CPSC 1020 Section 200: Computer Science II,
CPSC 1021: Computer Science II Lab
Spring 2020 Syllabus

Course Information:

Instructor
Dr. Svetlana V. Drachova ("Dr. D."), **sdracho@clemson.edu**

Office/Hours
M & W, 1:00 PM–2:00 PM, McAdams 105. May also be available by appointment.

Lectures

Section	CRN	Meeting time/location
200	12205	M, W, F, 9:05 – 9:55 pm, McAdams 114

Labs (see lab syllabus for more info)

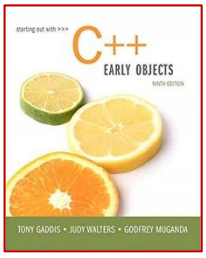
Section	CRN	Meeting time/location	Lab TAs
001	14866	T&R, 9:30 - 10:20 am, Barre B108	
002	12206	T&R, 11:00 - 11:50 am, Barre B108	
003	12207	T&R, 12:30 - 1:20 am, Barre B108	
004	12208	T&R, 1:30 - 2:20 am, Barre B108	
005	12209	T&R, 2:30 - 3:20 am, Barre B108	
006	20459	T&R, 3:30 - 4:20 am, Barre B108	

Head GTA for all sections – Deyrel Diaz

Textbooks and Materials:

1. Gaddis, Walters, Muganda.
   Starting Out with C++: Early Objects(9th Edition) by Pearson.
   ISBN-13: 978-0-13-440024-2.

2. Course Management System: Canvas
   www.clemson.edu/canvas



Course Catalog Description

Continuation of CPSC 1010. Continued emphasis on problem solving and program development techniques. Examines typical numerical, nonnumerical, and data processing problems. Introduces basic data structures. Credit may not be received for both CPSC 1020 and 1070.

Prerequisites

CPSC 1010 or CPSC 1110 with a C or better

Corequisites

CPSC 1021 - a zero credit hour lab.

Course Learning Objectives

By the end of the course, students should be able to:

1. Use structured data types.
2. Classify and use common data structures including lists, vectors, arrays, etc.
3. Define object-oriented concepts including classes, inheritance, and recursion and apply them in a software project.
4. Plan, design, implement, test and debug, and deploy a complete object-oriented software solution in a Linux environment.
5. Describe how references allow for objects to be accessed in multiple ways.
6. Articulate design principles including information hiding and encapsulation.

Course Website

Clemson Canvas course website for CPSC 1020 and CPSC 1021 lab, accessible from https://www.clemson.edu/canvas will be used throughout the course. Students will submit assignments to canvas, and grades will be posted to that site. Course materials such as lab and project assignments, course schedule, TA office hours, and links will be posted on the course website. Students are responsible for checking the course website daily for new information and announcements.

Course Components

Lectures

Lectures will cover selected chapters of the required course textbook and other materials. Textbook readings will be assigned during/before lecture periods, and students should keep up with these readings throughout the semester. Lectures will not cover the entire required material, but students are still responsible for all assigned material. Students are expected to take notes and participate regularly.

Quizzes

Throughout the semester, there will be announced and unannounced graded quizzes. Missed quizzes cannot be made up, except in cases of a documented illness, or a documented emergency (See **Late Work** policy below)

Assignments

Three programming assignments will be assigned during the semester. Students must submit their

solutions using Canvas course website. The projects will either be individual projects (no collaboration is permitted), or group projects, and will be specified in the project description. The project submissions must compile on the Linux lab machines in order to receive credit (projects that do not compile receive a grade of 0). Students are responsible for ensuring that all correct files were submitted to the correct location and before the deadline. Missed assignments cannot be made up, except in cases of a documented illness, or a documented emergency (See **Late Work** policy below).

Activities

There will be a number of in-class and pre-class activities that students need to complete. These will be due when specified and no late submissions will be accepted, except in case of a documented illness or a documented emergency (See **Late Work** policy).

Exams

There are three exams in this course: two midterms, and a final exam. Exams will take place in the lecture classroom. Students are required to bring their TigerOne Id card, pens/pencils, and an eraser to all exams. No restroom breaks are allowed during an exam, unless you've obtained a class accommodation from the instructor before that exam begins. Students may be assigned seats during exams per the instructor's discretion. Use of cell phones is not allowed during the exam. During exams all cell phones must be placed face down on the desk in front of the student, and be visible to the instructor and other students at all times. Tentative dates for each exam are given in the Course Schedule on the last page of this syllabus. Missed exams cannot be made up, except in cases of a documented illness, or a documented emergency (See **Late Work** policy below).

Your final exam schedule as listed on https://www.clemson.edu/registrar/student-menu/exam-spring.html:

Section 200: Friday, May 11st, 8- 10:30 pm.

Labs

There are 12 labs, each worth 5 points. Labs will meet twice a week for 50 minutes, starting during week 2. Students are required to attend all scheduled labs for the lab section that they registered for. Attendance is required on Tuesdays and will be recorded. If students miss their first lab period of the week, they will receive a grade of 0 on that week's lab assignment unless the absence is excused (excused absences are explained later in this section). If students finish and submit that week's lab on Tuesday, then they are not required to attend Thursday lab period for that week, with the permission of the lab TA.

Lab assignments should be worked on during the allotted period of time and submitted to canvas for grading before the deadline. Students should not work on programming projects during lab time, unless they have finished and submitted the current week's lab assignment. Lab assignments are due on the Friday of the same week before 5:00 pm, unless otherwise instructed.

Students who have technical issues submitting their assignments should email their lab instructor before its deadline. Submitted lab assignments must compile on the Linux lab machines in order to receive credit (lab assignments that do not compile will receive a grade of 0).

All lab assignments are individual assignments. Students are allowed to examine any publicly available code with the purpose of understanding the concepts, discuss programming concepts and basic program design approaches, but all labs should be completed by each student individually. Students are responsible for checking the correctness of their lab assignments before submitting them, for following all instructions given in a lab assignment, and for submitting all the correct files. Lab grading rubrics will be provided for each lab. Missed labs cannot be made up, except in cases of an illness, or an emergency (See **Late Work** policy below).

Extra Credit

There is NO individual extra credit in this course. The only extra credit that *may* be assigned in the course is assigned to the entire class. Extra Credit is optional and does not guarantee that student will pass the course, if that student has a failing average before submitting extra credit work.

Attendance

Attendance is required and will be recorded. Students should arrive to lectures by the start of the period and be in the class for the duration of the period unless otherwise stated by the instructor. An unexcused absence will be recorded for students who miss a lecture attendance check.

Late Work

Late work (quizzes, projects, labs, exams) is not accepted in this course, except in the case of a documented illness or a documented emergency. In case of an illness student must provide instructor with the documentation on the official medical clinic/hospital letterhead, stating the exact date that the student became ill, and the date student was released back to class/work. In case of other emergency, documentation should state the exact date of the emergency. In case of military deployment/exercises, student must obtain a copy of orders from the CO. If student misses class due to a University sanctioned event (conference travel, athletic event, etc.) documentation must be provided as well. All documentation must be submitted as specified by the course instructor within 3 calendar days of a missed quiz, exam, lab, or project deadline. Allowing student to make up the missed work will be at the discretion of the course instructor after the documentation has been reviewed.

Grade Calculation

Students must be registered for this course in order to attend class and to receive any grades. Students who are auditing this course may not receive graded feedback. Grades will only be rounded to the first decimal point. The following scheme explains the grading scheme:

Components:	**Points:**	**Approx. Weight:**
Quizzes	(variable) = 75 points	15%
Programming Assignments	3*40 points = 120 points	20%
Midterm Exams	2*100 points = 200 points	30%
Final Exam (comprehensive)	1*120 points = 120 points	20%
Labs	12*5 points = 60 points	10%
Class Activities	(variable) = 30 points	5%
Total:	600 points	100%

Final Letter Grades

Grades may be curved for the entire class at the instructor's discretion. Grades will be rounded only to the first decimal digit. Final letter grades will be determined according to the following scale:

Grade	Percent
A	90 – 100%
B	80 – 89%
C	70 – 79%
D	60 – 69%
F	59% or less

Electronic Devices

Lecture

Students may not use personal electronic devices (including laptops, tablets, and phones) during lectures, unless the instructor has explicitly given them permission to do so. Typically, the lecture instructor only gives permission to use electronic devices during lecture periods for students who have a class accommodation approved by our University. If a class activity requires the use of an electronic device, the instructor will explicitly announce that in class. Electronic devices are a distraction to you, other students, and the teacher.

Lab

Students are required to bring their laptop to the lab period on both Tuesdays and Thursdays. Laptop should be charged and ready to use prior to the start of lab. Students must also know their laptop password (if any) and Clemson username and password.

Syllabus Updates

Instructor reserves the right to update the syllabus whenever it is needed. Students will be informed when/if the syllabus was updated.

Conduct Policy

Students are expected to be courteous and respectful in all interactions with fellow class members, TAs, and the instructor (whether this interaction occurs online, during class, or outside of class). Student misconduct will not be tolerated. Student misconduct includes, but not limited to, arguing with an instructor or TA about course policies, being rude or disrespectful towards a fellow class member or an instructor, sleeping in class, disrupting class, using a computer or other device during class without authorization from the instructor, showing up to class late or leaving class early without permission from the instructor, and refusing to follow course policies or instructions stated by an instructor. The instructor and TAs have the right to assign seats or to ask students to move to another seat if they feel it is necessary, and refusing to sit in an assigned seat will also be considered as an act of student misconduct. NO tobacco products or electronic cigarettes are allowed to be used during class or labs, including cigarettes, cigars, chewing tobacco, dip, etc. For the first case of student misconduct, students may have points deducted from their Quiz grades or their final grade might be lowered by one full letter grade (i.e. an A becomes a B, B becomes a C, etc.) at the instructor's discretion. In extreme cases, or if the misconduct persists, a grade of F will be assigned to the student, and the student will

not be allowed to attend class thereafter.

Academic Honesty

"As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a high seminary of learning. Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form."

When, in the opinion of a course instructor, there is evidence that a student has committed an act of academic dishonesty, the instructor must make a formal written charge of academic dishonesty, including a description of the misconduct to Dr. Jeff Appling, Associate Dean of Undergraduate Studies. The reporting instructor may, at his/her discretion, inform each involved student privately of the nature of the alleged charge. In cases of plagiarism (I.B.2.) instructors may use the Plagiarism Resolution Form available from the Office of Undergraduate Studies.

Steps to help prevent academic dishonesty are:

1. Familiarize yourself with the regulations.
2. Refuse to assist students who want to cheat.
3. Protect your work! Do not allow anyone to copy any part of your work, and report anyone who tries to copy from you to the instructor or TA.
4. Do not copy any code from any unauthorized source. An unauthorized source includes, but not limited to, any webpage, online source, document, book, or person not affiliated with our course.
5. If you have any doubt about what constitutes academic dishonesty, ask your instructor before you turn in an assignment.

Furthermore, selling, posting, or giving away course content such as slides, notes, or any information about exams, quizzes, assignments, projects, or lectures is considered an act of academic dishonesty (unauthorized assistance) unless you have written permission from the instructor. All work submitted for grades should be your own work, and you cannot copy, paraphrase, or modify any work from any source not explicitly permitted by the instructor. The instructor has the right to run programs to detect evidence of unauthorized assistance (usually in the form of copying from another person or unauthorized source) in any assignment submitted by a student in this semester, previous semesters, or future semesters.

Cheating has severe consequences, please do your own work!

Class Accommodation and Accessibility

Clemson University values the diversity of our student body as a strength and a critical component of our dynamic community. Students with disabilities or temporary injuries/conditions may require accommodations due to barriers in the structure of facilities, course design, technology used for curricular purposes, or other campus resources. Students who experience a barrier to full access to a class should let the professor know, and make an appointment to meet with a staff member in Student Accessibility Services as soon as possible. You can make an appointment by calling 864-656-6848, by emailing studentaccess@lists.clemson.edu, or by visiting Suite 239 in the Academic Success Center building. Appointments are strongly encouraged – drop-ins will be seen if possible, but there could be a significant wait due to scheduled appointments. Students who receive Academic Access Letters are strongly encouraged to request, obtain and present these to their professors as early in the semester

as possible so that accommodations can be made in a timely manner. It is the student's responsibility to follow this process each semester. You can access further information here: http://www.clemson.edu/campus-life/campus-services/sds/.

If You Need Help

Your teacher and TAs are here to help you learn the material. To get help you have several options.

1. Talk to your instructor and TAs, many times a brief discussion will clarify things enough to get you back on track.

2. Get an additional textbook of your choice on C++ programming and practice programming concepts outside of class. Programming is not learned by reading about it, it is learned by practicing hands-on programming skills.

3. Explore tutoring options available from Clemson's Academic Success Center (ASC) at https://www.clemson.edu/asc, or Peer & Wise at http://www.clemson.edu/cecas/departments/peer-wise/ index.html.
   Please remember that TAs are not tutors and will not be tutoring you throughout the course. There will be TA office hours where you can get quick questions answered regarding labs and assignments.

4. Form a study group with your classmates. Group discussions and quizzing each other often helps to master or review the material.

5. Use a search engine of your choice to ask questions, or if you need a different perspective on the concept than the one presented in your textbook.

6. Be a self-advocate. It is not always apparent if a student needs help until that students falls far behind. Seek help as soon as you feel you have questions about the material. Asking for help after the fact, or right before the final grades are posted will usually not help to improve the grade. Be proactive and "stay on top" of your grades.

Inclement Weather Policy:

If a class is cancelled due to inclement weather, the instructor will make alternative arrangements for submitting work that was due that day. Usually the work will be due the next class, unless specified otherwise.

Academic Continuity Plan for this course

Clemson has developed an Academic Continuity Plan for academic operations. Should university administration officially determine that the physical classroom facility is not available to conduct classes in, class will be conducted in a virtual (online) format. The University issues official disruption notifications through email /www /text notification/Social Media.

When notified, students will use Clemson Canvas to find important information about the class. Teachers will also provide students with information on what to do in this case.

E-Learning Day

On E-Learning Day, Wednesday, February 19th, 2020, a real-time test of the Academic Continuity Plan will be conducted. There is no lecture scheduled that day. Students will be provided with instructions on what to do and how they will be evaluated.

Late Instructor Policy

If the instructor or a lab instructor is late to class or labs, then students should wait at least 15 minutes and check the course announcements before leaving.

Clemson University Title IX (Sexual Harassment)

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veteran's status, genetic information or protected activity in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972.

This policy is located at http://www.clemson.edu/campus-life/campus-services/access/title-ix/. Ms. Alesia Smith is the Clemson University Title IX Coordinator and the Executive Director of Equity Compliance. Her office is located at 110 Holtzendorff Hall, 864.656.3181 (voice) or 864.656.0899 (TDD).

Syllabus Policy

Students are responsible for learning and following all policies stated in this syllabus. This course syllabus is a general plan for the course; deviations announced to the class by the instructor may be necessary. Tentative course schedule will be frequently updated.

Tentative Course Outline

Class #	Day	Date	Lecture Topic	Important Dates
1	W	1/08	Welcome and syllabus	
2	F	1/10	Areas of memory, types of variables and scope	
3	M	1/13	C review, loops (sections 5.8-5.11), conditional statements	1/14 Last day to register, add a class or declare audit
4	W	1/15	(6.1-6.7; 6.10-6.11) functions, (10.1-10.7, 10.9-10.0) pointers	
5	F	1/17	more pointers, pass-by-reference, dynamic memory allocation (malloc(), calloc())	
6	M	1/20	Martin Luther King Holiday	
7	W	1/22	function pointers	1/22 Last day to drop a class or withdraw from the University without a W grade
8	F	1/24	(7.12) structs, (8.8) typedef	
9	M	1/27	(section 17.1-17.4) linked lists	
10	W	1/29	(17.5-17.6) linked lists	1/29 Last day to apply for May Commencement
11	F	1/31	finish linked lists, debugging, makefiles	
12	M	2/3	(2.2, 3.1) intro to C++; extensions to C; data types; cout; cin, (3.3) typecasting, (3.7) formatted output	
13	W	2/5	(2.1, 3.1) intro to C++; class; namespace, (5.12) file I/O, (6.13) reference parameters	
14	F	2/7	finish intro to C++, review for Exam 1	
15	M	2/10	Exam 1	
16	W	2/12	C++ classes	
17	F	2/14	C++ classes , (7.1-7.1) abstract data types, (7.3-7.5) design by contract; UML diagrams; objects; classes (in-line vs. regular method implementation); constructor; destructors	
18	M	2/17	more constructors: parameterized constructor with default value; constructor with in-class,	

			(7.6-7.7) initialization; constructors with initialization lists; dynamic memory allocation in C++; new and delete	
19	W	2/19	(rest of ch. 7) more C++ classes; passing objects to functions; constant reference parameters; returning an object from a function; copy constructors; object composition; C++ structures	2/19 Academic Continuity Exercise (all face-to face instruction will be moved to online modality)
20	F	2/21	(finishing up ch. 7) code examples / exercises	
21	M	2/24	(ch. 8) arrays and vectors, (8.1-8.4) review of arrays (8.5) range-based for loop	
22	W	2/26	(8.6-8.7, 8.9-8.11) review of using arrays; C++11 array class and other containers	
23	F	2/28	(8.12) vector class, (8.13) arrays and vectors of objects	2/28 Midterm grades posted
24	M	3/2	(ch. 10) C++ pointers, (10.5) initializing pointers in C++11, (10.3) relationship between arrays and pointers, (10.6) comparing pointers, (10.8) pointers to constants & constant pointers, (10.9) revisiting dynamic memory allocation with new and delete (10.10) dangling pointers; memory leaks; returning pointers from functions, (10.13) smart pointers	
25	W	3/4	More ch. 10	
26	F	3/6	Ch. 12 – strings	
27	M	3/9	review of pointers and strings code or exercise	
28	W	3/11	(11.1) the this pointer, (11.2) static members, (11.3) friend functions	
29	F	3/13	(11.4) member-wise assignment, (11.5) copy constructors, (11.6) overloaded operators	3/13 Last day to drop a class or withdraw from the University without final grades
30	M	**3/16**	**Spring Break**	3/16 – 3/20 Spring break
31	W	3/18	**Spring Break**	
32	F	3/20	**Spring Break**	
33	M	3/23	(11.7) references and move constructor/assignment	
34	W	3/25	(11.9) type conversion operators (sections 11.10) convert constructors	

35	F	3/27	review chapter 11 code / exercise; review for Exam 2	
36	M	3/30	Exam 2	
37	W	4/1	go over Exam 2, (11.11-11.12) aggregation, composition, and inheritance go over assignment #2	
38	F	4/3	(ch. 11) finish up, inheritance examples	
39	M	4/6	exercise with inheritance	4/6 Fall 2020 registration begins
40	W	4/8	(15.1-15.2) polymorphism	
41	F	4/10	exercise with polymorphism	
42	M	4/13	(15.3-15.4) finish up polymorphism; abstract base classes	
43	W	4/15	finish up abstract base classes with code examples or exercise	
44	F	4/17	(ch. 15) finish up, code examples / exercises	
45	M	4/20	tie up loose ends, probably something to still finish up with	
46	W	4/22	review for Final Exam	
47	F	4/24	review	

Syllabus Agreement:

By signing below, I agree that:

I have read and agree to abide by the terms and policies outlined in the syllabus and take full responsibility for my learning and success in this course. This agreement must be filled out correctly and turned in to the instructor during lecture class on the first two weeks of the course; failure to turn in this agreement may result in being withdrawn from the course.

_____

Student Name (Signature)

_____

Student Name (Print)

_____

Date