

**PALOMAR COLLEGE
COURSE OUTLINE OF RECORD
FOR DEGREE CREDIT COURSE**

(FORM VERSION 5/95) Revised 03.11.00

 TRANSFER COURSE

 A.A. DEGREE

COURSE NUMBER AND TITLE: CSIS 285 Windows Programming I

UNIT VALUE: 4

MINIMUM NUMBER OF SEMESTER HOURS: 80

BASIC SKILLS REQUIREMENTS: Appropriate language and computational skills

ENTRANCE REQUIREMENTS:

Prerequisite: CSIS 221

Corequisite: None

Recommended Preparation: None

SCOPE OF COURSE: An introduction to the fundamental concepts of Windows programming which will enable students to develop Windows applications using a graphical user interface. Includes a detailed study of the Windows Application Programming Interface.

SPECIFIC COURSE OBJECTIVES: The successful student will be able to:

1. Understand the structure of a Windows program.
2. Use Hungarian notation.
3. Manage Windows resources.
4. Process Windows messages correctly.
5. Create windows, menus, and dialog boxes.
6. Build dynamic link libraries.
7. Develop applications for the Microsoft Windows operating environment.

CONTENT IN TERMS OF SPECIFIC BODY OF KNOWLEDGE:

- I. Introduction
 - A. Borland C++ Integrated Development Environment
- II. The Windows Development Environment
 - A. Windows programming concepts
 - B. Windows graphical user interface
 - C. Structure of a Windows program
 - D. Compiling a Windows program
 - E. Hierarchy, modularity, and abstraction in the creation of a Windows program.

- III. Basics of Windows Development
 - A. Creating windows
 - B. Message processing
 - C. Windows classes and styles
 - D. Instances and message loops
 - E. Window procedures
 - F. Hungarian notation
 - G. Writing text to the client area
 - H. Handling the WM_PAINT message
 - I. Handling keyboard messages
 - J. Handling mouse messages
 - K. Window support functions
 - L. Abstract data types and the creation of windows.

- IV. Managing Machine Resources
 - A. Windows resources
 - B. Resource compiler
 - C. Scroll bars
 - D. Segmented memory model
 - E. Flat memory model
 - F. Local and global memory
 - G. File I/O
 - H. Common dialogs
 - I. Space and time complexity of a Windows program.

- V. Window Menus
 - A. Main menus
 - B. Pop-up menus
 - C. Building menus in the resource file
 - D. Adding a menu to a program's window
 - E. Menu messages

- VI. Dialog Boxes and Controls
 - A. The Windows message box
 - B. Windows child classes
 - C. Dialog box control statements
 - D. Dialog box templates
 - E. Dialog box procedures

- VII. Advanced Topics
 - A. The Windows graphical device interface (GDI)
 - B. Dynamic link libraries (DLL)
 - C. The clipboard
 - D. Dynamic data exchange (DDE)
 - E. Windows user-defined data structures
 - F. Encapsulation of a windows public interface protocols and implementation details.

REQUIRED READING:

Petzold, Charles. Programming Windows. 5th edition. Redmond: Microsoft Press, 1999.

SUGGESTED READING:

Conger, James. Windows API Bible. Corte Madera: Waite Group Press, 1992.

REQUIRED WRITING:

Problem solving exercises are required. Students will be expected to complete five or six computer programming labs. Each programming lab will consist of a hands-on exercise applying theory principles learned in class. Programs must be well documented (at least one paragraph) in terms of their overall design goals. Additionally, each subprogram must be documented (two or three sentences) as to its purpose and overall performance.

OUTSIDE ASSIGNMENTS:

Students are expected to spend a minimum of three hours per unit per week in class and on outside assignments, prorated for short term classes.

Outside assignments will include studying lecture/lab notes, completing programming assignments, assigned readings, and homework problems.

INSTRUCTIONAL METHODOLOGY: Check the following that apply:

- lecture
- laboratory
- lecture/laboratory combination
- directed study

This course may be offered as a distance education course and meets Title 5 regulations 55370, 55372, 55374, 55376 and 55378. Yes No If yes, check all that apply:

- telecourse
- mediated instruction
- computer assisted instruction

GRADING POLICY AND STANDARDS (include methods for determining whether the stated objectives have been met by students):

Grades for courses are based upon final examinations, mid-term examinations, other tests, assignments, projects, and participation. Faculty will inform students of their grading policy at the beginning of each semester.

IS COURSE REPEATABLE FOR REASON(S) OTHER THAN DEFICIENT GRADE? Yes ___ No x
Number of times course may be taken for credit: 1

If yes, identify specific provision of Division 2 section(s) 55761-55763 and 58161 which qualifies course as repeatable.

CONTACT PERSON: Richard Stegman x2769

SIGNATURES ON FILE
