Course Information
This course is not about programming. However, you will become a significantly better programmer for having completed it. The course introduces the issues surrounding the design and implementation of programming languages. Mostly, we will use Scheme to implement interpreters for a variety of languages (including various subsets of Scheme itself). Because you will be writing interpreters that support the various features, you will intimately understand issues such as scope, lazy and eager evaluation, recursion, mutation, continuations, types, polymorphism, and much more.

The course will require a significant commitment from you. Plan for it. Start your readings and assignments early. You will be required to read the text. If you work the examples as you go through the text, your assignments will be manageable. You will typically be completing one assignment each week.

From the Westmont catalog:
“Language processors; data; binding time; operations; sequence control; referencing environments; scope of a variable; storage management; operating environment; syntax; translation.”

This course supports the learning objectives within the Computer Science major as follows:
1. Core Knowledge: the course provides a deeper understanding of programming languages and their features through reading and implementation.
2. Communication: the course provides students multiple opportunities for technical presentations to their peers through the use of “code walks.”
3. Creative Thinking: not explicitly addressed, but many of the programming assignments will be very different than the types of programs written in programming courses.
4. Connections: students should begin to see connections between language semantics in computer science and natural language, and think broadly about language and the written word.

Instructor Information
INSTRUCTOR: Dr. Wayne Iba
OFFICE: New Math/CS Modular Building
COURSE WEBPAGE: http://www.westmont.edu/~iba/teaching/CS105
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Course Assignments, Requirements and Policies
ASSIGNMENTS: Students are required to complete various programming projects. Some of these will involve implementing small interpreters with specific language features. Others will introduce you to new programming languages through simple programming assignments. Still others may require the student to write an essay. In general, assignments will be required every week. Work must be submitted complete and before the deadline.
EXAMS: There will be zero or more surprise exams. Students may not make up exams unless arranged with the instructor in advance.
ATTENDANCE: Attendance in class is required. Excessive absence from class will result in termination from the course with a grade of F.
GRADING: The course grade will be based on assignments (80%) and exams (20%). Letter grades will be assigned on a standard 60, 70, 80, 90 percent basis.
ACADEMIC HONESTY: You are responsible for understanding and abiding by the Westmont policies. Incidents of academic dishonesty will result minimally in a 0 score for the assignment or exam in question, or expulsion from the course with a grade of F. Failing the course does not preclude further action that may be taken by the college.