

**BRISTOL COMMUNITY COLLEGE**  
**Computer Information Systems Department**

## **CIS158 - Introduction to Procedural Programming**

Instructor: **Silvino C. Ferreira**

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Web Page: <http://www.devferr.com/bcc>

Meeting Times: **Tuesday 7:00 – 8:15 pm**  
**Thursday 5:30 – 8:15 pm**

### **I. Catalog Description**

This course covers Procedural Programming (C/C++) under Unix. Data types, variable declarations, arithmetic expressions, conditional statements, macros, function prototypes, standard libraries, file processing, pointers, structures, unions and dynamic memory management are discussed. Unix file system, shell scripts, input/output redirection, piping, programming with standard I/O and Unix system calls are covered.

**Prerequisite:** None.

### **II. Student Learning Outcomes**

1. Use Unix/Linux bash shell commands to manage files and directories.
2. Develop and write source code for the C programming language using the vi editor.
3. Develop and write header files.
4. Use one or more source code and header file to create binary using the gcc compiler, makefile and make command.
5. Create programs that use variables, pointers, arrays, structures, unions, and math, bitwise and logical operators and iteration,.
6. Create and use preprocessor directives including macros.

### **III. Texts**

**A Book on C [ Required ]**  
by Kelley and Pohl  
Forth Edition, Copyright © 1998  
Adison-Wesley  
ISBN 0-201-18399-4

**Linux: The Textbook [ Optional ]**  
Sarwar, Koretsky, and Sarwar  
Copyright © 2002  
Adison-Wesley  
ISBN 0-201-72595-9

## IV. Course Outline and Expectations

### Homework Expectations

This class meets for three class hours and two lab hours per week .For a college level class, a general rule of thumb is that a student should do between two and three hours of work outside of class for every one hour in class. This class is no exception..

Approximately 3 - 5 hours per week of computer time will be required to complete the programming assignments. The outline below indicates the areas that will be discussed. Students are responsible for completing the readings and assignments required each week. There will be weekly programming assignment to be created and executed on the class Linux server. The details and due dates for all of these as well as class policies and exam dates are provided on the class website at [www.devferr.com/bcc](http://www.devferr.com/bcc).

### Course Outline

Week	Topics
1	Introduction to Linux and Using the vi editor
2	Introduction to C Programming Variables, Expressions and Assignments Preprocessor - #include and #define
3	Use of functions - printf and scanf Flow of Control – Creating Functions Arrays, Strings and Pointers
4	Lexical Elements, Operators and The C System
5	Fundamental Data Types
6	Flow of Control
7	Functions
8	Arrays and Pointers
9	Strings and Array of Pointers
10	Bitwise Operators and Enumeration Types
11	The Preprocessor
12	Structures and Unions
13	Structures and List Processing
14	Input and Output
15	Review

## V. Requirements

1. Curiosity and love for learning
2. Ability to work with others in thinking and learning together
3. Average grade of **60** for all quizzes.
4. Completion of **80** percent of all assignments and program assignments.

## VI. Examinations

There will be several **15 - 30 minute quizzes**. These quizzes will be announced in class and posted on the class website prior to being given. The material and related assignments being quizzed will be announced at the same time. A **two (2) hour exam** will be given at the end of the course.

## VII. Grading

### Quizzes and Finals

All quizzes and the final exam will be graded using the traditional percentage system ( 0 - 100).

### Weight of assignments, attendance and examinations:

Assignments	20%	Programming Assignments	30%
Attendance	5%	Quizzes	25%
Final Examination	20%		

### Programming Assignments will be graded using the following system

Appearance	15%	Logic	30%
Efficiency	15%	Syntax	30%
Documentation	10%		

### Final Grades will be assigned as follows:

97 – 100	=	A+	77 – 79	=	C+
94 – 96	=	A	74 – 76	=	C
90 – 93	=	A-	70 – 73	=	C-
87 – 89	=	B+	60 – 69	=	D
84 – 86	=	B	Below 60	=	F
80 – 83	=	B-			

## VIII. Plagiarism

Plagiarism is **not** tolerated. Students are expected to take this course to learn. Learning will not happen unless you do the required assignments and turn in your **own** work for credit. Students who violate this policy may receive a penalty of the next lower grade or "F" for the course. Duplicate assignments submitted for credit **will be discarded** and will be graded as "**0**" (zero).

## **IX. Teaching Methodology**

The lecture will be the principal teaching method used in this course. "Handouts" and sample programs will be available on the class web page. Class discussions will be conducted pertaining to the Lab assignments before each assignment is made and after it is due. Software demos using a portable PC and overhead slides will also be used.

## **X. Attendance**

The instructor reserves the right to assign a grade of "F" for the course after three (3) student absences. The instructor can not withdraw a student. It is the student's responsibility to withdraw formally from the class prior to the final withdrawal date.

## **XI. Accommodations**

I encourage any student in need of accommodations for a specific documented disability to contact me and the Office of Disability Services at their earliest convenience to ensure timely and appropriate accommodations. ODS can be contacted in person (Fall River, L109; New Bedford, NS151) or by phone at (508) 678-2811 (Fall River, ext. 2955; New Bedford, ext. 4011) or online at <http://www.bristolcc.edu/students/disabilityservices/>

## **XII. Office Hours**

Office Hours are [as posted](#) and by appointment. Simple questions or assistance can be obtained through e-mail to the address above. If you need some help with a serious debugging problem or if you need some one-on-one tutoring help to get caught up with the class, please make an appointment with the instructor. Half hour time slots are available for that purpose. Appointments can be arranged via e-mail or during class breaks.



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This SYLLABUS is a SUGGESTED course OUTLINE and will be GENERALLY followed, subject to change according to the INSTRUCTOR'S discretion and needs. Academic FLEXIBILITY is important.

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