

CSE 3302/5307-001: Programming Languages

Spring 2015: TR 9:30 - 10:50, ERB 131

Instructor: Bob Weems, Associate Professor
Office: 627 ERB (weems@uta.edu, <http://ranger.uta.edu/~weems>)
Hours: T 11:15 a.m - 1:15 p.m., R 1:00 - 3:00 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 languages, 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. Gabrielli 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>

R. Kent Dybvig., *The Scheme Programming Language*, 4th ed., MIT Press, 2009. <http://www.scheme.com/tspl4/>

N. Wirth, *PASCAL-S: A Subset and its Implementation*.
<http://ranger.uta.edu/~weems/NOTES3302/NEWTOTES/NOTES02/Wirth-Pascals.pdf>

Readings: Indicated on calendar later in syllabus.

Grade: Based on the following weights:

Exams 1-3: 70% divided evenly among 3 exams.

Exam 3: Thursday, May 14, 8:00 - 10:30 a.m.

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 9:15 AM ON THE DUE DATE, NOT MIDNIGHT. After the due time, assistance will not be provided.

<u>Degree of lateness</u>	<u>Penalty</u>
Up to 9:15 next day	5 pts
Up to 9:15 two days	15 pts
Up to 9:15 three days	30 pts
Up to 9:15 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:

		Gabrielli-Martini	Crockford	Wirth	Felleisen	Dybvig
1	Preliminaries (Abstract Machines) Steele - <i>Growing a Language</i>	Intro., 1, 13.3, 13.4, 13.5, 13.6			Preface, Intro.	1
2	Four-and-a-Half New Friends		1, 10	1-3	1-5	2
3	Syntax & Semantics	2	2, 7, D	5, A	6	3.1-3.2
4	Names & Scope	4			7	
5	Memory Management	5		4	8	
6	Control Structure	6			9	
7	Control Abstraction	7			10, 11	5.5, 5.7
8	Structuring Data	8	3-6		12	
9	Data Abstraction	9				
10	Object-Oriented, Polymorphism, and Generic Programming	10				
11	Functional Paradigm	11				3.3, 5.6

Calendar - with subject numbers from course content

January		February		March					
20	Syllabus	22	1.	3	5	3	5	Exam 1	
27		29	2.	10	12	10	SPRING	12	BREAK
				17	19	17	5.	19	
				24	26	24	6.	26	
						31	7.		
April		May							
		2		5	7				
7	8.	9	Exam 2		14	Exam 3			
14	9.	16							
21	10.	23							
28	11.	30							

April 3 is the last day to drop; submit requests to major advisor prior to 4:00 p.m.