Texas Wesleyan University Course Syllabus

CSC1310-01 Foundations of Computer Science
Fall 2020

Instructor: Yukong Zhang
Meets: MW(FTF) & F(Virtual) at 10:00-10:50
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Course Modality: FTF plus Virtual
Room: McFadden 107

Office: McFadden 103
Office Hours: MWF: 2:00-3:30 & TTH:11-12
Course Web: `https://cs.txwes.edu/`

Course Introduction

This course is a freshman-level computer science course designed to introduce students to computer science. Students will know what computer science is about and how computer scientists solve real-world challenging problems using computing and technologies. Specifically, students will learn from binary number representation to algorithms to computer applications such as artificial intelligence, network security, and database management systems, etc.

Course Description

Prerequisite: Completion of, or concurrent enrollment in MAT 0301 or higher.

Topics include problem solving and software development principles including problem decomposition, abstraction, data structures, algorithm design and analysis, debugging, and testing; computer architectures including low-level data representation and instruction processing; computer systems including programming languages, compilers, operating systems; real-world application including networks, security and cryptography, artificial intelligence, and social issues.

Learning Objectives

This course is intended for the students who are interested in computer science. It presents an introduction to the major areas of computer science and students completing the course will:

Objectives	Program Goals
Objective 1: Know about the various sub-disciplines within computer science.	1.1
Objective 2: Be proficient in microcomputer applications, database, and web page design.	1.2
Objective 3: Understand the basics of operating systems and utility software.	1.3
Objective 4: Know how computer software is created, including algorithm development, programming, and debugging.	1.4
Objective 5: Understand the basics of computer hardware, including binary numbers, Boolean logic, gates, and computer organizations.	1.5

Required Materials

Textbook(s):

- Computer Science Illuminated by Nell Dale and John Lewis, 7th edition, Jones and Bartlett Publishers, 2020. ISBN: 978-1-284-15561-7

Software/Apps/Equipment:

- Notepad++, Putty, and PSFTP.

- Web browser: Google Chrome

Learning Methods and Technologies

The learning methods used in this course include the following:

- Collaborative assignments

- Independent homework assignments

- Outside classroom readings

- Exams

Student Workload Expectation

Students should expect to spend a minimum of two hours out-of-class student work each week for every one hour of classroom or direct faculty instruction.

Course Requirements

Submitting and Returning Assessments

- Assessment Submission: Submit your assignments via Blackboard or in class.

- Assessment Feedback

  - I will provide feedback on assessments within 7 days after submission.
  - My feedback will be provided in the form of comments for each assignment.
  - Your grades will be posted to the Blackboard Grade Center.

- Communication with the Instructor: To contact me with questions and concerns related to this course, visit me during my office hours or email me.

- Quizzes and Exams: All exams will be conducted in classroom or take home depending on the university policies.

Evaluation and Grading

All grades will be made available to students in Blackboard.

Category	Number of Items	Points per Item	Total Points
Homework Assignments	10	50	500
Exams	2	150	300
Final Exam	1	250	250
Total Course Points:			1050

Final	Final Points/Average
A	90% or above
B	80-89%
C	70-79%
B	60-69%
F	Below 60%

Course Policies

Class Attendance

Regular and punctual attendance at all scheduled classes is expected of all students. University regulations authorize certain absences of students when representing the University (e.g. participation in intercollegiate athletic competitions, and student government, student development, or fine arts events). Absences that may be necessary to fulfill course requirements and are approved by the Provost are also considered to be authorized. The maximum number of authorized absences during one semester is five for a Monday-Wednesday-Friday class, three for a Tuesday-Thursday class, and two for a class

or laboratory meeting once a week. Additional authorized absences may be granted on an individual basis when extreme circumstances warrant (e.g. advancement to and representation of the university at regional or national level intercollegiate athletic, academic, or fine arts competition). Individual faculty may not enforce a more restrictive policy than what is set by the University. Students are required to notify instructors prior to any missed class and will be held responsible for all class and laboratory assignments.

Class attendance is vital for student success in the Evening and Weekend Classes, since many classes meet once each week or every other weekend. A student who is absent from class must contact the instructor before the absence, if possible. Class absences jeopardize a student's academic success and grade. Each instructor of Evening and Weekend Classes determines the specific attendance policies for the class.

Attendance via participation is critical to a student's success in Online and Hybrid Classes. When an online or hybrid class student does not participate in consecutive online activities or does not submit consecutive assignments AND has not communicated with the instructor about the student's participation, the instructor must drop the student from the class using the Faculty Initiated Student Withdrawal process. Each instructor determines the specific number of consecutive activities or assignments that will initiate the withdrawal, according to the requirements of the particular online or hybrid class.

Academic Integrity

Cheating, plagiarism (submitting another person's material as one's own), or completing assignments for another person who will receive academic credit are not permitted. This includes the use of unauthorized books, notebooks, or other sources in order to secure or give help during an examination, the unauthorized copying of examinations, assignments, reports, or term papers, or the presentation of unacknowledged material as if it were the student's own work.

Disciplinary action may be taken beyond the academic discipline administered by the course instructor. Read the University's Academic Integrity Policy [1].

COVID-19 Policies

- While the University plans to offer instruction face-to-face, due to Covid-19, some or all instruction for all or part of Academic Year 20-21 may be delivered remotely. Tuition and mandatory fees have been set regardless of the method of instruction and will not be refunded in the event instruction occurs remotely for any part of the Academic Year.

- Students are required to wear masks in the class at all times; should wash their hands frequently, watch and maintain adequate social distance from others.

- For your safety, you should sanitize your desk space before and after use.

- International students enrolled in hybrid courses are required to attend the in-person sections and attendance policies will be enforced.

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[1]The underlined text is a clickable hyperlink to a web page

- The University reserves the right to change the instructional modality of this course as needed in response to concerns related to COVID-19 or other public health/safety issues.

Other University Policies [2]

Links to selected University policies are available in <u>Blackboard</u> under the Student Resources tab. The current Texas Wesleyan University <u>Catalog</u> and <u>Student Handbook</u> contain all University policies.

Class Schedule [3]

Week	Topic
Week 1-2:	The World Wide Web
Week 3:	Binary Values and Number Systems
Week 4:	Data Representation
Week 5-6:	Gates and Circuits
Exam 1	
Week 7:	Computing Components
Week 8:	Problem Solving and Algorithm Design
Week 9:	High-Level Programming Languages and MS Office
Week 11-12:	Abstract Data Types and Algorithms
Exam 2	
Week 13:	Operating Systems
Week 14:	Database Systems
Week 15:	Computer Networks
Final Exam	

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[2]Note: Course syllabi are intended to provide students with basic information concerning the course. The syllabus can be viewed as a "blueprint" for the course. Instructors will inform students of any changes concerning examinations, the grading or attendance policies, or changes in project assignments.

[3]This is a tentative schedule. It is subject to change as the class progresses