



COURSE INFORMATION

A: Division: INSTRUCTIONAL DIVISION  
 B: Department: COMMERCE AND BUSINESS ADMINISTRATION  
 Program: COMPUTER INFORMATION SYSTEMS

Date: SEPTEMBER 1995  
 New Course:  
 Revision of Course  
 Information Form: OCTOBER 1993

C: CISY 370 D: C LANGUAGE PROGRAMMING E: 3

Subject & Course No. Descriptive Title Semester Credit

F: **Calendar Description:** This course provides the student with an introduction to C programming covering basic to intermediate structures and features of the language. Theory is supplemented by practical examples in the lab concentrating on business-oriented functions. Structured, top-down, modular design is re-enforced. The student will be able to write simple stand-alone applications or intermediate-sized routines which would form part of a larger application.

**Summary of Revisions:**  
 1995-09 Sections: G,M,N,P,R

G: **Type of Instruction: Hours per Week/per Semester**

|                           |          |              |
|---------------------------|----------|--------------|
| Lecture                   | 2        | Hrs.         |
| Laboratory                |          | Hrs.         |
| Seminar                   | 2        | Hrs.         |
| Clinical Experience       |          | Hrs.         |
| Field Experience          |          | Hrs.         |
| Practicum                 |          | Hrs.         |
| Shop                      |          | Hrs.         |
| Studio                    |          | Hrs.         |
| Student Directed Learning |          | Hrs.         |
| Other                     |          | Hrs.         |
| <b>TOTAL</b>              | <b>4</b> | <b>HOURS</b> |

H: **Course Prerequisites:**  
 One of: CISY 210 or CISY 230 or CISY 240 or CISY 250

I: **Course Corequisites:**  
 nil

J: **Course for which this Course is a Prerequisite:**  
 nil

K: **Maximum Class Size:**  
 35

L: College Credit Transfer: X  
 College Credit Non-transfer:

M: **Transfer Credit:**  
 Requested: X  
 Granted:  
 Specify Course Equivalents or Unassigned Credit as Appropriate:  
 UBC & OLA CPSC (3)  
 SFU CMPT 112 (1)  
 UVic CSC 110 (1.5)  
 Other: Trinity Western CMPT 100 lev(1)

*E. Meyer*  
 COURSE DESIGNER(S)  
*[Signature]*  
 DIRECTOR/CHAIRPERSON

*[Signature]*  
 DIVISIONAL DEAN  
*[Signature]*  
 REGISTRAR

**N: TEXTBOOKS AND MATERIALS TO BE PURCHASED BY STUDENTS**

(Use Bibliographic Form):

Millspaugh, A.C. Business Programming in C for DOS-Based Systems,  
Latest Ed. HBJ-Holt-Saunders, The Dryden Press.

**O. COURSE OBJECTIVES**

The student will be able to:

1. demonstrate an understanding of the power of the language;
2. take a C program through the edit, compile, link and debug cycle;
3. understand C functions (simple to intermediate) and be able to:
  - recognize and describe the various components and actions of the function
  - know how to maintain and modify existing C code
  - design and write functions for small stand-alone systems, or to be incorporated into larger applications;
4. describe, by having had hands-on experience using the facilities, at least one way of how to create full screen, color, menu-driven business applications using C.

**P. COURSE CONTENT**

1. Language characteristics and anatomy.
2. Directing output to the screen/printer and applying data format specifications.
3. Data types, variables and entering data.
4. Operators -- arithmetic, relational, logical, assignment, unary/binary.
5. Looping structures - WHILE, DO and FOR.
6. Decision structures - nested IF, ? operator, compound conditions.

7. SWITCH statement and setting up of menus.
8. Storage types (auto, register, static, extern) and their visibility/scope within a program.
9. Functions -- arguments/parameters, prototypes, call by value, call by reference.
10. Single/Multi-dimensional arrays.
11. Sorting and searching arrays.
12. Structures and unions, enumerated types.
13. Pointers - pointer arithmetic, levels of indirection, use with simple data types/arrays/structures.
14. File I/O using structures - sequential and random access, associated C functions.
15. Introduction to: Dynamic Memory Allocation, command line parameters, casting.
16. Differences between standard C and C + +.
17. Miscellaneous Topics - linked lists, basic graphics.

**Q. METHOD OF INSTRUCTION**

Lecture, seminar and laboratory.

**R. COURSE EVALUATION**

|                      |               |
|----------------------|---------------|
| Assignments          | 25%-30%       |
| In-Class Test(s)     | 10%-15%       |
| Mid-Term Examination | 25%-30%       |
| Final Examination    | 25%-30%       |
| Participation        | <u>0%- 5%</u> |
|                      | <u>100%</u>   |