

# 810:151:85

## Programming in Ada

### Spring 2009

<http://www.cs.uni.edu/~mccormic/151/>

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#### Instructor

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← Check web page for schedule of office hours

#### Course Content

In this course you will study the Ada programming language.

Ada is a programming language named after Augusta Ada King, Countess of Lovelace, the world's first programmer. While it is suitable for many development needs, its particular niche is in the development of highly reliable programs. When software failure is not an option, the system is written in Ada. Air traffic control, commercial and military aviation, rockets and space vehicles, secure data communications, banking and finance, GPS, and medical devices are some of the areas in which Ada dominates.

Ada has built-in features that directly support structured, object-oriented, generic, distributed and concurrent programming.

Rockwell-Collins in Cedar Rapids is a major user of Ada. They use it to develop avionics software for commercial and military applications. Many UNI graduates work with Ada at Rockwell-Collins.

We will build on your knowledge of programming concepts in your prior languages to quickly learn the syntax and semantics of Ada.

#### Prerequisites

810:052      Data Structures

810:080      Discrete Structures

#### Textbooks

We will use the following books available on-line (links on the class home page)

- Wiki Book : *Ada Programming*
- *Ada Distilled: An Introduction to Ada Programming for Experienced Programmers*
- *Ada Essentials: Overview, Examples and Glossary*
- *Ada 95: The Craft of Object-Oriented Programming*
- *A Guide to Ada for C and C++ Programmers*
- *Multithreading in Ada and Java*

Should you prefer a printed textbook for now and the future, I recommend

*Programming in Ada 2005* by John Barnes, Addison Wesley, 2006, ISBN 0-32-134078-7.

Several copies of this book are available at University Book and Supply.

## **Programming Projects**

You will complete three to five Ada programs that illustrate the basic features of the programming language. Grades will be based on both correctness and style.

## **Electronic Devices in the Classroom**

Cell phones, MP3 players, iPods, pagers and PDA's must be turned off during class. We will use personal laptops in class for class related activities. Please do not use your laptop in class to email, chat, IM, browse, play games, work on assignments for other classes, display images/videos, etc. These activities are incompatible with a college classroom and create a distraction to neighbors and people seated in rows further back.

## **Grading**

The final grade will be computed as follows:

Programming Projects	<b>100%</b>
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"The Americans with Disabilities Act of 1990 (ADA) provides protection from illegal discrimination for qualified individuals with disabilities. Students requesting instructional accommodations due to disabilities must arrange for such accommodation through the Office of Disability Services. The ODS is located at: 213 Student Services Center, and the phone number is: 273-2676."