

General Syllabus: CMSC 131, Spring 2014

CMSC131 is an introductory-level course for Computer Science majors. This course is challenging, but is designed with the assumption that students have little or no experience with computer programming.

1 Major Topics

Upon successful completion of this course students will have a demonstrated knowledge in the following areas:

Basic programming Using JAVA, students are introduced to the elements of programming: primitive data-types and standard utility classes, with a focus on **Strings**, basic flow-of-control primitives, including boolean operators, **if** and **switch** statements, and both bounded and un-bounded iteration using **for** and **while** statements.

Integrated Development Environment(s) Because all programming is done within the ECLIPSE development platform, students learn how to use an Integrated Development Environment (IDE) that is state-of-the-practice outside of schools and is used extensively throughout the student's exposure to coursework in Computer Science at UMD.

Algorithmic Thinking Through the lens of object-oriented programming design, students learn to decompose problems, anticipate solution paths, and to develop mechanisms for verifying these paths.

Responsible Use Students are challenged to consider the societal and ethical implications of computer programming which has become a silent foundation for so much of contemporary culture

2 Evaluation

Grades are determined by students performance on 2 mid term and 1 final exam. In addition, students are evaluated by their performance on programming assignments (projects), and periodic in-class assessments (such as quizzes and small, focused labs). Note: students

are given, on average, one quiz per week, and are expected to complete a project every ten days. Expect about 8 projects, comprising approximately 40% of your grade, with the exams and labs making up the difference.

All Projects and Labs are in the JAVA programming language, and must be done on the ECLIPSE platform in order to be graded through the University's submission software.

3 Recommended Texts

Although no textbook is required for this course, **Java Foundations: Introduction to Program Design and Data-Structures**, by John Lewis, Peter DePasquale, and Joseph Chase (either the first or second edition) is recommended for students who wish to have a written reference.

4 Computing Resources

All students are given access to computing resources through the University, although students are advised to bring personal laptops to recitation. In the general case, laptops are neither required nor welcomed during normal lectures. however.