

CMSC38XY – Fall 2020

A Tour of Programming Languages

Prerequisites: CMSC216, CMSC250

Credits: 1

Time and Location: Fridays, xx:00pm – xx:50pm in XYZabcd

Instructor: Dr. David Van Horn

Course Facilitators: Clifford Bakalian, Justin Goodman

Course Description:

We will examine various programming languages to gain a better understanding of PL design. Over the semester, students will complete a handful of programming projects to gain experience in uncommon programming paradigms

Student Goals:

- To gain a more expansive picture of programming languages.
- To gain experience in programming language paradigms and design.
- To understand how different programming languages can be used to accomplish the same task.

Resources:

- [Wikipedia page](#)
- More resources will be posted during the semester.

Schedule:

Fall 2020 16-week schedule.

Week	Topic	Language	
09-04	Introduction/Syllabus	–	
09-11	Procedural languages	COBOL	
09-18	REPL/Scripting	Lua	
09-25	Logic languages	Prolog	
10-02	Concurrent language	Go (Golang)	
10-09	Security	Rust	
10-16	Stack-based language	PostScript	
10-23	Array programming	APL	
10-30	List-based/domain-specific languages	Racket	exam 1 due
11-06	Parsing Languages	lex/yacc	
11-13	Data-oriented languages	SQL	
11-20	Shading languages	OpenGL	
break	(Oddities)	MSFT PowerPoint	
12-04	Esoteric languages	INTERCAL	
12-11	Reflective programming	Befunge	
final	–	–	exam 2 due

Weekly Assignments:

Each week, after lecture, we will release a simple programming assignment in the language covered that day, due before the following week's lecture. These tasks will vary in difficulty depending on the language in question. For simple languages like Rust or Prolog, one example task could be to finish simple functions like Fibonacci, or implement a binary tree. For more nuanced languages, like INTERCAL or lex/yacc, simple file I/O and manipulation of data will be asked.

Exams:

There will be two exams for this course – one around the semester halfway point, and one at the end of the semester. Both will be take-home exams featuring coding problems more difficult than the weekly assignments. Students will have one week to complete each exam. Students should work alone

Grading:

Grading is broken down as follows:

- 40% Assignments
- 30% Exam 1
- 30% Exam 2
- Quizzes for extra credit

Office Hours: Each facilitator will have an office hour posted each week.

Excused Absence and Academic Accommodations: See the section titled “Attendance, Absences, or Missed Assignments” available at Course Related Policies.

Disability Support Accommodations: See the section titled “Accessibility” available at Course Related Policies.

Academic Integrity: Note that academic dishonesty includes not only cheating, fabrication, and plagiarism, but also includes helping other students commit acts of academic dishonesty by allowing them to obtain copies of your work. In short, all submitted work must be your own. Cases of academic dishonesty will be pursued to the fullest extent possible as stipulated by the Office of Student Conduct. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit <http://www.shc.umd.edu>.

All individual assignments/quizzes must be done individually. Please visit the PDF of the [UMD Code of Academic Integrity](#) for a detailed explanation of what constitutes academic dishonesty. Note that it includes not only cheating, fabrication, and plagiarism, but also includes helping other students commit acts of academic dishonesty by allowing them to obtain copies of your work. In short, all submitted work must be your own.

Cases of academic dishonesty will be referred to the [University's Office of Judicial Programs](#). If the student is found to be responsible of academic dishonesty, the typical sanction results in a special grade “XF”, indicating that the course was failed due to academic dishonesty. More serious instances can result in expulsion from the university. If you have any doubt as to whether an act of yours might constitute academic dishonesty, please contact your one of the course instructors.

Excused Absence and Academic Accommodations: Any student who needs to be excused for an absence from a single discussion day due to a medically necessitated absence shall, within 24 hours of the missed assessment, inform the instructor of the missed discussion day by using email or by using the “Report Absence” button on the grades server. Each note must contain an acknowledgment by the student that the information provided is true and correct. Providing false information to University staff is prohibited under Part 10(j) of the Code of Student Conduct (V-1.00(B) University of Maryland Code of Student Conduct) and may result in disciplinary action. The student is responsible for following up with the instructor and/or the TA to make sure they have all information missed from that day.

This self-documentation may not be used for any Major Scheduled Grading Events, defined below, and it may only be used for only 1 discussion day during the entire semester. Any student who needs to be excused for a prolonged absence (2 or more consecutive class meetings), or for a Major Scheduled Grading Event, must provide written documentation of the illness from the Health Center or from an outside health care provider. This documentation must verify dates of treatment and indicate the timeframe that the student was unable to meet academic responsibilities. In addition, it must contain the name and phone number of the medical service provider to be used if verification is needed. This documentation must be given to the instructor within a week of the student's return to classes.

The **Major Scheduled Grading Events** for this course include the 4 projects and the final project.

At the time the instructor is informed about an excused project deadline, arrangements can be made regarding it in terms of an appropriate extension to the deadline.

It is also the student's responsibility to inform the instructor of any intended absences from exams or class for religious observances or official University events during the first two weeks of the semester.

Disability Support Services: Any student eligible for and requesting reasonable academic accommodations due to a disability is requested to provide, to the instructor in office hours, a letter of accommodation from the Office of Disability Support Services within the first two weeks of the semester and the arrangements for individual exams must be made with the instructor at least one week in advance.

University Policies: There are general course related policies at the University with which you might want to become familiar.

Course Evaluations: If you have a suggestion for improving this class, don't hesitate to tell the instructor or course facilitators during the semester. The Department of Computer Science takes the student course evaluations very seriously. Evaluations for the Fall will usually be open during the first two weeks of December. Students can go to www.CourseEvalUM.umd.edu to complete their evaluations (usually in the last two weeks or so of the semester). Your comments will help make this class better.