

## Course Information

### Course structure for Fall 2004

The course focuses on the practice of principled code design, as applied to the design of large programs. The programming language Java is used as the implementation language.

The central component of the course is a sequence of moderately large programming project, some of which will be carried out in teams. A separate handout describes the projects.

In lectures we will review the principles that underlie writing good code, specifically with respect to the object-oriented programming paradigm, with an emphasis on elegant code that is easy to write, read, understand, and show correct. We will also consider various aspects of the Java programming language, its design, and its implementation. Finally, we will examine general principles of programming languages, their design, and their implementation.

In lab sections we will follow the progress of the projects and will review good programming practice in the Java programming language.

### Assignments and grading

In-class mid-term exam (10%), out-of-class final exam (covering the entire course) (15%), homework assignments (homework 1, 5%; homework 2, 5%), programming projects (project 1, 12.5%; project 2, 12.5%; project 3, 25%), in-class work (15%). You are expected to attend class regularly, read the assigned reading before class, and participate in class discussion.

### Teams

Some in-class work and some programming assignments will be done in teams. Team composition will be decided during the second week of classes. Team work will be graded both on the basis of the team's achievement and of each individual's participation and contribution to the team.

### Attendance

Your attendance at lectures and lab sessions is mandatory.

### Prerequisites in detail

Experience with developing substantial applications in imperative (especially object-oriented) programming languages is required. This kind of experience can be gained by taking CS 251. An understanding of the principles of programming languages is desirable; this kind of experience can be gained by taking CS 257. In general, all CS core courses at the 200 level are prerequisites for CS351.

### Lectures

Tuesdays and Thursdays, 2–3:15, in Mitchell Hall 211.

## **Instructor**

Darko Stefanovic, office FEC 345C, phone 2776561, email darko@cs.unm.edu — office hours Mondays and Wednesdays 3–3:50 and Tuesdays and Thursdays 3:20–4.

## **Lab sections**

Mondays 1–1:50 and Tuesdays 12:30–1:20.

## **Teaching assistant**

Jason Brown office FEC 301A, phone 2773394, email jbrown@cs.unm.edu — office hours Tuesdays and Thursdays 4–5; Wednesdays 12:30–2; and Mondays by appointment 2:30–5.

## **UNM statement of compliance with ADA**

Qualified students with disabilities needing appropriate academic adjustments should contact the instructor as soon as possible to ensure their needs are met in a timely manner. Handouts are available in alternative accessible formats upon request.

## **Textbooks**

(The bookstore has ordered the titles marked with \*.)

### **Required reading**

\* Ken Arnold, James Gosling, and David Holmes: *The Java Programming Language*, 3rd edition, Addison-Wesley, ISBN 0-201-70433-1.

\* Joshua Bloch: *Effective Java: Programming Language Guide*, Addison-Wesley, ISBN 0-201-31005-8.

Michael L. Scott: *Programming Language Pragmatics*, draft 2nd edition, Morgan Kaufmann: selected chapters will be provided to the students

Other material freely available and linked to from the course web page.

### **Optional reading**

\* Sherry Shavor et al.: *The Java Developer's Guide to Eclipse*, Addison-Wesley, ISBN 0-321-15964-0.

## **Assignment hand-in policy**

Assignments are due on the date assigned, no extensions will be granted, and no credit will be given for late work. Hand-in mechanisms (usually electronic) will be specified with each assignment.

## **Cooperation and cheating**

The following description is for individual work and assignments. (Team assignments will have special policies. Programming projects will have explicit policies defining which, if any, external code may be used.) Feel free

to *discuss* homework assignments with classmates and the instructor. However, *do not look at or copy another student's solution*. If a problem appears too difficult, or you lack the background to solve it, you are expected to talk to the instructor promptly. Once you have the background necessary to solve a problem, you must provide your own solution. Exchanging homework solutions is cheating and will be reported to the University administration; students involved may not be permitted to continue in the class. You are responsible for exercising due diligence in protecting your homework files from unauthorized access. In case two or more students present essentially similar homework, all involved students will be reported to the University administration.

Each assignment handed in must be accompanied by the following statement: *"I pledge my honor that in the preparation of this assignment I have complied with the University of New Mexico Board of Regents' Policy Manual."*

Of particular relevance is Section 4.8, which reads as follows.

**4.8 Subject: ACADEMIC DISHONESTY****Adopted: September 12, 1996****Applicability**

This policy applies to all students at the University with regard to academic activities and professional activities related to academic work.

**Definition**

"Academic dishonesty" includes, but is not limited to, dishonesty in quizzes, tests, or assignments; claiming credit for work not done or done by others; hindering the academic work of other students; misrepresenting academic or professional qualifications within or without the University; and nondisclosure or misrepresentation in filling out applications or other University records.

**Policy**

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, up to and including dismissal, against any student who is found guilty of academic dishonesty or who otherwise fails to meet the expected standards. Any student judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

**Implementation**

The President may establish administrative policies and procedures for implementing this policy, which shall be published in the Pathfinder and the Faculty Handbook, together with this policy.