COSC 2436: Programming Fundamentals III

Course Information Document Spring 2018

Faculty Information

Douglas Atkinson
Location: Northeast Campus
Office: NATB 2209A
Office Hours: Monday/Wednesday 2:00 pm to 4:00 pm
Tuesday/Thursday 3:00 pm to 6:00 pm
Other times by appointment
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E-mail is answered during office hours. E-mail sent after the day's office hours or during the weekend, will be answered by the next class day's office hours.

Class 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. This course is included in the Field of Study Curriculum for Computer Science.

Course Materials

Required

Textbook:

Title: Java Software Structures, 4th Edition
Author: John Lewis and Joseph Chase
Publisher: Pearson
© 2014; ISBN 978-0133250121

Eclipse or Netbeans

Laboratory

We will work on programs together in class, however the time available in class will not be enough to complete programming projects. Students may use the Computer Science Lab located in NTAB 1239 as needed. Each student will be assigned a lab user account with server memory for document storage. The student's user account will be accessible while in the Northeast Computer Science network. Students will need to supply portable storage, such as a USB drive, for additional storage for working away from the classroom and/or Computer Science Lab.

Methods of Instruction
Lectures, PowerPoint presentations, programming exercises

Exams
There will be two exams throughout the semester. The mid-term will be given approximately half-way through the course and will cover all material up to that point. The final exam will be comprehensive. Every student is expected to take the final exam. If a student scores better on the final exam than the mid-term exam, the score of the mid-term exam will be replaced with the final exam score.

Grading Information

Percentage Allocations				
Category	**Task**	**Points**	**Total**	**Percentage of grade**
Quizzes	8	25	200	08.70 %
Programming Assignments	5	300	1500	65.22 %
Midterm Exam	1	300	300	13.04 %
Final Exam	1	300	300	13.04 %
			2300	100.0 %

Grade Distribution	
Grade	**Percentage Required**
A	89.5 % - 100 %
B	79.5 % - 89.49 %
C	69.5 % - 79.49%
D	59.5 % - 69.49 %
F	< 59.5 %

Attendance Policy (Computer Science/IT)
Regular and punctual class attendance is expected at Tarrant County College. Student absences will be recorded from the first day the class meets. In case of an absence, it is the student's responsibility to contact the instructor. Communication between the student and instructor is most important, and it is the student's responsibility to initiate such communication. A student in an on-campus course missing a cumulative of 15 percent of the class meetings AND not keeping up with the course assignments MAY be dropped. Once you are withdrawn the instructor cannot reinstate you. If you have a question about your grades please contact your instructor. You should take responsibility for your grade, DO NOT ASSUME YOU WILL BE AUTOMATICALLY DROPPED.

Missed Assignment Deadlines
All course work to be completed has a due date. Course work may be submitted for up to three days late for a 10 percent penalty per day late (not including quizzes). You can always complete/submit assignments early. Keep this in mind if you have family emergencies or work related issues that conflict with deadlines. It is not considered late **IF** prior arrangements have been made with the instructor. Quizzes can only be completed and turned in during the time in class that the quiz was done.

Electronic Submissions
Any assignment that requires an electronic submission must be submitted by Blackboard. Electronic submissions will not be accepted by email.

Extra Credit
Extra credit will be considered on a case by case basis. However, only students who have completed all their assigned work will be given any consideration for extra credit. Students who have zeros for any assignments need not ask about extra credit.

Withdrawals
See Student Handbook. Last day to drop is April 12, 2018.

Cell Phones
Students should turn-off cell phones or place cell phone on vibrate. It is expected that while the student is in class, the material being covered is important to the student and that any phone calls can wait. Absolutely no texting. The instructor has the right to remove a student from class if the instructor feels the cell phone is disrupting class.

Leaving Class
Students in a college class are assumed to be adults. Students should take care of any bodily needs before the start of class. Leaving after class starts for any reason (i.e. restroom, smoking, phone calls, etc) is disruptive and will not be tolerated. A student who must leave class should not return until the following class day.

Tardies
Arriving to class after it starts is disruptive. A student who is tardy should enter quietly and sit at the seat closest to the door so as not to disrupt the class.

Special Accommodations
If a student requires special accommodations based on a disability, the student must be registered with the Disability Support Services Office and must inform the teacher about the needed accommodations the first week of classes.

Student Conduct
TCC has the responsibility and authority to formulate and enforce rules of student conduct that are appropriate and necessary to further the educational goals of the College and its students. Students who enroll must accept responsibility for their behavior and for their ultimate success in higher education. To create a positive climate for learning, TCC expects all students to abide by a Code of Student Behavior. The District Handbook for Students, available at TCCD's Website www.tccd.edu, has full information regarding this. To summarize:

Students must maintain high standards of scholastic honesty. Violations of the TCC Code of Student Behavior include but are not limited to cheating on tests or assignments, plagiarism, and collusion; violence or threats of violence; loud or abusive language; and failure to comply with the direction of College officials and instructors.

Programming Assignments and Code Copying

The only way to learn how to program is to actually write programs. Students are expected to do programming labs on their own. While students may study together and help each other, for programming assignments this should be limited to discussing general ideas. Do not share actual source code with other students. Programming labs that have similar source code will both receive a zero. The best way to make certain that your code is not too similar to another student is to write your own code and do not share it with others.

In addition, do not copy code from the Internet, whether it is from a tutorial site, youtube, facebook, stackoverflow, or any of the other various sites where you can find code. The purpose of the labs is to learn to code by writing your own code. Programming labs with code that is similar to code in these sites will receive a zero.

According to the student handbook (http://www.tccd.edu/documents/services/student-life/rights-and-responsibilities/student-handbook/2016-2017-student-handbook.pdf):

The term "Cheating" includes, but is not limited to: (1) use of any unauthorized assistance in taking quizzes, tests, or examinations; (2) use of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments; (3) the acquisition, without permission, of tests or other academic material belonging to a member of the College District

Dishonesty: Acts of dishonesty (POLICY FLB [LOCAL]). Dishonesty includes, but not limited to the following:

a. Cheating, plagiarism, or other forms of academic dishonesty;
b. Furnishing false information to any College District Official, faculty member, or office;
c. Forgery, alteration, or misuse of any College District document, record, or instrument of identification;
d. Fraud- receiving or attempting to receive payment services or academic credit under false pretenses; and
e. Tampering with any College District election process.

The following sanctions may be imposed upon any student/organization found to have violated the Student Code:

c. Scholastic Penalties - The assignment of a failing grade on an assignment or examination or in a course by an instructor based on scholastic dishonesty including cheating, collusion, and plagiarism committed by a student/organization. The instructor will submit a written report of the incident and of the planned action to the instructor's dean.

Any students involved in cheating on any assignments will receive a zero and the incident will be reported to the college.

Weekly Topic Schedule

Week	Lesson	Reading Assignment	Assignment
01	Orientation Syllabus Chapter 1: Introduction	Chapter 1	
02	Java Refresher		
03	Appendix B: Object-Oriented Design	Appendix B	Program 1 – February 3
04	Chapter 2: Analysis of Algorithms Chapter 3 Introduction to Collections - Stacks	Chapter 2 Chapter 3	
05	Chapter 3 Introduction to Collections – Stacks Chapter 4: Linked Structures - Stacks	Chapter 4	Program 2 – February 17
06	Chapter 5 Queues Chapter 6 Lists	Chapter 5 Chapter 6	
07	Chapter 6 Lists Chapter 7 Iterators	Chapter 7	
08	Chapter 8 Recursion Chapter 9 Sorting and Searching	Chapter 8 Chapter 9	Program 3 – March 10
09	Chapter 9 Sorting and Searching Midterm		Midterm – March 21
10	Chapter 10 Trees	Chapter 10	
11	Chapter 11 Binary Search Trees	Chapter 11	
12	Chapter 12 Heaps and Priority Queues Chapter 13 Sets and Maps	Chapter 12 Chapter 13	Program 4 – April 14
13	Appendix E Hashing Chapter 14 Multiway Search Trees	Appendix E Chapter 14	
14	Chapter 15 Graphs	Chapter 15	
15	Chapter 15 Graphs		Program 5 – May 5
16	Final Exam		Final Exam – May 9

Disclaimer

The instructor reserves the right to make changes to this document as necessary.