USC Viterbi School of Engineering
*Technology and Applied Computing*

# ITP 265: Object-Oriented Programming

**Fall 2025**

**Location:** TBD (See schedule of courses)
**Instructor:** Kendra Walther, kwalther@usc.edi
**Office:** RRB 204
**Office Hours:** TBD. Posted on course site.
**Contact Info:** All general course and assignment questions should be asked on ed Discussions (every student will receive an invitation at the start of the semester). Other questions should be asked via email.

**IT Help:** Provided by Viterbi IT
**Hours of Service:** 8am–5pm M-F
**Walk-in:** DRB 205
**Contact Info:** (213) 740-0517
**Email:** engrhelp@usc.edu

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

## 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.

## 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 basic object-oriented principles such as inheritance and polymorphism
- Use the Java collection classes to solve real-world problems
- Design a system with multiple classes using inheritance

## Course Notes and Tools

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 Ed. Assignments will be submitted through Ed unless otherwise noted.

## Required Readings and Supplementary Materials

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 **ed** page.

## Course Structure

This class meets for two hours twice a week. Class time will comprise a 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. TAC has a laptop loaner policy for students who are enrolled and do not have a personal laptop.

## Communication Outside of Class

I encourage you to ask questions and get help. TAC 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 ed Discussions rather than over email. Students will be added to the class 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) 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. The timeline for replying to emails is 24-48 **business** hours, but it is often much quicker.

**Students should not directly email the learning assistants (LAs) or graders; all correspondence with the LAs must occur on Ed Discussions.** If a direct email to an LA is necessary for any reason, the student must **copy** the instructor on 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, and section number so that I can manually add you to the course platforms.

## Grading Breakdown

| Item | % of Grade |
|---|---|
| Assignments | 25 |
| Participation Activities | 5 |
| 4 Tests | 50 |
| 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.

## Grading Scale

Course final grades will be determined using the following scale

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

# Course Policies

### 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 TAC 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**. Additionally, importing course materials (like assignment prompts) into generative AI tools is an academic integrity violation.

### Course Help

Assignments and projects in an introductory computer programming course are different from those in some other types of courses. We provide a lot of out-of-course support through a variety of in-person and online office hours, as well as answering questions on our online discussion forum. Please do not consult outside tutors, friends who are CS majors, and internet resources without first trying to get help from the instructional staff. Others may "help" in ways that may hinder your learning.

Unless otherwise specified, students should not share code or exchange solutions for assignments and projects. Assignments may be analyzed by software that looks for similarity. Any sharing of ideas or code will be considered a violation of academic integrity (cheating); an OAI report will be filed with the recommended penalty of an F in the course. 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 copying the code yourself.

### Participation and Attendance

Successful completion of the course and mastery of learning objectives require 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 (if available) and consult with classmates before attending office hours for help with material.

If you need to attend a class session over Zoom, please make a private post on ed Discussion (attendance category) with the reason for that choice. 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) should be reserved for rare instances.

### 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 "TAC 265 Course Accommodations". In the body include your name and your class section number. In addition, reach out the week before each test or exam to discuss details for coordinating specific testing accommodations.

### Exam Policy

No make-up quizzes, tests, midterms, or 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 are strongly recommended. TAC is not responsible for any work lost.

## Programming Assignment Policies

Programming assignments will be posted with assigned due dates on ed and should be completed individually without the use of generative AI, unless specifically told otherwise. **All code should be submitted on ed and must compile and run.** Code that does not compile and run may receive a 0. It is the student's responsibility to double-check that their submission finished uploading 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 avoid 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 (with no tokens used) | Token Usage |
|---|---|---|
| 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 | 2 tokens + 10% off |
| 60-72 hours | 50% of total points | 2 tokens + 20% off |
| more than 3 days | 0 | Not accepted |

## Tokens: Late Days

Each student will receive 5 "tokens" that may be used as late passes. Tokens cannot be used for extra credit and have no value other than to allow all students an equal opportunity to have more time as needed. To use a token, fill out the Google form linked from the ed.

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 2 tokens can be used at once (48 hours late).

## Grading Timeline

In most circumstances, assignments will be graded, and students will receive feedback (on ed) within two weeks of submission (hopefully within 1 week in many cases).

## Grading Issues

If you believe you were graded inaccurately on an assignment, create a private post in the **Regrade Requests** category on ed 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 process the regrade. **Remember you should never directly email the grader without also CC'ing the instructor.**

# Final Project Details

### Requirements

The design for final project will be assigned as the last assignment, due in class Tuesday of Week 15. Students should immediately start programming their final projects and will submit two intermediate checkpoints for their final project. The final project and report will be due on the Saturday between exam weeks by midnight (end of day).

The final project will be graded on how it fulfills the requirements and the quality/completion of the code. 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. 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.

### Grading Rubric

| Item | Points |
|---|---|
| Checkpoint 1 & 2 | 8 |
| Final Report | 8 |
| Final Reflection | 8 |
| Inheritance Hierarchy & hierarchy Implementation | 16 |
| Code Implementation Requirements | 8 |
| Robust user interaction | 16 |
| Data to files | 16 |
| Use of collections within the project | 16 |
| Coding Style | 4 |
| **Total** | **100** |

### Academic Integrity

The University of Southern California is foremost a learning community committed to fostering successful scholars and researchers dedicated to the pursuit of knowledge and the transmission of ideas. Academic misconduct is in contrast to the university's mission to educate students through a broad array of first-rank academic, professional, and extracurricular programs and includes any act of dishonesty in the submission of academic work (either in draft or final form).

This course will follow the expectations for academic integrity as stated in the USC Student Handbook. All students are expected to submit assignments that are original work and prepared specifically for the course/section in this academic term. You may not submit work written by others or "recycle" work prepared for other courses without obtaining written permission from the instructor(s). Students suspected of engaging in academic misconduct will be reported to the Office of Academic Integrity.

Other violations of academic misconduct include, but are not limited to, cheating, plagiarism, fabrication (e.g., falsifying data), knowingly assisting others in acts of academic dishonesty, and any act that gains or is intended to gain an unfair academic advantage.

Academic dishonesty has a far-reaching impact and is considered a serious offense against the university. Violations will result in a grade penalty, such as a failing grade on the assignment or in the course, and disciplinary action from the university itself, such as suspension or even expulsion.

For more information about academic integrity see the student handbook or the Office of Academic Integrity's website, and university policies on Research and Scholarship Misconduct.

Please ask your instructor if you are unsure what constitutes unauthorized assistance on an exam or assignment or what information requires citation and/or attribution.

If the instructor or learning 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.**

**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.

## TAC 265 Course Schedule: A Weekly Breakdown

**Note**: Approx. 8 hours/week of work outside of class is expected outside of class.
Reading (2-3 hrs/wk) + HW (5-6 hrs/wk).

| Week | Topics | Reading | Assignment |
|---|---|---|---|
| 1 | Intro to Java. Syntax Practice. Data Types. Conditionals. | Week 1 Reading (Ch 1-2) | A00: Survey *due Wed of week 1*<br>A01: Basic Java *due Sat after week 1* |
| 2 | Loops. Methods. Simple user input. Intro to Using Java APIs. | Week 2 Reading (Ch 4-6) | A02: Java Sampler *due Sat of week 2* |
| 3 | Java APIs: `String`, `Math`, `Random`, and `LocalDate`. **Using arrays.** | Review | A03: Java APIs *due Wed of week 3*<br>**Test 1** *Friday of Week 3* |
| 4 | Array Practice. 2d arrays. Intro to OOP | Week 4 Reading (Ch 3 & 7) | A04: Wordle *due Sat of week 4* |
| 5 | Basics to OOP | Week 5 Reading (Ch 9& 10) | A05: LightsOut *due Fri of week 5* |
| 6 | Designing classes. Arrays of objects. Real world data. `Scanner` and streams | Week 6 Reading (Ch 11) | A06: BookTeaque *due Wed of week 6*<br>**Test 2** *Friday of Week 6* |
| 7 | Scanner. Files. | Week 7 Reading (enums & Ch 12) | A07: CreditCard *due Wed of week 7* |
| 8 | Data structure overview: `ArrayLists` versus arrays ,Enums, `JOptionPane`. | Week 8 Reading (Ch 13) | A08: BookTeaque, Part 2 *due Wed of week 8* |
| 9 | Introduction to Inheritance. | Week 9 Reading (Ch 14) | A09: AAA & Blackjack *due Wed of week 9*<br>**Test 3** *Friday of Week 9* |
| 10 | Inheritance. Polymorphism, Object. Abstract classes. | Week 10 Reading | A10: Vampire Game (BIG) *due Sat of week 10* |
| 11 | Interfaces. `Comparable` interface and compareTo method. | Week 11 Reading (Ch 15) | A11: Product Store *due Sat of week 11* |
| 12 | Data structures: `HashMaps` Program Design. Liskov principle | | A12: Maps *due Sat of week 12* |
| 13 | Java Collection Framework. Custom Exceptions. Program Design | | A13: Exceptions *due Wed of week 13*<br>**Test 4** *Friday of Week 13* |
| 14 | OOP Design Principles and Patterns Video Lectre | | |
| 15 | Final Projects. Miscellaneous Topics | | A14: Final Project Design *due Tuesday of week 15 in class*<br>Final Project Checkpoint 1 *due Sun after week 15* |
| Study Days | Special Office Hours will be Announced on ed and shared Google Calendar | | |
| **Finals** | **Final project** will be due Saturday of finals week by 11pm | | |

# Statement on University Academic and Support Systems

**Students and Disability Accommodations:**
USC welcomes students with disabilities into all of the University's educational programs. The Office of Student Accessibility Services (OSAS) is responsible for the determination of appropriate accommodations for students who encounter disability-related barriers. Once a student has completed the OSAS process (registration, initial appointment, and submitted documentation) and accommodations are determined to be reasonable and appropriate, a Letter of Accommodation (LOA) will be available to generate for each course. The LOA must be given to each course instructor by the student and followed up with a discussion. This should be done as early in the semester as possible as accommodations are not retroactive. More information can be found at osas.usc.edu. You may contact OSAS at (213) 740-0776 or via email at osasfrontdesk@usc.edu.

**Student Financial Aid and Satisfactory Academic Progress:**
To be eligible for certain kinds of financial aid, students are required to maintain Satisfactory Academic Progress (SAP) toward their degree objectives. Visit the Financial Aid Office webpage for undergraduate- and graduate-level SAP eligibility requirements and the appeals process.

**Support Systems:**
*Counseling and Mental Health - (213) 740-9355 – 24/7 on call*
Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.

*988 Suicide and Crisis Lifeline - 988 for both calls and text messages – 24/7 on call*
The 988 Suicide and Crisis Lifeline (formerly known as the National Suicide Prevention Lifeline) provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week, across the United States. The Lifeline consists of a national network of over 200 local crisis centers, combining custom local care and resources with national standards and best practices. The new, shorter phone number makes it easier for people to remember and access mental health crisis services (though the previous 1 (800) 273-8255 number will continue to function indefinitely) and represents a continued commitment to those in crisis.

*CARE-SC: Confidential Advocacy, Resources, and Education Support Center - (213) 740-9355(WELL) – 24/7/365 on call.*
Confidential advocates, prevention educators, and professional counseling teams work to promote a universal culture of consent, and prevent and respond to gender- and power-based harm. Services available to all USC students at no cost.

*Office for Equity, Equal Opportunity, and Title IX (EEO-TIX) - (213) 740-5086*
Information about how to get help or help someone affected by harassment or discrimination, rights of protected classes, reporting options, and additional resources for students, faculty, staff, visitors, and applicants.

*Reporting Incidents of Bias or Harassment - (213) 740-2500*
Avenue to report incidents of bias, hate crimes, and microaggressions to the Office for Equity, Equal Opportunity, and Title for appropriate investigation, supportive measures, and response.

*The Office of Student Accessibility Services (OSAS) - (213) 740-0776*
OSAS ensures equal access for students with disabilities through providing academic accommodations and auxiliary aids in accordance with federal laws and university policy.

*USC Campus Support and Intervention - (213) 740-0411*
Assists students and families in resolving complex personal, financial, and academic issues adversely affecting their success as a student.

*USC Emergency Information*
Latest updates regarding safety, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible.

*USC Department of Public Safety*
For 24 hour emergency assistance or to report a crime: UPC: (213) 740-4321, HSC: (323)-442-1000.
For 24 hour non-emergency assistance or information: UPC: (213) 740-6000, HSC: 323-442-1200.

*Office of the Ombuds* - *(213) 821-9556 (UPC) / (323-442-0382 (HSC)*
A safe and confidential place to share your USC-related issues with a University Ombuds who will work with you to explore options or paths to manage your concern.

*Occupational Therapy Faculty Practice* - *(323) 442-2850 or* otfp@med.usc.edu
Confidential Lifestyle Redesign services for USC students to support health promoting habits and routines that enhance quality of life and academic performance.