

MAT 371 — Organization of Programming Languages, Fall 2004

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Office Hours: TTh 10:00am–11:15am, M 12:30pm–1:20pm, or by appointment
Course Web Page: <http://ramsey.washcoll.edu/class/04FALL/371.html>
Class meetings: TTh 2:30pm–3:45pm in SMTH 113
Textbook: *Programming Languages: Design and Implementation, Fourth Edition*,
by Pratt and Zelkowitz

Overview: In this course you will learn about the organization of programming languages. Studying programming languages is important because a programmer may be exposed to a variety of languages throughout her career. For example, in the last fifteen years, Pascal has moved towards becoming obsolete while an insurgence of Java and Perl can be seen. Studying programming languages may allow one to develop more efficient algorithms, improve current programming skills, and to improve one's knowledge of useful paradigms and constructs. Choosing the appropriate language for a task is akin to choosing the right tool for a job. Most obviously, a study of programming languages also makes it easier to design and learn new languages in the future.

Topics: In this course you will learn about the evolution of software and architecture, the role of programming languages, computer operation, language translation (such as syntax, grammar, automata and regular expressions), lambda calculus and data handling (such as objects, variables, constants and composites). You will also learn about encapsulation, inheritance, polymorphism, sequence control and storage management (such as stacks, heaps and garbage collection). If time permits, we will discuss distributed, parallel and network programming.

Advising: MAT 371 is a required course for the major in computer science. MAT 102 and MAT 240 are prerequisites for this course, however my permission is also acceptable.

Grading: There will be two exams (20% each) that contribute to your final grade. The final exam will count as 25%. Homework contributes 25% to your final grade. Late homework will be assigned a 25% penalty per day late. Thus, handing in an assignment four days late results in a 0. Lastly, class participation will count as 10%. Class participation includes participation in class and may include announced and unannounced quizzes. Continuous improvement, attendance, and punctuality (in class and in assignments) will be considered for students on the borderline of a grade. Exam dates are *tentatively* set for: October 5 and November 18. The final will be during finals week December 13–December 18. Exams may not be taken on a different date except in extreme circumstances.

Attendance: Attendance will be taken at the beginning of every class. On your fifth unexcused absence, you fail the course. I will likely email you if you miss a class. Notice that participation is also a part of your grade and if you do not come to class, it will affect your participation.

Academic Honesty: You are always subject to the Honor Code of this college. You may discuss concepts with others, but work is to be done on your own. If you are unsure if something is considered *cheating*, you should ask me first. If you have questions, feel free to stop by or email me.

Accommodations: If you have a special accommodation/need that has been reported to the college, please let me know the first week.