**CSE1310 Introduction to Computers and Programming**

**Spring 2016 Syllabus**

Instructor: Dr. J. Carter M. Tiernan **620 NH** x20113 (817-272-0113)

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Class CSE1310 - 003: TR 3:30 - 4:50pm, NH 100

Office hours (in 620 NH): **Mon 3pm – 5pm, Tues/Thurs 1:30pm - 3:15pm and other times available by appointment**

**Course Objective:**

Introduces students to the concept of writing computer programs and thinking about how to write computer programs. The course uses the Java programming language to do this and also considers how to write programs using good programming practices that will apply to all later programming as well.

“Learn about programming. Do some programming.”

**Catalog Description:**

An introduction to the computer, to the algorithmic process, and to programming using basic control and data structures, using a procedural language.

Student Learning Outcomes:

* Students will be able to develop algorithms for math functions (e.g. the factorial), processing of strings and lists, games (e.g. Tic-Tac-Toe, The Hangman ) or basic functionality (e.g. a phonebook).
* They will be able to write and debug programs that implement the above mentioned algorithms.
* When reading simple code, students will be able to explain what each line of code does and how it affects the computer state.
* Students will be able to read and write text files using Java.

Prerequisites: MATH 1302 or MATH 1421 (or concurrently) or MATH 1426 (or concurrently)

Textbook: E-Book: Cay Horstmann, **Big Java - Late Objects (5th Edition),** 2015. Book available from Wiley <http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP002041.html> or Vitalsource CourseSmart <http://www.coursesmart.com/9781118087886?__professorview=false&__hdv=6.8> or other sources.

Additional online resources are at : <http://bcs.wiley.com/he-bcs/Books?action=index&itemId=1118087887&bcsId=7006> and <http://horstmann.com/codecheck/>

**Schedule:** See Dr. Tiernan's Spring 2016 class website or Blackboard for the semester schedule of class topics and the exam dates for the class.

**Grading for CSE 1310 Spring 2016:**

1. Lab assignments are graded out of 100 points each. All lab assignments will be averaged to compute a semester lab grade.
2. Exams are graded out of 100 points each. All exams will be averaged to compute a semester exam grade.
3. The final numeric grade for the semester will be the average of the semester lab grade and the semester exam grade. This grade must also meet the lab completion requirements later in this syllabus.
4. The final numeric grade will then be converted to a semester letter grade as shown below.

In class pop quizzes up to 3% added to the semester exam grade

*Extra Credit Service Learning up to 3% added to the semester lab grade {OPTIONAL - see below}*

Final course grades determined by:

90 – 100pts A

80 – 89pts B

70 – 79 pts C { CSE 1310 must be passed with a C or better to progress to the next class }

60 – 69 pts D

0 – 59 pts F

The instructor may apply a more lenient letter grade scale based on degree of difficulty of the class.

Attendance: At The University of Texas at Arlington, taking attendance is not required. Rather, each faculty member is free to develop his or her own methods of evaluating students’ academic performance, which includes establishing course-specific policies on attendance. As the instructor of this section, I will take attendance for the first few days of the class only. Attendance does not factor in to the grading. However, students are expected to attend class and pop quizzes may be given during the class.

Make up exams must be arranged in advance and will be scheduled at the discretion of the instructor.

**CHEATING on exams, PLAGIARISM, or COLLUSION will not be tolerated.**

**Dr. T’s philosophy about teaching programming:**

The job of a computer scientist/ software engineer / systems analyst / computer engineer / etc. is to use the computer to solve a problem or create a product. These problem solutions and products are software programs. The task of CS/SE/analyst/engineers is determining what kind of solution is needed for a problem and then designing a program to implement it and then writing the code for that program and making it work. To learn all of the skills to do this well is the purpose of pursuing a 4-year degree. To do all of this, there are many things to learn and practice. Part, only part, of the practice is to write programs and learn how to do this well. However, this practice pervades the rest of the tasks so in order to be able to use the skill of writing programs, we have to teach you to write programs and we have to teach this first, like the ABC’s, so that it can be used as a building block for learning all the other parts of being a computer scientist/ software engineer / systems analyst / computer engineer / etc.

So, programming is NOT the entire job of being a computer scientist/ software engineer / systems analyst / computer engineer / etc. but it is a significant part. Therefore we teach you programming FIRST so that you can use this skill while you learn the rest of the really interesting aspects of being a computer scientist/ software engineer / systems analyst / computer engineer / etc. throughout the rest of your degree. Learning to program is like learning your ABC’s. You do this in order to learn how to do even more interesting things later. ☺

**Lab homework assignments:**

The only way to learn programming is to write programs and make them work. The process is to write a chunk of code, test the chunk of code, find the errors, debug the errors, test the code some more, find errors, debug, test, get it working then add another chunk of code and do the same process again. At the beginning of this course you will write very small programs. These will help you get familiar with the process of turning your thoughts and algorithms into programs. As the semester progresses, you will be expected to write larger and larger programs. These will reuse ideas you learned earlier and will let you practice the process of writing testing and debugging. You should anticipate at least 10 hours per week outside of class (on average) to complete the lab assignments.

All lab assignments are individual effort only.

Lab assignments will be submitted through Blackboard for this class.

Every lab assignment has a given due date. No late labs will be accepted. (Five minutes late is still late.) Lab assignments will be posted on the class website listed at the top of this page.

Lab assignments must be individual effort. The Statement of Ethics you will receive details the definitions of collusion, plagiarism, and academic dishonesty as related to lab assignments in CSE.

All of the required lab assignments will be written in Java.

**Lab completion requirements:**

All of the required labs must be submitted in order to have the possibility of making a grade of A. At least eighty-five percent (85%) of the required labs must be submitted in order for a student to pass CSE 1310 with a C or better. At least seventy-five percent (75%) of the submitted labs must receive passing grades (with no significant errors) in order to pass CSE 1310 with a C or better and at least two of these labs with a passing grade must be from the final three lab assignments.

Lab Grading:

Each lab will be graded on a number of factors. **Always be sure that a turned in lab compiles in Netbeans without warnings or errors even if it is not complete. You will receive partial credit for a working stubbed program. It is your responsibility to completely test your lab assignment PRIOR to submission.**

Programs that do not compile successfully (without compiler warnings or errors) will receive **zero (0) credit**.

Programs that do not execute successfully (without inappropriate termination) will receive **zero (0) credit**.

This means that ALL choices the user can make when running your code must work properly and ALL inputs (excluding ones the lab instructions say you don't have the deal with) must work properly even if the input value is invalid; for example, a negative value for a month must NOT make your program crash.

Labs that implement some, but not all, of the requirements must compile and run successfully without errors or warnings to receive partial credit. Examples of errors are

Compilation errors - these occur when the program is being compiled and prevent creation of an executable file (a.out)

Compilation warnings - these occur when the program is being compiled, are printed to the screen but still allow the creation of an executable file

Execution errors - these occur once the program has started running and cause the program to terminate in any way other than that defined by the programmer

Additional procedural information on lab assignments may be handed out or made available on the website as required.

**Quizzes:**

Pop quizzes may be given in class and based on the assigned chapters and class lectures. No make-up quizzes will be given.

**Exams:**

Material covered on the exams will be based on the assigned chapters and class lectures. All exams are mandatory. There are NO make-up exams after the scheduled times. If a student notifies the instructor IN ADVANCE, then an early make-up exam M AY be arranged at the discretion of the instructor. The instructor's decision is final. All exams may be kept by the instructor.

Service Learning Extra Credit:

This class will offer the opportunity for you to earn up to 3% extra credit for the semester grade by performing some service to the CSE department, the UT Arlington College of Engineering, the University, or the community. The service must be completed and documentation turned in by the Friday BEFORE Dead Week. The service learning credit structure is as follows:

- 4 or more hours of service to the CSE dept. or the College of Engineering, documented by a faculty or staff member, is worth 3%;

- 2 to 4 hours of service to the CSE dept. or the College of Engineering OR 4 or more hours of service to the University, documented by a faculty or staff member, is worth 2%;

- 2 to 4 hours of service to the University, documented by a faculty or staff member OR 4 or more hours of service to the community documented by a staffer of the community organization is worth 1%.

CSE dept. service includes volunteering at approved events, joining ACM, GDC, or AAAI and assisting with their events, or other CSE service approved in advance by Dr. T. Approved events include the RoPro Contest (Feb.), Engineering Saturday (Sept., Nov. and Apr.), FIRST Tech Challenge (Mar.), FIRST Lego League (Nov.), and the RoPro Camp (July). This is not a complete list but it gives some examples.

College service includes volunteering at the Engineering Welcome Bash, joining ESC/ JCEO and assisting with ESC events such as Engineers Week, or other College of Engineering service approved in advance by Dr. T.

University service includes activity with UTA Volunteers, FLOC, or the BIG EVENT, or other UTA service approved in advance by Dr. T.

"Community" service includes volunteering at public schools, parks, animal shelters, and homeless shelters.

Other venues for service (within UTA or within the community) must be approved in advance by Dr. T prior to your service.

**Miscellaneous:**

The class syllabus, schedule, and other information will be available on my website and/or on Blackboard as it is developed. YOU are responsible for checking the website regularly for information such as due date changes and assignments.

If you require accommodation based on disability, I would like to meet with you in the privacy of my office during the first week of the semester to ensure that you are appropriately accommodated.

If you are considering dropping this class please come discuss your performance in the class with Dr. Tiernan so that you can make the best choice.

Students who are members of the Honors College may wish to take this course for Honors credit. If you wish to do so, please provide me with an Honors Credit Contract (downloaded from http://honors.uta.edu/documents/credit.pdf). You and I will together determine an appropriate supplemental assignment to justify the awarding of Honors credit. If you are not in the Honors College and would like to learn more about the benefits of membership, visit the website at http://honors.uta.edu/, where you will find an application form for electronic submission.

Grading issues:

Requests for re-evaluation of assignments are limited to seven (7) calendar days after the assignment is returned. Every assignment submitted for regrading must be given to the instructor (exams and quizzes) or lab instructor (labs) in its entirety and will be completely regraded. Papers will not be re-evaluated in the classroom or lab.

Applications for excluding (or replacing) the grade in a course are available online from the Registrar's office (Office of Records) and must be turned in to the Registrar before the last drop day of the semester in which the course is being retaken.

Semester grades will be available via the UTA website, after the Registrar has completed processing the semester grades.

**Ethics and Academic Integrity:**

A Statement of Ethics will be provided for you to read, sign, return, and follow. Violators of the ethics code will be reported to the Office of Student Conduct and penalties will be levied as described in the Statement of Ethics.

\*\*\*How to be successful in Dr. T's class:\*\*\*

For lecture material - Read the textbook in advance. Come to class with material already a little bit familiar then hear it in class again

For lab assignments - START EARLY! Read and follow ALL the instructions. Don't pick and choose which ones you pay attention to. Use a highlighter to go over the assignment the first time and a pen or pencil to go through it a second time.

Design your lab first, then build it piece by piece. Make each piece work and TEST it before you do more. Save a version of the tested partial program then make a copy and continue working on the copy. This means you always have a working version that you could turn in. Test your program by trying out all the possible things that can be wrong and make sure that your program keeps running. If Dr. T says the program does not have to handle a particular problem then you can ignore that one.

\*\*\*How to get help: \*\*\*

This course offers assistance through weekly office hours for the course instructor and the TA. USE THEM. Go talk to the TA as soon as you can just so you can meet them. Once you meet them, it is easier to ask them for help. Go talk to Dr. T in her office as soon as you can. Same reason.

Drop Policy: Students may drop or swap (adding and dropping a class concurrently) classes through self-service in MyMav from the beginning of the registration period through the late registration period. After the late registration period, students must see their academic advisor to drop a class or withdraw. Undeclared students must see an advisor in the University Advising Center. Drops can continue through a point two-thirds of the way through the term or session. It is the student's responsibility to officially withdraw if they do not plan to attend after registering. Students will not be automatically dropped for non-attendance. Repayment of certain types of financial aid administered through the University may be required as the result of dropping classes or withdrawing. For more information, contact the Office of Financial Aid and Scholarships (http://wweb.uta.edu/aao/fao/).

Disability Accommodations: UT Arlington is on record as being committed to both the spirit and letter of all federal equal opportunity legislation, including The Americans with Disabilities Act (ADA), The Americans with Disabilities Amendments Act (ADAAA), and Section 504 of the Rehabilitation Act. All instructors at UT Arlington are required by law to provide “reasonable accommodations” to students with disabilities, so as not to discriminate on the basis of disability. Students are responsible for providing the instructor with official notification in the form of a letter certified by the Office for Students with Disabilities (OSD). Students experiencing a range of conditions (Physical, Learning, Chronic Health, Mental Health, and Sensory) that may cause diminished academic performance or other barriers to learning may seek services and/or accommodations by contacting:

The Office for Students with Disabilities, (OSD) www.uta.edu/disability or calling 817-272-3364.

Counseling and Psychological Services, (CAPS) www.uta.edu/caps/ or calling 817-272-3671.

Only those students who have officially documented a need for an accommodation will have their request honored. Information regarding diagnostic criteria and policies for obtaining disability-based academic accommodations can be found at www.uta.edu/disability or by calling the Office for Students with Disabilities at (817) 272-3364.

Title IX: The University of Texas at Arlington does not discriminate on the basis of race, color, national origin, religion, age, gender, sexual orientation, disabilities, genetic information, and/or veteran status in its educational programs or activities it operates. For more information, visit uta.edu/eos. For information regarding Title IX, visit www.uta.edu/titleIX.

Academic Integrity: Students enrolled all UT Arlington courses are expected to adhere to the UT Arlington Honor Code:

I pledge, on my honor, to uphold UT Arlington’s tradition of academic integrity, a tradition that values hard work and honest effort in the pursuit of academic excellence.

I promise that I will submit only work that I personally create or contribute to group collaborations, and I will appropriately reference any work from other sources. I will follow the highest standards of integrity and uphold the spirit of the Honor Code.

UT Arlington faculty members may employ the Honor Code as they see fit in their courses, including (but not limited to) having students acknowledge the honor code as part of an examination or requiring students to incorporate the honor code into any work submitted. Per UT System Regents’ Rule 50101, §2.2, suspected violations of university’s standards for academic integrity (including the Honor Code) will be referred to the Office of Student Conduct. Violators will be disciplined in accordance with University policy, which may result in the student’s suspension or expulsion from the University.

<The following information is required in all syllabi. However, no lab training is required for this class.>

Lab Safety Training: Students registered for this course must complete all required lab safety training prior to entering the lab and undertaking any activities. Once completed, Lab Safety Training is valid for the remainder of the same academic year (i.e., through the following August) and must be completed anew in subsequent years. There are no exceptions to this University policy. Failure to complete the required training will preclude participation in any lab activities, including those for which a grade is assigned.

Electronic Communication: UT Arlington has adopted MavMail as its official means to communicate with students about important deadlines and events, as well as to transact university-related business regarding financial aid, tuition, grades, graduation, etc. All students are assigned a MavMail account and are responsible for checking the inbox regularly. There is no additional charge to students for using this account, which remains active even after graduation. Information about activating and using MavMail is available at http://www.uta.edu/oit/cs/email/mavmail.php.

Student Feedback Survey: At the end of each term, students enrolled in classes categorized as “lecture,” “seminar,” or “laboratory” shall be directed to complete an online Student Feedback Survey (SFS). Instructions on how to access the SFS for this course will be sent directly to each student through MavMail approximately 10 days before the end of the term. Each student’s feedback enters the SFS database anonymously and is aggregated with that of other students enrolled in the course. UT Arlington’s effort to solicit, gather, tabulate, and publish student feedback is required by state law; students are strongly urged to participate. For more information, visit http://www.uta.edu/sfs.

Final Review Week: A period of five class days prior to the first day of final examinations in the long sessions shall be designated as Final Review Week. The purpose of this week is to allow students sufficient time to prepare for final examinations. During this week, there shall be no scheduled activities such as required field trips or performances; and no instructor shall assign any themes, research problems or exercises of similar scope that have a completion date during or following this week unless specified in the class syllabus. During Final Review Week, an instructor shall not give any examinations constituting 10% or more of the final grade, except makeup tests and laboratory examinations. In addition, no instructor shall give any portion of the final examination during Final Review Week. During this week, classes are held as scheduled. In addition, instructors are not required to limit content to topics that have been previously covered; they may introduce new concepts as appropriate.

Emergency Exit Procedures: Should we experience an emergency event that requires us to vacate the building, students should exit the room and move toward the nearest exit, which is located either to the right or left of the front doors or through the back exit doors. When exiting the building during an emergency, one should never take an elevator but should use the stairwells. Faculty members and instructional staff will assist students in selecting the safest route for evacuation and will make arrangements to assist individuals with disabilities.

Emergency Phone Numbers: In case of an on-campus emergency, call the UT Arlington Police Department at 817-272-3003 (non-campus phone), 2-3003 (campus phone). You may also dial 911. Non-emergency number 817-272-3381

Student Support Services: UT Arlington provides a variety of resources and programs designed to help students develop academic skills, deal with personal situations, and better understand concepts and information related to their courses. Resources include tutoring, major-based learning centers, developmental education, advising and mentoring, personal counseling, and federally funded programs. For individualized referrals, students may visit the reception desk at University College (Ransom Hall), call the Maverick Resource Hotline at 817-272-6107, send a message to resources@uta.edu, or view the information at http://www.uta.edu/universitycollege/resources/index.php

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