CS2336.001 Course Syllabus

Course Information

CS2336.501 Computer Science II

Fall 2022

Professor Contact Information

Name	Ramana Kumar
Office Phone	972-883-XXXX
Office Location	ECSN 3.610
Email Address	Ramana.Kumar@utdallas.edu
(Note, the subject of your email must always contain "CS2336.501.F22", else, your email will be ignored.)	
Web Site	http://www.utdallas.edu/~Ramana.Kumar
Office Hours	Online Office hours (MS Teams utd.link/ramana) Tuesday & Thursday 10:00am - 11:00am

TA Contact Information

Name	TBD
Office Location	N/A
Email Address	
Office Hours	TBD

Course Modality and Expectations

Instructional Mode	Traditional classroom
Meeting Time	Tuesday & Thursday 8:30pm - 9:45pm ECSS 2.306
Course Platform	This is a traditional lecture only, and will not be recorded.
Expectations	You will attend every class on time. You will read the material before it is covered in class. You will treat your fellow students and your instructor with respect.

General Course Information

Prerequisites	CE/CS/TE 1337 with a grade of C or better or equivalent
Pre/Co-Requisite	Currently taking CE/CS/TE 2305 or have earned a C or better in CE/CS/TE 2305 (or equivalent).

Course Description	Further applications of programming techniques, introducing the fundamental concepts of data structures and algorithms. Topics include recursion, fundamental data structures (including stacks, queues, linked lists, hash tables, trees, and graphs), and algorithmic analysis. Includes comprehensive programming projects. Programming language of choice is Java.
Learning Outcomes	Students will be able to implement different data structures using the Java programming language. They will be able use different data structures to program solutions to solve real problems. It will also help them understand algorithmic analysis and complexities. After successful completion of this course, you should be able to: • Ability to implement recursive algorithms • Ability to implement linked lists, stacks, and queues • Ability to implement a binary tree • Ability to use hash tables and graphs • Ability to understand algorithmic analysis • Ability to create a comprehensive programming project • Ability to implement and use generics/templates
Required Text	***Introduction to JAVA Programming*** (Physical Book) 11th edition – Comprehensive Version; Liang, Y. Daniel; Pearson Publishing; iSBN 976-0-13-467094-2 **or** ***REVEL for Liang Java*** – Access Code (Digital Book) available at this URL: https://www.pearson.com/us/higher-education/program/Liang-Revel-for-Liang-Java-Access-Card/PGM2505973.html
Additional Resources	The Computer Science Mentor Center at https://csmc.utdallas.edu/ is always a good resource. You can also look at the java docs at https://docs.oracle.com/en/java/index.html
Java Version	All programs will be tested with Java SE 10. This is a free download for all operating system, available at http://www.oracle.com/technetwork/java/javase/downloads/index.html
IDE	You can use any development environment you like, since you will be handing in only .java files, not IDE projects. I'll use Visual Studio Code Java Tutorial for in-class examples. Eclipse is also good.

Course Policies

Grading Criteria	Exam 1: 20% Exam 2: 20%	A+=97 & above A=93-96 A-=90-92 B+=87-89

	Homework Assignments: 40% Participation (Attendance, Discussion board and in-class assignments): 20%	B=83-86 B-=80-82 C+=77-79 C=73-76 C-=70-72 D=60-69 F=below 60
Make-up Exams	Not allowed	
Late Work	25% reduction in grade per day or partial day for any late submissions unless otherwise stated in the assignment. That is, if the assignment is worth 100 points, you will lose 25 points per day, in addition to points lost because of the quality of work.	
Grade Information	I do not curve individual assignments, but I may curve the entire course a little. Do not count on this. Do your best work. Grades will be posted in eLearning and you can use the weights above to see where you stand.	
Who Grades What	The grader grades all homework and assignments. Online quizzes are auto-graded by eLearning. I grade tests.	
Grade Disputes	If you have an issue with a test, talk with me. If you have an issue with an assignment, talk with the grader first, then me. Copy me on all correspondence with the grader. All grades become final one week after they are posted.	
Online Quizzes	You may be given quizzes in eLearning and/or Codio assignments. These may be due **before** the lecture or at the start of the lecture that covers the material. The purpose is to get you to read the material before you hear it in class.	

Codio

We will be using codio platform to submit & auto-grade the assignments and most activities. Your submissions will be tested against several testcases, similar to ZyLab platform you might have used in CS 1136/1336 courses. You will be promoted to purchase a license ($40 fee) as part of the first assignment/activity we will do in that platform.

Class Name	CS2336.501.F22
Website	www.codio.com

Faculty	Ramana Kumar (Ramana.Kumar@utdallas.edu)
You must **sign-up using utdallas email** and your full name.	

Class Attendance

The University's attendance policy requirement is that individual faculty set their course attendance requirements. Computer Science Department policy is that if you miss three consecutive classes your grade will drop one letter grade. Missing four in a row is failing.

Regular and punctual class attendance is expected regardless of modality. Students who fail to attend class regularly are inviting scholastic difficulty. see Class Participation below for grading information).

Class Participation

Regular class participation is expected regardless of course modality. A portion of the grade for this course is directly tied to your participation in this class. It also includes engaging in group or other activities during class that solicit your feedback on homework assignments, readings, or materials covered in the lectures (and/or labs). Class participation is documented by faculty. Successful participation is defined as consistently adhering to University requirements, as presented in this syllabus. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Class Recordings

There is NO plan to record the regular lectures. The instructor may record meetings of this course, under special circumstances. Such recordings will be made available to all students registered for this class if the intent is to supplement the classroom experience. If the instructor or a UTD school/department/office plans any other uses for the recordings, consent of the students identifiable in the recordings is required prior to such use unless an exception is allowed by law.

Class Materials

The instructor may provide class materials that will be made available to all students registered for this class as they are intended to supplement the classroom experience. These materials may be downloaded during the course; however, these materials are for registered students' use only. Classroom materials may not be reproduced or shared with those not in class, or uploaded to other online environments except to implement an approved Office of Student

Accessibility accommodation. Failure to comply with these University requirements is a violation of the Student Code of Conduct.

Assignments & Academic Calendar

Week	Date	Topic	Reading
1	23-Aug	Introduction to CS2336, syllabus review	
	25-Aug	Elementary Java	Ch. 1,2,3
2	30-Aug	Methods; Recursion	Ch. 5,6,18
	1-Sep	Characters and strings	Ch. 4, 12.10-12.11
3	6-Sep	Methods, Single-Dimensional and Multi-Dimensional Arrays	Ch. 7, 8
	8-Sep	Single-Dimensional and Multi-Dimensional Arrays	Ch. 7, 8
4	13-Sep	Objects and Classes	Ch. 9, 10
		Object-Oriented Thinking	
	15-Sep	Inheritance and Polymorphism	Ch. 11
5	20-Sep	Inheritance and Polymorphism	Ch. 13
	22-Sep	Interfaces and Abstract Classes	
6	27-Sep	Interfaces and Abstract Classes	Ch. 13
	29-Sep	Text file I/O	Ch. 12
7	4-Oct	Exception Handling	Ch. 19
	6-Oct	Generics	Ch. 19
8	11-Oct	Test 1 Review	
	13-Oct	**Test 1 (In class)**	8:30pm - 9:30pm (60 mins)
9	18-Oct	Lists, Stacks, Queues	Ch. 20, 24
	20-Oct	Lists, Stacks, Queues	Ch. 20, 24
10	25-Oct	Sets and Maps	Ch. 21
	27-Oct	Hashing	Ch. 27
11	1-Nov	Binary Search Trees	Ch. 25
	3-Nov	Binary Search Trees	Ch. 25
12	8-Nov	Graphs, Sorting	Ch. 28
	10-Nov	Sorting	Ch. 23
13	15-Nov	Sorting	Ch. 23
	17-Nov	Developing Efficient Algorithms	Ch. 22
14	22-Nov	**Thanksgiving break**	
	24-Nov		
15	29-Nov	Test 2 Review	
16	1-Dec	**Test 2** (In class)	8:30pm - 9:30pm (60 mins)
17	6-Dec	Advanced Topics:	Ch. 30

17	8-Dec	Java Streams - Different Operations On Streams	

Off-campus Instruction and Course Activities
Not Applicable.

Comet Creed
This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

Academic Support Resources
The information contained in the following link lists the University's academic support resources for all students.

Please see http://go.utdallas.edu/academic-support-resources.

UT Dallas Syllabus Policies and Procedures
The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.