**CSC110AB ONLINE**

**Java Midterm Exam Toolkit: Exam Covers Chapters 1 - 6**

This is a **starting point** to help you study and get prepared for your first exam.

* The exam is online. Most questions will be multiple choice, fill in the blank, etc.
* Review chapter assignments, quizzes, chapter materials, and zyBooks chapters.
* This exam requires Respondus Lockdown Browser.

Reminder: There are no makeup exams in this course.

**Topics:**

**Fundamental elements of Java**

* Using System.out.println and System.out.print
* Primitive data types – byte, short, int, long, float, double, boolean, char
* Java Style recommendations for variable names and classes.
* Variable declaration and assignment. Valid identifier/variable names

**Calculations and Operators in Expressions**

* Operator precedence
* Integer vs. Floating point arithmetic- watch out for integer division!
* Casting. Data type conversion

**Using Java Classes and Objects**

* Java classes : String, Random, Scanner, Math
* objects vs. primitive data type variables
* creating an object with "new"
* import statements - when do you need them

**Conditionals and Decision Statements - Using if..else and switch statements**

* Comparison/Relational Operators: **> < == != <= >=**
* Logical Operators : **&& || !**
* Evaluating conditions. true or false
* Syntax for **if..else if…else** statements
* Syntax for **switch** statements

**Looping Structures - use while, for, and do statements**

* Syntax for while, for, and do loops
* Evaluating the number of times a loop executes
* Recognizing infinite loop scenarios
* Loop counters, sentinel values, and terminating conditions
* nested for loops - syntax, common patterns generated

**Arrays**

* declaring and instantiating arrays
* loading with values or objects - one at a time or with a for loop
* using the length property of arrays
* performing tasks based on all elements in the array - displaying all elements, searching for a value, finding the maximum, finding the minimum, summing up all values in the array, counting elements