CISP 360
Introduction to Structured Programming
Online Course Syllabus

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Course Description

This course is an ONLINE introduction to structured programming. This course will introduce you to the art and science of capturing thoughts and making them real - programming! You will learn and practice the syntax of the C/C++ programming language. Furthermore, you will be exposed to other necessary skills of programming, such as version control and testing.

Prerequisites. This class has prerequisites. If FLC cannot verify your them, you will need to file a Prerequisite Challenge Form **immediately**. You can find this online and must be delivered with the supporting documents to the Dean's office. If this form is not at the office by the end of the first week, you will be dropped from the class. This is attracting attention from the State of California and is an area we have little control over.

I thought this class used C as the programming language? Once upon a time, it did. However, technology has advanced. C++ is the modern update of the C programming language. It has a number of advanced features (which we cover in the next course in this series) and is used in modern program creation. However, it is a superset of the C language, which means any valid C++ program is a valid C program, also. The languages are so similar, they are referred to in the industry as C/C++. You are getting a better education by using this version of the language.

Why would I want to study C++? C++ is a modern, high performance computer language. It is a superset of the C language, which can be considered

the 'mother tongue' of the majority of modern computer languages. It has many advanced features which are found in other languages, so once you learn the general concept, it will be easier to pick up in other languages. Over the past decade or so, C/C++ has alternated in popularity with Java as the number one or number two most popular computer language. C/C++ experts are considered elite in the programming world. Learning C++ cannot hurt you - even if you never program in it.

What aren't we going to cover? It's not so much what aren't we going to cover; it's that there is so much here, we will not be able to cover many things in depth. The biggest element we will not cover here is object oriented programming; that's in the next class. This class concentrates on grounding you in the fundamentals.

Where can I go for the most up-to-date course information? The Folsom Lake College website under CISP Course Descriptions has the most current prerequisite, units, meeting times, room assignment, etc. etc. information on this class.

How is the class organized? This is an online class. There will be no class meetings at any physical location on campus. This is the enormous freedom of an online class, but also the greatest weakness of it. You will need to be organized and disciplined in order to keep on track. Many students believe that they can skip a week and catch up later. It is common in online classes, the material builds up very quickly. You can expect homework assignments, reading assignments, and discussion group assignments. The actual dates of these assignments are listed in the calendar in this document.

Why don't you have a study guide or post your lectures online? The field of Information Science teaches us very clearly that student learning takes place when student makes the material their own. You need to work with the material and frame it according to how you think, ask it your questions and record it in your words. I have found when I post my lectures online, student absences increase because they "can just get the notes online". A study guide creates the illusion of learning because students blow through the material and end up with a feeling of mastery, when in fact, they have NOT mastered it. The rule is "(s)he who does the work, does the learning".

Do I need a computer at home? You don't necessarily need a computer at home, but you do need access to a computer. We have computer labs on campus with the software that you need to do the assignments in this class. You can always come to school and do you work here. Of course, if you need to do that, why are you taking an online class?

I'm not very comfortable using computers, what do you recommend? I recommend you think very seriously about taking an on-line programming course at this time. This class works best with students that have some experience programming computers. You need to be comfortable troubleshooting and solving your own computer problems. If you haven't installed software before or haven't used the command line, or a text editor you could become very frustrated in the class. If this sounds like you, think about taking the class in the classroom - you will be MUCH happier. I can only do so much troubleshooting electronically.

Does this class have a lab and what exactly does that mean? This class has a lab component. The lab is after class, on your own time. A lab is an informal work time - you will be programming.

Contacting Me.

Office Hours (FL2-236)					
Time	Monday	Tuesday	Wednesday	Thursday	Friday
9:00	Class	Class	Class	Class	
10:00	Class	Class	Class	Class	
11:00	Office	Office	Office	Office	
12:00	Office	Office	Office	Office	
1:00	Class	Class	Class	Class	
2:00	Class	Class	Class	Class	
3:00					
4:00					
5:00					
6:00					
7:00					

I am rarely in my office. So, unless you like waiting, you are wise to schedule a time with me via email. I will then mark you in my calendar and make sure I am in my office. I do not consider an appointment confirmed unless you respond to my my email setting up our appointment.

First Week of Classes

I will drop you immediately if you do not attend all classes in the first week. My classes usually have wait lists and those students show up. You should have received at least 1 email from me by now regarding this class. If you have not, **you need to immediately** find out why. There is critical information in the emails I send you and "I didn't get your email" is NOT a valid excuse.

What do I need to do if I'm trying to add the class? If you are trying to add, you will need a permission number from me to do so. I will provide one to you in the first class if there are any openings. You must add ASAP because the permission numbers expire. You must also pay immediately or the system will drop you from the class. It is also your responsibility to make sure you have met the course prerequisites (if any). These can be found in the FLC course catalog. If you do not meet the prerequisites, you will be dropped from class at the end of the first week.

Emailing me, remember, you are communicating with a college professor, not a text message to your peers. Use your full name, student number and class. I usually recognize my students, but I often cannot place what class they are in. Your email does NOT automatically tell me your student number, nor your class. I check my email in the morning and evening (around 5:00PM). I'll be glad to talk to you in my office if I am there, as long as I don't have any pressing deadlines. Even better - send me an email to schedule a time, because I am usually in and out of my office.

Student Learning Outcomes

The State Chancellor's Office wants to know if we are measuring our student success rates against the Student Learning Outcomes (SLOs) standard. Upon completion of this course, the student will be able to:

1. divide a program into modules.
2. organize a grouping of code to represent each module of the language currently being used.
3. utilize and understand fundamental vocabulary and constructs of the programming language currently being used to develop algorithms.
4. utilize predefined modules and libraries in the development of algorithms to create solutions to computing problems.
5. design and implement basic to more complex programs in the language currently being used.
6. demonstrate a basic understanding of Object Oriented Programming syntax and semantics.

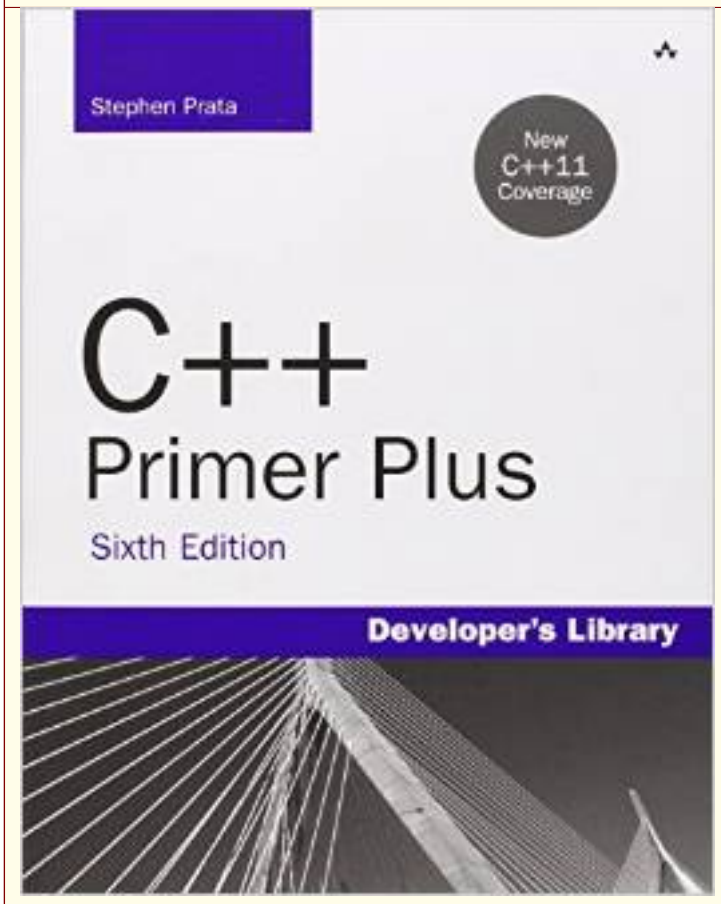
Course Topics

- C++ in Context
- Anatomy of a C++ Program
- Strings and Variables
- Conditional tests
- Iteration
- Standard Template Library

- Procedural Programming
- Arrays

Text and Required Supplies

Textbook



Prata, S. (2011). C++ Primer Plus (6th ed.). ISBN: 978-0-321-776402. Upper Saddle River, NJ: Pearson Education.

Required Supplies for this class. You will need access to a computer with a D2L account and working email. You will also need access to the Linux operating system, that's what you will use to do your homework on.

Does it matter what operating system I use? **Yes,** it is absolutely critical you get the Ubuntu operating system up and running. I assume you are using this OS and issue instructions accordingly. If you cannot get this running, I cannot check your work and **you cannot pass this class!** You can install Ubuntu on computers without erasing your original operating system. I have posted instructions on how to do this on D2L.

Course Schedule

	OnLine Class Schedule				
Week	**Su Date**	**Sa Date**	**Topic**	**Listings &Quizzes**	**Hw Due**
1	1/17	1/23	Ch 1 - Getting Started		Setup
2	1/24	1/30	Ch 2 - Setting Out to C++	√	TipCalc
3	1/31	2/6	Ch 3 - Dealing with Data	√	ccPayoff
4	2/7	2/13	Ch 4 - Compound Types	√	MoneyMath
5	2/14	2/20			
6	2/21	2/27	Ch 5 - Loops	√	CandyBarCrush
7	2/28	3/5	Supp A - File Ops		MadLibs
8	3/6	3/12	Ch 6 - Branching	√	PickaWinner
9	3/13	3/19			ZakAttack
10	**3/20**	**3/26**	**Spring Break**		
11	3/27	4/2	Ch 7 - Functions	√	
12	4/3	4/9	Ch 8 - Adv. Functions	√	Complex
13	4/10	4/16	Ch 9 - Memory Models		InputValidation
14	4/17	4/23		√	acDecisionTree
15	4/24	4/30	Supp B - Bit Fiddling	√	TBD
16	5/1	5/7	Ch 10 - Objects	√	
17	5/8	5/14		√	Pig
18	5/15	5/21	Final & Project		Final Project

†Last day to drop with a 'W'

✓quiz and/or chapter listing due by Saturday of this week.

Read the material listed **before** class. I reserve to right to change the syllabus at any time for any reason. Key Folsom Lake College sites: Academic Calendar. Final Schedule.

Grading Plan and Assignments

Online Assignment Categories				
Assignment	Late	Frequency	Points	Total
Homework	Yes	11	20	220
Quizzes	No	9	20	180
Chapter Listings	No	9	16	144
Final Project	No	1	80	80
Final	No	1	100	100
Engagement	No	1	300	300
Total				1024

Assignment Categories

Homework. Various periodic assignments for you to complete alone. These typically are assigned a week before they are due, but you are free to start earlier if they are up on D2L. See the individual assignment document for specifics. These are listed on D2L under content as homework.

Homework is assessed a 10% late penalty for each week it is late, subject to a -30% penalty. If you turn in the homework, the worst you can do is receive a D for that assignment. I want to encourage you to do the work and get the assignment in - that's how you learn how to program. I typically look at assignments in a batch on Sunday. This means if something is wrong with your code and I can't run it, it is already a week late. Lesson? Test and test again! **Please do not send me your code asking me to check it!** I cannot possible do that for everyone in the class. I will be happy to discuss your code in person, however.

Quizzes. These are weekly tests on the material in the chapter. They are usually, but not guaranteed to be, multiple choice tests. You take them on D2L and they are only open for the week we are studying the chapter. These tests are timed, so you will not be able to look up the answers in your book to take the test.

Final Exam. This is a cumulative exam on all the material from this class. If you are doing well on your weekly test, this should be no problem. I do not try to trick or trap students. You will take this during finals week. Why am I giving you a cumulative final? Because, my friends, life is cumulative.

Engagement. Everything in the syllabus so far, discusses what FLC brings to the learning process. However, if you are going to excel, learning must be

a two way street; you must bring something to the table as well. Engagement measures how much you bring to the learning process.

All students start out with whatever engagement amount is specified in the syllabus; this represents what a 'typical' student does - come to class, study, do homework, etc. etc. It is perfectly reasonable for students to do nothing 'outside the box' and still get A's; happens all the time.

However, outstanding students go above and beyond. These students are what engagement is really directed at. Activities which contribute to student excellence are encouraged, while activities that detract from student excellence are discouraged. You can think of it as positive and negative 'extra credit'. Note: there usually is no fixed amount of points for each element. The actual points I award or deduct depend upon the number of students who engage in the activity, how much time it took you to do the activity, how relevant it is to this class, etc. etc. There is no guarantee I will reward a specific activity. I only promise to award the same amount to all students who participate in an activity.

The only exceptions to this rule are tardiness, unexcused absences and plagiarism. The sections of the syllabus discussing these topic has more information about this.

Some activities which increase engagement:

- Join a club on campus.
- Join student government.
- Volunteer to lead weekly reviews (if any)
- Participate in Online Discussion Groups
- See me in my office with questions
- Getting help with a tutor
- Setting up or attending a study group
- Completing surveys.
- Attending on campus lectures outside of class

Some activities which decrease engagement:

- Late to class - Saps your grade.
- Unexcused Absences - the killer
- Poor group feedback
- Class Disruptions
- Plagiarism - Another killer

Code of Conduct

All students are expected to conform with the Code of Conduct found in the FLC Catalog. Furthermore some other items are: No video or audio recording without prior instructor approval. If you need to text or answer the phone, please go outside so you do not disturb the rest of the class. You cannot take other student's works, comments, electronic material from D2L and post it to electronic services like YouTube.

Academic Honesty. I expect you to know the section on Academic Honesty in the catalog. I will hold you to that standard. I consider isomorphic homework to be plagiarism. Collaboration does not mean you get to copy each other's work. Expect an 'F' for your first offense; removal from the class for a subsequent offense. I kick student's out of my classes each semester for plagiarism. If you have any questions on this, come and see me.

Your Ideas and Evaluations

In general, your ideas, comments, suggestions, questions, grade challenges, etc. are welcome. Your discretion in these matters is expected, however. No part of your grade will be based on anything other than your coursework and engagement activities. You are encouraged to take advantage of instructor office hours for help with coursework or anything else connected with the course and your progress.

Suggestions for Success

The key to succeeding in this course is to keep up with the work. Assignments may start out simple, but they quickly build up in number and complexity. It is critical you work steadily week in and week out. Every class, my student's say "I wish I had spent more time reading the textbook". Success is built on many little things, not 1 big score. This is what you need to do if you want to do well in here:

- Buy the textbook (you would think I wouldn't have to say this).
- Read the textbook every week.
- Come to class every week.
- Keep up with the work.

Yes, it really is that simple. However, every semester, students try to prove this advice wrong and fail. Students usually don't implode spectacularly. They usually get further and further behind and die and inch at a time. The key to avoiding this is to stay out in front of your work. That's what keeps it manageable. You can do this!

Legend for Master Switch

This is ONLine text only. This is onground text only. This is common text for onground and ONLine classes.