

265 Course Syllabus (Fall 2022)



The syllabus is a crucial part of understanding expectations and responsibilities for the course. It is EVERY STUDENT'S responsibility to know, understand, and agree to the terms of the syllabus. Please read through this page carefully.

✓ Don't forget to complete the action items at the end of the document!

ITP 265 Object Oriented Programming

Instructor: <u>Kendra Walther</u>
Office: RRB 219 (see <u>map</u>)
Office hours: See <u>Schedule</u>
Email: <u>kwalther@usc.edu</u>

Course Sections:

10:00-11:50am, M/W (Coffee, 31848)

2:00-3:50pm, Tu/Th (Tea, 31849)

Contact Info: All general course/assignment questions should be asked on EdStem Discussions (every student will receive an invitation at the start of the semester)



Prerequisite(s): ITP 115 or ITP 165

Units: $4 \rightarrow$ According to <u>USC Policy</u>, this means that you are expected to work 8 hours per week outside of class time.

time.

Format: This course will make use of several tools for content and assignments including EdStem, Google Drive, Notion, and Blackboard. Lecture notes and any supplemental course content will be posted for use by all students but may not be shared externally. Any and all announcements for the course will be sent as emails and posted to the class discussion forum. All assignments will be posted and submitted on EdStem Lessons.

📜 Course Description

This course focuses on problem solving within the object-oriented programming paradigm. This is the second course in the introductory series for the programming minor. Students will expand upon what they learned in their introductory programming course, applying it to the **Java** programming language. Students will learn how to design and create classes in Java using constructors, accessors, and mutators to maintain object state. The course focuses on object-oriented programming design, and students will learn about inheritance, polymorphism, abstract classes, and interfaces. Students will learn best practice approaches for software project design using object-oriented principles and some basic design patterns. Students will be introduced to collection classes and how to use basic data structures. By the end of the course, students should feel comfortable designing a system with multiple classes using inheritance.

Course Learning Objectives

- · Build and strengthen programming and software design skills
- · Understand the difference between classes and objects
- · Design classes within Java to represent real-world data
- · Understand and apply basic object-oriented principles such as inheritance and polymorphism to coding problems

- · Use the Java collection classes to solve real-world problems
- · Design and implement a system with multiple classes using inheritance



Course Notes and Tools

Kendra will post lecture notes, videos, code, and other supplemental course content for use by all students enrolled in the course. Students may not share the material outside of the course or post to any online location.

Announcements for the course will be posted on one of the platform tools and sent to your USC email address. Participation Activities will be submitted on EdStem. Assignments will be be submitted through EdStem unless otherwise noted and midterms will be on Gradescope.

Course Structure

This class meets for two hours twice a week. Class time will comprise of lecture and various in class individual or group activities. Programming assignments and the final project will be assigned to be completed outside of class time. Access to a functional computer where you can install software is required. ITP has a laptop loaner policy for students enrolled who do not have a personal laptop.

Readings

Readings will be from the freely available online textbook Think Java by Allen Downey and Chris Mayfield. This book is available via pdf or as interactive online version. Applicable chapters are embedded into the edStem environment.

Course Tools

This course will make use of several tools for content and assignments, including EdStem, Notion, GoogleDrive, Gradescope, and Blackboard. It is the student's responsibility to understand how and where class information is located, or to ask for help if something is unclear.

Communication Outside of Class

I encourage you to ask questions and get help. ITP 265 offers lots of office hours and an online forum for asking general questions (of the whole class or privately to the instructional team). In general, questions should be asked on EdStem Discussions rather than over email. Students will be added to EdStem at the start of the semester, however, students who add the class late will need to reach out to the instructor (with full name, email, and section) in order to be manually added to the platform. For other questions or concerns, please email: <u>kwalther@usc.edu</u> — when emailing, please **always**

Live class sessions and Zoom

Due to the ever-changing situation of our lives due to the lasting impacts of Covid-19, it is my understanding and expectation that faculty, staff, and students are doing their best to make learning a priority. However, health concerns and external factors will affect everybody in different ways throughout the semester: from common colds, to covid exposure or illness, to other health or family concerns... Therefore, we will all have to remain flexible and understanding with one another and to give each other the benefit of the doubt. I will do my best to assume the best of intentions from each of my students, and I ask that you do the same for me.

My plan is to setup up class meetings to be hyflex; supporting in-person and remote students. However, it is expected that students attend class in-person whenever physically possible. Students attending more than 4 sessions remotely throughout the semester should discuss their situation with me over email or in office hours. Each class meeting will have a brief activity on EdStem that should be completed for participation credit during the class session.

While I plan to make video-recordings of class sessions available to all students for review, asynchronous participation (watching recording rather than attending class during scheduled time) will only be allowed in rare instances and will require pre-approval from the instructor. Additionally, asynchronous participants must submit lecture notes or summary of the class session, in addition to the in-class EdStem activity before Saturday at noon to receive participation credit.

Netiquette

It is expected that students in the virtual classroom behave professionally, treat others with courtesy and respect, use

include your full name, course and section number or name (coffee/tea). Timeline for replying to emails is 24-48 **business** hours, but is often much quicker. Please note that I expect most general questions to be posted on EdStem, so my response may be "Post on EdStem in order to get an answer."

Students should NOT directly email the learning assistants (LAs) or graders: all correspondence with the LAs should be done on <u>EdStem Discussions</u>. If a direct email with a LA is required for any reason, the student must **cc** the instructor in the email.

language thoughtfully, wear appropriate clothing, and avoid inappropriate surroundings or inappropriate or distracting virtual backgrounds. Ideally you will join class from a suitable, quiet location, with a device that permits full participation in the class activities. Students should participate actively while on Zoom through answering questions verbally or on chat and students are expected to participate fully in breakout room sessions for group activities.



Grading

After reading *Grading For Equity* by Joe Feldman this summer, I wanted to completely transform how I approach grading in this course, but I didn't have enough time to fully overhaul things. Instead, I will begin to implement practices and engage in discussions with you throughout the session on how we can continue to focus on mastery of learning objectives rather than accumulating points.

Item	Percent
Assignments	25
POGIL and Participation Activities	10
Midterms (15 each)	45
Final Project	20
TOTAL	100

If you are taking the class with a grade of **P/NP**, you must earn a grade of **70%** or higher in order to receive a P.

Reflection Journals on EdStem... I have created a space each week (or two) for you to share personal reflections about your learning experience. These are not required for your grade, but I think reflection is an important part of learning, so I encourage students to reflect as often as necessary to benefit your overall class learning and better inform the instructional staff on how we can support you.

Grading Scale

Letter Grade	4 pt scale	Percent
Α	3.75-4	≥94
A-	3.5-3.75	≥ 90 and < 94
B+	3.25-3.5	≥ 87 and < 90
В	3-3.25	≥ 83 and < 87
B-	2.75-3	≥ 80 and < 83
C+	2.5-2.75	≥ 73 and < 80
С	2-2.5	≥ 70 and < 73
C-	1.75-2	≥ 67 and < 70
D+	1.25-1.75	≥ 63 and < 67
D	1-1.25	≥ 60 and < 63
D-	>0 < 1	
F	0	< 60



Course Policies (read thoroughly)

Course Material Policy

Do not share, upload, reproduce, distribute, or post any lecture material, assignments, midterms, or other course material without my explicit written consent. Students may take notes and make copies of course materials for their

Programming Assignment Policies

Programming assignments will be due one week after they are assigned and should be completed individually. All code should be submitted on EdStem (unless otherwise stated) and should compile and run. It is the student's

own use. Additionally, I will provide a shared google folder where students can share notes or helpful resources with students in their section. However, students may **not** post any ITP 265 course materials on any other online (public or private) site. Doing so is a copyright violation and an academic integrity violation that will be reported and dealt with accordingly.

Participation and Attendance

Successful completion of the course and mastery of learning objectives requires that students be present and engaged with course materials and group activities. However, emergencies may happen that prevent your participation in class. The instructor will give verbal instructions for completing the in-class participation activity; students who miss the in-class participation activity (with prior communication with the professor) will need to watch the class recording and submit notes or a summary with a make-up participation activity. Students are responsible for in class work, POGIL activities, other participation activities, announcements made during lecture time, and for understanding material covered in class. As such, students should watch lecture recordings and consult with classmates before attending office hours for help with material.

OSAS Accommodations

If you have course accommodations authorized by OSAS (Office of Student Accessibility Services, previously DSP), please **email** the instructor your accommodation letter **by the end of Week 3**, the subject of the email should be "*ITP 265 Course Accommodations*". In the body include your name and your class section (*Coffee or Tea*). In addition, reach out the week before each midterm to discuss details for coordinating specific testing accommodations.

Late Add

Per university policy, students are allowed to add the course after the initial start period. Any students wishing to add the course should plan on attending the course from the beginning of the semester. Upon adding the course after week 1, the student should email the instructor **immediately** to make sure there is a plan for completion of work and learning missed materials. Any missed work is required to be completed and submitted according to the schedule provided by the instructor.

If you add that class after day 1, I do not get automatic notification, so please send an email to kwalther@usc.edu

responsibility to double-check that submission finished uploading properly and that the **correct** files were uploaded.

If a student needs an extension of more than 12 hours on an assignment, the instructor should be notified with a private post on EdStem Discussion. To maintain better equity in the course, late assignments will not suffer grading penalties, but the instructional staff may not be able to provide timely grading or constructive feedback on late submissions.

Backups

Students should keep a copy of all of their assignments. Frequent backups to an external drive or to the cloud is strongly recommended. ITP is not responsible for any work lost.

Grading Timeline and Regrades

In most circumstances, assignments will be graded and students will receive feedback (on EdStem) within two weeks of submission. The instructor will demonstrate how to view code feedback on EdStem for the first couple assignments. After that students should review feedback on their own.

As part of more equitable grading policies, students may resubmit an assignment with corrections. However resubmissions need to occur in a timely manner to be beneficial for learning and not cumbersome for the instructional staff. Each assignment will include a labeled second "Regrade" instance on EdStem for resubmission. Specific guidance for regrades will be discussed and finalized in class.

If you believe you were graded inaccurately, create a private post in the <u>Regrade Requests category</u> on EdStem discussions with your name, section, assignment number, and your reasons for requesting the regrade. This will allow the grader and instructor to view your submission and make a decision. Remember you should never directly email the grader without also CC'ing the instructor.

Midterm Policy

No make-up exams (except for **documented** medical or family emergencies) will be offered. If a medical or family emergency occurs, it is your responsibility to provide adequate documentation as soon as possible to the instructor.

with your full name, email, <tea or coffee> section so that I can manually add you to the edStem platform.

Well Being

In addition to the my new grading philosophy, eliminating late penalties, and allowing resubmission of homework assignments, I hope to engage all of you in discussions throughout the semester on how we can work together to create the optimal environment to support learning for each and every one of you. Not all learning strategies equally benefit all learners, but I strive to implement classroom practices that focus on mastery of content rather than short-term memorization of concepts.

Overall well-being and a sense of belonging is critical for effective learning. It is my goal to create an environment where all students feel included and can flourish in the classroom. Your physical and mental health are important components for thriving within the classroom, and I encourage you to practice self-care throughout the semester. If you need help or support, please reach out to me and I will do my best to connect you with appropriate resources. If you don't feel comfortable sharing details, even a brief message to let me know that things are "not okay" can help you get support. USC offers a variety of student-focused support and I hope you feel empowered to get the help you need and deserve. Please see this document for the full list of USC support services which includes contact information:



USC Statement on Support Systems and Academic Conduct

Academic Integrity

USC seeks to maintain an optimal learning environment. General principles of academic honesty include the concept of respect for the intellectual property of others, the expectation that individual work will be submitted unless otherwise allowed by an instructor, and the obligations both to protect one's own academic work from misuse by others as well as to avoid using another's work as one's own. All students are expected to understand and abide by these principles.

😢 Plagiarism

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/scientificmisconduct.

If the instructor, a grader, or a lab assistant **suspects** you of academic dishonesty, it has to be reported to SJACS (https://sjacs.usc.edu). Do not share assignments with any other people. Do not look up solutions on websites. Do not look at other student's solutions to any assigned coding homework. Do not **submit** another person's work as your own. Do not **look** at or discuss any work during quizzes or tests. Do not leave the room during an exam without

Examples of behavior violating University standards:

- · The submission of material authored by another person but represented as the student's own work, whether that material is paraphrased or copied in verbatim or near-verbatim form. (This applies to code as well as written work)
- · Obtaining for oneself or providing for another person a solution to homework, a project or other assignments, or a copy of an exam or exam key without the knowledge and expressed consent of the instructor.
- Unauthorized collaboration on a project, homework, or other assignment.
- Fabrication: Submitting material for lab assignments, class projects, or other assignments which is wholly or partially falsified, invented, or otherwise does not represent work accomplished or undertaken by the student.

Academic integrity tutorials can be found at https://libraries.usc.edu/research/reference-tutorials permission. Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.

Viterbi Honor Code

Engineering enables and empowers our ambitions and is integral to our identities. In the Viterbi community, accountability is reflected in all our endeavors.

Engineering+ Integrity.

Engineering+ Responsibility.

Engineering+ Community.

Think good. Do better. Be great.

These are the pillars we stand upon as we address the challenges of society and enrich lives.

Course Schedule

Fall 2022

<u>Aa</u> Week	Ē Date	■ Attention	≡ Topic	■ Details	≡ Assignment	≡ \$ Readings
Week 01	@August 22, 2022 → August 27, 2022		Intro to Java Basics	Overview of Course. Syllabus questions. Java Syntax. Primitive Data. Conditionals Looping.	A00: Syllabus Review and Background Survey A01: Java Output and Methods	Chapter 1 & 2
<u>Week</u> 02	@August 29, 2022 → September 3, 2022		Java Basics. Input	Java API. String. Random. Input with Scanner.	A02: Health Records	Chapter 4-
Week 03	@September 5, 2022 → September 10, 2022	No Class Sep 5 or Sep 8 (Labor Day)	Arrays	Arrays	A03: Array Practice	Chapter 3
Week 04	@September 12, 2022 → September 17, 2022		Arrays	Array Practice	A04: Wordle Dictionary (Arrays and File Reading)	Chapter 7
<u>Week</u> 05	@September 19, 2022 → September 24, 2022	Midterm 1 (Sep 19/20)	Creating Classes and Objects	Helper & Creating Classes and Objects	A05: OOP (Credit Card Design)	Chapter 9 & 10
Week 06	@September 26, 2022 → October 1, 2022		Object Oriented Programming	OOP: Credit Card and Cupcakes	A06: Bookteaque Part 1	Chapter 11
<u>Week</u> <u>07</u>	@ October 3, 2022 → October 8, 2022		OOP + ArrayList	Arrays of Objects + ArrayLists	A07: Bookteaque Part 2	Chapter 12

<u>Aa</u> Week	≡ Date	≡ Attention	≡ Topic	■ Details	= Assignment	≡ ♦ Readings
Week 08	@October 10, 2022 → October 15, 2022	No Class Oct 12 or 13 (Fall Recess)	Using IDE to support OOP	2d Arrays Eclipse Maybe JOptionPane	A08: African American Achievements	Chapter 13
<u>Week</u> 09	@October 17, 2022 → October 22, 2022	Midterm 2 (Oct 19/20)	Enums	Enums. Inheritance. Polymorphism of object object methods.	A09: Lights Out 1d & 2d Game	
Week 10	@October 24, 2022 → October 29, 2022		Inheritance	Inheritance Review. Abstract classes. Interfaces. Comparable interface and compareTo method	A10: Inheritance Practice	Chapter 14
<u>Week</u> <u>11</u>	@October 31, 2022 → November 5, 2022		Polymorphism & Interfaces	Program Design, using Polymorphism. Comparable Interface Java Collection Framework. Lists, Sets, Maps	A11: Product Tester (Inheritance)	Inheritance
<u>Week</u> <u>12</u>	@ November 7, 2022 → November 12, 2022		Polymorphism & Java Collections & Maps	Maps File I/O Exceptions	A12: Files and Exceptions	
<u>Week</u> 13	@November 14, 2022 → November 19, 2022	Midterm 3 (Nov 16/17)	File I/O & Exceptions	Maps and Exceptions	A13: Favorites: Map, Exceptions, I/O	
<u>Week</u> <u>14</u>	@November 21, 2022 → November 26, 2022	No Class Nov 23-24 (Thanksgiving)	Software Design	OOP Design Principles and Patterns	A14: Final Project Design Plan	
<u>Week</u> <u>15</u>	@November 28, 2022 → December 3, 2022		Final Projects, Miscellaneous Topics	Final Projects Miscellaneous Topics	Peer Review Final Project Work	
Study Days	@December 5, 2022 → December 6, 2022	Note: Special Office Hour Schedule				
Exam Period	@December 7, 2022 → December 14, 2022	Final Project Due Saturday Dec 10 by midnight				



Requirements

The initial **design** for final project will be assigned and graded as the last course homework. Students should immediately start programming their final projects and will submit **two** intermediate graded checkpoints. The final project will be due by midnight on Saturday December 10th.

Students must plan and implement a multiple-class, fully functioning application in Java. Successful projects will have a clear inheritance hierarchy, read and store data to files, allow for user interaction, and demonstrate concepts learned during the course (like inheritance, polymorphism, interfaces, MVC pattern, and good code style). A project must represent the student's sole effort; online tutorials or other examples may be consulted, but they must be improved upon and noted in the final documentation. Failure to note and provide links to reference material will be considered cheating. The final project will be graded on how it fulfills the requirements and the quality and completion of the code.

Final Project Grading.

Each of the below categories will be rated on "Approaching Mastery", "Attempting Mastery", and "Incomplete or Not Functional"

- Final Project Intermediate Work (checkpoint 1): 10 points.
- Final Project Intermediate Work (checkpoint 2): 10 points.
- · Peer feedback: 5 points
- Inheritance Hierarchy and code implementation of hierarchy: 20 points
- · Data to files: 20 points
- · User Interaction: 15 points
- System representation and use of collections: 10 points
- Coding Style: 5 points
- Final Report: 10 points
- · Reflection: 10 points

Total points possible: 115

Closing Statements

We're in this together! **

To begin, these are unprecedented times for all of us. I know that many of you are dealing with a lot of anxiety and uncertainty. This is a new experience and we're going to do what we can to make it work. I taught online this summer and learned a lot of lessons doing so; but the most important thing that I learned is that we need to be kind and flexible.... Kind to ourselves and each other, and flexible as we attempt to learn while all the stressors that affect our lives (including but not limited to this pandemic, hurricanes and power outages, political unrest, racial equity, international student stress, financial hardship, and whatever family stress may occur as we all try to live and work under one roof.)

I know that everyone does not have the same access to resources, your time is being spent differently, and your environment is possibly vastly different than the "ideal" learning environment of a face-to-face classroom. I will be up front with you all that I am teaching this class from a corner of my bedroom while also parenting/over-seeing the at-home learning schedule of my two kids. It is not the

Principles for Learning during a Pandemic *

- 1. Nobody signed up for this.
 - Not for the sickness, not for the social distancing, not for the sudden end of our collective lives together on campus.
 - Not for an online class, not for teaching remotely, not for learning from home, not for mastering new technologies, not for varied access to learning materials.
- 2. The humane option is the best option.
 - We are going to prioritize supporting each other as humans.
 - We are going to prioritize simple solutions that make sense for the most.
 - We are going to prioritize sharing resources and communicating clearly.
- 3. We cannot just do the same thing online.
 - Some assignments are no longer possible.

ideal teaching environment, but I have been (and will continue to) do my best to make it work. Although this is not our ideal version of the spring semester, I am confident that we can work together to make the most of our experience and support each other through the semester and meet the course learning goals, even if we have to adjust our expectations to do so. I promise to work hard to continue to redesign course elements to support you and your learning in this online environment.

If you're experiencing any problems related to your ability to participate in this course, please let me know ASAP. I will be as flexible as I can be and adjust to the situation, but I cannot do anything to help if I am not informed. For each class there will be options for synchronous and asynchronous participants, I will record sessions and provide clear instructions on what to do; office hours will be scheduled at different times of the day to accommodate learners in different time zones, and I will have flexible 1:1 appointment times available as well. I am still working on making sure all the apps that I use to supplement the course are available to everyone and USC still has not finished setting up some of the tools that I expect to use so please be patient as many things may need adjusting depending on when they are rolled out and based on individual student needs.

** description adopted from a version shared by Kate Pierce at UW.

- Some expectations are no longer reasonable.
- Some objectives are no longer valuable.
- 4. We will foster intellectual nourishment, social connection, and personal accommodation.
 - Accessible asynchronous content for diverse access, time zones, and contexts.
- 5. We will remain flexible and adjust to the situation.
 - Nobody knows where this is going and what we'll need to adapt.
 - Everybody needs support and understanding in this unprecedented moment.
 - * From Brandon Bayne, UNC Chapel Hill

Syllabus Action Items

(If applicable) Send OSAS accommodation letter to instructor
Zoom : Upload your photograph or bitmoji image for display when your video is off. (Sign in to the website <u>usc.zoom.us</u> and click Profile in order to add or change your image.)
Complete the survey on EdStem.