

COSC 341/342 Programming Languages FALL 2017

Course communication

1. Course home page – <http://emunix.emich.edu/~haynes/341/fa17>

Instructor: Professor Susan Haynes

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Office Hours

M W 1:00 – 2:00 pm

T Th 4:00 – 5:00 pm

Required Textbooks:

- Scott, *Programming Language Pragmatics, 3rd Ed*, ISBN 0123745144, Morgan Kaufmann, 2009.
- Lipovača, *Learn You A Haskell for Great Good*. Free, online version [HERE](#)
- J. Remmers, *Notes on C*, <http://emunix.emich.edu/~haynes/Papers/NotesOnC/NotesOnC-OpenOffice.pdf>

Catalog 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. 4 ch.

Prerequisites: COSC 211 and COSC 221.

Learning Objectives (from the "master syllabus"):

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.

Specific objectives

- Intermediate facility in C.
- Beginner level facility in Haskell
- Write an interpreter, including symbol table.
- Introduction to Java bytecode and to the JVM
- Understand and be able to use regular expression grammar and BNF grammar
- Understand and be able to use expression trees.

What is beginner level facility? It comprises intelligent use of primitive types, aggregate types, blocks, conditionals, looping, functions, understanding scope and lifetime.

Important Dates:

<u>Date</u>	<u>Item</u>
R 9/7	First day of class
R 11/23	Thanksgiving
T 12/12	Last day of class
T 12/19	Final Exam, 1:30 – 3:00 pm

Grading:

Programming:	35%
Two hourly exams:	30%
Final exam (cumulative):	20%
Other (HW, quiz, etc):	15%

Assignment of grades:

1. 91 - 100% A range
2. 81 - 90% B range
3. 71 - 80% C range
4. 61 - 70% D range

Old tests:

Some tests given in earlier semesters are available at

<http://emunix.emich.edu/~haynes/courseArchive.html>

Academic Honesty: I expect you to behave according to the highest possible ethical standards. If you claim anyone else's work as your own, or if you allow someone else to claim your work, you will receive an E in this class. Additionally, I will report your name to the Dean of Students for possible expulsion. Warning: the Internet is seductive; there is a lot of publicly accessible material out there. I will tell you when and how it will be acceptable to cannibalize code for a project. It is never acceptable to cannibalize text (e.g., for a paper). Do not plagiarize! Theft is beneath you.

Caveat: This syllabus and the course outline will be changed as I deem pedagogically necessary or preferable. I will publish written changes to the syllabus. Such a change may require a change in grading rubric.