# Introduction to Programming Concepts
# COP 1000C
# Fall 2016 (201710)
# Online Course at Valencia College (East Campus)


**Instructor:** Sanika Paranjape
**Office:** East Campus - Building 2 Room 309
**E-Mail:** sparanjape@mail.valenciacollege.edu
(Use Blackboard email system - This is preferred mode of communication. Make sure to check your ATLAS email daily.)
**Phone number:** 407-582-2351

**Office hours:** Monday - 5 pm to 7 pm (email)
Tuesday – 9 am to 2:30 pm (Office 2-309)
Wednesday - 5 pm to 7 pm (email)
Thursday – 3:45 pm to 4:15 pm (Office 2-309)
Friday - 5 pm to 7 pm (email)
Also By Appointment.
**Course Website:** https://learn.valenciacollege.edu/ (Blackboard)
Short Semester –TWK – October 3, 2016 to December 18, 2016

**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: 16124** Section – EC1
**Credit hours:** 3.0
**Prerequisite(s) and Co-requisite(s):** None
**Meeting Time & Place:** ONLINE in Blackboard

**Course Outcomes:**

- **The student will explain number systems and the internal representation of data.**
  *Corresponding Evidence of Learning*
  - 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

- **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.**

*Corresponding Evidence of Learning*

- 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.**
  *Corresponding Evidence of Learning*
  - 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.**
  *Corresponding Evidence of Learning*
  - 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.

**Educational Materials:**

There is no textbook required for this class. We will be using online Course Videos and PowerPoint Slides.

**Additional Supplies** – Pens, pencils, erasers, lined paper, USB drive.

**Assessment Methods and Evaluation:**

**Assignments**: This course will consist of several assignments. Assignments must be submitted in Blackboard only. No email assignment submissions will be graded. Late assignments are penalized by up to 20%. Assignments more than one week late may not be graded. This is not a self-paced class. The last assignment must be submitted by the due date. Any assignment that is not submitted will receive a grade of "zero." One assignment with lowest grade will be dropped before calculating the assignment average.

All assignments (after dropping one lowest grade assignment) averaged together = Assignment Grade.

**Quizzes**: There will be short multiple choice, T/F, or Fill-in-the-blank questions on the quizzes that will assess your understanding as we go along.

**To avoid being withdrawn as a "No-Show," you must submit Quiz 1 in Blackboard on or before October 10, 11:59 pm. No exceptions.**

**Participation:** Each student is expected to post at least ten discussion posts (five points each) during the course of the semester.
**Exams**: There will be three exams during the semester. Any missed exams will receive a grade of "zero."
**Final Exam**: There will be a Final Exam during final exams week. The final exam in this course is optional. If a student does not take the final exam, the student will receive a grade of "zero" for the final exam.

**Grading:**
**Assignments = 100 Points**
**Quizzes = 50 Points**
**Participation = 50 points**
**Exam 1 = 100 Points**
**Exam 2 = 100 Points**
**Exam 3 = 100 Points**
**Final Exam = 100 Points**
Total possible points equal 500 points (the lowest grade from Exam 1, Exam 2, Exam 3 and the Final Exam will be dropped from the student's points total).

**Grade Scale:**
A grade of **"A"** will be assigned to a student whose total pts is **equal to or greater than 450 pts**.
A grade of **"B"** will be assigned to a student whose total pts is **equal to or greater than 400 pts**.
A grade of **"C"** will be assigned to a student whose total pts is **equal to or greater than 350 pts.**
A grade of **"D"** will be assigned to a student whose total pts is **equal to or greater than 300 pts**.
A grade of **"F"** will be assigned to a student whose total pts is **less than 300 pts**.

**Attendance Policy:**
It is expected that students will log into this Blackboard course a minimum of once every day. Submitting the required assignments, reading, and posting on the discussion board are considered 'attending' the class. It is required that students read all email and discussion postings in Blackboard.
Students will not be withdrawn by the instructor of this course except during the NO-SHOW period. Any student who wishes to withdraw may do so in ATLAS by the withdraw date (See **Important Dates** below)

**No show Procedure:**
**Drop/ Refund/ No Show Deadline are 11:59 p.m. October 10, 2016.**
Any student who does not attend class by the **No Show/drop/refund deadline** will be withdrawn by the instructor as a no-show. This will count as an attempt in the class, and student 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.
**To avoid being withdrawn as a "NO-SHOW" you must submit Quiz 1 in Blackboard, on or before October 10, 11:59 PM. Logging into Blackboard is not sufficient to avoid being withdrawn as a 'no-show'.**

**Withdrawal:**
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. Withdrawal deadline for W grade is 11:59 pm **November 18, 2016**. 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/

NOTE: Before choosing to withdraw, you should speak first with your professor regarding your progress in the course and with an Academic Advisor to discuss the impact of the W on your academic progress, future fees, and financial aid.
See College Calendar for important dates and final exam schedule at
http://valenciacollege.edu/calendar/

**Make-up Policy:**
Makeup work (assignments, quizzes, exams) will only 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.

**College Policies:**
A full description of all College policies can be found in the College Catalog at
http://valenciacollege.edu/catalog/
Policy Manual at http://www.valenciacollege.edu/generalcounsel/ ;
And the Student Handbook at http://valenciacollege.edu/studentdev/CampusInformationServices
Referred to the Dean of Student's Office for disciplinary action, which may result in a sanction up to and including expulsion. http://valenciacollege.edu/generalcounsel/policy

**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.

**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.

**Important Dates:**

Classes begin.....- October 3, 2016.

Drop/Refund/No Show Deadline.....- 11:59 pm October 10, 2016.

Withdrawal deadline for a "W" Grade.....- 11:59 pm November 18, 2016.

Classes End.....- December 18, 2016.

College closed.....- October 6 and November 23 - 27

**Course Policies:**

Please note that students are expected to be courteous and respectful of one another. For those who do not have access to a computer or are having computer problems, an open lab is available on the East campus in the library in Building 4. Problems with your computer at home will not serve as an excuse to turn in work late. Be sure to keep backups of your work at all times to avoid losing points should your computer suddenly fail to function or your storage device crash.

**Valencia I.D. Cards:**

Valencia I.D. cards are free and can be obtained in the Campus Security Office in 5-220.

**Disclaimer:**

This syllabus may be altered, at the instructor's discretion, during the course of the term. It is the responsibility of the student to make any adjustments as announced.

## Tentative Class Schedule

| Week | Week of | Topics | Video Segment |
|---|---|---|---|
| 1 | October 3 | Getting started, SDLC, Variables and Data Types | 1, 2 |
| 2 | October 10 | Input and Output, Arithmetic Operators | 3, 4 |
| 3 | October 17 | Problem Solving, Binary and Hexadecimal numbers | 5,A2, A3 |
| 4 | October 24 | Exam 1 | |
| 5 | October 31 | Selection if-else, Problem Solving with Selection, Repetition – while | 6, 7, 8 |
| 6 | November 7 | Logical Operators, Mixed Type Expressions, Problem Solving with Repetition | 9, 10, 11 |
| 7 | November 14 | Short-cut Operators, More Loops: do-while, for, Switch, Problem Solving with Repetition and Selection | 12, 13, 14, 15 |
| 8 | November 21 | Exam 2 | |
| 9 | November 28 | More Data Types, Arrays, Problem Solving with Arrays | 16,17, 18 |
| 10 | December 5 | Functions and Decomposition, Problem Solving with Functions & Exam 3 | 19, 20 |
| 11 | December 12 | Final Exam | |