

VALENCIA COLLEGE

Course Syllabus Spring 2017

Hybrid



COURSE: COP 1000c Introduction to Programming Concepts

PROFESSOR: Dr. Colin Archibald (Dr. A.)
Office: West Campus 9-140c
E-mail: CArchibald@mail.valenciacollege.edu (Please use Blackboard email system)
Phone number: (407) 582-1517
Skype: Dr.Colin.Archibald

Office hours: An announcement in Blackboard will show office hours. They are also posted on the office door West Campus 7-127.

Catalog Description:

A hands-on introduction to analyzing, designing, coding, and testing computer programs. Students will develop algorithms for problem solving with an emphasis on good programming practices. Students will use programming techniques including control structures, file management, arrays, and subprograms to design and code basic programs using a modern computer language. Other topics include working with data, number systems, and an introduction to object-oriented and event-driven programming. This course prepares students for software development courses in programming and web development. Students with a demonstrated background in computer programming (transcript, job experience, or waiver exam) may request to have this course waived as a prerequisite to subsequent courses.

CRN: 25446

Credit Hours: 3.0

Prerequisite(s) and Co-requisite(s): None

Meeting places and times: **Thursdays 2:30 – 4:30 PM, West Campus 7-122 Starting on Jan 12, 2017**

EDUCATIONAL MATERIALS:

A **webcam and a free Skype Desktop account** are encouraged for all students.

(If you are purchasing a webcam, you might consider the Logitech model C310 as a good quality and affordable choice.)

Online Lecture On Demand:

<https://www.youtube.com/playlist?list=PL96BE5469318EFC74>

Additional supplies: Pens, pencils, eraser, lined paper, 3-ring binder. It is easier to collect and organize your work with paper.

Optional Textbook: There are many sources of online books and tutorials, some of them better than others. If you want to look at a good reference for the C programming language, consider the *free* online WikiBook found here:

http://en.wikibooks.org/wiki/C_Programming

ASSESSMENT METHODS AND EVALUATION:

- **1 midterm test** during the term
 - The date for the test will be announced at least one week in advance
 - The test will be held in the classroom during regular class time
- **Final Exam**
 - The exam will be in the usual classroom – comprehensive, closed-book, on paper, no calculator
 - The final exam in this course is MANDATORY. Any student not completing the exam will receive a grade of F for the course.
 - **The final exam will be** April 27, 2017 13:00 – 15:30 **in the usual classroom**
- There will be 11 homework **assignments**
 - Late assignments are penalized by up to 20%. Assignments more than 1 week late may not be graded. This is not a self-paced course.
 - The first and last Assignment **must** be submitted by the due date.
 - Assignments must be submitted in Blackboard, under the Assignments Tab.
 - **To avoid being withdrawn as a “no-show,” you must attend class on Jan 12, 2017**

Assignments	40%
Midterm Test	20%
Attendance & participation	10%
Final Exam	30%

<< Please notice that the assignments are not calculated the same toward the final grade as the test and exam. Each assignment is about 3.6% of your final grade, but the exam is 30% of the grade. >>

The sum of these will determine a letter grade as follows:

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

ATTENDANCE POLICY:

It is expected that students will attend all classes. Missing more than 3 classes will result in being withdrawn from the class.

You will lose 2% of your grade for each missed (or late) class up to 6% points, and then you will be withdrawn on the 4th absence for excessive absences.

It is required that students read all email and discussion postings in Blackboard.

It is expected that an *average* student will require a total of **8 hours of work per week** to be successful in this course.

Any student who wishes to withdraw may do so in Atlas by the Withdraw date. (see **Important Dates** below)

NO-SHOW PROCEDURE

Any student who does not attend class prior to the start of the no-show period for each part of term will be withdrawn by the instructor as a no-show. This will count as an attempt in the class, and students will be liable for tuition. If your plans have changed and you will not be attending this class, please withdraw yourself through your Atlas account during the drop period for this term.

To avoid being withdrawn as a “NO-SHOW” you must attend class on January 12, 2017

WITHDRAWAL

Valencia wants all students to be successful in their classes. Use the “Thinking of Withdrawing” located above “My Grades” in Blackboard to help you avoid needing to withdraw. Go to <https://youtu.be/fFkAOh4pu4> to learn more!

Per Valencia Policy 4-07 (Academic Progress, Course Attendance and Grades, and Withdrawals), a student who withdraws from class before the established deadline for a particular term will receive a grade of “W”. A student is not permitted to withdraw after the withdrawal deadline. A faculty member MAY withdraw a student up to the beginning of the final exam period for violation of the class attendance policy. A student who is withdrawn by faculty for violation of the class attendance policy will receive a grade of “W”. Any student who withdraws or is withdrawn from a class during a third or subsequent attempt in the same course will be assigned a grade of “F”. For a complete policy and procedure overview on Valencia Policy 4-07 please go to: <http://valenciacollege.edu/generalcounsel/policy/>

MAKE-UP POLICY: Make-up work (assignments, test, exam) will be allowed in cases of documented student emergencies. For student emergencies, it is the student’s responsibility to contact the instructor and provide documentation within one week unless special arrangements have been made previously.

ACADEMIC HONESTY: Each student is required to follow Valencia policy regarding academic honesty. All work submitted by students is expected to be the result of the student’s individual thoughts, research, and self-expression unless the assignment specifically states “group project.” Any act of academic dishonesty will be handled in accordance with Valencia policy as set forth in the Student Handbook and Catalog.

Students who make their work available to others will also be considered to have been dishonest. Clarification: If someone passes in your homework with their name on it, you have both broken the academic honesty policy.

COLLEGE POLICIES: A full description of all College policies can be found in the College Catalog at <http://www.valenciacollege.edu/catalog/>

Policy Manual at <http://valenciacollege.edu/generalcounsel/policy/>

and the Student Handbook at <http://valenciacollege.edu/studentdev/CampusInformationServices/>

IMPORTANT DATES:

Students may withdraw themselves and receive a W up until 11:59 p.m. **March 31 2017**. Students may not withdraw themselves after that date.

College Closed (Credit Classes Do Not Meet):

Jan 16	MLK day
Feb 10	Learning Day
March 13 – 19, 2017	Study Break

See College calendar for important dates and final exam schedule at <http://valenciacollege.edu/calendar>

SPECIAL RULES:

All email communication with DrA will be by BlackBoard email (this is for organizational purposes).

OFFICE OF STUDENTS WITH DISABILITIES INFORMATION: Students with disabilities who qualify for academic accommodations must provide a Notification to Instructor (NTI) form 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.

East Campus Bldg. 5, Rm. 216 Ph: 407-582-2229 Fax: 407-582-8908 TTY: 407-582-1222

West Campus SSB, Rm. 102 Ph: 407-582-1523 Fax: 407-582-1326 TTY: 407-582-1222

Osceola Campus Bldg. 1, Rm. 140A Ph: 407-582-4167 Fax: 407-582-4804 TTY: 407-582-1222

Winter Park Campus Bldg. 1, Rm. 212 Ph: 407-582-6887 Fax: 407-582-6841 TTY: 407-582-1222

STUDENT ASSISTANCE PROGRAM: Valencia College is interested in making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. BayCare Behavioral Health Student Assistance Program (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

DISCLAIMER: Changes may be made at the discretion of the instructor. Any changes to this document during the semester will be delivered to each student by BlackBoard email.

COURSE OUTCOMES:

Course Learning Outcome	Evidence of Learning
The student will Explain number systems and the internal representation of data.	<ul style="list-style-type: none">• Student will be able to Know how computers represent data internally• Student will be able to Define basic storage units such as byte, Kbyte, Mbyte.• Student will be able to Convert numbers from binary to decimal and from decimal to binary
The student will be able to solve problems with simple sequence, selection, and repetition statements by using different data type variables, expressions, and flow of control.	<ul style="list-style-type: none">• Student will be able to Define variables and constants, select the correct data type for a variable, and describe the relationship between variables and memory.• Student will be able to Build expressions involving the assignment and the basic mathematical operators (+, -, *, /, %).• Student will be able to Evaluate logical expressions involving relational and logical operators• Student will be able to Know when to use a selection and/or a repetition statement• Student will be able to Solve problems using IF, nested IF statements and the Case structure• Student will be able to Solve problems using counter-controlled, sentinel and nested loops.
The student will be able to create and use arrays of data.	<ul style="list-style-type: none">• Student will be able to List the benefits of using arrays• Student will be able to Describe how arrays are represented in memory• Student will be able to Solve problems using arrays
The student will be able to create and call modules.	<ul style="list-style-type: none">• Student will be able to List the benefits of decomposing large problems into modules• Student will be able to Know how to create a module and call the module• Student will be able to Solve problems using modules

Topics:

Getting Started, Variables and data types

I/O and Arithmetic

Problem Solving, Relational Operators, Selection if - else

More Problem solving with I/O, Arithmetic, Selection, IPO's

Repetition: While Loops, Logical Operators

Problem Solving with Repetition and Selection, walking through code

Arithmetic with Mixed type expressions, Cast operators

Midterm Test. closed-book, on paper, no calculator

Binary and Hexadecimal Number Systems

Short-cut operators, more loops, for-loop, do-while

Switch statement. Problem solving with Repetition and Selection

More data types. Concepts of arrays.

Arrays examples, problem solving with arrays

Functions and Decomposition

Problem solving with arrays and functions

Final Exam