COSC 341/342   Programming Languages [for Educators]   WINTER 2010

T Th 11:00 - 12:15pm   302 PH

Instructor: Susan Haynes   shaynes @ emich.edu   emunix.emich.edu/~haynes

Text: Webber, *Modern Programming Languages: A Practical Introduction*, Franklin, Beedle & Assoc.

Description: Formal definition of programming languages; structure of simple statements; global properties of algorithmic languages; data description; run-time representation of programs; procedural languages such as C and C++, non-procedural languages such as Lisp or Prolog. Credit will not be given for both COSC 341 and COSC 342.

Learning Objectives:
1. Explain the compilation process and the interpretation process.
2. Read and create BNF to describe syntax
3. Read and create one semantic description for a language.
4. Understand design alternatives for
   * control structures
   * parameter passing
   * scoping
   * types and type definition
5. Write programs in at least two different paradigms (functional, logical, OO, ...) in at least two languages neither of which is the "teaching language" of the department.

COSC 341 and COSC 342 have essentially the same catalog description.

Instructor's philosophy: This class is schizophrenic in that it has two major objectives: (1) it is part one of a compiler class, i.e., it covers how to *implement* a programming language, and (2) by learning the elements of 2 or 3 different programming language paradigms, you will be able to confront new languages with some confidence.

Teaching Assistant: John Lindstedt, Office hours and email TBA

Student work and assessment:

Programming:	40%
Midterm:	15%
Quizzes:	25% (lowest one dropped, no make-ups)
Final (cumulative):	20% (Thursday, April 22, 11:00 - 12:30pm)

Grades:

91 - 100%	A range
81 - 90%	B range
71 - 80%	C range
61 - 70%	D range

Academic Honesty: I expect, and your fellow students expect, that every person in this class will adhere to the highest ethical standards. All work given to me for grading must be your own independent work. If you act in an academically or ethically dishonest manner, you will receive an E for the final grade and I will submit your name to the dean of students for dismissal or academic sanction.

CAVEAT: This document may be modified, with appropriate notification to students, as pedagogically necessary or advisable.