Syllabus - CSCI 1423

Programming Fundamentals I (with lab) – Fall 2020

Course Description & Overview

Introduction to the fundamental concepts of structured and Object Oriented programming. Topics include software development methodology, data types, control structures, functions, arrays, files, classes, program testing and debugging techniques. Concurrent course: CSCI 1421. Prerequisite: CSCI 1411/1413 or equivalents. Three lecture hours a week. Credit: Three hours.

Note: The co-requisite, CSCI1421 is 1 lecture hour a week and accounts for 1 credit hour.

Meets Major Requirements.
Meets Elective Requirements

Faculty Contact Information

- Dr. David Gardner
- Email: dgardner@twu.edu
- Phone: 940-898-2162
- Office: MCL 421
- Office Hours: MW1:00pm-4:00pm, other times and online by appointment

Goals & Outcomes

Upon successful completion of this course, students will be able to:

- Develop basic and intermediate programs to perform a variety of tasks using variables, constants, and assignment statements.
- Demonstrate an understanding of the use of data types in strongly and loosely typed languages.
- Utilize selection and control statements to manipulate the flow of different programs.
- Exhibit knowledge of modular design and structure by correctly incorporating the use of subroutines, functions, and/or methods into programs.
- Demonstrate an understanding of object oriented programming and how it compares to procedural programming.
- Create logical, concise, and syntactically correct programmatic solutions to a variety of problems

Each of the above student learning outcomes must be performed at an appropriate level as stated in each course assignment requirements, grading scale or rubric.

Course Materials & Supplies

- Required: Raspberry Pi 4, 3B+, 3 or Zero W kit (see CourseMaterials document for additional information about what the kit should include)
- Reliable computer and internet access (Be sure you have alternate access in case of technical problems)
- Reliable video, screen, and/or audio recording hardware and software access. (Be sure you have alternate access in case of technical problems)

NOTE: If you have any questions about the required materials, please consult your instructor, course assistants, or supporting documentation as provided by your instructor.

NOTE: Lack of access to a computer or technical problems with a computer are not acceptable excuses for missing assignments or deadlines.

Support

General access computer labs are available in many locations throughout TWU as well as at many public libraries.

Tutoring may be available in MCL307 in the department's Math and Technology Success Center. You can stop by the lab for a copy of their schedule or visit their website at

Course Format

This course is designed to be a blended educational opportunity, incorporating both in-class and online coursework. In-class coursework will include lectures, discussions, group work, and lab work. Online coursework will be completed via various online resources including Blackboard, Moodle, Google, YouTube, etc. Class discussion may occur both in-class and through various electronic tools.

Topics

Several computing topics will be covered in the class, including but not limited to:

- Procedural Programming
- Object Oriented Programming
- Structured/Modular Design
- Data Types
- Logical and Control Statements
- Subroutines, Methods, Classes, & Objects
- Debugging

Assignments & Submissions

You are expected to accomplish all required activities for each unit of instruction on or before the assignment due date. All assignments are required, except in special situations noted by the instructor. Assignments will be assigned and discussed in-class and will be submitted online. Email submissions are NOT accepted and will NOT be graded, unless specifically requested by the instructor. Unless otherwise noted, all file submissions MUST follow the naming convention outlined in the assignment description or stub code. Inappropriately labelled assignments will NOT be graded. Late work is NOT accepted and will be given a grade of 0.

Homework assignments must be completed on your own time and on your own, except in the case of specifically assigned group work. Each student must complete homework assignments individually. Group work is not acceptable, unless specifically identified as such. Shared credit or zero credit is given for shared work. When you submit an assignment for grading, you pledge that your work is your own and original, and that you have neither given nor received any unauthorized assistance on the assignment.

Examinations

Any course examinations will be given via electronic resources. If a student knows that they will miss an exam for a university excused absence, then they must contact the instructor 3 weeks prior to the test to ask the instructor about the possibility of taking the exam early.

Outside Class Work

Students are expected to invest a minimum of 2 hours of study and problem-solving time for each hour of class time. For example, if you are taking one 3 hour course then you are expected to spend at least 6 hours of outside class time researching, studying, and completing assignments. The expectation for online courses is similar except all course work will be completed outside of class meaning that a 3 hour online class would require a minimum of 9 outside hours of class work.

Grading

Grade Distribution

- Lab/In-Class Exercises: 30%
- Programming Assignments: 30%
- Final Project(s): 20%
- Exams: 20%

Grading Scale

- A: 90-100%
- B: 80-89%
- C: 70-79%
- D: 60-69%
- F: less than 60%

Grading Questions

During the course of the semester, if a student has a question about a grade, they must contact the instructor within 10 days of the grade being posted. In special circumstances, an instructor may request grade/assignment questions be sent to them earlier in order to support a student's performance on an upcoming assignment/exam, or to meet a program or organizational deadline. For example, the time between when a final exam is taken and when university grades must be submitted, may be less than 10 days. In this situation, once the instructor has posted grades, they may request that the students send any questions to the instructor within a shorter time period in order to allow enough time for the instructor to address the student's question.

Policies

Attendance

TWU Attendance Policy: Consistent attendance is vital to academic success and is expected of all students. Grades are determined by academic performance, and instructors may give students written notice that attendance related to specific classroom activities is required. Absences do not exempt students from academic requirements. Excessive absences, even if documented, may result in a student's failing the course. Excused absences are within the purview of the instructor. Students must consult with instructors regarding make-up work.

Course Make-Up Work Policy: A student must contact the instructor before, or on, the day they return to classroom activities to see if the absence can be excused and if/when make-up work can be completed.

Civility

This is a civil classroom/course. I have the expectation that you will treat each other and your instructor with respect. This applies to your conduct in-person, online, and in emails. This includes adhering to the following:

- No food or drinks are allowed in the computer classroom.
- No use of games, email, social networks, or other electronic communications in class.
- No headsets, music devices etc. during lectures, discussions, or tests.
- No use of cell phones in the classroom (voice or text).
  - Use of cell phones during tests will result in a 0 for the test and dismissal from the testing room.
- Raise your hand if you need assistance and wait your turn.
- Do not talk during lecture/demonstration sessions.

Email Communications

The email communications policies for this class are as follows:

- Address your instructor by their proper name and title.
- Clearly state what your problem is, and what attempts you have made to solve the problem.
- Sign your email with your full name
- Subject lines must appear in the following manner: department coursenumber.sectionnumber - yoursubject (eg: CSCI 3002.01 - Questions about last class).
- Before sending an email, check the announcements, forums and directions online to see if your question has already been answered.
- The instructor for this class is not available 24/7. You can expect emails to be answered during posted office hours. Plan your emails accordingly.
- Emails that contain rude or inappropriate language will not be answered.

Departmental Hardware

During the course of the semester, you may have the opportunity to checkout computing hardware from the department to take home and work on outside of class for assignments, labs, and projects. You will be required to log all equipment checked out and to keep track of and prevent harm to the checked out hardware. All checked out hardware must be returned to the department by the assigned check-in date and must be returned in similar or better condition. Failure to return departmental hardware will result in a drop of 2 letter grades.

Disability Support

Texas Woman's University strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability , please contact Disability Services for Students (dss@twu.edu; 940-898-3835, CFO 106) to verify eligibility and register for services. After

DSS registration, contact me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion.

Title IX

Students who may need academic accommodations due to pregnancy (including termination of pregnancy, childbirth, and lactation) are encouraged to contact Parrish Nicholls, J.D., Director & Coordinator of Title IX (pnicholls@twu.edu, 940-898-3518) and me to discuss your academic needs.

Academic Integrity

Honesty in completing assignments is essential to the mission of the University and to the development of the personal integrity of students. In submitting graded assignments, students affirm that they have neither given nor received unauthorized assistance, and that they have abided by all other provisions of the Code of Conduct in the TWU Student Handbook. Cheating, plagiarism, collusion, dual submission of a paper or other kinds of academic dishonesty will not be tolerated and will result in appropriate sanctions that may include failing an assignment, failing the class, removal from an academic program, or being suspended or expelled. Allegations of academic dishonesty in this course may be reported to the Office of Civility and Community Standards. The specific disciplinary process for academic dishonesty is found at http://www.twu.edu/student-handbook in Section 5 as part of the TWU Student Code of Conduct. For details on avoiding plagiarism, visit http://libguides.twu.edu/writingciting and visit the Writing Help > Plagiarism section.

Tentative Schedule

This is a tentative schedule and is subject to change.

Schedule provided in separate document.