

SI 413: Programming Languages and Implementation

Course Policy, Fall 2011

I. **Instructor:** Dr. Daniel S. Roche

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II. **Web Page:** <http://www.usna.edu/users/cs/roche/courses/f10si413/>

III. **Textbook:** *Programming Language Pragmatics, 3rd ed.*, Michael L. Scott, Morgan Kaufmann Publishers, 2009.

IV. **Course Project:** There will be one course project that progresses throughout the term. Some students will work individually, and some in pairs. Students working in pairs will be given more challenging tasks. All partners and project topics will be decided by the instructor.

The project will be broken into three parts: two programming parts, and an in-lab presentation. The programming parts are due at the beginning of class on the dates of the first and second midterms, respectively. Programming submissions up to one week late will be counted as a zero for the mid-semester grade reported, and will occur a 50% penalty. Programming submissions more than one week late will receive a zero.

V. **Grading:** Your final grade will be computed as follows.

- **10%:** Homeworks
- **15%:** Course Project
- **25%:** Labs
- **30%:** Midterm Exams 1 & 2
- **20%:** Final Exam

Homeworks are short assignments given every class and will be marked simply as 100%, 50%, or 0. All other components will be given numeric or letter grades. The first midterm exam will include a take-home Scheme practicum exam. **The lowest homework grade AND the lowest lab grade will be dropped**, and will not count towards the final grade.

VI. **Late Policy:** All homeworks are due at the beginning of the following class period. All labs are due at the beginning of the following lab. **No late homework or labs will be accepted.** (However, see the policy above on dropping the lowest lab and lowest homework grade.)

VII. **Honor:**

- **Homeworks:** Students may collaborate freely outside of class, but must write up their own solutions, in their own words.
- **Labs:** Some labs will be done in pairs. In such cases, only one copy needs to be turned in, and the partners may collaborate freely. Students may also collaborate freely during the lab period. **Outside of class, no collaboration is permitted**, except between partners.
- **Projects:** Students will be assigned different topics. They may collaborate freely with their partners (where applicable), and with other students **with different topics**. Collaboration with students assigned the same topic is prohibited, except between partners.
- **Exams:** No collaboration of any kind is permitted.

For all homeworks, labs, and project, students may use any non-human outside source (e.g. manuals, online resources, textbooks), as long as they acknowledge all sources not given in class.

VIII. Learning Objectives

- (a) Understand the functional programming paradigm and be able to solve problems in a functional language.
- (b) Develop a vocabulary for describing programming languages.
- (c) Understand how programming languages are specified.
- (d) Understand lexical analysis, parsing and basic interpretation.
- (e) Implement a simple interpreter.
- (f) Understand the security issues and responsibilities of closed specifications versus open specifications and its local and global impact on an organization.

IX. Program Outcomes

- (PO e) An understanding of professional, ethical, legal, security, and social issues and responsibilities (Learning Objective 6).
- (PO g) An ability to analyze the local and global impact of computing on individuals, organizations and society (Learning Objective 6).
- (CS j) An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices (Learning Objectives 1-5).

X. **Extra Instruction (EI).** The instructor has an “open door” policy, meaning that if he is in his office, students may come in for extra help. Instructor’s schedule will be posted on the course website (USNA intranet access only). Students are expected to come to EI with specific questions, problems, or issues in mind. Instructor will also respond promptly to email requests, either course-related questions or requests for a specific EI appointment.

XI. **Section Leader** The duties of the section leader include:

- calling the section to attention at the beginning and end of class reporting absences to the instructor
- contacting the department office (x36800, Room 346) if the instructor is more than 10 minutes late for class
- directing the class in productive work if the instructor is absent

XII. **Classroom Decorum** Beverages are permitted in classrooms and labs provided they are in closed containers. No food is permitted in classrooms or labs.