

# CS 120 – COMPUTER SCIENCE II

College of Information Technology & Engineering  
Weisberg Division of Engineering and Computer Science

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**Semester and Year:**

Spring, 2007

**Classroom Location and Meeting Times:**

Marshall University, Huntington Campus - Gullickson Hall Room 211  
Monday and Wednesday 3:30-4:45

**Textbook:**

Horstmann, Cay, *Java Concepts, 4<sup>th</sup> Ed*, John Wiley & Sons, Inc., 2005 ISBN 0-471-69704-4

**Pre-requisites:**

Computer Science I (CS110)

**Instructors:**

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**Course Description:**

CS 120 is a continuation of CS110. Students will continue to learn the Java language and to learn additional concepts from computer science and software engineering.

**Course Outcome Objectives:**

At the completion of this course the student will be able to:

1. Use inheritance and polymorphism for code reuse
2. Be able to write a graphical user interface using Java API calls and in a visual programming environment such as NetBeans or Eclipse
3. Be able to handle potential runtime errors using exception handling compound expressions.
4. Be able to use the standard files in Java – text files, binary files, and object streams.
5. Be able to use recursion for problem solving
6. Be familiar with standard sorting algorithms
7. Be able to write and use standard searching techniques
8. Be able to write and use a linked list.

## Course Activities:

### *Programming Assignments*

This course activity involves preparing applications that implement a specification provided by the instructors. The assignments will often be done outside of class since they will require more thought and effort than those in CS 110.

### *Interim Examinations*

There will be three one-hour exams during this semester. Only authorized absences, with prior approval by the instructors, will be accepted for make-up examinations. Some of the exams may include both open book and closed book portions.

### *Lab Assignments*

Learning to program requires hands-on work at the computer, not just listening to lectures. Hence, we will continue the CS 110 policy of having hands-on assignments as often as possible. We will often start these labs during class so that the instructors are available to answer questions, clarify the requirements, or to help get you started. If you do not complete a lab during class hours, then you are expected to complete the assignment outside of class. The computer science lab in Gullickson Hall Room 206A is available during the day Monday through Friday from 9:00 to 4:00. The lab is also open between 4:00 and 9:00pm, Monday through Thursday. Tutors are available during this time if you need assistance or run into problems.

### *Final Exam*

There will be the usual comprehensive two-hour final exam.

### *Class Attendance, Participation,*

Students are expected to attend all class sessions and participate in class activities.

### *Decorum*

Students are also expected to maintain a certain level of decorum that includes

1. Turning off cell phones and pagers
2. Closing laptops during lectures and class discussions
3. Arriving to class on time
4. Not sleeping during class
5. Not eating during class.
6. Keeping side conversations to a minimum.
7. Not leaving class until it is dismissed by the instructors

### Evaluation/Grade Computation:

Course grades are based on weighted percentage averages. Your final grade will be derived by multiplying each individual Student Activity score by the weighted percentage and summing all of the weighted percentage averages.

Student Activity	Individual Score	Weighted %	Weighted % Average
Programming Assignments		x 0.15	
Exam 1		x 0.15	
Exam 2		x 0.15	
Exam 3		x 0.15	
Lab Assignments		x 0.10	
Final Exam		x 0.20	
Class Attendance, Participation, and Decorum		x 0.10	
Grand Total =			

Evaluation Scale				
90% & Above = A	80% - 89% = B	70% - 79% = C	60% - 69% = D	59% & Below = F

### Schedule of Topics:

Interfaces and Polymorphism

Event Handling

GUI development

Exam 1

Inheritance

Exception Handling

Streams

Sorting

Exam II

Searching

Recursion

Intro to Data Structures

Exam III

**Final Exam**

### Exam Attendance

Students are required to take exams at the scheduled class period. Students may take an exam at a different time under one of the following conditions:

- They present a University Excused Absence
- They present a valid medical excuse
- Other extraordinary circumstance as determined by the instructor

**Academic Conduct:**

Learning about programming is a hands-on activity, not something that you can pick up by just reading a book or listening to a lecture. It is important that you do the work yourself to gain this experience. To that end, you may discuss programming concepts and techniques with others, consult the web or other textbooks, or study code that is available from various sources but the work you submit must be your own. Here are some examples of appropriate and inappropriate conduct:

- You need to insert an IF statement in your program and you can't remember whether or not parentheses are required. You ask a friend who says, yes, they are required. This is acceptable.
- You're running late on an assignment and in order to hand a program in on time, you copy ten lines of code from a classmate. This conduct is NOT ACCEPTABLE by either student. You must neither directly copy code from someone else nor offer your code to another student or allow it to be copied.
- After struggling for some time, you do a search on the internet and find a snippet of code that you adapt to your problem and insert into your program. You comment your code to acknowledge the source. This is acceptable.
- After struggling for some time, you do a search on the internet and find a program that does exactly what you need. You submit it as your own work. This conduct is NOT ACCEPTABLE.

It is your responsibility to satisfy the spirit of this conduct. If you have any questions, please ask one of the instructors for clarification. Depending on the severity of the offense, the instructors may:

- Take no action
- Penalize the student on the assignment in question
- Assign the student a failing grade in the course

**Adaptive Methods for Disabilities:**

Students with disabilities who believe that they may need accommodations in this class are encouraged to contact the instructors as soon as possible to better ensure that such accommodations are implemented in a timely fashion. A reasonable period of time must be given to the instructors when making your initial request for any accommodation.

**Bibliography:**

Flanagan, David, *Java in a Nutshell*, 5<sup>th</sup> Ed. O'Reilly & Associates, Inc, Sebastopol, CA 95472

**Internet Web Sites:**

Java software and documentation	<a href="http://java.sun.com">java.sun.com</a>
BlueJ Development Environment	<a href="http://www.bluej.org">www.bluej.org</a>
Eclipse Development Environment	<a href="http://www.eclipse.org">www.eclipse.org</a>
TextPad text editor	<a href="http://www.textpad.com">www.textpad.com</a>