Instructor
Bill Cheng, phone 453-6055, billcheng@cs.siu.edu

Office Hours
MWF 1:00 – 3:00 p.m., FANER 3043

TA
Venkata Saaketh Gummalla, saaketh@siu.edu

Office Hours
T 1:00 – 3:00 p.m., R 2:00 – 3:00 p.m., FANER 3127

Lectures
MWF 10:00 – 10:50 a.m., PARK 107

Lab Session
Section 1, R 11:00 a.m – 12:50 p.m., LNDG 18

Textbook
Data Structures and Abstractions with Java, 3rd ed., by Frank Carrano.

Grading Policy

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<td>Comprehensive Final</td>
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<td>Quiz</td>
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Grade Score

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Mid-Term
Fri March 7, 2014 10:00 – 10:50 a.m.

Comprehensive Final
Fri May 9 2014 7:50 – 9:50 a.m., PARK 107

Spring Break
March 8, 2014 – March 16, 2014

Goals of the Course

• To provide an increased level of exposure to structured programming techniques (through lecture material and programming assignments).
• To provide a thorough treatment of data abstraction and a further exposure to object-oriented programming (OOP).
• To provide a thorough treatment of the fundamental data structures, including stacks, queues, linked lists, and trees.
• To provide a more in-depth coverage of sorting and searching techniques and techniques for analyzing the efficiency of algorithms.
• To lay the foundation for further study in computer science.
CS 220 – Programming with Data Structures - Spring 2014

Course Topics
1. Review of Java basics and Java development frameworks.
2. Additional Java: interfaces, inheritance, polymorphism, generics, etc.
3. Software design and object-oriented programming concepts.
4. Java vs. C/C++ and OOP vs. procedural programming.
5. Basic data structures: arrays, linked lists, stacks, queues, trees.
7. Recursion and recursive functions.
8. Introduction to Sorting algorithms.

Important Course Information
• Attendance at the lectures is considered a critical part of this course. Not only will absences likely impact the quality of your work, frequent absences may result in points being deducted from your cumulative score (which may lower your final grade).
• The separate lab sessions on Thursday will be an extended chance for students to ask questions about and get help with the lab assignments. Students are strongly urged to attend these sessions as minimal time will be devoted to lab assignment questions in the lecture sessions.
• While most of the course topics will be covered in class, and there is a great deal of online material about Java programming, you are still expected to read the assigned sections in the required textbook. Because of time limitations, not everything you should learn from this class can be covered in the lectures. You may be tested on assigned material in the text even if it has not been discussed in class.
• Most of the course grade will be based on the exams, and students will be required to write code on the exams. Don’t expect to get a good grade for the course if you do well on the labs and homework, but then do poorly on the exams.
• Labs will not be accepted late in this class, so start early. The only possible exceptions will be in the case of serious illness or a comparable excuse, at the discretion of the instructor. Makeup exams will not be offered except under very exceptional circumstances.
• Programs that do not compile or do not run at least partially, will generally not be graded (i.e., we will not grade by examining source code). Such submissions will be assigned a score of 0. No appeals. Again, start your assignments early enough so you are not faced with a 99% complete program that nonetheless receives a zero.
• All programming for the course will be done with the Java programming language.
• You will be instructed as to how to submit your (Java) programs electronically. However, you still need to turn in the hard-copy of your assignment latest by the due date before the class starts.
• We will have quiz on every Friday. The quiz will covering the material up to the class before.

Cheating
• A major goal of this course is to teach each and every student certain basic programming skills. When students work collaboratively on a programming assignment, it is nearly always the case that some team members will not learn everything they should from the assignment, and team grades will not reflect what every team member has learned. Thus, unless you are told specifically that you may collaborate on an assignment, all homework and labs in this course are expected to be done independently! If you receive any substantive assistance from fellow students, friends, computer
support personnel, or from code you find on the web, you will be considered to have cheated. If you have questions about an assignment, talk with the instructor or the TA only.

- Students caught cheating will receive zeros for the assignment. Second infractions may result in an ‘F’ for the course and lead to suspension from taking CS courses or even suspension from SIUC. This policy will be announced in class, and you will considered to be aware of it if you continue to be enrolled in the course.

- Likewise, you are not to provide substantive support to a classmate: the person providing this type of assistance will be considered just as guilty of cheating as the person receiving the assistance! In general, you should not discuss methods for accomplishing the assignments with other students.

- The main point of homework and labs are to get student to practice the material so that they do well on the exams. While cheating may get you a higher homework/lab score, you will almost certainly perform much worse on the exams, so in the long run having cheated will harm you rather than help you. It is better to struggle with a lab and get a 50% but learn something, than to turn in somebody else’s work and get 100% but learn nothing. Your grade is mainly going to be determined by your exam performance!

**Emergency Procedures**

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on BERT’s website at www.bert.siu.edu, Department of Safety’s website www.dps.siu.edu (disaster drop down) and in Emergency Response Guideline pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.