

**CS 505 PROGRAMMING LANGUAGES
SYLLABUS
FALL 2005
<http://www.cis.uab.edu/cs505>**

Instructor: Barrett Bryant, Ph. D. (bryant@cis.uab.edu)

Classroom: CB15 124

Time: 5:30-6:45 P.M. Monday and Wednesday

Office: CH 121 (934-2213)

Office Hours: 3:00-4:00 P.M. Monday and Wednesday or by appointment

Teaching Assistant: Jane Lin (cs405ta@cis.uab.edu)

Office Hours: Wednesday, 10:00 A.M.-2:00 P.M., CH 153B (975-5796)

Textbook: *Concepts of Programming Languages*, 7th ed., by Robert W. Sebesta. Addison Wesley Longman, 2006.

Recommended: *Modern Compiler Implementation in Java: Basic Techniques*, 2nd ed., by Andrew W. Appel and Jens Palsberg. Cambridge University Press, 2002.

| Time Table: | <u>Topic</u> | <u>Chapter</u> | <u>Lecture</u> |
|-------------|---|----------------|----------------|
| | Introduction | 1-2 | 1 |
| | Formal Syntax and Compiling | 3-4 | 2-6 |
| | Denotational Semantics and Functional Programming | 3, 15 | 7-8, 10-11 |
| | Axiomatic Semantics and Logic Programming | 3, 16 | 12-15 |
| | Names, Bindings, Type Checking, and Scopes | 5 | 16 |
| | Data Types | 6 | 17 |
| | Expressions | 7 | 18, 20 |
| | Statements | 8 | 21-22 |
| | Subprograms | 9-10 | 23-25 |
| | Abstract Data Types | 11 | 26 |
| | Object-Oriented Programming | 12 | 27 |
| | Concurrency | 13 | 28 |
| | Exception Handling | 14 | 29 |

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| Grading: | Exam #1 | 1/6 |
| | Exam #2 | 1/6 |
| | Final Exam | 1/3 |
| | Exercises | 1/3 |

Grading Policy:

There will be two (2) 75-minute examinations, the first exam on Wednesday, September 21, and the second exam on Wednesday, October 26. The final exam is on Wednesday, December 14, 4:15-6:45 P.M. The schedule of these exams is fixed and cannot be changed to accommodate individual circumstances except for a major illness or family emergency. In such cases, arrangements must be made **before the time of the exam** to take the exam at a different time. Makeup exams will not be given without such **prior** approval and only for the emergency cases indicated. Besides exams, there will also be several written and programming exercises which will emphasize the theory covered by the lectures and text. Many of these exercises will build on each other in the form of a complete implementation of a programming language. Therefore, it is imperative that all assignments be done promptly. Assignments will be accepted at most one class meeting late, at a cost of 25% of the assignment credit. Otherwise, all assignments are due on the date indicated **by the beginning of the class period**. The exercises are to be done independently. Any single incident of copying or duplication of work will result in the division of credit among the collaborators. A subsequent occurrence of academic dishonesty will result in the grade of F for the course.

Prerequisites:

CS 303 Algorithms and Data Structures
CS 350 Automata and Formal Language Theory
each with a C or better