CSE 3302/5307-001: Programming Languages

Fall 2014: TR 2:00 - 3:20, NH 112

Instructor: Bob Weems, Associate Professor
Office: 627 ERB (weems@uta.edu, http://ranger.uta.edu/~weems/)
Hours: TR 12:30 -1:45 p.m.

GTA: Contact information will be on my personal webpage

Prerequisites:
CSE 1325: O-O Programming
CSE 2320: 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:
1. Understanding of programming language paradigms, including imperative, functional, and object-oriented/generic.
2. Understanding of the breadth of design issues in defining programming lanuages, along with those for building compilers, interpreters, and run-time systems.
3. Understanding, at an elementary level, of the formalisms and notations used with programming languages.

Textbooks: M. Gabbrielli and S. Martini, *Programming Languages: Principles and Paradigms*, Springer-Verlag, 2010.

D. Crockford, *JavaScript: The Good Parts*, Yahoo Press, 2008. http://javascript.crockford.com

M. Felleisen, et.al., *Realm of Racket: Learn to Program, One Game at a Time!*, No Starch Press, 2013. http://racket-lang.org

A. Stepanov and P. McJones, *Elements of Programming*, Addison-Wesley, 2009. http://www.elementsofprogramming.com

N. Wirth, *PASCAL-S: A Subset and its Implementation*, ETH Technical Report 12, 1975 (available from webpage).

Readings: Indicated on calendar later in syllabus.

Grade: Based on the following weights:

Exams 1-3: 70% divided evenly among 3 exams.
Exam 3: Tuesday, December 9, 2:00-4:30

Programs: 30% divided evenly among 4 - 6 assignments.

Policies:

1. Regular attendance is expected. You are expected to know lecture contents and announcements. The lectures are being recorded and will have a link on the web page, but no availability guarantee is made (e.g. this is not a "distance" course).

2. The course web page is http://ranger.uta.edu/~weems/NOTES3302/cse3302.html

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

4. 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/

5. Any request for special consideration must be appropriately documented in advance. (Special consideration does not include giving a higher grade than has been earned.)

6. Late programs are penalized according to the following schedule. LABS ARE DUE AT 1:45 PM ON THE DUE DATE, NOT MIDNIGHT. After the due time, assistance will not be provided.

Degree of lateness	Penalty
Up to 1:45 next day	5 pts
Up to 1:45 two days	15 pts
Up to 1:45 three days	30 pts
Up to 1:45 four days	60 pts

7. Each lab is graded as follows:

		Some Issues
a. Output/Code	70%	If you know your program has problems, you should let the GTA know what parts are functional. Test cases demonstrating the limited functionality are useful.
b. Style	15%	The emphasized language features are applied appropriately.
c. Structure	15%	Code is not unnecessarily complicated or long. It is often better to rewrite code rather than patching several times.

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

Points will not be awarded for programs that are not substantially complete.

8. If you require a reasonable accomodation for a disability, please contact me no later than the second week of this semester. Further details at http://www.uta.edu/disability/

9. Occasional class-wide email messages (e.g. weather situations, clarifications) may be sent to the addresses recorded by MyMav.

Course Content (in chronological order)

Reading Annotations:

		Gabbrielli-Martini	**Crockford**	**Wirth**	**Felleisen**	**Stepanov-McJones**
1	Preliminaries (Abstract Machines) Steele - *Growing a Language*	Intro., 1, 13.3, 13.4, 13.5, 13.6			Preface, Intro.	Preface, Errata, 1, A
2	Three-and-a-Half New Friends		1, 10	1-3	1-5	2, 3
3	Syntax & Semantics	2	2, 7, D	5, A	6	4, B
4	Names & Scope	4			7	5
5	Memory Management	5		4	8	6
6	Control Structure	6			9	7
7	Control Abstraction	7			10, 11	8
8	Structuring Data	8	3-6		12	9
9	Data Abstraction	9				10
10	Object-Orientation, Polymorphism, and Generic Programming	10				11
11	Functional Paradigm	11				12, Afterword

Calendar - with subject numbers from course content

August				September			October			
		21	Syllabus	2	2.	4			2	5.
26	1.	28		9		11	7		9	6.
				16	3.	18	14		16	7.
				23	4.	25	21		23	8.
				30	Exam 1		28	Exam 2	30	

November				December	
4	9.	6		2	
11	10.	13		9	Exam 3
18	11.	20			
25		27	Holiday		

October 29 is last day to drop; submit requests to major advisor prior to 4:00 p.m.