# Computer Science 170
# Introduction to Computer Science
# Spring 2003 - Dr. Robert E. Bailey
# e-mail: bailey@LearnLink.emory.edu

TEXT: *Computing Concepts with Java Essentials*, 3e by Cay Horstmann, 2003. ISBN 0-471-24371-X

OFFICE: Seney 116A - Math Offices
PHONE: 784-8498
OFFICE HOURS: 5:00 - 6:00 Tues, Thurs.

COURSE CONTENT: This course will consist of material related to the concepts of Object-Oriented software development; an introduction to Software Engineering; an in-depth study of java applets and applications; an introduction to HTML ; the uses of Graphical User Interfaces (GUI); an introduction to and the uses of such data structures as arrays, vectors and strings and an introduction to different sorting and searching procedures.

GOALS: On completion of this course, students who successfully complete this course will know abut the software life cycle, begin to understand ho to analyze software in terms of the class design of the requirements, explain the difference between a Java application and a Java applet, explain the advantages of encapsulation and the use of Java modifiers to accomplish this, define and use arrays for basic data structures, comprehend the basics of the Graphics class and its role in design of Applets, define polymorphism and demonstrate their usefulness in programs.

GRADING: Grades will be determined by student performance of two tests; ten laboratory assignments and a comprehensive final exam:

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| 2 | tests @ 150 | 300 |
| 6 | Lab Projects @ 75 | 450 |
| 1 | final exam | 250 |
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| Total | | 1000 |

In general,

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|---|---|
| A,A- | 900 - 1000 points |
| B+,B,B- | 800 - 899 |
| C+,C,C- | 700 - 799 |
| D+,D | 600 - 699 |
| F | Below 599 |

HOMEWORK: The textbook homework problems will not be collected but are to benefit you. The assigned problems will not be collected but will form the basis for class discussions and lecture. You will need to stay current with the assignments.

To do well in this class, the average student will need to study about 3 hours outside of class for every class meeting or about 6 hours per week. Preparing lab reports and studying for tests will take additional time.

ATTENDANCE: You are expected to attend classes since you are responsible for work covered in class. An inordinate amount of absences will be handled in accordance with school policies.

You are expected to take tests at the scheduled times. Any conflicts or problems will be handled on an individual basis. If the excuse is considered legitimate by the instructor, arrangements will be made to take a test prior to the testing time. Labs will be assigned during the lab times on Thursdays, most will be due the following Thursday.

HONOR CODE: THE HONOR CODE OF OXFORD COLLEGE APPLIES TO ALL WORK SUBMITTED FOR CREDIT POINTS TOWARD YOUR GRADE. ALL SUCH WORK WILL BE PLEDGED TO BE YOURS AND YOURS ALONE. YOU PLEDGE THAT WITH YOUR SIGNATURE.

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| Thursday, Jan. 16 | Chapter One - Introduction<br>Review Exercises 3, 4, 5, 14. |
| Tuesday, Jan. 21 | Chapter Two - An Introduction to Objects and Classes<br>Page 72 - R2.1, 2.2, 2.3. 2,4 |
| Wednesday, Jan. 22 | Lab 1 - Introduction to the JDK, and the BlueJ IDE. |
| Thursday, Jan. 23 | Chapter Two - An Introduction to Objects and Classes |
| Tuesday, Jan. 28 | Chapter Three - Fundamental Data Types |
| Wednesday, Jan. 29 | Lab 2 - Lab Project One - |
| Thursday, Jan. 30 | Chapter Three - Fundamental Data Types |
| Tuesday, Feb. 4 | Chapter Four - Applets and Graphics |
| Wednesday, Feb. 5 | Lab 3 |
| Thursday, Feb. 6 | Chapter Four - Applets and Graphics |
| Tuesday, Feb. 11 | Chapter Five - Decisions<br>Page 245 - 6.11 - 6.21 |
| Wednesday, Feb. 12 | Lab 4 |
| Thursday, Feb. 13 | Chapter Six - Iteration |
| Tuesday, Feb. 18 | Chapter Seven - Designing Classes |
| Wednesday, Feb. 19 | Lab 5 |
| Thursday, Feb. 20 | Chapter Seven - Designing Classes |

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| Tuesday, Feb. 25 | Chapter Eight - Testing and Debugging |
| Wednesday, Feb. 26 | Test One -<br>Chapters 1 to 7 |
| Thursday, Feb. 27 | Chapter Nine - Interfaces and Polymorphism |
| Tuesday, Mar. 4 | Chapter Eleven - Inheritance |
| Wednesday, Mar. 5 | Lab 6<br>Introduction to the Marine Biology<br>Simulation Case Study |
| Thursday, Mar. 6 | Chapter Eleven - Inheritance |

< ---------- Spring Break ---------- March 11 to 13 ---------->

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| Tuesday, Mar. 18 | Chapter Thirteen - Array Lists and Arrays |
| Wednesday, Mar. 19 | Lab 7 |
| Thursday, Mar. 20 | Chapter Thirteen - Array Lists and Arrays |
| Tuesday, Mar. 25 | Chapter Fourteen - Exception Handling |
| Wednesday, Mar. 26 | Lab 8 |
| Thursday, March 27 | Chapter Fourteen - Exception Handling |
| Tuesday, April 1 | Chapter Fifteen - Streams<br>Page 483 - 13.6 - 13.13 |
| Wednesday, April 2 | Lab 9 |
| Thursday, April 3 | Chapter Fifteen - Streams |
| Tuesday, April 8 | Chapter Sixteen - System Design |

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| Wednesday, April 9 | Lab 10 |
| Thursday, April 10 | Chapter Sixteen - System Design |
| Tuesday, April 15 | Chapter Seventeen - Recursion |
| Wednesday, April 16 | Lab 11 |
| Thursday, April 17 | Chapter Eighteen - Sorting and searching |
| Tuesday, April 22 | Chapter Eighteen - Sorting and Searching |
| Wednesday, April 23 | Test Two - Chapters 8 to 18 |
| Thursday, April 24 | Review for Final Exam ------ |
| Tuesday, April 29 | Review for Final Exam ----- |
| TBA | Final Exam |