COP 2220C Syllabus C Programming

Instructor: Dimas Sanchez
 Phone: 407-582-1012
Office: 7-128
Office Hours:

Tuesday	12:00pm (7-128)	3:00pm
Wednesday	12:00 pm (7-128)	2:00 pm
Thursday	8:00 am (Virtual)	11:00 am
Friday	8:00 pm (Virtual)	10:00 am

Email: use Blackboard for all email
Prerequisite: COP1006 Introduction to Programming Concepts with a C or better.

Text (required): None

Course Description: The hands-on study of the C Programming Language as applied to business and scientific applications. Topics covered include arrays, pointers, functions, I/O operations, and operating system interaction.

Note: this is an introductory C Language class, not an introductory programming class. Students are expected to be familiar with the program design process, including use of flowcharts and/or pseudo code.

Course Requirements: Periodic quizzes, programming projects, and a comprehensive final exam.

See below for detailed descriptions of these requirements.

Attendance Policy: Even though this is an online class, participation is still required. It is expected that you log in to Blackboard at least 5 times per week. The instructor will be logged in several times a day during the week and often on weekends and many of your classmates will be logged in daily, so in order to keep up with their questions and any announcements, you will want to try to do the same. I expect all students to participate on the course discussions and the requirements for this are discussed below. ALL students are expected to read ALL bulletin board posts regularly. This is not optional.

Withdrawal Policy: You must withdraw from class on the date specified on Valencia's calendar in order to receive a grade of W. You will not be permitted to withdraw after that date. Withdrawal is your responsibility--**you will not be automatically withdrawn from this class.** See the college catalog for further details on the withdrawal policy.

COP 2220C Syllabus C Programming

Evaluation: The grade in this class will be determined by student performance in the following areas:

Grade Scale:

Programming Projects 30%	90 - 100% A
Zybooks 20%	80 - 89 B
Final Exam 20%	70 - 79 C
Quizzes 30%	60 - 69 D
	below 60 F

A percentage score will be calculated for each of these areas. These scores will be combined into a final percentage score based upon the weights above. The letter grade will be determined from the scale above.

Description of Requirements:

Programming Projects: These will be assigned periodically throughout the semester. Each project will have a due date and point value announced when assigned. Late projects turned in within one week after the due date will have 20% of the total point value deducted. Projects more than one week late will not be graded. No projects will be accepted after the last day of classes. Projects are to be submitted through the Blackboard Assignments tool. Students must do their own work; there are no exceptions. Students who plagiarize, or cheat in any way, will receive a grade of F. Refer to your student handbook. Students who make their work available to others will also be held responsible for cheating. Clarification: If someone passes in your homework with their name on it, you will both be considered to have cheated.

Midterm Test: The midterm test will be announced at least one week in advance and will include the material covered up to that point.
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Final Exam: The final exam will be comprehensive.

Course Outline: (This outline is tentative and may be revised as deemed necessary by the instructor.)

1. Writing a first C Program

2. Variables and Assignment, Data types, Constants ,Printing in C with printf, input using scanf

3. Expressions Arithmetic operators, Precedence of operations, Compound Assignment , Evaluation of expressions with precedence and associatively

4. Relational and logical expressions, Control structures – Selection, if-else, switch statements

COP 2220C Syllabus C Programming

More standard library functions, Building a menu program

5. Control Constructs – looping, while, do, for, Exercises with Looping

6. Problem solving with selection and iteration, Increasing complexity of problems

7. Arrays, Problem solving with Arrays, Multidimensional arrays, Sorting and searching algorithms, Arrays passed to functions

8. Structured programming, Creating and calling a function. Function return types, including void Passing parameters to functions, Function prototypes. Passing by value and passing by reference. & and * operators for addressing. Random number generation, Variable Scope

9. Pointers and arrays – dealing with Strings

10. Dynamic memory allocation – using the stack and the help

11. Structs – creating your own data types. Problem solving with structs. Pointers to structs, manipulating structs. Passing structs to functions by value and by reference.

12. Reading and writing data files – text and binary files

13. Introduction to advanced data structures, including linked lists

14. Creating .h files – conventions

Expected Student Conduct: Valencia is dedicated not only to the advancement of knowledge and learning but is concerned with the development of responsible personal and social conduct. By enrolling at Valencia, a student assumes the responsibility for becoming familiar with and abiding by the general rules of conduct. The primary responsibility for managing the classroom and/or online environment rests with the faculty. Students who engage in any prohibited or unlawful acts that result in disruption of a class may be withdrawn from the class. Violation of any class or College rules may lead to disciplinary action up to an including expulsion from Valencia. Disciplinary action could include being withdrawn from the class, disciplinary warning, probation, suspension, expulsion, or other appropriate and authorized actions. You will find the Student Code of Conduct in the current Valencia Student Handbook. http://valenciacc.edu/pdf/studenthandbook.pdf

Learning Community

The learning community consists of 3 elements: *Professor*, *Student*, and *Course Content*. As your *professor* I serve to introduce you to the material, give examples and explanations, and serve as a helpful resource in my office hours. It is my job to empower you to become a successful learner. As the *student* you must explore all resources available that are needed to help you be successful. You must realize that the learning is ultimately **your** responsibility through participating in class activities, reading the book, attempting homework and using any other tools you feel might individually help you. Whether or not you feel the *course content* is exciting or boring should not govern the amount of time and energy that you put into learning the content.

COP 2220C Syllabus C Programming

Keeping a positive attitude always helps, and thinking negatively will affect you mentally by making you less motivated.

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, ext. 1523).

*Disclaimer***:** *Changes to the syllabus and/or schedule may be made at any time during the term by announcement of the professor via email and/or a Discussion post on Blackboard. A revised syllabus may be issued at the discretion of the professor.*

VALENCIA STUDENT COMPETENCIES:
The following Valencia Student Competencies will be reinforced throughout the entire course.
THINK - Think clearly, critically, and creatively. Analyze, synthesize, integrate, and evaluate in many domains of human inquiry.

To think, what must you do?
a) Analyze data, ideas, patterns, principles, and perspectives
b) Employ the facts, formulas, and procedures of the disciplines
c) Integrate ideas and values from different disciplines
d) Draw well supported conclusions
e) Revise conclusions consistently with new observations, interpretations, or reasons
How and where must you think?
• With curiosity and consistency
• Individually and in groups

VALUE - Make reasoned value judgments and responsible commitments.
To value, what must you do?
a) Recognize the values expressed in attitudes, choices, and commitments
b) Distinguish among personal, ethical, aesthetic, cultural, and scientific values
c) Employ values and standards of judgment from different disciplines
d) Evaluate your own and others' values from individual, cultural, and global perspectives
e) Articulate a considered and self determined set of values

How and where must you value?
• With empathy and fair mindedness
• Individually and in groups

COMMUNICATE – Communicate with different audiences using varied means.
To communicate, what must you do?
a) Identify your own strengths and need for improvement as communicator
b) Employ methods of communication appropriate to your audience and purpose

c) Evaluate the effectiveness of your own and other's communication

How and where must you communicate?
- By speaking, listening, reading and writing
- Verbally, non verbally, and visually
- With honesty and civility

ACT - Act purposefully, respectfully, and responsibly To act, what must you do?
a) Apply disciplinary knowledge, skills, and values to educational and career goals
b) Implement effective problem solving, decision making, and goal setting strategies
c) Act effectively and appropriately in various personal and professional settings
d) Assess the effectiveness of personal behavior and choices
e) Respond appropriately to changing circumstances

How and where must you act?
- With courage and perseverance
- Individually and in groups
- In your personal, professional, and community life