Course Syllabus

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CS 424/524 - Intro to Programming Languages
Fall 2016
Syllabus and Course Summary

last modified July 27, 2016

Instructor: Dr. Harry S. Delugach
Email: delugach@uah.edu

WWW: http://www.cs.uah.edu/~delugach (http://www.cs.uah.edu/~delugach)
Phone: (256) 824-6614

Class Meets: MW. 11:10 AM - 12:30 PM
Location: OKT N-326
Office Hrs: 2:00 - 3:30 Tue-Thu
or by appointment
Office Location: TH N-351

Text:
Programming Languages, by Allen Tucker and Robert Noonan, **2nd edition**, McGraw-Hill, 2007.
ISBN 0-07-286609-4 (note this is the 2nd edition).

Clicker:
ResponseCard NXT: P/N RCXR-02 (-03 may also work) by Turning Technologies

Grading

Midterm Exam	**20 %**
Final Exam	**30 %**
Programming Exercises	**20 %**
Problem Sets	**20 %**
Quizzes	**10 %**

The following grading scale will be used:

> A+ 96.5; A 92; A- 89.5; B+ 86.5; B 83.5; B- 79.5; C+ 76.5; C 73.5; C- 69.5; D 59.

The **plus/minus grading system** will be used in this course and such grades will appear on your transcript. In accordance with University policy, they will **not** affect your grade point average (GPA**).** If you feel there is an error in the grading of your work, you must bring it to the instructor's attention within one week after the grade was assigned.

General Policies

Please read the **general guidelines and policies** (http://www.cs.uah.edu/~delugach/Courses/Syllabus-General.html) that apply to this course, accessible through Canvas (the course management system). They are a part of this syllabus. This syllabus is freely available to anyone. Other course materials, announcements, discussions, etc. will be distributed using Canvas. (http://uah.blackboard.com/)

Course Objectives

- To learn how programming language features are defined and classified.
- To compare features in different programming languages and evaluate their strengths and weaknesses.
- To learn some details of programming in selected non Von Neumann languages.
- To learn how different programming languages employ (or do not employ) object-oriented concepts.
- (CS 524) To become familiar with published literature on programming languages and prepare technical papers.

Canvas Online Access

Communication in this class will be conducted through Canvas by Instructure, the university's course management system. To access Canvas, go to **uah.instructure.com (https://uah.instructure.com/courses/15767/assignments/uah.instructure.com)** or access it through **the Central Authentication Service (SSO) (http://sso.uah.edu/cas)**. You'll find instructions there about id/password and access information. You may also reach the Help Desk at **http://www.uah.edu/oit (http://www.uah.edu/oit/contact)** or phone them at 256-824-3333.

Problem Sets and Quizzes

There will be three problem sets during the first half of the course. There will be an unspecified number of regular in-class ungraded and graded quizzes. Problem sets will be submitted and graded through Canvas. Problem sets must follow instructor's **Submission guidelines (http://www.cs.uah.edu/~delugach/Courses/Submission.html)**.

Programming Exercises

A portion of your grade in this course will be based on two programming exercises, in various interesting languages which will be covered in the course. The purpose of the exercises is expose you to different styles of programming, to expand your awareness of what "programming" can mean, and to help you understand the advantages and disadvantages of various approaches to programming language design. Programs must follow instructor's **Submission guidelines (http://www.cs.uah.edu/~delugach/Courses/Submission.html)**.

CS 524 (also CS 424 Honors contracts)

Graduate students enrolled in CS 524 (and students pursuing an Honors contract in CS 424) will be expected to prepare a 5-page paper, with specific instructions to be given out before the mid-term exam. There may be other small differences (e.g., additional questions on exams, etc.) Honors students pursuing an Honors contract in CS 424 are expected to follow all the requirements for CS 524 students.

The paper will count as much as a single programming assignment (see above).

Course Schedule

NOTE: Readings should be done before the class in which they will be discussed.

DATE	TOPIC	TEXT READINGS	ASSIGNMENTS
Wed Aug 17	Overview	Ch. 1	
Mon Aug 22	Syntax	Ch. 2	
Wed Aug 24	Syntax	Ch. 2	
Mon Aug 29	Names	Ch. 4	
Wed Aug 31	Names	Ch. 4	
Mon Sep 05	**NO CLASS - Labor Day**		
Wed Sep 07	Types	Ch. 5	
Mon Sep 12	Types	Ch. 5	**Problem Set A (https://uah.instructure.com/courses/15767/assignments/90760)**
Wed Sep 14	Types	Ch. 5	
Mon Sep 19	Semantics	Ch. 7	
Wed Sep 21	Semantics	Ch. 7	
Mon Sep 26	Semantic Interpretation	Ch. 8	**Problem Set B (https://uah.instructure.com/courses/15767/assignments/90761)**
Wed Sep 28	Semantic Interpretation	Ch. 8	
Mon Oct 03	Functions	Ch. 9	
Wed Oct 05	Functions	Ch. 9	**CS 524 paper proposal (https://uah.instructure.com/courses/15767/assignments/90757)**
Mon Oct 10	Functions	Ch. 9	
Wed Oct 12	Memory Management	Ch. 11	**Problem Set C (https://uah.instructure.com/courses/15767/assignments/90762)**
Mon Oct 17	Memory Management	Ch. 11	
Wed Oct 19	Imperative Programming	Ch. 12	
Mon Oct 24	**Mid-Term Exam**	**Ch. 1,2,4,5,7,8,9,11,12**	
Wed Oct 26	Object-Oriented Programming	Ch. 13	
Mon Oct 31	Object-Oriented Programming	Ch. 13	
Wed Nov 02	Python	Instructor notes	**CS 524 paper first draft (https://uah.instructure.com/courses/15767/assignments/90756)**
Mon Nov 07	Python	Instructor notes	
Wed Nov 09	Logic Programming / Prolog	Ch. 15	**Python Program (https://uah.instructure.com/courses/15767/assignments/90764)**
Mon Nov 14	Logic Programming / Prolog	Ch. 15	

Wed Nov 16	Logic Programming / Prolog	Ch. 15	
Mon Nov 21	Functional Programming	Ch. 14	Prolog Program (https://uah.instructure.com/courses/15767/assignments/90763)
Wed Nov 23	**NO CLASS - Thanksgiving**		
Mon Nov 28	Summary of the Course, Review		CS 524 paper (https://uah.instructure.com/courses/15767/assignments/90755)
Mon Dec 05	**Final Examination 8:00 - 10:30 AM**		

Assignments Summary:

Date	Details	
Sun Aug 21, 2016	Register Clicker (https://uah.instructure.com/courses/15767/assignments/96391)	due by 11:59pm
Mon Sep 12, 2016	Problem Set A (https://uah.instructure.com/courses/15767/assignments/90760)	due by 11:59pm
Mon Sep 26, 2016	Problem Set B (https://uah.instructure.com/courses/15767/assignments/90761)	due by 11:59pm
Wed Oct 5, 2016	CS 524 paper proposal (stage 1) (https://uah.instructure.com/courses/15767/assignments/90757)	due by 11:59pm
Wed Oct 12, 2016	Problem Set C (https://uah.instructure.com/courses/15767/assignments/90762)	due by 11:59pm
Mon Oct 24, 2016	Mid-Term Exam (https://uah.instructure.com/courses/15767/assignments/90759)	due by 11:10am
Wed Nov 2, 2016	CS 524 Paper draft (https://uah.instructure.com/courses/15767/assignments/90756)	due by 11:59pm
Wed Nov 9, 2016	Python Program (https://uah.instructure.com/courses/15767/assignments/90764)	due by 11:59pm
Mon Nov 21, 2016	Prolog Program (https://uah.instructure.com/courses/15767/assignments/90763)	due by 11:59pm
Mon Nov 28, 2016	CS 524 Paper (https://uah.instructure.com/courses/15767/assignments/90755)	due by 11:59pm

Mon Dec 5, 2016	**Final Exam (https://uah.instructure.com/courses/15767/assignments/90758)**	due by 8am