

CS-119/119L, Section 9591/9592 Course Syllabus

Program Design & Development – Spring 2019

Course Description

CS-119 Section 0137 Hybrid course (Classroom/online) 3 Units

CS-119L Lab section 0138 Hybrid (Classroom/online) 1 Unit

CS-119 is an introductory course in program design and development using Java or another object oriented programming language to serve as a foundation for more advanced programming, computer science or networking courses. This class emphasizes the development of problem-solving skills as it introduces students to computer science through the use of a modern object oriented programming language. Devotes attention to the development of effective software engineering practices emphasizing such principles as design decomposition, encapsulation, procedural abstraction, testing and software reuse. Students will learn and apply standard programming constructs, problem-solving strategies, the concept of an algorithm, fundamental data structures, and the machine representation of data, introductory graphics and networking.

Corequisite

The CS-119L lab section provides tutorials, lab exercises and programming projects intended to reinforce the programming and design concepts taught in the CS-119 section.

Note that CS-119/CS-119L will be taught effectively as one course. Enrollment in CS-119L as a co-requisite is mandatory! College policy requires me to drop students not enrolled in both sections!

Prerequisites

None although completion of CIS-110 or a comparable introductory computer course is recommended. Students should be comfortable working with Microsoft Windows (7 or 10), using a web browser, uploading/downloading files, installing software and using Microsoft applications such as Word, Excel and Access.

Student Learning Outcomes

Upon completion of the course, the student is expected to demonstrate practical applications of software engineering methodologies and practices as outlined below:

1. Decompose problems and design program solutions using flowcharts, pseudocode, models, or other tools.
2. Properly code applications using the fundamental coding structures: sequence, selection, and loops.
3. Test and debug applications using debugging tools such as trace execution.

Instructor

John Gerstenberg

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Office: None – please email me if you need help with any of the class work.

Background: Currently, I am a Senior Programmer/Analyst with the City of Chula Vista with 35 years of experience in the electronics and computer software industry. Work experience includes private sector companies as well as government agency experience. I am an active software and database developer currently using Visual Basic.Net, ASP.Net, C#, MS Access, SQL Server, SQL Server Reporting Services (SSRS), and Geographic Information Systems (GIS) to implement a wide variety of government business solutions. I have also worked for private sector companies on projects for retail inventory and a variety of projects developing cable TV/broadcast automation systems. My industry experience also includes digital design, system design/specification, software design/specification in structured and OOP environments, software development in text based (MS-DOS and UNIX), GUI (MS Windows) environments, web applications, Windows networking, Project Management, multimedia/digital video, user training and product support. Software development background includes Basic/Visual Basic, ASP.Net, Microsoft SharePoint, C/C++, C#, Java, Assembly, and Object Pascal/Delphi. Database experience includes DBase, Paradox, Access, Informix, Btrieve, Oracle and MS SQL Server.

Additionally, I have been a part-time college instructor in the Information Technology and Computer Science disciplines for over 20 years teaching Programming Logic and Design, Visual Basic, ASP.Net, SQL Server, Java, operating system theory and object oriented software technology.

Course Text and Materials

An Object Oriented Approach to Programming Logic And Design, 4th Edition (Required)

Joyce Farrell

Course Technology ©2011

ISBN-10: 1133188222 ISBN-13: 9781133188223

E-Textbook available through Cengage at a substantially lower cost than the printed copy. Semester rentals are available as well.

If you run into delays getting your textbook, there are 2 copies of the textbook on reserve at the Cuyamaca College Library. These are available for check out and use in the library so you can complete the assigned chapter readings.

For the Java programming, to save on book costs, I will provide online resources, notes and sample Java code that you may use as an aid for completing class assignments. You can also use one of the *optional* textbooks listed in the Optional Text section of this syllabus.

Microsoft Visio (version 2016)

Available at no cost through [Microsoft Imagine \(formerly Dream Spark\)](http://Microsoft Imagine (formerly Dream Spark)).

Accounts are normally available by the 2nd - 3rd week of class.

For class assignments, you may also use the free online drawing tool Draw.io

NetBeans (Java Integrated Development Environment)

Fully licensed, functional IDE available from www.NetBeans.org as a free download. I will provide download and installation instructions the first week of class. There are versions of the NetBeans IDE available for Mac and Linux.

Access to a reliable PC with a fast (I.e., cable, DSL) Internet connection for online work.

For lab work, it is strongly recommended to have a USB storage device for saving/backing up work.

Optional Text: Any reference books that provide “introductory” coverage of program design and/or Java. Recommended titles:

Sams Teach Yourself Java 6 in 21 Days

Rogers Cadenhead & Laura Lemay
2007 Sams Publishing
ISBN-13: 978-0-672-32943-2

Murach's Java Programming (4th Edition)

Joel Murach
2011 Mike Murach & Associates, Inc.
ISBN-13: 978-1-890744-65-3

Class Meeting Times

Section 9591/9592 Hybrid Classroom/Online

Classroom E-212
Tuesday Lecture 6:00 PM - 7:40 PM; Lab 7:50 PM - 9:40 PM
Online via Canvas
January 29 – June 3, 2019

Virtual Classroom

Besides our regular classroom time, I will also be using the Canvas Course Management system for class activities. You will be provided a login account once you are officially registered for the class. In addition to participating in online discussions, taking exams online and submitting labs online, I will provide various learning resources such as Power Point slides for each chapter, lecture/chapter notes, videos and code samples as needed to help you get through the chapter material. You are welcome and encouraged to use these learning resources in addition to the text material. Please feel free to ask if there's a particular code sample or a demonstration video that you need that isn't already available. I'm here to help you succeed.

I will periodically (weekly or bi-weekly) post announcements to the Class Announcements page and/or send out e-mails to class members that may include things such as class announcements, lab due dates, exam reminders, and answers to frequently asked questions. To ensure that *you* are "kept in the loop", please make sure I have *your* e-mail address and it's an e-mail account you check on a regular basis.

Virtual Office Hours

I am available to assist you with questions and problems with assignments as needed. If you have questions regarding chapter material or assignments, you can e-mail me questions. There are also discussion forums on Canvas where you can post questions. I am also available after class and I will host 4 open lab/tutoring sessions on campus during the semester. See the Course Outline and Canvas calendar for specific dates, times and location. My goal is to help you succeed but it is your responsibility to ask for help if you need it.

Assignments and Grading Policies

Assignments and exams are to be completed and turned in on the due date. Grading is based on accumulated points for the following assignments:

Assignment	Points	Pct. of Grade
Online Discussion Activity (1)	10	1
Labs (7)	350	45
Mid-term Exam	100	13
Quizzes (12)	120	15
Final Exam/Final Project	200	26
Total Points:	780	100

Final letter grades will be assigned based on the following point/percentage scale below. ***Everybody is expected to take an active part in the class and complete the assigned work.*** I ***do not*** give automatic C grades for just "chair warming".

Points	Pct.	Grade
780	100	A+
733 - 779	94 - 99	A
702 - 732	90 - 93	A-
686 - 701	88 - 89	B+
647 - 685	83 - 87	B
624 - 646	80 - 82	B-
608 - 623	78 - 79	C+
546 - 607	70 - 77	C
468 - 545	60 - 69	D
< 468	Below 60	F

Note: The grade earned for the main CS-119 class section will also be the grade given for the CS-119L lab section. Incompletes will not be given unless initiated by the student prior to the final exam date and must be for a medical emergency, family emergency or other extenuating circumstances.

Exams (2 @ 100 points each = 200 Points Total)

Quizzes (12 @ 10 points each = 120 Points Total)

Exams and quizzes will consist primarily of Multiple Choice and True/False problems but may also contain some short answer, short essay questions or trace program execution questions. Questions will be based primarily on the text material but there may also be some from posted lecture notes, handouts, labs, and coding demonstrations. Exams and quizzes will be online and each will be available for at least a one week period. You may use notes and/or books as needed but be aware that your copy of the exam is not necessarily the same as your classmate's copy. See Canvas for specific quiz and exam availability

periods. Additionally, I will post announcements and/or send e-mail reminders about quizzes/exams so pay close attention to these "friendly reminders" as well. **There is no make up for missed exams or quizzes.**

Labs (7 Labs @ 50 points each + Final Project @ 100 points = 450 Points Total)

Lab assignments are designed to provide a "hands-on" reinforcement of the various programming principles presented in the chapter material. Due dates for each lab are published on the Canvas site with the lab assignment. Please check the due date carefully and periodically as I may adjust due dates depending on the needs of the class. All files for all lab exercises must be in a Zip file and must be uploaded to the Assignments page by 11:59 PM PST on the assignment due date. **Late assignments will be penalized 5 points each week late. No late assignments will be accepted two weeks after the due date.** Specific Lab standards are outlined in a separate handout and a detailed instruction handout on how to upload to the Lab Assignment page is available on Canvas

The final project will be a practical programming project to test your ability to apply the various learning outcomes in the course.

We will be using the NetBeans Java IDE in class for lab/project work. I will provide a handout on Canvas with instructions on how to download and install a working Java development environment on your home computer that is sufficient for completing class lab exercises. There is no cost for the Java IDE.

Online Discussion Activity (1 @ 10 points each = 10 Points Total)

Participate in online discussions. There is only 1 online ice breaker activity.

Courtesy & Respect

Please treat others in the class with courtesy and respect. Put cell phones and any other electronic devices in a silent mode when you enter the classroom. If you need to make/take phone calls or have conversations with others during class, please do so **outside** the classroom! You are welcome to bring and use your own tablet or laptop in class for completing class work but please refrain from social media, web surfing, etc. during class. It is very distracting and disruptive to others who are really trying to learn!

Attendance and Participation

Active participation is important for gaining the maximum benefit from this course. I may drop students with more than 2 consecutive weeks of inactivity, and/or falling behind in at least two labs, and/or missing the mid-term, or if you have less than 50% of the points in the class at the final drop date. Simply logging into Canvas each week and/or showing up in class each week and doing nothing is **not** active participation! **You are ultimately responsible to drop the class if you decide to stop attending.** If you are going to be absent/inactive for more than 1 week due to illness, work travel, military duty or family matters, please notify me preferably by e-mail.

Persons with Disabilities

For students with any kind of disability, services and support are available to you through the Disabled Students Programs and Services (DSPS). Call 619-660-4239 or visit the [DSPS web page](#). Please see me if you need any special accommodations such as sitting in a specific seat (i.e., front row), extra time to complete exams, etc.