Community College of Philadelphia

Computer Science 111

Computer Science I - Online

Fall 2016

Section 900, CRN: 47973

This page contains the syllabus for *Computer Science 111 – Computer Science I* as offered in the Fall *2016 Semester*. It is published by the instructor as a communication with students. Official College information, including course listings, schedules, etc., can be found on the Web at http://www.ccp.edu.

For information on *Computer Science and Computer Information Systems*, degree programs and courses at the College, see the Computer Technologies Department Web Page at http://faculty.ccp.edu/dept/cis.

Course Description

Computer Science 111 – Computer Science I

4 credits (2 hours lecture, 2 hours lab per week)

CSCI 111 is an Introduction to Computer Science, Object-Oriented Programming and Algorithm Development using the Java programming language. Emphasis is placed on object-oriented design, top-down development, modular programming, debugging and documentation.

Prerequisite: English 101 placement; Math 118 Placement

Textbooks

Required Textbook: The Java Development Kit An Introduction to Computer Science with Java
by Charles Herbert

The required textbook that we are using is a textbook written by Charles Herbert, a full time professor in the Computer Science Department at CCP. The textbook will be provided free of charge to our students via *Canvas*. Chapters will be available with the weekly material via the Canvas online learning management system.

Recommended Readings and Textbooks:

Introduction to Java Programming, Comprehensive Version, 10E

By Daniele Liang
ISBN-10: 0133813460 • ISBN-13: 9780133813463

Instructor

Craig Nelson

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Center for Business and Industry

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Office Hours: Are by Appointment During Summer

Mondays

Tuesdays

Wednesdays 9:00 am – 3:00 pm

Thursdays

Fridays

Class Meetings:

Each week a reading assignment, a quiz and a programming assignment and discussion must be completed. Students are expected to participate weekly

You can contact me any time you have questions about the course. I am currently the temporary Coordinator for Computer Science, so I can also help you with questions about courses, registration, graduation requirements and transfer to four-year schools.

Topics, Schedule and Links to Class Notes

The class meets entirely online during the Fall 2016 semester September 6, 2016 – December 15, 2016. This is a 14 week online section of CSCI 111

Details of the course schedule, such as notes on upcoming classes, will be posted in Canvas as the course progresses. Some content may get more emphasis then others and some material may move to different weeks depending on the needs of the class. At times I may augment topics, assignments and schedules as needed. This is an Online Computer Technology course. The class meets online using primarily the Canvas Learning Management (LMS). We will also correspond regularly using CCP Email. It is your responsibility to review your CCP Email and Canvas Announcements regularly for class announcements and updates.

For the official College Academic Calendar, see http://www.ccp.edu/site/academic/academic_calendar.php

Course Learning Outcomes

Historical Context

Provide a general description of several common programming languages, paradigms for developing software, the role of software in modern computer systems, and the history of computer systems and programming languages.

Programming Constructs

Demonstrate an understanding of fundamental programming constructs and use them to design and develop software.

Algorithms and Problem Solving

Describe the essential properties of algorithms and develop algorithms for the solution of specific problems in computing.

Object-Oriented Programming

Describe the fundamental concepts of object-oriented programming and design and develop object-oriented software.

Software Design

Describe the properties of good software design and design and evaluate software based on them.

Data Types and Declarations

Demonstrate an understanding of data types and the ability to establish data of various types in computer programming.

SOFTWARE FOR THE COURSE

Students will receive exposure using a text editor that is Java enabled for compiling and linking Java applications. The open source product (Netbeans) and (Eclipse), that is installed on every computer in the classrooms and SACC for these exercises will be the required IDE. Students may also use a second open source product named (Note Pad ++). This product will be used by the instructor to efficiently illustrate example code. Students may want to download this product to easily view example code on their personal computer. However, our main focus is to gain experience using a comprehensive Integrated Development Environment (IDE) with the Java Programming Language. In this course we will use the NetBeans IDE primarily; we will briefly discuss and explore additional IDE's such as the Eclipse IDE. ***All programming project assignments must be submitted as a Zipped NetBeans Project Folder.***

NetBeans

Link to Download NetBeans 8.0. (Different versions may cause compatibility issues)

- http://java.sun.com/javase/downloads/index.jsp

Link to Java Development Kit 8.0 (JDK 8)

- http://java.sun.com/javase/downloads/index.jsp

Link to Java Runtime Environment (JRE)

- http://java.sun.com/javase/downloads/index.jsp

The JRE, JDK and NetBeans may be downloaded separately or all in a one package download

Notepad ++

Link to Download Notepad ++

- http://notepad-plus.sourceforge.net/uk/download.php

The latest version will due

The course will require that you create several technical documents with your applications. Students should use a professional document editing environment for this. Microsoft Word is installed on all academic computers at CCP. If you are working from home and do not have Microsoft Word, students may optionally choose the free open source professional document editing environment of Libre Office using the Libre Office Link below. You may also use free online service word processing applications such as Google Docs or Microsoft 365

Microsoft Office 2016 and Office356 Student Specials – A Productivity Suite for a free

At this site you may purchase or rent the use of Microsoft Office.

https://products.office.com/en-us/student?ms.officeurl=getoffice365

Libre - OFFICE – A free open source productivity suite

The following Link will direct you to Open Office Download Center

http://donate.libreoffice.org/home/dl/win-x86/5.0.0/en-US/LibreOffice_5.0.0_Win_x86.msi

Students in this class will be provided a semester registration to Dreams Spark

MICROSOFT VISIO 2016

During the course, students will be exposed to concepts and skill sets in Process Modeling and UML Modeling. Ultimately your process and flow models may be submitted hand written and scanned to PDF format. However, it is strongly encouraged to put the extra effort in to model your assignments using a modeling tool. The modeling tool of choice for this class will be Microsoft Visio; you may also use Microsoft Word and its drawing tools, as the modeling assignments will not be very sophisticated. We will only practice Flow Charts and Class Diagrams

Use your Dream Spark Account to acquire this software if intend to use this version

Students will also be registered into Microsoft's premiers Dream Spark Program, this will provide students free access to a variety of Microsoft software

Schedule

Week 1	Mon, September 5 – Sunday, September 11		Introduction to Objects, Programming, and Java
Week 2	Mon, September 12 – Sun, September 18		Reading, Writing, and Arithmetic in java
Week 3	Mon, September 20 – Sun, September 25		Branching; Lab Reports and Collaborative Writing
Week 4	Mon, September 26 – Sun, October 22		Loops
Week 5	Mon, October 3 – Sun, October 9		Methods and Modularity
Week 6	Mon, October 10 – Sun, October 16		Arrays
Week 7	Mon, October 17 – Sun, October 23		Strings
Week 8	Mon, October 24 – Sun, October 30		Object-Oriented Design (OOD)
Week 9	Mon, October 31 – Sun, November 6		User-Defined Classes and Abstract Data Types (ADTs)
Week 10	Mon, November 7 – Sun, November 13		GUI Basics
Week 11	Mon, November 14 – Sun, November 20		Introduction to Events

Week 12	Mon, November 21 – Sun, November 27 **Thanksgiving Holiday Break** Thursday November 24 – Sunday November 27		Exceptions Handling
Week 13	Mon, November 28 – Sun, December 4		Data Communications; Presentation Systems
Week 14	Mon, December 5 Sat, December 10		Student Consultations : Graphics – Extra Credit
Week 15	Mon, December 12 – Sat, December 17		Finals Week – Final Projects are Due

More details about each week will be posted during the semester on the course website in Canvas. There is a chapter in our textbook for each week of class. We will also have a weekly class discussion in Canvas

Exams, Assignments and Grading

Grading

During the semester will have several different types of graded activities:

- weekly exams (20 points each)
- participation in weekly class discussions (15 points each)
- Course assignments (20-40 points each) Most assignments will be weekly programming projects. We will also have a Document Markup and Review Assignment to learn to use tools for collaborative editing of lab report documents. This will also include general non programming Computer Science assignments.
- Final project with a PowerPoint presentation (40 points)

Final grades will determined based on the percentage of the total points each student has earned during the semester. This will be calculated by dividing the total points earned by the total possible points that you could have earned during the semester: The Canvas LMS may not accurately display your up to date class percentile. You should keep a running total of the points that you earned and the total possible points you could have earned each week during the semester. This will provide you with the most accurate view of your grade during any week. Below is a chart of percentages as they relate to a letter grade.

A - 90 to 100 % | B - 80 to 89 % | C - 70 to 79 % | D - 60 to 69 % | F - less than 60 %

Programming Assignments: Programming assignments must be submitted as an entire Zipped NetBeans Project Folder. Do not send in just the file with the java extension. You must send in a copy of the entire project folder that has been zipped. To verify that you have included the entire project folder, it is recommended that you download the documents that you submitted into a separate folder for varication. Programming Assignments submitted that are not zipped NetBeans project folders will not be processed for grading. Students using Apple Operating Systems should be particularly mindful to verify the contents of the zipped file after submitting it. The Apple File Systems are a little tricky when interfacing with Zipped Folders. Canvas will permit you to resubmit assignment if needed. You may continually resubmit an assignment up until the lockout.

Lab Reports: Starting with the programming assignment in Chapter 3 of the textbook, all subsequent/ remaining programming assignments must have an associated Lab Report Submitted with it. Starting with the programming assignment in Chapter 3, points will be deducted from programming assignments that do not have a professional looking lab report submitted with it. Lab Reports must be created using a Word Processor such as Microsoft Word, Libre-Office, Google Docs, or Microsoft 365

Discussion Assignments: Many modules in Canvas will contain discussion assignments. This involves reading the discussion topic and posting a personal reply to the topic. In order receive full credit for a discussion assignment. You must first post your own personal reply, then you must reply to at least two other student's personal replies. That is a total of three posts per discussion topic. Points will be deducted if there are not 3

If you have questions about specific grades or your overall progress at any time during the semester, then please consult with me. I will be glad to review individual items and your overall grade at any time.

Canvas and Computer Resources

Success in the class depends on your ability to use Canvas. If you have problems using Canvas, then please contact Vaishali Sharma, at vsharma@ccp.edu. For more information about Canvas, or Distance Education, please see the Distance Education Website at:

http://www.ccp.edu/site/de/

The classroom-based version of this course meets for five hours per week. You should allow several hours per week for study and several hours per week for your programing lab work. Online students should allocate an additional five hours a week to study and work on the practice assignments in each chapter. This works to compensates missing material that is covered in face to face sections of the course

The College has a number of open lab facilities for students who wish to do their work on-campus. For more information see the posted schedules of the SACC Computer Labs in MyCCP;

Main Campus (CBI Building SACC)	18th and Callowhill Street
Northwest Regional Center	12901 Townsend Rd
Northwest Regional Center	1300 W Godfrey Ave.
West Regional Center	4725 Chestnut St.

Students are expected to utilize College computer resources as part of this class, including Websites, networks,, and the possible use of physical facilities. You are expected to become familiar with the policies and accepted behavior for these resources. Any violations of their rules that results in a student being removed from or banned from using a College facility are grounds for dismissal from the course -- such as attempting to remove, copy, or install software on the College's systems.

Learning Lab Support

The Learning Lab will provide tutorial support for students requiring one on one tutorial support for this class. They may even be able to provide one on one tutorial support online using video conferencing. For more information on tutorial support for CIS courses contact:

Mavis Pogue. B2-36d 215-751-8474 mpogue@CCP.EDU

Counseling

The College has excellent counseling services available. If you are having any personal problems that might interfere with your progress in class or toward a degree, including difficulties related to military service, please visit or contact our counseling center in room BG-07 on the Main campus or at any of our Regional Centers. More information, including contact information is online at:

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http://www.ccp.edu/site/current/support-services/counseling.php

College Policies

The Computer Technologies Department adheres to all College policies. These can be found in your Student Handbook or at the following hyperlink:
http://www.ccp.edu/site/policy.php

Notes from the Instructor – Keys to Successful Learning

Education is a Social Process

Architects use the metaphor of the campfire and the cave to describe spaces they are designing. A campfire is a place where people come together to be with one another to work, play, etc. A cave is a place where a person can rest, read, etc. alone quietly. Architects design business spaces to have both campfires and caves – places where they can conduct business and commerce with other people and places where people can work alone quietly when necessary.

Successful students need to spend time both at the campfire and in the cave. They need to engage with teachers and other students in classrooms labs, online forums, and so on, but they also need to have a time and place to work alone, reading studying, and developing a personal understanding of the course material.

In other words, education, like life itself, is both a social process and a personal psychological process.

We learn from other people and with other people. You should take the opportunity to communicate with and work with other students and your teacher. You can learn from them and they can learn from you. The course will be easier and you will learn more if you become part of the social fabric of the course.

Yet, ultimately we learn best by developing a personal understanding of the course material. We each need to spend time studying away from others to develop a personal, inner understanding of the course material beyond what can be learned communally.

This course moves along quickly. There will be reading and written homework assignments each week, So, you will need to quickly establish a pattern for how you will participate in the class each week and when you will find time to do your course work, alone, and working with others.

Learning Demands Participation

Woody Allen once said "*The hardest part of making a movie is to get the actors to show up on time. The rest is a piece of cake.*" The same thing is true for learning – students who show up for class and do their work each week will do well.

A great deal of educational research has shown that the single biggest factor in determining final grades is class attendance. No other factor, not I.Q., SAT scores, family wealth, ethnic origins, nor any other factor correlates as closely with final grades as classroom attendance. If you show up for class and do the required work each week you will do well, if not, you won't do well. This is true, in part, because colleges and universities have a complex system of placement and prerequisites to make sure you are in a course that you are able to handle. You must show up for class and do the required work each week to do well in the course.

This is especially true in a weekly-oriented distance education course. Your grade is directly related to how much you participate in the course.

Additional Resources on the Web

The NetBeans IDE for the for the course is freely available on the Web at:
http://netbeans.org/

Oracle's Java Tutorials Page
http://docs.oracle.com/javase/tutorial/

Webopedia – an online dictionary (and search engine) for Computer Terminology
www.webopedia.com

Webopedia Java Page with links to tutorials, etc.
http://www.webopedia.com/TERM/J/Java.html

Financial Aid:

Please see the College catalog regarding impact to Financial Aid if you drop this course.

Messages:

It is best to reach me via e-mail (cnelson@ccp.edu). Please include your name, and course number in the subject line of your emails.

You do not have to tell me about a single absence (See Attendance).

If you do not get a response from me within 24 hours, please send your e-mail again.

Classroom Conduct:

You should be punctual, alert, and prepared for each class session. You must be considerate of other students, which includes being quiet during class lecture and discussion except when you have something to contribute to the class. Cell phones and beepers will be turned off or on vibrate mode for the entire class. If necessary, you will take calls outside the classroom. Food, beverages and their containers are not permitted in the classroom. Homework and/or lab should not be done during lecture.

ACADEMIC INTEGRITY POLICY & PROCESS:

See the uploaded document detailing Community College's Academic Integrity Policy & Process. In summary, students must do their own work when the assignment specifies that it is an individual assignment. Assignments that are collaborative will be designated as being so. Plagiarism will not be tolerated. Any assignment presented by a student in fulfillment of course requirements must reflect his/her own work unless credit is properly given to others. Anyone who assists another in such academic dishonesty is equally responsible. The grade on the assignment will be an "F" for all parties involved, if an academic integrity violation is discovered.

Disability Accommodations Policy:

Students who are registered with the Center on Disability must inform the instructor by the end of the first week of classes if special accommodations are requested. Proper documentation must be presented.

Important Dates for the Fall 2016 Semester:

September 6, Tuesday	Fall 2016 (15-week) term begins
October 4, Tuesday	Fall 2016 (10-week) term begins
October 17, Monday	Priority web registration begins for eligible students for Spring 2017
October 24, Monday	Registration begins for continuing students for Spring 2017
November 24-26, Thursday-Saturday	Thanksgiving Holiday — College closed
December 6, Tuesday	Professional Development Day (Potential Emergency Closing make-up day)
December 7, Wednesday	Deadline for full payment of tuition and fees for all students registered by this date for Spring 2017 semester Professional Development Day/Study Day (Potential Emergency Closing make-up day)
December 10, Saturday	Final day of classes for Fall 2016 semester
December 13	Final day to submit Final Project
December 12-17, Monday-Saturday	Final examinations, Fall 2016 semester