CSE 3302 : Programming Languages

University of Texas at Arlington
Fall 2023

Instructor:	Kelly Scott French
Office:	ERB 339
Hours:	Monday / Wednesday 1:00pm – 2:00pm
	or by appointment

Email:	kelly.french@uta.edu
Faculty Profile:	https://mentis.uta.edu/explore/profile/kelly-french

Class Schedule and Location:
        CSE 5307 - 001 (TuTh 2:00pm – 3:20pm)   NH 110
        CSE 3302 - 002 (MoWe 2:30pm – 3:50pm)   NH 110
        CSE 3302 - 003 (MoWe 4:00pm – 5:20pm)   NH 110

Prerequisites:	CSE 1325: O-O Programming
	CSE 2320 / 3318: Algorithms & Data Structures
	CSE 2312: Comp. Org. & Assembly Lang. Prog.

Objective:	In future design situations, students will be capable of considering programming language issues.

Outcomes:
- Describe the general principles that involved in the design of programming languages.
- Explain the relationship between syntax and semantics as well as the differences between the two.
- Describe the principal features of different programming language paradigms.
- Explain programming language concepts such as binding, naming, scopes, storage, control structures, functions, calling conventions, and exceptions and their interactions.
- Explain how a variety of programming language constructs are implemented.
- Describe the structure of a typical compiler and interpreter.

Textbook:	Kenneth C. Louden & Kenneth A. Lambert, *Programming Languages: Principles and Practice*, Course Technology, Cengage Learning, 2012.

Supplementary:	D. Crockford, *JavaScript: The Good Parts*, Yahoo Press, 2008.
	`http://javascript.crockford.com`
	Federico Biancuzzian Shane Warden, Masterminds of Programming: Conversations with the creators of Major Programming Languages, O'Reilly 2009

Reading and Assignments: Will be assigned in class and shared on Canvas.

Grading Policy:
Letter grades will be assigned as follows
90% or above = A, 80 - 89 = B, 70 – 79 = C, 60 – 69 = D, 0 – 59 = F

Grade Weighting:

- Homework: 15%
- Labs: 25%
- Exams (3):   45%
- Final Exam: 15%

Technology Requirements:
Microsoft Teams may be used for office hours. Microsoft Teams is available to all employees and students at The University of Texas at Arlington. You may download Teams to your device using the following URL: https://teams.microsoft.com/downloads.

Policies:

There will be no class on Monday, April 8th.

Lectures may be recorded but not be made available until a week or more after the lecture date if at all.

Exams will be in person.

Regular attendance of lecture is encouraged. You are expected to know lecture contents and announcements. Exams and assignments will primarily cover material presented in class rather than in the book. There will be questions on exams that were presented in lecture but not in the book or the slides.

While interaction is not required, the instructor encourages students to participate during lecture including asking questions or discussing topics of interest.

Announcements and assignments will be through Canvas.

You are expected to have read the assigned readings by the specified date.

CHEATING - YOU ARE EXPECTED TO KNOW UNIVERSITY POLICIES. If you are suspected of cheating, the matter must go through university channels outside of the CSE Department.
`http://www.uta.edu/conduct/`
Any request for special consideration must be appropriately documented in advance. (Special consideration does not include giving a higher grade than has been earned.)

Letter grades will be assigned as follows:

90-100 = A, 80-89 = B, 70-79 = C, 60-69 = D, 0-59 = F. 89.5 will be rounded to 90 and 79.5 will be rounded to 80 and 69.5 will be rounded to 70 and 59.5 will be rounded to 60.

The late penalty for homework or lab assignments is 5 points per day after the due date up to a maximum of 50 points as long as the due date is not within the last 2 weeks of class. This is to encourage the student to submit their work as even a 50 is better than a zero!

Each lab is graded as follows:

a. Output/Code   60%   Your code should be easy to compile and run. If you know your program has problems, you should let the GTA know what parts are functional.

b. Style   20%   The emphasized language features are applied appropriately.

c. Structure   20 %   Code is not unnecessarily complicated or long. Points may be subtracted if it is hard to read or to follow the logic

You are responsible for correctly submitting each programming assignment on Canvas.

Points will not be awarded for programs that are not substantially complete.
TA will handle regrade requests. Requests after 7 days will not be considered.

If not satisfied with the results, you have 7 days after the initial regrade period to request a review from the instructor, and the decision is final.

Students may be asked to bring a laptop or other mobile device, i.e. a phone, to class in order to complete an assignment or quiz during the class period, unless other arrangements are approved by the instructor. This will be announced at least one class period in advance.

Course Schedule

Note that this is subject to change, but here are the topics I intend to cover in their approximate order.

Turing Machines
The Halting Problem
Language Design Criteria
Language Paradigms
    - Functional
    - Logical (optional)
    - Object Oriented
Syntax
Semantics
Control Structures
    - Expressions
    - Statements
    - Procedures
    - Environments

Data Types
Abstract Data Types

Important Dates

Tuesday, January 16th	First day of classes
Wednesday, January 31st	Census date
March 11 – 15	Spring Break
Friday, March 29th	Last day to drop classes
Tuesday, April 30th	Last day of classes at UTA

Finals Schedule

The final exam will be given on the University scheduled day and time during finals week, consult the published Finals Schedule for exact day and time for each section.

As the instructor for this course, I reserve the right to adjust this schedule in any way that serves the educational needs of the students enrolled in this course.

Attendance: At the University of Texas at Arlington, taking attendance is not required but attendance is a critical indicator in student success. 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, [insert your attendance policy and/or expectations, e.g. "I will take attendance sporadically" or "I have established the following attendance policy: …"] However, while UT Arlington does not require instructors to take attendance in their courses, the U.S. Department of Education requires that the University have a mechanism in place to mark when Federal Student Aid recipients "begin attendance in a course." UT Arlington instructors will report when students begin attendance in a course as part of the final grading process. Specifically, when assigning a student a grade of F, faculty report the last date a student attended their class based on evidence such as a test, participation in a class project or presentation, or an engagement online via Canvas. This date is reported to the Department of Education for federal financial aid recipients.

Institution Information
UTA students are encouraged to review the below institutional policies and informational sections and reach out to the specific office with any questions. To view this institutional information, please visit the [Institutional Information page](#) which includes the following policies among others:
- Drop Policy
- Disability Accommodations
- Title IX Policy
- Academic Integrity
- Student Feedback Survey
- Final Exam Schedule
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Counseling and Psychological Services (CAPS) www.uta.edu/caps/ or calling 817-272-3671 is also available to all students to help increase their understanding of personal issues, address mental and behavioral health problems and make positive changes in their lives.

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.

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. 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.

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/studentsuccess/success-programs/programs/resource-hotline.php

LIBRARY library.uta.edu

RESOURCES FOR STUDENTS

Research or General Library Help

Academic Plaza Consultation Services library.uta.edu/academic-plaza

Ask Us ask.uta.edu/

Library Tutorials library.uta.edu/how-to

Subject and Course Research Guides libguides.uta.edu

Librarians by Subject library.uta.edu/subject-librarians

Research Coaches http://libguides.uta.edu/researchcoach

Resources

A to Z List of Library Databases libguides.uta.edu/az.php

Course Reserves pulse.uta.edu/vwebv/enterCourseReserve.do

Study Room Reservations openroom.uta.edu/

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