



<b>Course</b>	ITSS & OPRE 3312.201/202/501 – Object-Oriented Programming
<b>Term</b>	Spring 2021
<b>Meets</b>	Tu/Th 5:30 pm – 6:45 pm
<b>Room</b>	ECSS 2.415
<b>Modality</b>	Flexible

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<b>Phone:</b>	(214) 906-2113 (mobile)
<b>Office Hours:</b>	We/Th, 10:00-11:30 am or by appointment (I am very flexible)
<b>Office Location:</b>	Teams meetings only due to COVID-19 protocols
<b>TA:</b>	TBA

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**Prerequisites** – ITSS 3311 and (MATH 1326 or MATH 2414 or MATH 2419 or OPRE 3340) and (CS 2305 or MATH 2333 or MATH 2418 or OPRE 3333). This course is the same as OPRE 3312.

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### Course Description

ITSS 3312 – Object-Oriented Programming – Java (3 semester credit hours). Business application development using an object-oriented programming language. Topics include the fundamentals of programming for web-based systems, and object-oriented programming concepts.

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### Course Learning Objectives

1. Apply the basic mechanics of object-oriented programming (OOP) to write a program and complete a program to produce executable software.
  2. Apply advanced OOP concepts including usage principles of inheritance, polymorphism, encapsulation, method overloading, exception handling, GUI and data structures.
  3. Discover errors in a program using testing and debugging tools.
  4. Use versioning tools for collaborative programming/editing.
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### Texts & Resources

Instructor will use content from the textbook: Introduction to Java Programming and Data Structures (Comprehensive Version), 12th Edition, by Y. Daniel Liang Pearson Education Inc., publishing as Prentice Hall (ISBN-13: 978-0136520238 or ISBN-10: 0136520235). Earlier editions of this textbook by Liang should work fine.

- Least expensive version I have found for Liang 12<sup>th</sup> Edition is a loose-leaf format (you will need a 3-inch binder) for about \$30.00.
  - Java textbooks from other authors are also acceptable, however, I recommend a textbook that covers JavaFX (GUI development).
  - Instructor will identify supplemental online resources to provide alternative presentations of the content. These resources are generally very good and for many, make a textbook unnecessary.
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### Technical Tools and Resources

- Students will use a personal computer in every lecture and for every project, quiz and exam.
- Students must have access to a personal computer capable of handling Java and Eclipse IDE.
- Course content and grades will be managed and available via the UTD eLearning system.
- Lectures will be delivered in the Traditional modality as defined by the university using Microsoft Teams and/or eLearning Collaborate collaboration tools. Lectures will be recorded and available for viewing online shortly after the lecture is concluded.
- Students are responsible for acquiring course-required technology tools, and for being able to use the tools.
- Students should install Excel, Powerpoint, and Word from the MS Office suite of options for this course.
- Presumably, students have already downloaded Java JDK and Eclipse IDE software for the ITSS 3311 course. Should that not be the case, here is the information for downloading the required software.
  - The oldest Java JDK recommended is Java SE 8 Update 271 Edition: Standard Edition (SE), Version: 8, Update: 271. More recent versions of Java SE are acceptable.

- There are 2 versions depending on your OS (Windows or Mac) and 2 versions depending on your processor (32-bit and 64-bit). You should install the 32-bit version only if your personal computer is a 32-bit machine.
  - Try this link first: <https://www.java.com/en/download/> (auto selects the version)
  - If the above link fails, use this link: <https://www.java.com/en/download/manual.jsp>
- Free download of Eclipse IDE for developers
  - The version of Eclipse IDE must be compatible with the version (32-bit or 64-bit) of the Java JDK. If the 32-bit Java JDK is installed, Eclipse IDE of 32 bits must be used.
  - Students should install the most recent version of Eclipse, which is 2020-12 (64-bit only).
    - 64-bit: <https://www.eclipse.org/downloads/packages/>
    - 32-bit: <https://www.eclipse.org/downloads/packages/release/helios/sr1/eclipse-ide-java-developers>
- Week 11 and beyond will require enabling of an extension for Eclipse to support JavaFX. You do not need to install this until we get to that point in the course.

### Lecture Preparation

- All assigned lecture preparation is to be completed before class on the date the content will be covered in the lecture. Generally, the preparation materials will be available and/or listed in the Course Schedule on eLearning approximately a week before the lecture.

### Lecture Guidelines

- Students are expected to be present, attentive, engaged, and participative during lectures.
- Students are expected to have a PC open in class to enable participation in exercises and activities.
- Lectures will start on-time and most often will use the entire class-time duration.
- Students are responsible for all materials covered in a lecture, irrespective of their attendance. Neither the TA nor the instructor are required to cover lecture content one-on-one for students missing lectures. Recorded lectures should be used when students miss scheduled lectures.

### Special Purpose Assessments Guidelines (~5% of final grade calculation)

- There are 3 special-purpose assessments during the semester for which students will earn points.
  - Quiz 0 – Covers the syllabus and student profile information.
  - Quiz 3311 – Assesses students' retention and understanding of content from ITSS 3311.
  - Midterm Survey – Provides a forum for feedback to the instructor on students' satisfaction with the course and suggestions for improvements to the course.

### Project Guidelines (~40% of final grade calculation)

- Projects are problems students will solve via Java programs.
- Information related to projects will be posted in eLearning as they are assigned. Project-specific scoring criteria (rubric) will be included with the project instructions.
- Projects are to be submitted in eLearning and before class start time on the date due unless the instructor advises otherwise. Submissions via email will not be accepted unless specifically requested that way. Multiple submissions are allowed with the last submission graded.
- Late Projects will be accepted but with discounted points. For a 40-point project, 5 points will be deducted each day a project is late. Projects are due at the beginning of class time. Submissions to eLearning after the class start time will be subject to the 5-point deduction for day 1. Submissions 24:01 (hh:mm) after class time will be subject to another 5-point deduction, and so on.
- Each student, is expected to do their own work on the projects. Working on projects together or in groups, copying another student's work or computer files, or having another person do your work is scholastic dishonesty and will be addressed via the academic dishonesty processes of the University.

### Quiz Guidelines (~5% of final grade calculation)

- Quizzes will be administered throughout the course to provide feedback to the students and the instructor on the students' understanding and retention of content.
- Quizzes will be administered via eLearning during class time.
- There will be no makeup opportunities for quizzes. Students with conflicts for the quiz may request an alternative day/time, but it is at the instructor's discretion to allow an alternative date/time.

### Exam Guidelines (~50% of final grade calculation)

- Exams will be administered via eLearning.
- Exam 2 is not comprehensive.
- Students not able to take the exam at the scheduled time must notify the instructor before the scheduled time for the exam. Should a student miss an exam, it is at the instructor's discretion to allow an alternative date/time. Instructor will require documentation supporting the reason the exam was missed.

### Grading

- This course features a mixture of projects, quizzes, and exams for assessing students' performance. Points for each scored category/activity are shown in the Grade Calculation table below.
- Letter grades will **NOT** be provided for each project or exam.
- Letter grades will be provided at semester-end based on the Letter Grade Scoring table below, or on a curved distribution that conforms to UT Dallas guidelines, whichever is more favorable to the students.
- Indicative midterm letter grades will be posted after Exam 1 so students are aware of their letter grade status at the mid-point of the semester. Instructor is available to discuss grades one-on-one.

### Grade Calculation

Grade Component	Points	% of Total	Purpose
Quiz 0 (Syllabus)	5	1.3%	Administrative
Midterm Survey	5	1.3%	Administrative
Quiz 3311	10	2.5%	Review
Projects 1-4 (40 pts each)	160	40.0%	Skill Development
Quizzes 1-4 (5 pts each)	20	5.0%	Review/Prep
Exam 1	100	25.0%	Comprehension / Application
Exam 2	100	25.0%	Comprehension / Application
<b>Total</b>	<b>400</b>	<b>100.0%</b>	

### Letter Grade Scoring

Final Point Total %	Letter Grade
93-100	A
90-92	A-
87-89	B+
83-86	B
80-82	B-
77-79	C+
73-76	C
70-72	C-
67-69	D+
63-66	D
60-62	D-
0-59	F

### Miscellaneous Course and Instructor Policies

The following guidelines and policies describe how the course will be managed. Situations and issues not covered will be resolved at the discretion of the instructor. Changes to the guidelines will be posted in syllabus updates on eLearning. Students will be notified via email when syllabus changes occur.

- **Extra Credit:** No extra credit projects are available.
- **Timing of Scoring / Timing of Score Reviews:** Scoring of projects and exams is targeted to be completed 7 days after the work was due (the Scoring Period). It is each student's responsibility to check the scores for their work. Questions about scores and requests for Score Reviews will be accepted during the Score Question Period, which is the 7 days after the scoring was scheduled to be completed. After the Score Question Period has passed, no questions will be addressed. *If you do not see a score in eLearning for work that you believed you have turned in and for which the Scoring Period has passed, you must ask the TA or instructor about it via email during the Score Question Period or you will receive a zero.*
- **Score Reviews:** Requests for a review of a score for a project should be submitted in writing via email to the TA. If a student is not satisfied with the TA's explanation, the student may appeal to the instructor, also via

email. Requests for score reviews of an exam should be submitted directly to the instructor in writing and within 7 days after exam scores and question details were made available. All questions or appeals should fully explain why the student believes additional points should be awarded and include references to the question wording, lecture slides, online resources content, etc.

- **eLearning:** eLearning will be used for all graded items and the recording of scores/grades. eLearning will be used for all class content that is not covered in the online web site resource (e.g., additional lecture preparation resources, additional exercises, etc.). Class announcements (e.g., change in project dates, course calendar adjustments, etc.) also will be posted on eLearning.
- **Instructor Response Policy:** For any questions for which you are expecting a formal (actionable) response, you must submit the question in writing from your UT Dallas email to the instructor's or TA's UT Dallas email. Neither the instructor nor the TA bears any responsibility for questions submitted orally (e.g., during class via chat, during office hours, etc.) or via a platform other than UT Dallas email. The instructor / TA will respond to all student emails within 48 hours or less (excluding holidays and weekends).
- **Academic Integrity:** The University and the instructor are committed to academic excellence and expects academic honesty from all members of the University community. We believe that academic honesty is essential for academic excellence and integrity. Academic honesty includes adherence to guidelines established by the instructor in a particular course. It prohibits representing the work of others to be one's own (plagiarism); receiving unauthorized aid on an assignment (cheating); and using similar papers or other work products to fulfill the obligations of different classes without the instructor's permission. Penalties for academic dishonesty will be assessed per the policies and precedents of the UT Dallas Office of Community Standards and Conduct (OCSC). Penalties may include a score of zero on the work in question or for the entire course. In addition, any student engaged in academic dishonesty will be subject to UT Dallas disciplinary action. Please refer to the General Polices website (see below) for detailed information pertaining to academic dishonesty, including procedures for determining disciplinary action.

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### General UT Dallas Policies & Procedures

For topics not discussed in this syllabus, UT Dallas policies and procedures will apply. For information regarding general University policies and procedures, please go to <http://go.utdallas.edu/syllabus-policies>. These policies include the following:

- Technical Support
- Field Trip Policies, Off-Campus Instruction and Course Activities
- Student Conduct and Discipline, Academic Integrity, Avoiding Plagiarism
- Copyright Notice
- Email Use
- Withdrawal from Class
- Student Grievance Procedures
- Incomplete Grade Policy
- Disability Services
- Religious Holy Days

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### Course Schedule

Below is the initial course schedule. The course schedule is subject to change as the course progresses. Changes to the course schedule will be announced via email and posted in eLearning. The current course schedule always will be posted on eLearning.

The University of Texas at Dallas has modified the Spring 2021 semester calendar due to the effects of the COVID-19 pandemic. It is possible that additional lectures will be scheduled at a time other than the regularly scheduled class time to cover all of the content in the course. Students will be advised of the additional lecture time as described in the previous paragraph regarding changes to the course schedule. Non-scheduled lecture events will be recorded and links to the recordings will be posted.

<b>ITSS 3312.501.S21 (Tu-Th, 5:30-6:45 pm)</b>					
<b>Week</b>	<b>Dates</b>	<b>Content</b>	<b>Liang Lecture Prep</b>	<b>Project/Quiz</b>	<b>Due</b>
<b>1</b>	<b>19-Jan</b>	Course Intro and Overview,	Ch 1, 2	<b>Quiz 0</b>	<b>22-Jan</b>
	<b>21-Jan</b>	Basics of Java, Selections, Math functions			
<b>2</b>	<b>26-Jan</b>	Assessment Quiz, Loops	Ch 2, 3, 4	<b>Quiz 3311</b>	<b>In-Class</b>
	<b>28-Jan</b>	Loops			
<b>3</b>	<b>2-Feb</b>	Methods	Ch 5, 6		
	<b>4-Feb</b>	Arrays - Single-dimensional		<b>Project 1</b>	<b>11-Feb</b>
<b>4</b>	<b>9-Feb</b>	Quiz1, Arrays - Multidimensional	Ch 7, 8	<b>Quiz 1, wks 1-3</b>	<b>In-Class</b>
	<b>11-Feb</b>	Arrays - cont'd			
<b>5</b>	<b>16-Feb</b>	Objects and Classes	Ch 9, 10		
	<b>18-Feb</b>	Objects and Classes		<b>Project 2</b>	<b>25-Feb</b>
<b>6</b>	<b>23-Feb</b>	Objects and Classes	Ch 9, 10	<b>Quiz 2, wks 4-5</b>	<b>In-Class</b>
	<b>25-Feb</b>	Objects and Classes			
<b>7</b>	<b>2-Mar</b>	Exam 1 - Prep	Ch 1-10		
	<b>4-Mar</b>	<b>Exam 1 - Wks 1-6</b>			In-Class
<b>8</b>	<b>9-Mar</b>	Exam 1 - Recap, Inheritance	Ch 11	<b>MT Survey</b>	<b>12-Mar</b>
	<b>11-Mar</b>	Inheritance and Polymorphism			
	<b>13-Mar</b>	MT Grades due in Galaxy			
	<b>16/18 Mar</b>	Spring Break			
<b>9</b>	<b>23-Mar</b>	Exception Handling	Ch 12		
	<b>25-Mar</b>	Exception Handling		<b>Project 3</b>	<b>1-Apr</b>
<b>10</b>	<b>30-Mar</b>	Quiz 3, Abstract Classes, Interfaces	Ch 13	<b>Quiz 3, wks 8-10</b>	<b>In-Class</b>
	<b>1-Apr</b>	Abstract Classes and Interfaces			
<b>11</b>	<b>6-Apr</b>	JavaFX	Ch 14		
	<b>8-Apr</b>	JavaFX			
<b>12</b>	<b>13-Apr</b>	Event-Driven Programming	Ch 15		
	<b>15-Apr</b>	Event-Driven Programming		<b>Project 4</b>	<b>22-Apr</b>
<b>13</b>	<b>20-Apr</b>	JavaFX Controls	Ch 16		
	<b>22-Apr</b>	JavaFX Controls			
<b>14</b>	<b>27-Apr</b>	Quiz 4, Recursion	Ch 18	<b>Quiz 4, wks 11-13</b>	<b>In-Class</b>
	<b>29-Apr</b>	GitHub			
<b>15</b>	<b>4-May</b>	Exam 2 - prep	Ch 11-16, 18		
	<b>6-May</b>	<b>Exam 2 - Wks 8-14</b>			In-Class