

Programming Graphical User Interfaces

ITP 368 (3 Units)
Fall 2018

Catalogue Description	Programming applications with dynamic graphical user interfaces. Topics include events, controls, resources, data bindings, styles, and user experience.																				
Prerequisites	CSCI 104 or ITP 365																				
Instructor	Kendra Walther (kwalther@usc.edu)																				
Office Hours	Mon 2:15-3:30. Tues 10:45-11:45. Thurs 2:15-4. Office Location: OHE 530E																				
Lab Assistants	Listed on Blackboard under Contacts.																				
Course Hours	MW 12:00-1:50pm TuTH 12:00-1:50pm																				
Course Structure	The class meets for one hour and 50 minutes twice a week for a total of 3 hours and 40 minutes. One exam and several in class quizzes will be given. Programming labs and several larger assignments will be assigned to be completed outside of class time. Access to a laptop computer during class is required. ITP does have a laptop loaner policy for students enrolled who do not have a personal laptop. All course material is available on Blackboard at http://blackboard.usc.edu .																				
Textbook	Selected books from Safari Books online including: <u>Mastering JavaFX10</u> (by Sergey Grinev) and <u>Core Java Volume I and II</u> (by Cay Horstmann)																				
Grading	The following percentage breakdown is used to determine the final grade. <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 70%;">Final Project</td> <td style="width: 15%; text-align: right;">15%</td> </tr> <tr> <td>Assignments (weighted proportionally)</td> <td style="text-align: right;">45%</td> </tr> <tr> <td>Quizzes (4 total), lowest dropped</td> <td style="text-align: right;">20%</td> </tr> <tr> <td><u>Exam</u></td> <td style="text-align: right;"><u>20%</u></td> </tr> <tr> <td>TOTAL POSSIBLE</td> <td style="text-align: right;">100%</td> </tr> </table>	Final Project	15%	Assignments (weighted proportionally)	45%	Quizzes (4 total), lowest dropped	20%	<u>Exam</u>	<u>20%</u>	TOTAL POSSIBLE	100%										
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Grading Scale	The following scale is used to determine the letter grade: <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%;">93% and above</td> <td style="width: 10%;">A</td> <td style="width: 30%; text-align: right;">77 - 79%</td> <td style="width: 10%;">C+</td> </tr> <tr> <td>90 - 92%</td> <td>A-</td> <td style="text-align: right;">73 - 76%</td> <td>C</td> </tr> <tr> <td>87 - 89%</td> <td>B+</td> <td style="text-align: right;">70 - 72%</td> <td>C-</td> </tr> <tr> <td>83 - 86%</td> <td>B</td> <td style="text-align: right;">69 - 65</td> <td>D</td> </tr> <tr> <td>80 - 82%</td> <td>B-</td> <td style="text-align: right;">64 and below</td> <td>F</td> </tr> </table> <p>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. Final grade percentages are calculated to two decimal places and rounded to hundredths.</p>	93% and above	A	77 - 79%	C+	90 - 92%	A-	73 - 76%	C	87 - 89%	B+	70 - 72%	C-	83 - 86%	B	69 - 65	D	80 - 82%	B-	64 and below	F
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Late Add	Per university policy, students are allowed to add the course until the end of week 3. 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.																				
Homework	The assignments will be posted on the Google Doc Course Schedule and submission linked will be on Blackboard under the "Assignments" section. Each assignment will include instructions, a due date, and a link for electronic submission. Assignments must be submitted using this link. Assignments will be digitally submitted through Blackboard except where specifically specified.																				

Homework, Cont'd

It is your responsibility to submit assignments **on or before** the due date. Assignments turned in up to 24 hours late will have 15% of the total points deducted from the graded score. Assignments turned in 24-48 hours late will have 30% of the total points deducted from the graded score. Assignments turned in 48-72 hours will have 50% of the total points deducted from the graded score. After three days, submissions will **not** be accepted and you will receive a 0. Each student will be allowed **TWO** 24 hour late assignment for “free”, which may not be used on final project, and you must fill out the “Late Assignment” Google form.

You are required to keep a copy of all of your assignments. Frequent backups to an external drive or to the cloud is strongly recommended. ITP is not responsible for any work lost.

Policies

No make-up exams or quizzes (except for documented medical or family emergencies) will be offered. The lowest quiz will be dropped.

Attendance may be taken during lecture sessions electronically, verbally, or via a roster passed around the room. Do not sign in for another student; doing so is an academic integrity violation. Attendance is not mandatory, but you are responsible for any announcements made during lecture time and understanding material covered in class. Your work will be graded on the assumption that you have mastered material from class.

Do not reproduce, distribute, or post any lecture material, assignments, or exams publicly without my written consent. You may take notes and make copies of course materials for your own use. You may not post my course materials on sites such as CourseHero. Doing so is a copyright violation and an academic integrity violation that will be dealt with accordingly.

ITP offers open lab use for all students enrolled in ITP classes. These open labs are held beginning the second week of classes through the last week of classes. Hours are at <https://itp.usc.edu/current-students/open-lab-schedule/>. In addition, ITP has a laptop loaner program for students who may need temporary use of a laptop in order to complete an assignment.

**Kendra Walther's
Fall 2018 Schedule**

You are welcome to visit my office during office hours and any time my door is open!

		Kendra Walther Schedule Fall 2018						
		Monday	Tuesday	Wednesday	Thursday	Friday		
10 am		ITP 109 Java KDC 236		ITP 109 Java KDC 236		Available by advanced appointment only	10 am	
11 am		Lunch	Office Hours OHE 530E 10:45-11:45	Lunch			11 am	
noon		ITP 368 GUI (Ocean) KDC 236	ITP 368 GUI (Sand) Kap 158	ITP 368 GUI (Ocean) KDC 236	ITP 368 GUI (Ocean) KDC 236		noon	
1 pm							1 pm	
2 pm		Office Hours OHE 530E 2:15-3:30		Not available	Office Hours OHE 530E 2:15-4		2 pm	
3 pm							3 pm	
4 pm							4 pm	
5 pm						5 pm		
Coding		ITP 109 Section 31814	ITP 368 Section 31807	ITP 368 Section 32078	Office Hours	Sometimes busy		

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.

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 – 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/scientific-misconduct>. Academic integrity tutorials can be found at <https://libraries.usc.edu/research/reference-tutorials>

**Academic Integrity,
cont'd**

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.
- 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.

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 submit another person's work as your own. Do not look at other students' papers during exams. Do not leave the room during an exam without permission. **Do not cheat! As Trojans, we are faithful, scholarly, skillful, courageous, and ambitious.**

Disability Services

The Office of Disability Services and Programs, information at <http://dsp.usc.edu> provides certification for students with disabilities and helps arrange the relevant accommodations. Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP.

Please be sure the letter is delivered to your course instructor as early in the semester as possible. If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam, but preferably at the beginning the semester.

**Emergency
Preparedness**

If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information*, information at <http://emergency.usc.edu/>, will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Support Systems

Discrimination, sexual assault, and harassment are not tolerated by the university.

Student Counseling Services (SCS) - (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention.
<https://engemannshc.usc.edu/counseling/>

National Suicide Prevention Lifeline - 1-800-273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week.
<http://www.suicidepreventionlifeline.org>

**Support Systems,
cont'd**

Relationship and Sexual Violence Prevention Services (RSVP) - (213) 740-4900 -
24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. <https://engemannshc.usc.edu/rsvp/>

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: <http://sarc.usc.edu/>

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086

Works with faculty, staff, visitors, applicants, and students around issues of protected class. <https://equity.usc.edu/>

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response.

<https://studentaffairs.usc.edu/bias-assessment-response-support/>

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic.

<https://studentaffairs.usc.edu/ssa/>

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. <https://diversity.usc.edu/>

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible,

<http://emergency.usc.edu>

USC Department of Public Safety – 213-740-4321 (UPC) and 323-442-1000 (HSC) for 24-hour emergency assistance or to report a crime.

Provides overall safety to USC community. <http://dps.usc.edu>

ITP 368 Course Outline*

Note: Approx. 6 hours/week of work outside of class: Reading (2 hrs/wk) + HW (4 hrs/wk)

Week	Topics	Reading	Assignment
1	Introduction to Java	Core Java Volume I, Chapters 1-4	HW0: Introduction
	OOP Classes. Using Eclipse. Scanner class (I/O).		HW1: Debugging. Class Design.
2	Inheritance, Enums. Project Design	Core Java Volume I, Chapter 5. 6.1, 6.2, 7.1-7.3, Ch 9 (skim) and Effective Java Chapter 3 or article	HW2: Inheritance Project
	Testing & Debugging, Interfaces, Exceptions, Collections		
3	Labor Day (No Class)	Design Patterns	HW3: Inheritance Project Part 1 (Group Project)
	Quiz 1. Code Design and Design Patterns		
4	Design Patterns, cont'd.	Core Java Volume 2, Chapters 1	HW4: Inheritance Project Part 2 (Group Project)
	Functional Programming. Lambdas. Streams.		
5	Java FX Basics.	Mastering JavaFX 10	HW5: Shapes
	Guest Lecture(Concurrency) or Open Lab		
6	Quiz 2. More FX Basics	TBD	HW6: Shape Animation
	Java FX Animations. (Transitions)		
7	Layouts Panes and UI Controls.	Layout Panes Tutorial FX Controls (Chapters on controls covered in class)	HW7: Simple UI Design
	UI Controls. Gestalt and UI Design		
8	Quiz 3. Events. Event Handling. Key & Mouse Events.	FX Events (Chapter 1&2) Event Package Summary	HW8: UI with functionality
	Properties.		
9	Listeners. Binding. Multimedia	Pro JavaFX9 Ch 3	HW9: Game Design Preparation.
	Interface Design Rules. Accessibility		
10	Switching Scenes Game Design	Animation Timer article	HW10: Lights Out Game Design
	KeyFrames and Animation Timer		
11	Quiz 4. Movement	TBD	HW11: Moving Game
	Lists and List Customization		
12	Localization. Internationalization	Java Trail: Internationalization	HW12: List and i18n Project
	Persistence. Tables. Field checking		
13	Final Project Guidelines and Samples. Review	TBD	HW13: Final Project Design
	Exam		
14	Final Project Workshop.	None	HW14: Final Project Checkpoint
	(Thanksgiving Break)		
15	Deploying JavaFX Applications	TBD	HW15: Final Project Checkpoint
	Final Project Workshop.		
Study Days	Special Office Hours will be Announced on Piazza		
Finals	Final Project Presentations, individually presented during class exam period		

*** This course outline is for planning purposes and is subject to change.**