

COSC 20203-35 Techniques in Programming Fall 2018

Instructor: Dr. Antonio Sanchez

Meets: Tuesday and Thursday 11:00 to 12:20

Office: TUC 341F

Phone: 257-7057

Office Hours: MW from 10:30 to 14:30

Or by Appointment

Textbook: *Big Java* by Cay Horstmann 4rd or 4th Ed

Prerequisite: COSC 10403 Introduction to Programming

Before attempting the course,
students must be able to:

After completing the course,
students will be able to:

Write Java applets using the AWT classes or Swing and the 1.2 event model (Chapters 1–8 of <i>4ed Big Java</i>)	Write sophisticated Java applications 1. using Vectors/ArrayLists, Hashtables/Maps, and arrays appropriately 2. using Files and Streams 3. using recursion 4. using Threads 5. using network protocols 6. developing software having an existing graphical user interface 7. using the strings class and string tokens Discuss binary representation, JVM bytecode Discuss applications of the ACM Code of Ethics
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Course Topics:

Internal representation

Threads and client-server applications

Exceptions and I/O classes

Programming style

Collection classes

Debugging and testing techniques

Cloning

Linear data structures

Recursion

Issues in computer ethics

Grading:

Exams (2) 40%

Programming Assignments (5) 40%

Final Exam (Comprehensive) 20%

Final grades in this course will be the traditional letter grades (A, B, C, D, F) with cutoffs every 10 points; i.e., 90, 80, 70, and 60. There will be no +/- distinctions.

COSC 20203 35 Techniques Weekly Schedule: Fall 2018				
Week	Date	Lec #	Lecture Topic	Lab
#1	Tue - Aug 21	1	Java Review	
	Thu - Aug 23	2	Applications in MVC	
#2	Tue - Aug 28	3	Class Design	
	Thu - Aug 30	4	Serializable Objects	
#3	Tue - Sep 4	5	Setters and Getters	
	Thu - Sep 6	6	Exceptions	Lab 1 Due
#4	Tue - Sep 11	7	Java Documentation	
	Thu - Sep 13	8	Creating a Jar	
#5	Tue - Sep 18	9	Internal Representation	
	Thu - Sep 20	10	Files and Streams	
#6	Tue - Sep 25	11	Stream IO	Lab 2 Due
	Thu - Sep 27	12	Tokenizer	
#7	Tue Oct 2	13	Vectors and Array Lists	
	Thu Oct 4	14	HashTables	
#8	Tue Oct 9	15	Review	
	Thu Oct 11	16	Exam 1	
#9	Tue Oct 16	<i>Fall Recess (No Class)</i>		
	Thu Oct 18	18	Encryption	
#10	Tue Oct 23	19	Cyphers	Lab 3 Due
	Thu Oct 25	20	Hard Problems	
#11	Tue Oct 30	21	Recursion	
	Thu Nov 1	22	Interfaces	
#12	Tue Nov 6	23	Threads	
	Thu Nov 8	24	Threads	
#13	Tue Nov 13	25	Review	Lab 4 Due
	Thu Nov 15	26	Exam 2	
#14	Tue Nov 20	27	Networks	
	Thu Nov 22	<i>Thanksgiving (No Class)</i>		
#15	Tue Nov 27	28	Socket Servers	
	Thu Nov 29	29	ACM Code of Ethics	
#16	Tue Dec 4	30	Review	Lab 5 Due
Final	Thu Dec 13	Section 35 (11:00 - 1:30)		**This schedule represents our current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.

Attendance

You will be held responsible for all material presented in class. If you choose to miss class, you should be aware that this could adversely affect your performance on tests. It is your responsibility to obtain all materials missed and to make up all lectures, discussions, etc. without the aid of the instructor.

The seemingly innocuous behavior of being consistently tardy is not so innocent. It is quite understandable that once in a while a person will arrive late to class. However, there is no excuse for consistently arriving late. It is not fair to your fellow classmates or your instructor since such behavior disrupts class. Inevitably, the individuals who are consistently tardy are the ones who ask for material to be repeated. Your instructor will assume that consistently tardy arrival indicates a total lack of motivation or interest in the material.

Exams

Exams must be taken at the scheduled times. Make-up exams (which may be oral) will be given only in the event of university approved absence or as a result of MAJOR difficulties which have been approved by the Dean of Students. Reasons such as weddings, car trouble, illness, etc. will not be accepted unless approved by the Dean of Students.

Final Exam

The final exam will be given at the scheduled time. ALL STUDENTS MUST TAKE THE FINAL AT THE SCHEDULED TIME (arrange your travel plans accordingly).

Labs

Programming assignments will be *turned in* electronically. An assignment must be submitted before midnight of the day the lab is due; otherwise it will be considered late. **A penalty of 10% per day (including weekends) will be assessed for late programs.**

If you want help on a programming assignment, you are expected to have made a legitimate effort to write the program on your own prior to seeking help.

The computer and/or network is occasionally *down* due to failures, routine maintenance, upgrades, etc. You should allow sufficient time for such contingencies and plan on getting your lab assignments completed in advance of the due date. A similar caveat applies to such difficulties as slow response times, all of the computers being in use, being unable to reach your instructor to ask questions about an assignment, etc.

You should keep all graded and returned assignments until you have received your final course grade in case a question arises about an assignments grade.

Instructor Office Hours

I will make every effort to be available during the hours listed; however, committee meetings and other obligations may occasionally take precedence. Thus, if you wish to ensure that I will be

available at a specific time, please call the office for an appointment. Appointments can be made for times other than those listed, and you are welcome to drop by at other times.

Software

Any development environment can be used. *Eclipse* is an open-source effort fostered by IBM and it is used in the ACM Programming Contest. Other freeware products include NetBeans and JCreator LE., IntelliJ

Plagiarism

The Computer Science Department takes academic dishonesty quite seriously. Academic misconduct will not be tolerated. Such acts are detailed in the current *TCU Bulletin* and include: copying, using, or in any way misrepresenting another's work as your own; substituting for another or having someone substitute for you; plagiarism; collusion; abusing resource materials; unauthorized use of computer software or hardware; fabrication and falsification; complicity in misconduct. Such conduct at a minimum results in a zero on the test or assignment, and may result in a failing grade for the course.

Students with Disabilities

Texas Christian University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding students with disabilities. If you require accommodations for a disability, please contact the Coordinator for Students with Disabilities in the Center for Academic Services, located in Sadler Hall 11. Further information can be obtained from the Center for Academic Services, TCU Box 297710, Fort Worth, TX 76129, or at 817-257-7486.

The definitions and possible sanctions for plagiarism and other forms of academic misconduct are described in the section Academic Conduct Policy TCU Undergraduate Studies Bulletin. You are encouraged to seek the help of others (including classmates) to understand how to use the computer, the principles of programming, or the intent of an assignment. You may discuss the algorithms and general programming techniques used to solve a problem; you may give and receive aid in debugging; you may discuss and compare program output. However, you may NOT use, even temporarily, the source code of another person's program while developing your own.

Disabilities Statement

Texas Christian University complies with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act of 1973 regarding students with disabilities. Eligible students seeking accommodations should contact the Coordinator of Student Disabilities Services in the Center for Academic Services located in Sadler Hall, 1010. Accommodations are not retroactive, therefore, students should contact the Coordinator as soon as possible in the term for which they

are seeking accommodations. Further information can be obtained from the Center for Academic Services, TCU Box 297710, Fort Worth, TX 76129, or at (817) 257-6567.