



## Undergraduate Course Syllabus

### IT 232: Software Development w/C++.NET

Center: Online

#### Course Prerequisites

CIS-250, IT-240 or IT-145 and CIS-230 or IT-230 and MAT-230 or MAT-320

#### Course Description

This course teaches students how to design, implement and test applications in the C++ programming language. Topics include C++ data types, operators, functions, classes and inheritance. The course introduces students to issues associated with developing real-world applications by presenting several case studies. The concepts of object-oriented design and programming are covered. This is a programming course.

#### Course Outcomes

- Operate within the Visual C++.NET IDE
- Design and develop good user interface designs
- Demonstrate logical programming constructs
- Practice with variables, constants, and formulas
- Create projects using Windows Forms
- Create object-oriented programs
- Demonstrate database connectivity

#### Required Materials

Using your learning resources is critical to your success in this course. Please purchase directly through SNHU's online bookstore, [MBS Direct](#), rather than any other vendor. Purchasing directly from the bookstore ensures that you will obtain the correct materials and that the Help Desk, your advisor, and the instructor can provide you with support if you have problems.

#### *Beginning Visual C++*

Horton, Ivor

Wiley & Sons

2012

978-1-118-36808-4

#### Websites:

<http://www.cplusplus.com/>

<http://msdn.microsoft.com/en-us>

## Software Requirement

This course requires the use of MS C++.net (**Visual Studio 2012**) **Access 2013**. If you have trouble downloading and install the software, please request access to the SNHU VDI (virtual desktop) from your course instructor.

### Software:

Microsoft Visual Studio .NET 2012 Professional or Ultimate version

Microsoft Access 2010 or newer

The Recommended operating system is Windows 8, only because Visual Studio .NET 2012 is more compatible with Windows 8. However, Windows 7 can be used successfully for this course as well.

The required software as well as Windows 8 is available at no charge to IT students via the Microsoft/SNHU DreamSpark program.

For Mac users, please see the “Install Windows on a Mac Manual” link at the following website:

<https://my.snhu.edu/Offices/ITS/IS/Pages/software.aspx>. You can successfully use a Mac for this course as long as you install Windows and Visual Studio .NET in a virtual machine, as described in that link.

## Instructor Availability and Response Time

Your class interaction with your instructor and your classmates will take place in Blackboard on a regular, ongoing basis. Your instructor will be active in Blackboard at least five days a week, and you will normally communicate with your instructor in the open Blackboard discussion forum so that your questions and the instructor’s answers benefit the entire class. You should send emails directly to your instructor only when you need to discuss something of a personal or sensitive nature, and in those cases your instructor will generally provide a response within 24 hours.

## Grade Distribution

Assignment Category	Number of Graded Items	Point Value per Item	Total Points
Homework	4	75	300
Assignment	3	75	225
Final Project: Milestone One	1	150	150
Final Project: Milestone Four	1	325	325
		<b>Total Course Points:</b>	1,000

This course may also contain practice activities. The purpose of these non-graded activities is to assist you in mastering the learning outcomes in the graded activity items listed above.

## University Grading System: Undergraduate

<b>Grade</b>	<b>Numerical Equivalent</b>	<i>Total Points. 1,000</i>		
		<b>Points</b>	<b>Points Equivalent</b>	
			<i>Lower</i>	<i>Upper</i>
A	93-100	4	930	1000
A-	90-92	3.67	900	929
B+	87-89	3.33	870	899
B	83-86	3	830	869
B-	80-82	2.67	800	829
C+	77-79	2.33	770	799
C	73-76	2	730	769
C-	70-72	1.67	700	729
D+	67-69	1.33	670	699
D	60-66	1	600	669
F	0-59	0	0	599
I	Incomplete			
IF	Incomplete/Failure*			
IP	In Progress (past end of term)			
W	Withdrawn			

\*Incomplete and Incomplete/Failure: Any student requesting an "I" grade must complete a Student Petition and Contract for a Grade of Incomplete and submit it to the proper offices prior to the final day of the term/semester. The petition will specify a deadline by which the coursework must be completed. The incomplete automatically becomes an "IF" if work has not been completed and a grade has not been submitted by the specific deadline.

### Grading Guides

Specific activity directions, grading guides, posting requirements, and additional deadlines can be found in the Course Information area in the Assignment Guidelines and Rubrics folder.

### Weekly Assignment Schedule

The Learning Modules area in Blackboard contains one module folder for each week of the course. All reading and assignment information can be found in the folders. All assignments are due by 11:59 p.m. EST on the last day of the module week.

In addition to the textbook readings that are listed, there may be additional required resources within each module in Blackboard.

Module	Topics and Assignments
1	Icebreaker Activity (Required) Introduction to Visual C++/Data Types/Variables Reading: <i>Beginning Visual C++</i> , Chapters 1 and 2 1-1 Final Project Review 1-2 Assignment: Console Application
2	Decision Expressions, Loops, Arrays, Strings and Pointers Reading: <i>Beginning Visual C++</i> , Chapters 3 and 4 2-1 Discussion: Module Two Questions 2-2 Practice Problems: Count the Vowels 2-3 Homework: Loops, Arrays, and Pointers
3	Functions, Classes and Structs Reading: <i>Beginning Visual C++</i> , Chapters 5 and 7 3-1 Discussion: Module Three Questions 3-2 Assignment: C++ Code Snippets 3-3 Homework: Designing Classes
4	Using Templates and Collection Classes Reading: <i>Beginning Visual C++</i> , Chapters 8 and 10 4-1 Discussion: Module Four Questions 4-2 Practice Problems: Writing a Class 4-3 Homework: Using the STL
5	Graphical User Interfaces (with Windows Forms) 5-1 Discussion: Module Five Questions 5-2 Final Project Milestone One: Introduction to Forms
6	Database Connectivity with Windows Forms, Part I 6-1 Discussion: Module Six Questions 6-2 Assignment: Code Snippets 6-3 Final Project Milestone Two: Custom Classes
7	Database Connectivity with Windows Forms, Part II 7-1 Discussion: Module Seven Questions 7-2 Final Project Milestone Three: Database
8	Intro to Graphics Programming with GDI+ 8-1 Discussion: Reflective Summary 8-2 Final Project Milestone Four: Final Product 8-3 Homework: Graphics Programming with GDI+

### **Late Assignments Policy**

Meeting assigned due dates is critical for demonstrating progress and ensuring appropriate time for instructor feedback on assignments. Students are expected to submit their assignments on or before the due date. Review the [full late assignment policy](#).

### **Attendance Policy**

Failure to participate during the first week of the course (12:00 a.m. Monday through 11:59 p.m. Sunday) will result in automatic withdrawal. Participation is defined as posting within a discussion board, wiki, or blog, and/or submitting an assignment. Students who do not participate during the first week forfeit their rights to be reinstated into the course.

Extended absences, defined as failure to post into the Blackboard classroom for more than five days, must be coordinated with the instructor. Students who fail to coordinate any such absence with the instructor, or who fail to withdraw from the course in accordance with the COCE official drop and withdrawal policy, will be graded appropriately.

All assignments must be submitted through the appropriate Blackboard tool by 11:59 p.m. Eastern Standard Time on the specified due date. Refer to the Assignment Guidelines and Rubrics folder for specific details on completing the assignments in this course.

### **SNHU College of Online and Continuing Education Withdrawal Policy**

<https://my.snhu.edu/layouts/FormServer.aspx?XsnLocation=https://my.snhu.edu/FormServerTemplates/COCE.Withdrawal.revised.form.xsn&SaveLocation=https%3A%2F%2Fmy%2Esnhu%2Eedu%2FOffices%2FCOCE%2FAdvising%2FCourse%20Withdrawal%20Library&OpenIn=browser>

### **SNHU College of Online and Continuing Education Guide to Student Success**

<https://my.snhu.edu/Resources/StudentHandbooks/Pages/default.aspx>

### **Blackboard Course Tools/Areas Overview**

Your course will be delivered through Blackboard. Below are the most often used Blackboard tools and areas.

Tool/Area	Description	You Should . . .
Announcements	This area is used to post day-to-day course details such as the status of or directions for assignments.	Check the announcements on a regular basis, at least several times each week.
Course Information	The course syllabus, assignment guidelines and rubrics, technical support, Student Handbook, and advising information can be found here.	Check this area at the start of the class. It is recommended that the syllabus be downloaded for future reference.

Learning Modules	This area contains course content, including lectures, readings, resources, and assignments.	Check this area at the start of each module and throughout the module week to review course materials.
Discussion Board	This is one of the areas for discussion and collaboration in the class.	Participate and contribute on a regular basis if your course includes discussions.
Research/Writing	SNHU library and research information can be found here.	Check this area for links and information on different library-related resources.
My Instructor	Instructor information is located in this area.	Check this area to find out about your instructor's background and contact information.
My Grades	Assignment grades are located in this area.	Check this area to find out your grades for your course assignments.

### Southern New Hampshire University Policies

More information about SNHU policies can be found at  
<https://my.snhu.edu/Academics/Pages/SyllabiStatements.aspx>.

<p><b>Continuing Education Center Instructor Availability:</b> All undergraduate Continuing Education instructors at all center locations (Manchester, Nashua, Salem, Portsmouth, and Brunswick, Maine) will be available to students for a minimum of four additional hours of face-to-face meeting time per term. This time is in addition to the required 20 hours of face-to-face time in hybrid classes and the required 40 hours of face-to-face time in lecture classes. How the additional meeting time is utilized is at the discretion of the instructor and may vary by course.</p>
<p><b>Academic Honesty Policy:</b> Southern New Hampshire University requires all students to adhere to high standards of integrity in their academic work. Activities such as plagiarism and cheating are not condoned by the university. Students involved in such activities are subject to serious disciplinary action. Plagiarism is defined as the use, whether by paraphrase or direct quotation, of the published or unpublished work of another without full and clear acknowledgment. Cheating includes the giving or receiving of unauthorized assistance on quizzes, examinations, or written assignments from any source not approved by the instructor. Understand that in taking this course, your assignments may be submitted to Turnitin.com or other plagiarism-detection services and reviewed for textual similarity suggestive of plagiarism. All submitted papers are subsequently included as source material in the Turnitin.com database for the purpose of detecting plagiarism in other submitted work. Please review the Turnitin.com Usage Policy should you have any questions. For more about academic dishonesty, please refer to the undergraduate or graduate catalogs.</p>
<p><b>ADA/504 Compliance Statement:</b> Southern New Hampshire University is committed to and concerned with meeting the needs of students challenged by physical, sensory, psychiatric, and/or learning disabilities with regard to the Americans with Disabilities Act (ADA) and Section 504 of the 1973 Rehabilitation Act. At the beginning of each term, or as soon as you become aware of a disability, we encourage you to contact the Disability Resource Center to discuss accommodations for which you may be qualified.</p>

For questions concerning support services, documentation guidelines, or general disability issues, the contact information is:

Disability Resource Center, College of Online and Continuing Education

Kurt Mueller, Director

(603) 629-3464

[k.mueller1@snhu.edu](mailto:k.mueller1@snhu.edu)

For questions concerning ADA/504-related compliance matters, grievances, or legal issues, the contact information is:

[adacompliance@snhu.edu](mailto:adacompliance@snhu.edu)

(603) 645-9623 (phone)

(603) 546-9717 (fax)

**Technical Support:** If you need assistance with Blackboard or other technology issues, contact the SNHU Help Desk via online form submission or chat at <http://www.snhu.edu/techsupport> or by phone at 1-855-877-9919. Technical support is available 24/7.

**Academic Assistance:** Online students enrolled in undergraduate courses in the areas of math, writing, accounting, and statistics will have access to Smarthinking online tutoring:

<https://my.snhu.edu/offices/COCE/Tutoring/Pages/default.aspx>.

**Library Resources Statement:** In addition to the intellectual resources available onsite and online, <https://my.snhu.edu/Academics/Library/Pages/default.aspx>, Shapiro Library makes available group and one-on-one instruction in information literacy, enabling students to define and articulate what knowledge-based resources are relevant to their research interests. Library staff are available to assist students in effectively and efficiently accessing information from credible sources, to compare new knowledge with prior beliefs, and to consider the related ethical, legal, and socioeconomic issues that are inherent in scholarly investigation.

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