

Course Outline

COURSE: CSIS 47 **DIVISION:** 50 **ALSO LISTED AS:**

TERM EFFECTIVE: Spring 2018 **CURRICULUM APPROVAL DATE:** 10/23/2017

SHORT TITLE: VISUAL C++ PROGRAM

LONG TITLE: Visual C++ Programming

Units	Number of Weeks		Contact Hours/Week		Total Contact Hours
3	18	Lecture:	3	Lecture:	54
		Lab:	0	Lab:	0
		Other:	0	Other:	0
		Total:	3	Total:	54

COURSE DESCRIPTION:

Visual C++ Programming to create professional GUI based applications using app and class wizard, common controls, dialogs, menus, tool bars, status bars, file mechanism, and custom controls. This course has the option of a letter grade or pass/no pass. **ADVISORY:** CSIS 45

PREREQUISITES:

COREQUISITES:

CREDIT STATUS: D - Credit - Degree Applicable

GRADING MODES

- L - Standard Letter Grade
- P - Pass/No Pass

REPEATABILITY: N - Course may not be repeated

SCHEDULE TYPES:

- 02 - Lecture and/or discussion
- 03 - Lecture/Laboratory
- 72 - Dist. Ed Internet Delayed

STUDENT LEARNING OUTCOMES:

1. Create programs using calculations and selection, loops and arrays.
- Measure of assessment: Homework, projects, lab exercises.

2. Create programs using methods and objects.
Measure of assessment: Homework, lab exercises, projects.
3. Write programs using windows GUI features.

CONTENT, STUDENT PERFORMANCE OBJECTIVES, OUT-OF-CLASS ASSIGNMENTS

Curriculum Approval Date: 10/23/2017

WEEK HOURS CONTENT

1 3 Lec Course Objective (What to expect from this course)

Discussion of Final Project

Review of Classes

Microsoft

Visual C++ Integrated Development

Environment (IDE)

Demonstration Program

ASSIGNMENT: The students will write, debug and run a simple Visual C++ program. The students will write a console based application using a class.

2 3 Lec Event driven programming

Windows Messages

Introduction to Hungarian Notation

Application Wizard/Class Wizard

ASSIGNMENT: The students will create a dialog based

program which will display some static text.

3 3 Lec Microsoft Foundation Classes

Introduction to

Dialog class (including Message Box)

Introduction to three controls: command buttons, static text, text box

Member value and control variables to your controls

More on Hungarian notation

ASSIGNMENT: The students will create a specific program

in the IDE using Dialog class and the controls covered in this lecture. The students will be given a programming assignment requiring them to modify the above program and its controls.

4 3 Lec Quiz on Hungarian notation, value & control variables, command button controls, static text controls and text box controls.

Review assignment from previous class.

Adding minimize and maximize buttons.

Three more controls: check box control, radio button control, drop-down list box control.

ASSIGNMENT: The students will create a dialog based program using the check box control, radio button control and drop-down list control. They will debug and run the program. Their neighbors will check the screen output. The students will be given a programming project for the next class which will require the use of the controls learned thus far.

5 3 Lec Go over quiz.

Review assignment from previous class.

Specifying control tab order.

Disabling and hiding (and enabling & showing) controls.

Working with timers.

Assignment: The students will be given an "in class" programming assignment using one or more timers and previously learned controls. The assignment will require them to specify a control tab order and to enable/

disable and show/hide controls.

6 3 Lec Quiz on check box control, radio button control, drop-down list

control, enable/disable controls, show/hide controls and specifying control tab order.

Review assignment from previous class.

Creating your own dialog from your application and passing information back and forth.

ASSIGNMENT: The students will be given a project that

will require them to create a dialog based application which will require a second dialog box. It will be necessary for the student to handle information passing between the application and dialog box.

7 3 Lec Go over quiz. Review assignment from previous class.

Students turn in proposals for final projects.

Group Box. Using Group Box with Radio Buttons.

Using Group Box

with Check Box controls.

ASSIGNMENT: The students will be given a specific project using both grouped radio button and check box controls.

8 3 Lec Review assignment from previous class.

Common Dialogs in general (file selection, font selection, color selection, page setup, printing and find and replace)

File selection dialog (specifically)

ASSIGNMENT: The students will be given a project

requiring them to use the file selection dialog to both open and save a file.

9 3 Lec Review assignment from previous class.

Final projects assigned.

Creating menus for the application.

Menu standards and conventions.

Attaching functionality to menus.

Creating Pop-Up menus.

ASSIGNMENT: The students will be asked to add a menu to a previously assigned programming project.

10 3 Lec Review assignment from previous class.

Font selection dialog.

Building a list of available fonts.

Specifying a font for use.

Changing fonts dynamically.

ASSIGNMENT: The students will be given a project that will require the student to generate a list of available fonts and to select and display a font from the list. The project will also require that they alter the font dynamically in the program.

11 3 Lec

Review assignment from previous class.

Using the resource editor.

Adding bitmaps to a project.

Adding icons to a project.

ASSIGNMENT: The students will create their own icon and add it to one of their previous projects. The students will add a bitmap to a project.

12 3 Lec Quiz on File Selection Dialog, Font Selection Dialog, Menus and Resource Editor.

Review assignment from previous class.

Property sheet

Property pages

Tab controls

ASSIGNMENT: The students will create a specific project using a property sheet and three property pages resulting in a project with a tab control having three tabbed dialogs.

13 3 Lec Go over quiz. Review assignment from previous class.

Open Data Base Connectivity (ODBC)

Reading from and Writing to existing databases.

ASSIGNMENT: The students will be given copies of a simple three field Access database file. They will be

assigned a project to open the database, read records, update records, and create new records.

14 3 Lec

Review assignment from previous class.

Calendar Control

Date and Time Picker Control.

ASSIGNMENT: The students will be given specific projects to program using the Calendar Control and the Date & Time Picker Control. Print dialog & printing your output.

15 3 Lec Review assignment from previous class.

Progress Bar Control.

Active X controls (Flex Grid Control, Calendar Control)

ASSIGNMENT: The students will be given a programming project which includes both an active X flex grid control and an active X calendar control.

16 3 Lec Review

assignment from previous class.

About Box.

How to distribute finished programs (dependencies/ InstallShield)

ASSIGNMENT: The students will complete an About Box on one of their previous projects. The students will work on their final projects.

17 3 Lec Volunteers will demonstrate their final projects to the class.

ASSIGNMENT: The students will complete and turn in their final projects.

18 2 Lec FINAL EXAM

STUDENT PERFORMANCE OBJECTIVES:

The student will be able to write dialog-based Visual C++ programs using Microsoft Common Controls and some Active X Controls. The students will have a basic understanding of the Microsoft Foundation Classes. The students will have a firm grasp of event-driven programming.

WEEK 1

The students will enter into the (IDE), compile and run it without errors.

The students will check each other's screen output.

WEEK 2

The students will understand event driven programming, how to create member variables and how to name items with

Hungarian notation.

WEEK 3

The students will create a dialog based program and a message box.

The students will create and use three controls in their dialog box.

WEEK 4

The students will be able to add Check Box, Radio Button and Drop-Down List controls to their dialog based programs.

The students will be able to create their own Dialog Box icon.

WEEK 5

The students will be able to enable/disable and show/hide controls in their dialog based application as well as set the tab order for all controls.

The students will be able to create and use timers in their application.

WEEK 6

The students will be able to add additional dialog boxes to their application and transfer information between them.

WEEK 7

The students will be able to add and implement grouped Radio Button and Check Box controls to their programs.

WEEK 8

The students will be able to use the File Selection.

WEEK 9

The students will be able to add complete, custom menus to their applications.

WEEK 10

Students will be able to find and select fonts on their system for use in their application.

WEEK 11

The students will be able to create icons, create bitmaps, add existing icons to a project and add existing bitmaps to a project.

WEEK 12

The students will be able to create a property sheet from a standard dialog application and add property pages to it in order to achieve a tab controlled project.

WEEK 13

The students will understand ODBC and be able to connect to and use existing databases.

WEEK 14

The students will be able to add calendars to their projects and output data to a printer.

WEEK 15

The students will be able to add Active X Flex Grid and Calendar

Controls to their programs.

WEEKS 16 & 17

The students will have the opportunity to see projects completed

METHODS OF INSTRUCTION:

Lecture, computer demonstration, sample programs, hands-on exercises.

OUT OF CLASS ASSIGNMENTS:

Required Outside Hours: 108

Assignment Description: Reading the text, working on sample programs and homework programs.

METHODS OF EVALUATION:

Writing assignments

Percent of total grade: 5.00 %

Writing assignments: 5% - 20% Written homework

Problem-solving assignments

Percent of total grade: 30.00 %

Problem-solving demonstrations: 30% - 50% Homework problems Quizzes Exams

Skill demonstrations

Percent of total grade: 10.00 %

Skill demonstrations: 10% - 50% Class performance exams

Objective examinations

Percent of total grade: 10.00 %

Objective examinations: 10% - 40% Multiple choice True/false Matching items Completion

Other methods of evaluation

Percent of total grade: 0.00 %

Other methods of evaluation: 0% - 0%

REPRESENTATIVE TEXTBOOKS:

Required Representative Textbooks

Roger Mayne. Introduction to Windows and Graphics Programming with Visual C++: 2nd Edition. World Scientific Publishing Co,2015.

Reading Level of Text, Grade: Reading level of text: 11 grade level. Verified by: Verified by:dvt

ARTICULATION and CERTIFICATE INFORMATION

Associate Degree:

CSU GE:

IGETC:

CSU TRANSFER:

Transferable CSU, effective 200630

UC TRANSFER:

Transferable UC, effective 200630

SUPPLEMENTAL DATA:

Basic Skills: N

Classification: Y

Noncredit Category: Y

Cooperative Education:
Program Status: 1 Program Applicable
Special Class Status: N
CAN:
CAN Sequence:
CSU Crosswalk Course Department: CSIS
CSU Crosswalk Course Number: 47
Prior to College Level: Y
Non Credit Enhanced Funding: N
Funding Agency Code: Y
In-Service: N
Occupational Course: D
Maximum Hours:
Minimum Hours:
Course Control Number: CCC000124865
Sports/Physical Education Course: N
Taxonomy of Program: 070710