



School of Engineering
*Information
Technology Program*

ITP 165 – Introduction to C++ Programming
Units: 2 Room: GFS-118
Spring 2019 – Monday/Wednesday – 5:00pm-6:20pm
section 32054

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Hours of Service: 8am–5pm M-F
Walk-in: DRB 205
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Course Description

Fundamentals of C++ syntax and semantics, including function prototypes, overloading, memory management, abstract data types, object creation, pointers to class members, and I/O streams.

Learning Objectives

This course will teach students problem solving skills using the C++ programming language. Programming fundamentals including variables, control statements, loops, and arrays, pointers, functions and object-oriented programming.

Prerequisite(s): None

Co-Requisite(s): None

Concurrent Enrollment: None

Course Notes

All lecture slides and course content including homework and lab assignments will be posted to the course Blackboard page. Midterm and Final Examination are to be done by hand.

Technological Proficiency and Hardware/Software Required

Students are expected to be able to perform the following tasks before the course begins:

- **Create a ZIP file that contains one or more files**
- **UnZIP a file that contains one or more files**
- **Submit files through Blackboard's submission page**
- **Install VisualStudio or XCode software**

Required Readings and Supplementary Materials

We will use zyLabs to administer the labs(~\$30).

1. Sign in or create an account at learn.zybooks.com
2. Enter zyBook code

USCITP165KosterSpring2019

3. Subscribe

To supplement course material a good introductory C++ reference is recommended like the tutorials available at LearnCpp.com, CPlusPlus.com, and CProgramming.com.

Grading Breakdown

You will be graded on the following

ITEM	% of Grade	
Lab Assignments	20	
Homework Assignments	40	
Midterm Exam	20	
Final Exam	20	
TOTAL	100	

Grading Scale

Course final grades will be determined using the following scale

A	93+
A-	90 - <93
B+	87 - <90
B	83 - <87
B-	80 - <83
C+	77 - <80
C	73 - <77
C-	70 - <73
D+	67 - <70
D	63 - <67
D-	60 - <63
F	<60

Assignment Submission Policy

Homework are to be submitted on Blackboard only. Any other form of submission to instructor, teaching assistant, or grader will not be counted. Only the last submission on Blackboard will be graded. Students will not be able to get points for any previous submissions regardless of whether the previous submissions were correct or on time.

Lab assignments are assigned during the class session and are due that day but will be accepted up to two days later (or late with documented emergency). Points are awarded by the zyLabs autograding system.

Each homework assignment must be completely individually. There are no group projects in this class. Each homework assignment will include instructions, a due date, and a link for electronic submission. Homework assignments must be submitted using this link.

It is your responsibility to submit your all homework assignments on or before the due date. Homework assignments turned in one day late will have 20% of the total points deducted from the graded score. Homework assignments turned in two days late will have 50% of the total points deducted from the graded score. After two days, submissions will not be accepted and you will receive a 0.

All homework assignments must be digitally submitted through Blackboard except when otherwise specified by the course staff. Do not email homework assignments to the instructor or lab assistant.

Homework assignment questions should be posted to the online question forum. Do not send any email to the instructor regarding homework. You are encouraged to attend the office hours for homework related questions.

Extensions for homework will only be granted for those students who have a medical/family emergency or illness resulting in an inability to complete the assignment on time. Students must provide official documentation.

Grading Timeline

Grading of homework will be done within one week of the deadline.

Additional Policies

Make-up policy for exams: To make up for a missed exam, the student must provide a satisfactory reason (as determined by the instructor) along with proper documentation. Make-up exams are generally only offered in emergency situations.

Before logging off any ITP-owned computer (laptops, desktops in OHE 540, OHE 542, KAP 107, KAP 160, KAP 162, KAP 267) students must ensure that they have saved any work to either a USB drive or a service such as Dropbox. Any work saved to the computer will be erased after restarting the computer. ITP is not responsible for any work lost.

ITP offers Open Lab use for all students enrolled in ITP classes. These open labs are held beginning the second week of classes through the last week of classes.

Hours are listed at: <http://itp.usc.edu/labs/>.

This course will make use of Piazza, an online discussion forum. Students will be invited to join the class discussion, but are not required to. Students may post questions, answer other student's questions, post anonymously, or post privately. Students are not allowed to post homework or lab code to Piazza publicly. Students may post homework or lab code privately on Piazza to instructors only. Any student caught posting homework or lab code on Piazza will be punished through SJACS.

Course Schedule: A Weekly Breakdown

	Topics/Daily Activities	Labs	HW Due on Friday
Week 1	Introduction Variables	1.1-1.5 training 1.6 madlib	
Week 2	Booleans Conditionals	1.7 premium 1.8 calculator	HW01 Pizza
Week 3	MLK day, no class Loops	factorial	HW02 Horoscope
Week 4	Arrays C-strings	gradebook vowel count	HW03 Mortgage
Week 5	Using Functions Writing Functions	character count fn filters?	HW04 Op Language
Week 6	more functions PBR v PBV	PWcheck bubble	HW05 Pancakes
Week 7	no class Monday Midterm Exam		(HW05 due date moved here)
Week 8	Files Streams	first file streams	HW06 Deal or No Deal
Week 9	Pointers (+memory, general) Structs	struct memory	HW07 Quizzle
	<u>SPRING BREAK</u>		
Week 10	Dynamic allocation Dynamic arrays	pointers dynamic	Quizzle moved to Wed
Week 11	Classes Class functions	Point Student	
Week 12	Multi-file projects / headers Destructors	Dots Shapes	HW08 Gloss Sunday start of the week
Week 13	Vectors Inheritance	vector BankAccounts	HW09 Food Diary due Friday
Week 14	Virtual Functions Abstract Classes	BetterShapes sort?	
Week 15	Destruction Where to go from here	candy3types	HW10 Prisoner Evolution
FINAL			Wednesday May 1 4:30pm-6:30pm

Statement on Academic Conduct and Support Systems

Academic Conduct:

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Part B, Section 11, “Behavior Violating University Standards” <https://policy.usc.edu/scampus-part-b/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct>

In this class, all homework submissions will be compared with current, previous, and future students’ submissions. If your work is found to be a copy of another person’s work, or if you submit someone else’s work as your own, the instructors will file a report with SJACS with a recommended penalty of an F in the course.

It is not okay to look through another student’s code. It does not matter if this code is online or from a student you know, it is cheating. Do not share your code with anyone else in this or a future section of the course, as allowing someone else to copy your code carries the same penalty as you copying the code yourself.

Support Systems:

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. <https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. <http://www.suicidepreventionlifeline.org>

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 - 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. <https://studentaffairs.usc.edu/bias-assessment-response-support/>

The Office of Disability Services and Programs

Provides certification for students with disabilities and helps arrange relevant accommodations. <http://dsp.usc.edu>

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic <https://studentaffairs.usc.edu/ssa/>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible, <http://emergency.usc.edu>

USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime.

Provides overall safety to USC community. <http://dps.usc.edu>