DraftSyllabus (Spring 2024) Subject to change, but good for planning purposes!

> ❓ **Course Conflict for the Friday Quiz Section?**
>
> Don't worry! I am happy to sign the course conflict form and have you register for the class with a Friday conflict. We will have 3 tests during the quiz section time and otherwise use it for optional **review and homework help**. At the start of the semester, I will work with you and your schedule to find an alternate time for you to take tests.
>
> **Exam 1 (Feb 2)**
> **Exam 2 (March 1)**
> **Exam 3 (April 12)**

ITP 265 Object Oriented Programming

Instructor: <u>Kendra Walther</u>

Office: RRB 219

Office hours: Will be posted at start of semester

Email: <u>kwalther@usc.edu</u>

Course Sections:

☕ 10:00-11:50am, TuTh (31842) in RTH 105

🍵 2:00-3:50pm, Tu/Th (31877) in RTH 109

📌 10:00-11:50am, Fri (Quiz section, 31886) in ZHS 159

🔑 Enrollment

Prerequisite(s): ITP 115, ITP 116, or ITP 165
Units: 4 → According to <u>USC Policy</u>, **this means that you are expected to work 8 hours per week outside of class time.**

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

📜 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 .

Course Structure

Live class sessions and Zoom

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 will be embedded into the course edStem page.

Course Tools

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. The majority of class materials and discussion will occur through the course EdStem page.

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

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 continue to run Zoom sessions for classes. **However**, it is expected that students attend class **in-person** whenever physically possible.

Netiquette

It is expected that students in the virtual classroom behave professionally, treat others with courtesy and respect, use 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.** Students who are not active while on Zoom will need to complete the asynchronous session summary to receive participation credit.

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: kwalther@usc.edu — when emailing, please **always** 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 EdStem Discussions. If a direct email with a LA is required for any reason, the student must **cc** the instructor in the email.

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

🏆 Grading

After reading *Grading For Equity* by Joe Feldman during the summer of 2022, I started to transform how I approach grading in this course, but it is still a work in progress. In order to maintain a focus on learning and mastery of material, I plan to continue to experiment how to move away from the reliance on extrinsic motivation of grades and instead focus on helping students stay intrinsically motivated on learning and improving throughout the semester. Students should plan on being part of the teaching and learning process and engage in discussions throughout the semester on how we can continue to focus on mastery of learning objectives rather than accumulating points.

Item	Percent
Assignments	30

Grading Scale

Item	Percent
Participation Activities (includes POGILS and other in-class activities)	10
Exam 1	12
Exam 2	14
Exam 3	14
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.

Letter Grade	Percentages
A (3.75-4)	≥ 94
A- (3.5-3.75)	≥90 < 94
B+ (3.25-3.5)	≥87 < 90
B (3-3.25)	≥ 83 < 87
B- (2.75-3)	≥ 80 < 83
C+ (2.5-2.75)	≥ 73 < 80
C (2.0-2.5)	≥ 70 < 73
C- (1.75-2.0)	≥ 67 < 70
D+ (1.25-1.75)	≥ 63 < 67
D (1.0-1.25)	≥ 60 < 63
D- (0.5-1.0)	≥ 55 < 60
F (0.0 - 0.5)	< 55

🤖 Use of AI <Discuss in class and revise as needed!>

I think this is something that we need to discuss as a class. Here are three options that the University has given as guidance towards AI usage:

- **Generative AI is not permitted:** Since creating, analytical, and critical thinking skills are part of the learning outcomes of this course, all assignments should be prepared by the student working individually or in groups as described on each assignment. Students may not have another person or entity complete any portion of the assignment. Developing strong competencies in these areas will prepare you for a competitive workplace. Therefore, using AI-generated tools is prohibited in this course, will be identified as plagiarism, and will be reported to the Office of Academic Integrity.

- **Generative AI permitted but limited as follows:** In this course, you are permitted to use artificial intelligence (AI)-powered programs to help you, but only on assignments that explicitly indicate a permitted use of AI. However:

  - You should also be aware that AI text generation tools may present incorrect information, biased responses, and incomplete analyses; thus, their answers may not meet the standards of this course.

- To adhere to our university values, *you must cite any AI-generated material (e.g., text, images, and other content) included or referenced in your work and provide the prompts used to generate the content*. Using an AI tool to generate content without proper attribution will be treated as plagiarism and reported to the Office of Academic Integrity.

  - Please review the instructions in each assignment for more details on how and when to use AI Generators for your submissions.

- **Generative AI is encouraged:** You are expected to use AI (e.g., ChatGPT and image generation tools) in this class. Learning to use AI is an emerging skill; this is an opportunity for you to discuss with the instructor appropriate use of these tools. Keep in mind the following:

  - AI tools are permitted to help you brainstorm topics or revise work you have already written.

  - If you provide minimum-effort prompts, you will get low-quality results. You will need to refine your prompts to get good outcomes. This will take work.

  - Proceed with caution when using AI tools and do not assume the information provided is accurate or trustworthy If it gives you a number or fact: assume it is incorrect unless you either know the correct answer or can verify its accuracy with another source. You will be responsible for any errors or omissions provided by the tool. It works best for topics you understand.

  - AI is a tool, but one that you need to acknowledge using. Please *include a paragraph at the end of any assignment explaining if, how, and why you used AI and indicate/specify the prompts you used to obtain the results*. Failure to do so is a violation of academic integrity policies.

⬤ 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 own use. **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**

Programming Assignment Policies

Programming assignments will be posted with assigned due dates on EdStem and should be completed individually. All code should be submitted on EdStem and must compile and run. It is the student's responsibility to double-check that submission finished uploading

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. 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 who miss a class session should watch lecture recordings and consult with classmates before attending office hours for help with material.

 If you are attending over Zoom, please make a private post on EdStem Discussion (attendance category) with the reason for that choice. Students attending more than 4 sessions remotely throughout the semester may receive a reduced participation grade. However, if there are extenuating circumstances, I encourage you to discuss your situation with me over email or in office hours.

While I plan to make the Zoom 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 (if possible) from the instructor. Asynchronous participants must submit a summary of the class session (and show completion of any in-class activities) during the weekly reflection **before Friday at 11pm** to receive credit for asynchronous

properly and that the **correct** files were uploaded.

Due to the nature of the course, it is important that assignments be completed in a timely manner. It is the student's responsibility to submit assignments **on or before** the due date. **Assignments should be submitted within 1 hour of the due date to not occur late penalties, see the chart below for penalties. After three days, late submissions will not be accepted, and will result in a score of 0 (zero).**

Late	Penalty Deducted	
1-12 hours	5% of total points	1 token
12-24 hours	10% of total points	1 token
24-36 hours	20% of total points	2 tokens
36-48 hours	30% of total points	2 tokens
48-60 hours	40% of total points	3 tokens
60-72 hours	50% of total points	3 tokens
more than 3 days	0	Not accepted

Tokens: Late Days and/or Second Tries

 Each student will receive 8 "tokens" that may be used as late passes or to submit an assignment for a regrade. Tokens can not be used for extra credit and have no value other than to allow all students an equal opportunity

participation. Class participation grade may be lowered for students who do not regularly attend class in person.

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 test to discuss details for coordinating specific testing accommodations.

Exam 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.

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

In most circumstances, assignments will be graded and students will receive feedback (on EdStem) within two weeks of submission. We will post an announcement on EdStem when grades have been posted. The instructor will demonstrate how to view code feedback on EdStem for the first couple assignments. After

to have more time as needed. To use a token, fill out this google form.

Tokens may be used for late submission of assignments **(1 token for up to 24 hours)** unless otherwise specified (some assignments must be completed by class time and there are NO late submissions allowed on the final project.) **No more than 3 tokens** can be used at once (48 hours late).

Students who receive lower than an B on an assignment may use a token to learn from their mistakes and submit a second try. To discourage students from turning in work expecting to finish it during the second-try process, **the maximum regrade may only go up by one letter grade**. *(Example: from a B- to an A-)*

Second-tries should be submitted within deadline communicated when assignment grades are released.

Regrades

If you believe you were graded inaccurately on an assignment, create a private post in the **Regrade Requests** category 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.**

If you believe you were graded inaccurately on an exam, there is mechanism within Gradescope to request a regrade on specific questions.

that students should review feedback on their
own.

Well Being

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. 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.

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"

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)

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.

If the instructor, a grader, or a lab assistant **suspects** you of academic dishonesty, it will be reported to the Office of Academic Integrity https://academicintegrity.usc.edu/. Do not **share** assignments with any other people. Do not look up solutions on websites or use AI-generated code unless specifically permitted. 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 permission. **Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.**

- 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

🤝 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.

📆 Weekly Course Schedule (Subject to change)

See live view **<UPDATED LATER>**

Week	Topics	Assignments and Reading
Week 01	Intro to Java. Syntax Practice. Data Types. Conditionals. Introduction to Classes and Objects.	A00 and A01 Chapters 1 & 2
Week 02	Switch, Loops. Methods. Simple Input with `Scanner` . String and Math.	A02 Chapters 4-6 (Skim)
Week 03	Scanner for Input + Java APIs: String, Math, Random, LocalDate, ArrayList.	A03 Chapter 3
Week 04	More advanced Scanner use - console and File I/O. Introduction to arrays.	Exam 1 (Feb 2) Chapter 7
Week 05	Practice with Arrays. Immutable Objects. Mutable Objects	A04 Chapter 9 & 10
Week 06	BFF class. Designing classes → Constructors, Accessors, Mutators.	A05 Chapter 11
Week 07	OOP. Arrays of objects Using real world data.	A06 Chapter 12
Week 08	More on reading & writing files. Using ArrayLists versus arrays	Chapter 13 Exam 2 (March 1)
Week 09	Enums. HashMaps.	A07
	Spring Break	
Week 10	IntelliJ. Hashmaps and enums.	A08 Chapter 14
Week 11	Inheritance. Object. Abstract classes.	A09 Chapter 14
Week 12	Interfaces. `Comparable` interface and compareTo method. Program Design, using Polymorphism. Liskov principle and Polymorphism.	A10 Posted Reading
Week 13	**Guest Lectures.** Exceptions. 2d arrays. Java Collection Framework.	Exam 3 (April 12)
Week 14	OOP Design Principles and Patterns	A11
Week 15	Final Projects Miscellaneous Topics	Final Project
Study Days	Special Office Hour Schedule	
Exam Period	Final Project Due Saturday May 4 at 11pm	

🧠 Final Project (No late submissions permitted)

Requirements   **Final Project Grading.**

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 11pm on Saturday December 9th.

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.

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

- Checkpoints 1& 2: 8 points.
- Inheritance Hierarchy and code implementation of hierarchy: 16 points
- Code Implementation Requirements: 8 points
- Data to files: 16 points
- User Interaction: 16 points
- System representation and use of collections: 16 points
- Coding Style: 4 points
- Final Report: 8 points
- Reflection: 8 points

Total points possible: 100

📌 Syllabus Action Items

☐ *(If applicable*) Send OSAS accommodation letter to instructor

☐ If you have questions about any portion of the syllabus, please post on edStem discussions.

☐ **Zoom**: Upload your photograph or bitmoji image for display when your video is off. (Sign in to the website usc.zoom.us and click **Profile** in order to add or change your image.)