CSC 125 / CSC 501

Computer Science I: Programming Fundamentals

CSC 126 / CSC 502

Computer Science II: Intermediate Computer Programming

Spring 2015

Course Description

The use of the computer to solve problems. Students will learn general principles of program design at first by using libraries of predefined program units, and later by constructing complete programs. Emphasis is on developing techniques for program design that lead to correct, readable and maintainable programs. A subset of Java will be used.

Intermediate programming techniques will be studied. These topics will include recursion, inheritance, polymorphism and abstract classes, exception handling, File I/O, interfaces, inner classes, generics and the arraylist class, and linked data structures.

Course Objectives

1. Take advantage of the Java class library and navigate the Java API documentation
2. Demonstrate constructing programs modularly using methods
3. Use recursive problem solving techniques and write recursive methods
4. Understand encapsulation and information hiding, Understand data abstraction and create and use abstract data types
Demonstrate how polymorphism makes systems extensible and maintainable. Create reusable data structures with classes, inheritance, and composition.

5. Design and implement a system with multiple interacting classes

Texts and Materials

Text:

Materials:
- “jGRASP” Java environment.

Student Contributions

1. Expect to work 20 - 30 hours per week outside of class.
2. Come to class and lab. Absences will jeopardize your success in this class.
3. Be on time. Each class will begin promptly at the scheduled time.
4. All cell phones, beepers, alarm watches, etc. are to be turned off when entering the classroom.
5. Programming courses can be difficult and challenging, but also fun. You learn invaluable problem solving skills that will help you not only in your professional life but also in your daily life. If you put forth the required effort, you will be rewarded.
6. Not only are programming courses in general difficult and challenging, but this is also an intensive course. You must be prepared to do more than double the work that you would do in other course. Always keep in mind that this course is two courses in one.

Academic Honesty

Please read the Academic Honesty Policy in the catalog.

Because academic honesty is essential to the trust that is fundamental to an educational experience, academically dishonest behaviors will not be tolerated. Examples include, but are not limited to, software piracy, computer vandalism, cheating, fabrication, plagiarism, copying, and facilitating academic dishonesty. **Homework Assignments:** You may discuss approaches to solutions with others, but don't take anything written (notes or computer files) from these discussions. The work you turn in must be your own and in your own words. In addition, you MUST explicitly acknowledge the help. Include a line in the header of your assignment of the form: “I received help on this assignment totaling 15% of the effort from Jane Doe.”
Penalties for Academic Dishonesty:

- For any academically dishonest behavior, a violation report will be completed and sent to the Office of the Registrar. It will also result in automatic failure of the course.
- The university may take further action

Course Evaluation

All assignments are to be handed in by the start of the class on the assigned date. Programs and labs may be turned in up to one week late, with a 30% penalty. Programs and labs more than one week late will not be accepted.

There will be NO MAKE-UP EXAMS.

You will be receiving TWO official grades for this course at the end of the semester. The work for the first “course” will be finished during the first 8 weeks of the course but you will not receive your official grade until the end of the semester. The second “course” will be completed during the last 7 weeks of the semester. It will be possible to pass the first half of the course but not the second.

Grading

CSC125 / CSC501                      CSC126 / CSC502

- Labs 10%                             Labs 10%
- Homeworks 15%                         Homeworks 15%
- Midterm (Exam 1) 35%                 Midterm (Exam 3) 35%
- Final (Exam 2) 40%                   Final (Exam 4) 40%

Final grades will be given according to the following scale: 93-100 A, 90-92 A-, 85-89 B+, 75-84 B, 72-74 B-, 69-71 C+, 66-68 C, 63-65 D+, 60-62 D, 0-59 F

Open Lab

If you want help on your homework assignments, there will be additional time during which one of the computer labs will be open
for use by students taking all Java courses. During these hours, a computer science graduate student will supervise the classroom. This student will be available to answer your questions and help you with your homework and check off your labs.

Schedule for the open labs in Spring 2015:

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<tr>
<th>Day</th>
<th>Time</th>
<th>TA &amp; Location</th>
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<tbody>
<tr>
<td>Monday</td>
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<td>B/L 225</td>
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<td>Tuesday</td>
<td>11:00 AM - 12:15 PM</td>
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Students with Disabilities:

For those who have or think that you may have a disability (learning, physical or psychological), you are encouraged to contact Services for Students with Disabilities, Room G10, Bellarmine, 610-660-1774 or 610-660-1620 as early as possible in the semester. Reasonable accommodations can only be offered to students with current (within 3 years) documentation of the disability and to the extent that such accommodation does not interfere with the essential requirements of a particular course or program.
Once it is determined by the Director of Services for Students with Disabilities (“Director”) that a student qualifies for consideration for a reasonable accommodation, the Director will be in touch with the student’s professors in whose courses such accommodation is being requested to discuss the instructional essential requirements of the particular course and the type of accommodation being sought by the student in connection with the course. With this specific information related to the course and the documentation of the student’s disability, the Director will determine what accommodation, if any, can be offered to the student.

In the event that a student does not initiate this process at the start of the semester or at the start of his/her enrollment at Saint Joseph’s, but at some point during the academic year wishes to request extended time to take examinations and/or an examination in a distraction free environment, such requests must be discussed with the Director a minimum of two (2) weeks prior to the scheduled date of the exam. In addition, all students requesting extended time to take examinations in a distraction-free environment must complete the Extended-Time Request Form, present it to the professor a minimum of one (1) week prior to the scheduled date for signature and return the completed Form to the Office of Services for Students with Disabilities three (3) days prior to the date of the examination. Failure to follow these procedures could result in a denial of the request as untimely.

All other mid-semester requests for reasonable accommodation should be discussed with the Director as soon as possible.

**Accommodations Grievance Procedures for Students with Disabilities:**

The Office of Services for Students with Disabilities will seek to provide a reasonable accommodation to qualified students with disabilities. However, there may be times when a disagreement as to what is a reasonable accommodation or as to the nature of the reasonable accommodation being provided will occur between the student and the University. The student has a right to file a grievance for complaints regarding a requested or offered reasonable accommodation on the basis of a disability under Section 504 and the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) and University policies.

If you have any questions contact Jim Scott, Director, Services for Students with Disabilities – Bellarmine – Room G10 - 610-660-1774 or jscott@sju.edu

**Important Reminder for csc501/csc502 students:**

If you receive a grade below B in this course, you will not be able to get the admission to our computer science graduate program.