Fall 2006

1 Instructor

Dr. Chandra Kambhamettu
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TW 4:30pm-5:15pm, and by appointment
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Note: Your TA (teaching assistant) will be announced during class the first week.

2 Course Description

From the University Cata	alog:
Course Number	CISC105
Course Title	General Computer Science
Credit Hours	3 Hrs
Course Description	Principles of computer science illustrated and
	applied through programming in the high level language C. Programming projects illustrate applications in all areas: business, humanities, social sciences, physical sciences, mathematics. C is the dominant language of systems and applications development on UNIX platforms and PC's.

Restrictions Does not count toward graduation if taken after CISC181.

3 Overview

CISC105: General Computer Science is primarily an *introductory computer programming* course designed for two groups of students: (1) mathematically-oriented non-CISC majors, and (2) CISC or potential CISC minors/majors without significant programming experience. CISC105 assumes *no* prior programming knowledge.

The following are *good* reasons to take CISC105:

- You are a CISC major¹ without significant prior computer programming experience which is prerequisite for CISC 181: Intro to Computer Science.
- You are thinking of becoming a CISC minor/major and need CISC105 and CISC181 before your Change of Minor/Major Request will be considered by the CISC Department.
- You want to learn about:
 - Design and implementation of small to medium sized programs in C, including compilation, testing, debugging and execution of these programs.
 - Principles of software engineering including naming conventions, program structure, and methodology.
 - Familiarity with the Unix Operating System for a variety of purposes including the creation, editing, transfer and printing of files.
 - Use of local network and Internet resources.
 - Basic ideas of computer science including program and data structures, file management, computer hardware components, and algorithm development and analysis.

The following are bad reasons to take CISC105:

¹also CPEG, ELEG, MATH

- You could not get into CISC101. (Try ACCT160, FREC135, EGTE111, HPER276.)
- You need a group D requirement, and want to learn about computers.
- You need a course that will not require much time outside of class.

CISC105 is *not* a course in word processing. CISC105 is *not* a course that teaches canned commercial software packages, such as EXCEL spreadsheets, ACCESS databases, and POWERPOINT presentations. General computing concepts, terminology, and popular office software is covered in CISC101: Computers and Information Systems.

CISC105 emphasizes programming. Programming can be a challenging, sometimes difficult and time-consuming task.

4 Class Meetings and Attendance

Each week consists of two lecture classes and one lab class. Students are required to attend all lectures and labs. Warning: Poor attendance at lecture almost always results in poor performance.

5 Texts and Readings

- Problem Solving & Program Design in C, 4th ed by Hanly and Koffman 2003 Addison Wesley
- Just Enough Unix, 5th ed. by Andersen 2006 McGraw Hill
- Course Handouts
- Course Web Site (www.cis.udel.edu/~chandra)

6 Programming Environment and Computer Usage

You will primarily use Strauss for all programming in CISC105. Strauss is a multiprocessor computer manufactured by Sun Microsystems running the Solaris Unix operating system. Primary access to Strauss is obtained via X-terminals (Sun Rays) located at various computing sites on the Newark campus and elsewhere, or thru a secure shell connection (ssh).

Note: You cannot do your C work on Copland. You \mathbf{MUST} do your work while logged into Strauss.

7 Your Computer Account

All new students should activate their University account - go to this url for instructions: http://www.udel.edu/welcome/. You should also read the other information at that site - to understand your responsibilities vis-a-vis computer usage at the University.

To participate in the first lab class, you must have activated your university computer account.

8 Requirements and Grading

In determining your final grade, in-class exams and assignments are weighted as follows:

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15%Mid-term Exams30%Final Exam5%Homeworks20%Labs30%Programming Assignments----100%
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Special considerations may have a positive effect on final grades. These include class participation, a pattern of grade improvement, an isolated bad grade, etc. Such considerations will never have a negative effect on the final grade.

Occasionally, mistakes occur in grading. After a graded item is returned, students have two weeks to submit a request to have it regraded. These requests should be submitted directly to the TA. After two weeks, no requests for grade changes will be considered. The request for regrading should include the original exam or assignment, and the reason that regrading is requested.

9 Graded Assignments

There are three categories of assignments: Labs, Homeworks, and Programming. Labs, Programming Assignments and Homework assignments will be made available during the semester.

9.1 Lab Assignments

Lab assignments will be started (and in some cases completed) during the scheduled lab classes. Normally each lab assignment is due by the **beginning of your next lab class**. Most labs involve writing or modifying C programs. Each lab focuses on a particular concept discussed in the text or in lecture, and helps you to complete the programming assignments.

9.2 Homework Assignments

Homeworks normally consist of pencil-and-paper exercises designed to give you practice in applying information covered in the textbook and lectures. Homeworks usually do not require the use of a computer, although students can often check their answers on the computer.

9.3 **Programming Assignments**

Programming assignments consist of applying concepts from labs and lectures to build a software. Students must write their own computer programs; these programs must be compiled, tested, and debugged on the Strauss computer. There will be 3 programming assignments.

You will be given about 2-3 weeks to complete each programming assignment. Program grades are based on: program design, correct execution, proper program comments, properly formatted output, and proper program style. While working on a program, you may consult with the TA, professor, classmates, friends, etc., but the actual programming that you hand in *must* be your *own* work.

9.4 Extra Credit

Some assignments may include an opportunity for extra credit. Extra credit is optional, i.e., students can earn an A grade in the course without doing any extra credit. Extra credit on programming assignments provides students with an opportunity to gain greater programming skill and to learn more advanced material while at the same time improving their course grade. Current and potential Computer Science majors are encouraged to do the extra credit assignments to facilitate transition into the higher level Computer Science courses.

9.5 Late Submission of Assignments

An assignment's due date will be clearly specified when the assignment is made. Do *not* miss class or lab in order to complete an assignment. Late assignments will be penalized unless an extension is granted by the Professor. Only the Professor (not the TA) may grant an extension for an assignment.

The philosophy on late assignments is: (1) Everyone should try his/her best to complete all assignments by the due date. (2) People who work conscientiously to meet deadlines should be rewarded for their promptness and sacrifice of sleep. Thus, allowing others to hand in late assignments without some penalty is unfair to these people. However, there are various circumstances that may prevent a student from completing an assignment on time. Allowing no late assignments would not give students much incentive to eventually complete their work, which is a major source of learning. Thus, we believe that late assignments are better than no assignment.

Late assignments will be penalized 5% per 24 hour period or fraction thereof (not including weekends) up to maximum 25% penalty. For example, if your lab class meets Thursday at 6pm, and you submit the assignment late on Monday at 7pm, then the penalty is 10%. Late assignments will be accepted with penalty up to one week following the due date. Assignments submitted more than one week late without an approved extension will not be accepted.

It is best to submit late assignments directly to the Professor's mailbox in 103 Smith Hall, or the Professor's office. An assignment is considered turned in when it is physically received by the TA or professor or placed in their mailbox, not when it is printed by the computer. Please write the date and time on the late assignment just prior to submitting it.

Note: Extra credit work cannot be handed in late.

10 Exams

There will be two midterm exams during the semester, and a final exam. Each exam is closed book and in-class. The final exam is comprehensive.

If an exam is missed because of an absence that **has been excused** by the Professor, arrangements will be made either to take a make-up or to increase the weighting of the other exam, according to the Professor's choice. If the absence is not excused, it cannot be taken later, and a score of 0 will be included in the computation of the final grade.

11 Readings

Be sure to keep up with the readings - be especially diligent with the readings for labs - these should be completed <u>before</u> you arrive for your weekly lab. The labs assume you have done the reading before hand.

12 Academic Honesty

For many students, this is the first time you will be programming a computer and the first time you will be "debugging" computer programs. Hence, you need to learn what is allowed behavior and what is not. When your program does not work, the first thing to do is use your book and notes to try and figure out the problem yourself. The second and third things to do are to try to figure out the problem yourself! At that point, you may ask for the assistance of a consultant, TA, Professor, classmate or friend to help you understand the specific problem.

You may also discuss in *general* terms the *general* approach to solving a programming problem. Once the discussion gets down to specific programming issues such as names and types of variables to use, control structures such as loops, if-then-else statements, you must end any collaboration.

Specifically, you may *not*:

- Compare answers to any assignment before it has been turned in.
- Supervise a classmate typing in a program, or have a classmate supervise you typing in a program
- Copy, or allow another student to copy, a computer file that contains another student's assignment, and submit it, in part or in its entirety, as your own.
- Work together on an assignment, sharing the computer files and programs involved, and then submit copies of the assignment as one's own individual work.
- Edit a script file, and then submit it as an original transcript of your computer session.

Any evidence of performing any form of academic misconduct will be appropriately handled as stated in the Official Student Handbook of the University of Delaware. If you are in doubt whether or not a behavior is permitted, then ask the Professor or TA beforehand. If you are having difficulty with the course, then see the Professor or TAs for help.

13 Exam2

Exam2 will be held in class on 11/2/06.