CIS 120 - Problem Solving and Programming Concepts I  
Section 102 - Fall Semester 2003

Time and place  9:05 - 9:55 am, Monday, Wednesday, and Friday, FCW 23 
8:00 - 9:15 am, Tuesday, FCW 23

Prerequisite  You MUST be calculus ready to take this course. This means that you have taken, or are taking, or could be taking MA 113, MA 115, MA 120 or MA 125. If you are now in MA 112 or would belong in that course or a lower Math course, you are NOT calculus ready. If you have not completed these prerequisites or have any questions about this, see me today.

Credit Hours  4

Instructor  Keith Lynn

Office  Faculty Court East 2

Contact Information  Phone: 460-6390  
E-mail: lynn@cis.usouthal.edu  
URL: http://www.cis.usouthal.edu/~lynn

Office Hours  MWF 10:00 - 11:00 am, T 9:30 - 10:30 am and by appointment

Course Web Page  A web page for this section will be maintained at  

Additional Assistance  ACM tutoring program (in CSCB) and lab assistants in lab.

The SI Program  Supplemental Instruction is an academic enrichment program that assists students in historically difficult courses. SI is used in over 1000 universities worldwide and has a 30-year history with proven results.

Student SI leaders are selected and trained to be effective peer instructors. These SI leaders have succeeded in this course, will attend all classes, and will offer three fifty-minute SI Sessions per week. The session schedule is determined by student input from each class during the first week. These sessions are informal, free, and voluntary for the students enrolled in this course. Instead of a lecture approach, SI sessions are characterized by group discussions, examples, study strategies, and test preparation.

SI is designed for all students. SI attempts to form a learning community that benefits everybody. SI is NOT remedial. SI is pro-active and enhances students’ understanding of the course. A good SI program results in improved student grades, better long term student success, and higher graduation rates.

Note: Help should be obtained quickly when needed.

Special Assistance  Any student with a qualified handicap who wishes to use a tape recorder or needs any accommodation should talk with the instructor after class so that arrangements can be made.

If you have a specific disability that qualifies you for academic accommodations, please notify the instructor/professor and provide certification from Disability Services. (OSSS is located in Room 270 of the Student Center (460-7212)).
Textbook  Java How to Program, 5th edition, by Deitel and Deitel

Related Material  The Java 2 SDK and Sun One Studio are bound with the textbook. Newer versions of these software tools as well as additional lecture notes will be available through the ACM. There are also numerous books written and web resources about Java which should be consulted as needed.

Course Description  Introduction to the design of algorithms and their implementation in a high-level programming language. Topics include: problem solving strategies, programming concepts, programming environment, data structures, searching and sorting, and internal representations of data.

Objectives  The student will be able to:

- Explicitly describe the steps involved in problem solving and how each of those corresponds to a phase of the software life cycle.
- Use a text editor, compiler and interpreter to create and test programs.
- Describe and use the primitive data types supplied with a high-level programming language.
- Correctly use sequential execution, selection structures and loops to design and implement algorithms.
- Use the object-oriented paradigm for problem solving.
- Use aggregate data structures (such as arrays) in problem solving.
- Design and implement simple classes to represent newly designed objects.
- Explain the concept of efficient algorithms in terms of resource usage.
- Use an IDE (Integrated Development Environment) to develop simple Java programs with a GUI (Graphical User Interface).

Grading  The course grade will be determined on the following basis:

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Lab Exercises and Quizzes*</td>
<td>15%</td>
</tr>
<tr>
<td>Programs (Minimum of 5, Maximum of 7)</td>
<td>25%</td>
</tr>
<tr>
<td>Test 1</td>
<td>15%</td>
</tr>
<tr>
<td>Test 2</td>
<td>15%</td>
</tr>
<tr>
<td>Final Exam</td>
<td>30%</td>
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* A short quiz will be given at the beginning of class each Friday. It is important that these quizzes are taken seriously. The material for the quizzes will be the material presented during lecture or laboratory.

Grading Scale  

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>A</td>
<td>90+</td>
</tr>
<tr>
<td>B</td>
<td>80 - 89.99</td>
</tr>
<tr>
<td>C</td>
<td>73 - 79.99</td>
</tr>
<tr>
<td>D</td>
<td>55 - 72.99</td>
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<tr>
<td>F</td>
<td>54.99 or less</td>
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**Note the range for a C**

NOTE: Since all classes do not progress at the same rate, the instructor reserves the right to modify the above requirements or their timing as circumstances dictate. For example, the instructor may wish to change the number and frequency of exams, or the number and sequence of assignments. However, the students will be given adequate notification when and if such modification is deemed necessary.
Make-Up Policy  No make-up tests are given. Weights of other tests will be increased proportionately provided written medical or legal excuse for absence is provided in advance. Absence from the final exam will result in a failure for the course.

Attendance  On time attendance at lecture and lab is expected and required. The student is responsible for material missed during an absence whether the absence is excused or not. Your grade will not be lowered due to absences, however a good attendance record may be the deciding factor if your grade is on a borderline.

Important Dates

Classes start  Monday, August 25
Labor Day Holiday  Monday, September 1
Thanksgiving Holiday  Wednesday - Sunday, November 26-30
Test 1  Tuesday, September 30
Test 2  Tuesday, November 4
Spring Semester Advising  October 27 - November 7
Drop Date  Friday, November 14
Last day of classes  Friday, December 1
Common Final Exam for All Sections  Tuesday, December 9, 3:30 - 5:30 pm

Program Submissions  Full standards will be given with each assignment.

Programs will be submitted electronically and are graded from 0 to 100.

It is important that you turn in every programming assignment even if you don’t feel the program is working completely. Partial credit on what you submit is much better than getting a 0 for not turning in an assignment.

Each assignment is due by midnight of the date specified for its completion.

Late programming assignments will be graded accordingly:

<table>
<thead>
<tr>
<th>Due Date</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next class meeting</td>
<td>10%</td>
</tr>
<tr>
<td>Up to 1 week</td>
<td>20%</td>
</tr>
<tr>
<td>≥ 1 week and ≤ 2 weeks</td>
<td>30%</td>
</tr>
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</table>

No assignment will be accepted after two weeks from its due date.

Computer Ownership Policy  Each student enrolled in this course must own a notebook computer according to the specifications listed at http://www.cis.usouthal.edu/~laptop. Each student is required to register their notebook with the School. Each student must have their notebook by Wednesday September 3. You will be provided with information about how to register your laptop later this week.

Cheating  The CIS Policy on cheating is:

Unless otherwise stated by your instructor, all work submitted for grading must be your own work. This means that the work you submit for grading must be designed and implemented by one and only one person, and that person must be you. Any deviation from this policy will result in a failing grade for the course for all parties involved. This policy applies to examinations, programming assignments, quizzes, and homework assignments.

Additionally, a record of the incident will be placed in the student’s file and further action may be taken at the university level.