


















CS 200: Concepts of Programming with C++ (Fall 2023)

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Schedule

Week #	CS 200	Notes
1 / Aug 21	Unit 00: Welcome to CS 200!	 Aug 21 - First day of the fall semester
2 / Aug 25	Unit 01: Exploring software Unit 02: main()	 Aug 28 - Last day to drop and receive full refund
3 / Sept 4	Unit 03: Variables Unit 04: cin/cout	 Sept 4 - Labor Day Holiday. Classes not in session. College offices closed. (MONDAY ONLY)
4 / Sept 11	Unit 05: if/else if/else statements Unit 06: switch statements	
5 / Sept 18	Unit 07: while loops	
6 / Sept 25	(Break week - R.W.'s classes only)	
7 / Oct 2	Unit 08: Pointers and memory Unit 09: Functions	
8 / Oct 9	Unit 10: structs Unit 11: classes	
9 / Oct 16	Unit 12: for loops Unit 13: arrays and vectors	 Oct 16 - application deadline for fall graduation

Week #	CS 200	Notes
10 / Oct 23	Unit 14: strings	 Class and office hours REMOTE ONLY THIS WEEK
11 / Oct 30	Unit 15: ifstream and ofstream Unit 16: Inheritance	
12 / Nov 6	Unit 17: Searching and sorting Unit 18: Recursion	
13 / Nov 13	SEMESTER PROJECT	 Nov 15 - last day to withdraw with "W"
14 / Nov 20	SEMESTER PROJECT	 Nov 22 - 26 - Thanksgiving Day holiday. Classes not in session. College offices closed.
15 / Nov 27	SEMESTER PROJECT	
16 / Dec 4	FINAL EXAM: Dec 5, 7:00 - 8:50 pm	 Dec 5 - 11, final exams week
17 / Dec 11	POST-SEMESTER; grades posted online by Dec 12 @ 5 pm	 Dec 12 - grades entered online by 5 pm

[CS200] Unit 00: Welcome to CS 200! (Click to expand/collapse)



[CS200] Unit 01: Exploring software (Click to expand/collapse)



[CS200] Unit 02: `main()` - The entry-point of C++ programs (Click to expand/collapse)



[CS200] Unit 03: Variables - Storing data (Click to expand/collapse)



[CS200] Unit 04: `cin/cout` - Input and output in the console (Click to expand/collapse)



[CS200] Unit 05: `if/else if/else` statements - Branching when condition is true (Click to expand/collapse)



[CS200] Unit 06: `switch` statements - Branching for some value (Click to expand/collapse)



[CS200] Unit 07: `while` loops - Continue looping while condition is true (Click to expand/collapse)



[CS200] Unit 08: Pointers and memory - Where data is stored (Click to expand/collapse)



[CS200] Unit 09: Functions - Delegating tasks elsewhere (Click to expand/collapse)



[CS200] Unit 10: `struct` - Grouping related data together



1. Before class

- Reading:
 - Chapter 10.1: Introduction to objects, 10.2: Structs - from the CS 200/235 textbook ([PDF](#))
- Video lectures:
 - [Lecture \(2022\) - Introduction to Structs \(4:18\)](#)
 - [Lecture - Intro and Structs \(40:07\)](#)
- Concept introduction:
 - [Unit 10 Intro - Structs \[CS200.U10CI1\]](#)
- Optional:

2. In class

- Class presentation: [In-class presentation](#)
- Lab time:
 - [Unit 10 Exercise - Organizing related data with structs \[CS200.U10EX\]](#)

3. After class

- Unit 10 Notes - Structs
 - [Canvas assignment](#)
 - [Questions](#)

[CS200] Unit 11: Classes



1. Before class

Reading:

 [Structs and Classes](#)

Video lectures:

 [Classes, part 1 \(25:16\)](#)

 [Class Design \(8:14\)](#)

 [Classes, part 2 \(18:44\)](#)

Concept introduction:

 [Unit 11 Intro - Classes](#)

Archived lectures (optional):

 [Classes \(Summer 2021\)](#)

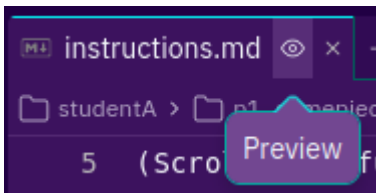
2. In class

PRESENTATION:

Example code: [Structs and Classes examples](#)


 U11EX: Classes

 [Canvas assignment](#)



Use the "eye" button on Markdown (.md) files to view it in a nicer format!

3. After class

 Notes:

 [Canvas assignment](#)

 [Documentation](#)

Tech literacy:

 [Unit 11 Tech Literacy - Professional networking](#)

Weekly check-in:

 [Unit 10/11 Checkin - Week 8](#)



1. Before class

[For Loops](#)

Video lectures:

 [Loops \(16:22\)](#)

Concept introduction:

 [Unit 12 Intro - For loops](#)


Archived lectures (optional):

 [For loops \(Spring 2021\)](#)

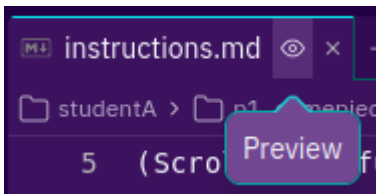
2. In class

PRESENTATION:

 [WIP](#)


 Unit 12 Exercise - Looping with for loops

 [Canvas assignment](#)



Use the "eye" button on Markdown (.md) files to view it in a nicer format!

3. After class

 Notes:

 [Canvas assignment](#)

 [Documentation](#)

[CS200] Unit 13: Arrays and Vectors



1. Before class

[Storing Data \(Arrays and Vectors\)](#)

Video lectures:

 [Arrays \(27:28\)](#)

Concept introduction:

 [Unit 13 Intro - Arrays and storing lists of data](#)  [Unit 13 Intro - Dynamic arrays](#)  [Unit 13 Intro - STL Array and STL Vector](#)


Archived lectures (optional):

 [Arrays \(Spring 2021\)](#)

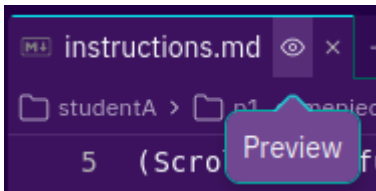
2. In class

PRESENTATION:

 [WIP](#)


 [Unit 13 Exercise - Storing sets of data with Arrays and Vectors](#)

 [Canvas assignment](#)



Use the "eye" button on Markdown (.md) files to view it in a nicer format!

3. After class

 Notes:

 [Canvas assignment](#)

 [Documentation](#)

Tech literacy:

 [Unit 06 Tech Literacy - Jobs in tech](#)

Weekly check-in:

 [Unit 12/13 Checkin - Week 9](#)

[CS200] Unit 14: String library



1. Before class

 [String library](#)

Video lectures:

 [Strings \(3:46\)](#)


Archived lectures (optional):

 [Strings \(Spring 2021\)](#)

2. In class

PRESENTATION:


 [WIP](#)

 Unit 14 Exercise - The string library

 [Canvas assignment](#)

Use the "eye" button on Markdown (.md) files to view it in a nicer format!

3. After class

 Notes:

 [Canvas assignment](#)

 [Documentation](#)

[CS200] Unit 15: File Input and Output - Ifstream and Ofstream



1. Before class

 [File I/O library](#)

Video lectures:

 [File I/O \(3:48\)](#)

Concept introduction:

 [Unit 15 Intro - Saving to text files with ofstream](#)

 [Unit 15 Intro - Loading text from files with ifstream](#)

Archived lectures (optional):

 [File input and output \(Spring 2021\)](#)

2. In class

PRESENTATION:

 [Example coding](#)

No exercise this week

3. After class

 Notes (with answers):

 [Documentation](#)

Tech literacy:

 [Unit 09 Tech Literacy - Bias and ethics in tech](#)

[CS200] Unit 16: Inheritance



1. Before class

Reading:

 [Inheritance](#)

Video lectures:

 [Inheritance \(19:55\)](#)

Archived lectures (optional):

 [Inheritance \(Summer 2021\)](#)

2. In class

PRESENTATION:

 [Inheritance example](#)

No exercise this week

3. After class

 Notes (with answers):

 [Documentation](#)

Tech literacy:

 [Unit 10 Tech Literacy - Professional networking](#)

Weekly check-in:

 [Unit 16 Checkin - Week 11](#)

[CS200] Unit 17: Searching and sorting



1. Before class


Reading:

 [Searching and sorting](#)

2. In class


PRESENTATION:

 [Example code](#)

 Unit 17 Exercise - Searching and sorting

 [Canvas assignment](#)

3. After class

 Notes:

(Notes with solution):

 [Documentation](#)

[CS200] Unit 18: Recursion



1. Before class

 Reading:

[Recursion](#)

Concept introduction:

 [Unit 18 Intro - Recursion](#)

2. In class

PRESENTATION:

 [Example code](#)

3. After class

 Recursion

(Notes with solution):

 [Documentation](#)

Tech literacy:

[Unit 18 Tech Literacy - Practice between semesters](#)

Weekly check-in:

 [Unit 17/18 Checkin - Week 12](#)

[CS200] SEMESTER PROJECT



1. Before class

Think about what kind of program you'd like to make! See the project documentation for requirements of code features.

2. In class

PRESENTATION:

We can work on example programs during class, as well as fill out the "cookbook" of useful code snippets as well, based on student suggestions.

 [Example programs](#)

SEMESTER PROJECT

 [Canvas assignment](#)  [Documentation](#)

3. After class

Weekly check-in:

 [Project Checkin - Week 14](#)

Additional information

Course collaboration expectations



Code of conduct

Since you will be interacting with other students in this course, please make sure to review this Code of Conduct:

Pledge

We as *students and instructors* to make participation in our community a harassment-free experience for everyone, regardless of age, body size, visible or invisible disability, ethnicity, sex characteristics, gender identity and expression, level of experience, education, socio-economic status, nationality, personal appearance, race, caste, color, religion, or sexual identity and orientation.

We pledge to act and interact in ways that contribute to an open, welcoming, diverse, inclusive, and healthy community.

Standards

Examples of behavior that contributes to a positive environment for our community include:

- Demonstrating empathy and kindness toward other people
- Being respectful of differing opinions, viewpoints, and experiences
- Giving and gracefully accepting constructive feedback
- Accepting responsibility and apologizing to those affected by our mistakes, and learning from the experience
- Focusing on what is best not just for us as individuals, but for the overall community

Examples of unacceptable behavior include:

- The use of sexualized language or imagery, and sexual attention or advances of any kind
- Trolling, insulting or derogatory comments, and personal or political attacks
- Public or private harassment
- Publishing others' private information, such as a physical or email address, without their explicit permission
- Other conduct which could reasonably be considered inappropriate in a professional/*academic* setting

Scope

This Code of Conduct applies within all *course* spaces, including on campus, in the discussion boards, via email, and the course Discord channel.

Enforcement

Instances of abusive, harassing, or otherwise unacceptable behavior may be reported to the *instructor* at **rsingh13@jccc.edu**. All complaints will be reviewed and investigated promptly and fairly. *The instructor* is obligated to respect the privacy and security of the reporter of any incident.

(Adapted from the [Contributor Covenant Code of Conduct](#))

How do pronouns work?



- Pronouns are a grammatical construct that most languages utilize. First person pronouns in English are "I, me" and "we", second person pronouns are "you", and third person pronouns traditionally are "he, she, they, it".
- Traditionally, a person's gender (male, female) is designated at birth based on their genitalia. The pronouns used for the gender is often set (male = he/him, female = she/her).
- A **cisgender person** (cis- being a prefix coming from Latin meaning "on this side" - [cis-etymology](#)) is a person who was either:
 - Assigned MALE at birth, identifies as a MALE, and uses he/him pronouns.
 - Assigned FEMALE at birth, identifies as FEMALE, and uses she/her pronouns.
- A **transgender person** (trans- being a prefix coming from Latin meaning "across, on the other side of" - [trans-etymology](#)) is a person who does not identify with the gender they were assigned at birth. This can mean many different things, including:
 - An "AMAB" (Assigned Male At Birth) person who now identifies themselves as FEMALE or NONBINARY.
 - An "AFAB" (Assigned Female At Birth) person who now identifies themselves as MALE or NONBINARY.
- NONBINARY is an umbrella term for someone who does not fit neatly into the traditional gender binary of only "male" or only "female. This may include identities like "neither gender", "no gender", "both genders", and more. You do not need to understand somebody else's gender to care for and respect that person.
- A PERSON can be ANY GENDER and be CIS OR TRANS and use ANY PRONOUNS. The pronouns being used does not require a specific gender.
- You can have AS MANY PRONOUNS AS YOU'D LIKE. Many people use "she/they" or "he/they", giving speakers an option of pronouns to use.
- Often NONBINARY PEOPLE may use gender-neutral-third-person-singular pronouns "they/them". THIS IS GRAMMATICALLY CORRECT.
- Many NONBINARY PEOPLE will also use NEO-PRONOUNS, new pronouns such as "ze/zir", "xe/xem". You can invent your own pronouns if you'd like.
- NO TWO PEOPLE ARE THE SAME. Everybody has a different relationship with their gender and with the language we speak.
- GENDER and SEXUALITY are not the same. Someone can be CIS or TRANS and still be STRAIGHT, GAY, BI/PAN, ACE, or other sexual identities.

Pronoun usage

Pronouns	Examples
he/him	"That is Buddy, he is a dog. His favorite toy is a donut. He is over there playing by himself."
she/her	"That is Kabe, she is a cat. Her favorite toy is not a toy, it's just sleeping. She is over there sleeping by herself."

they/
them

"That is R.W., they are my teacher. Their favorite hobby is playing video games. However, they are over there grading by themself. They would really like a coffee about now."