects. For this course, it is recommended that points be distributed as follows:

Coleman University Grade Assignment Policy:

Percent	Letter Grade	Grade Points
94-100	A	4
90-93	A-	3.67
87-89	B+	3.33
84-86	B	3
80-83	B-	2.67
77-79	C+	2.33
74-76	C	2
70-73	C-	1.67
67-69	D+	1.33
64-66	D	1
60-63	D-	0.67
N/A	INC	0
N/A	W	0
60 or above	CR	0

59 or below	NC	0
N/A	I	0
N/A	W	0
N/A	AU	0
N/A	TR	0
N/A	WV	0

Legend	
CR = Credit	NC = No Credit
I = Incomplete	W = Course Withdrawal
AU = Audit	TR = Transfer Credit
WV = Waiver	

Academic Accommodation / Adjustment Policy:

In accordance with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act (ADA), Coleman University offers accommodations to students with documented physical, psychological, and/or cognitive disabilities. Coleman University will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to offer equal educational opportunities to qualified disabled individuals.

To qualify for an academic accommodation under ADA, the student must provide adequate documentation of a disability. Students seeking academic accommodations should contact the campus ADA Coordinator at 858-966-3953 or via email at ada@coleman.edu. The ADA Coordinator will review the documentation provided and verify ADA coverage. Students covered under ADA must meet with the ADA Coordinator at the beginning of every term to determine the appropriate academic accommodations. Failing to meet with the ADA Coordinator at the beginning of every term may impact the availability of accommodations.

After the academic accommodations have been determined, the students' instructors will be notified by the ADA Coordinator. If any problems or concerns regarding the provision of accommodations occur, the student must inform the ADA Coordinator. If the student feels accommodation is not being made appropriately, the student may follow the published Student Grievance Procedures.