CSCI 1170 Computer Science I – Fall 2010

Instructor Information:

Instructor: Dr. Medha Sarkar
Office: KOM 358
Class time:
Section 001: MWF 8:00am - 8:55am,
Section 002: MWF 11:30am - 12:25pm
Class location:
Section 001 - KOM 307
Section 002 - KOM 321
Closed Lab Time:
Section 001: MW 9:10am – 10:10am
Section 002: MW 12:35pm – 1:35pm
Closed Lab Location: KOM 360
Office hours:
MWF: 9am-10am
MW: 12:30pm – 1:30pm
Other times by appointment or chance
Phone: 904-8296
E-mail: msarkar@mtsu.edu

Web page: www.mtsu.edu/~msarkar. This page will contain links to course information, including this syllabus and some assignments.

Course Description:

Computer Science I: Four credits. Prerequisite: Sufficient background in algebra and trigonometry. The first of a two-semester sequence using a high-level language; language constructs and simple data structures such as arrays and strings. Emphasis on problem solving using the language and principles of structured software development. Three lectures and two one-hour labs.

Goals:

The primary goal of this course is the development of program design and program construction skills. Topics related to program design include functional decomposition, structured programming, algorithm design, procedural abstraction, and the application of simple data structures. Topics related to program construction include the C++ programming language, UNIX tools, programming language concepts, and program development techniques.

Learning Outcomes:

Upon successful completion of this course, a student will be able to:

- Apply functional decomposition in the design of a program.
- Develop an algorithmic solution to solve a problem using sequence, selection, and iteration.
- Use simple data structures, such as arrays and strings, in an algorithmic solution.
• Demonstrate the use of procedural abstraction through the design and implementation of effective procedures and functions.
• Construct a readable, well documented, and syntactically correct C++ program.
• Explain the syntax and semantics of a target set of C++ language elements.
• Use UNIX tools to edit, compile, link, and execute a program.
• Predict the state changes of a program in execution and trace its execution.

Course Materials

2. Material covered in textbook: Chapters 1 through 11. For some of these chapters, only part of the chapter will be cover. Also other material deemed necessary by the course instructor will be covered.
6. Course Web Page is created at http://www.mtsu.edu/~msarkar/1170/. All lecture notes, handouts, assignments, and test reviews will be posted on the course web page. Check the page often for new updates. Lab materials are online and you should visit the course calendar page (which can be found on the course web site) to determine which lab will be assigned during the lab period.

Methods of instruction:

Lecture (white board, PowerPoint, and system and/or programming demonstrations) plus class discussion during scheduled class times. In addition there will be open and closed labs (see below).

Course Labs:

Two types of labs will be used in this class. They are closed labs and open labs.

Closed Lab:

• Section 001:
  • Time: MW 12:35 pm – 1:35 pm
  • Location: KOM 360
  • Lab Instructor: Mr. Rafet Al-Tobasei

• Section 002:
  • Time: MW 9:10am – 10:10am
  • Location: KOM 360
  • Lab Instructor: Mr. Brian Rutledge
• **Purpose:**

Closed labs are designed to help reinforce lectures or introduce new material. They give you the opportunity to discuss problems with classmates and ask in depth questions to the lab instructor. Two one-hour lab periods have been set aside each week in which a closed lab will be completed under the supervision of the lab instructor. Each student turns in the finished closed lab answer sheet together with program listings when required.

The closed lab portion of this course gives students the opportunity to learn and practice the skills needed to do open labs and be successful on exams. Unlike your open lab assignments, which you must work on independently, closed lab assignments (CLAs) give you the opportunity to discuss problems with classmates and seek assistance from the instructor or the lab assistant. You are expected to attend all closed labs. Additional information about the closed labs can be found in **Handout 2: Closed Lab Information**.

• **Grading:**

Closed labs will be graded on a 100-point basis. The lab instructor will normally return a closed lab in a week. If there is any disagreement on scores recorded, you should be prepared to produce graded labs to document the mistake. Thus it would be a good idea for you to keep the returned labs in a notebook. If you disagree with a score received on a lab, see the lab instructor for clarification of the grading.

If you can not finish and turn in the lab during the scheduled lab time, you may continue to work on the lab and turn it in to the lab instructor before 3:00pm on Friday of the same week. **No labs will be accepted after this time** (all labs after this time will receive a grade of 0). You may turn in the late closed labs to the lab instructor by leaving it in his mailbox (labeled with his name and your section number: (Brain Rutledge - 1170-001 or Rafet Al-Tobasei 1170-002) located in the Computer Science Department office (KOM 306). Please DO NOT place them under his office door, or they will be thrown away (most likely by the person who shares the office) and counted as a zero.

• **Attendance**: University attendance policies apply. You are required to attend all closed labs. Non-attendance will result in a zero for the lab unless excused by the lab instructor. If you have to miss a lab, you must see your lab instructor to obtain permission to turn in the lab. If permission is granted, you will be expected to make up the lab before 3pm on Friday of the same week.

• **Tardiness**: Sometimes, the first 10 minutes are spent giving instructions. If you are late, you will need to get these from a classmate. Most labs take the full time. Therefore, do not be late for the labs.

**Open labs**

Open labs are designed for solving problems without direct teacher supervision. You will go to the lab at your own convenience and solve the assigned problem at your own pace.
Open Lab Locations: KOM 350, 351, 360 (enter through 351) or you may work at home. There will be six to nine open labs assigned. Each open lab consists of the design, programming, and implementation of a problem assigned in class. If you use your time wisely, you may be able to complete a substantial portion of your open lab work during the closed lab sessions.

Most labs will consist of two parts: a lab design and the actual implementation, i.e., the program created and executed on the computer. The lab design is used to encourage and document timely design and implementation of each assignment.

Each open lab will be graded on a 100-point basis.

Each lab will have an assigned due date. Late programs will receive a 10% deduction for each class day late. The date will be determined by the date when you electronically submit your program. No program will be accepted two days after the original due date.

Programs are graded based upon design, correctness, documentation, style, efficiency, elegance, and adherence to requirements. You must design, write, implement, and debug your own open lab programs. The course instructor and lab assistant are available to help you in case of problems. You may discuss with others high level details of program design and implementation, but not generalities such as “what’s wrong with my program”…see academic integrity section above. You may discuss with others how to use the system such as the editor, operating system, printers, and email.

More information about open labs will be given to you prior to your first open lab assignment.

Open labs are designed for solving problems assigned without instructor supervision. You will go to the lab at your own convenience and solve the assigned problem at your own pace. You may work on the open labs at either one of the following three lab locations: KOM 350, 351, 360, or use remote log in from other labs on campus, your home or dorm.

To remote log in to the linux system while outside of KOM:

1) Use any web browser to go to: http://www.cs.mtsu.edu/nx
2) If the system asks for a Java plugin installation, go ahead and install it (it will prompt the users).
3) Go ahead and ignore the security warnings (if any)
4) Login to NX – Ranger using your class account userid and password.

You must design, write, implement, and debug your own programs. The lab instructor and I are available to help you in case of problems. In order to ask a question about your program, bring a copy of the latest program when you come, including any syntax or run time error messages and outputs generated.
Exams:

Four 100-point tests will be given during the semester plus the final examination. No make-up tests will be given. If you miss one of the three tests, the fourth test will replace this test. Only one replacement is allowed. If no tests were missed, the final test score replaces the lowest test score. The tests will cover materials presented in lectures, assigned readings, homework assignments, open and closed labs.

Exam Schedule:  *(Tentative, subject to change. Check course website for revisions.)*

<table>
<thead>
<tr>
<th>Exam</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Exam 1</td>
<td>Friday, September 24, 2010</td>
</tr>
<tr>
<td>Exam 2</td>
<td>Friday, October 13, 2010</td>
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<tr>
<td>Exam 3</td>
<td>Friday, November 19, 2010</td>
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<tr>
<td>Exam 4</td>
<td>Friday, December 6, 2010</td>
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**Academic Honesty and Individual Effort**

All work for this class is to be done on an individual basis. The penalty for unauthorized collaboration will range from a grade of zero for an individual assignment to a failing grade for the course. The first offense will result in a grade of zero for the assignment/lab/test/quiz. A second offense will result in a failing grade for the class.

See the Computer Science Academic Policy on Academic Integrity at http://www.mtsu.edu/~csdept/Academics/academicIntegrity.htm for a description of unacceptable collaboration.

Each student is expected to complete his/her own work. This includes all homework (open labs) and exams.

- Students are encouraged to study for exams in groups.
- Students are NOT allowed to complete homework in groups.
- Students are allowed to ask any questions concerning homework to the class instructor, lab instructor, or any other instructor at MTSU.
- Students may ask questions of other students IF they deal with how to use the system at MTSU.
- Students may ask questions of other students IF they deal with clarification of a homework assignment.
- Students may NOT ask questions of other students IF they deal with coding a section of a homework assignment.
- Students may ask questions of other students IF they deal with syntax errors in a section of a homework assignment and in which the response is how to correct the syntax error and NOT how to correct the program logic.
- Exceptions to this policy may be made if any group assignments are given.

Instances of cheating may result in punishment ranging from 0/F for an assignment to F for the course to suspension from MTSU.
Paper Assignments:

To aid the orderly processing of collected paper homework assignments, the following guidelines are to be used. All non-computer assignments must be turned in on 8 1/2 by 11 inch paper. Use the front of each sheet only. Multiple sheets must be stapled (preferred) or paper clipped together. In the upper right-hand corner of the top sheet: put your name on one line; the course id, section, and instructor's name on the next; the assignment id on the third; and the due date on the fourth. For example, for students in section 002, your first exercise would have:

Your Name
CSCI 1170-001 (or CSCI 1170-002) (Dr. Sarkar)
Exercise #1
Due: mm/dd/yy

For all computer assignments with a hardcopy requirement, write this information on the upper right-hand corner of the top page in large characters wherever it will fit without obscuring something on the page. Fan-fold printouts should NOT be burst. Laser printouts must be stapled (preferred) or paper clipped. Unless otherwise directed, hand paper assignments to the instructor in person or put in the instructor's mailbox in KOM 306. Do not slide homework under office doors as it may get lost.

Attendance & Communication:

Attendance is expected and excessive absences will be noted. Please let me know if you intend to be absent. If you miss a class, be sure to get the missed material from a classmate. You need not wait more than fifteen minutes after the scheduled class time for me to arrive. I expect the same courtesy---please be on time. Lateness is disruptive to the class. Students failing to attend the first two class meetings will be dropped from the course.

You must obtain the instructor's advance permission to use any electronic recording device or computer during lecture. No phone or network use during lecture. Pagers, phones, and audio devices must be muted or turned off in the classroom. No food or tobacco in the classroom.

The course website (http://www.mtsu.edu/~msarkar/1170) contains notices and assignment postings. You are responsible for checking the website and monitoring for course e-mail daily (weekdays only).

Grading:

Your grade in this course will be based on:

Closed Lab Assignments (CLA) 25%
Exercises and Projects (OLA) 25%
Exams 50%
Four in-class exams will be given. Because almost everyone has at least one bad exam, the lowest in-class exam score will be dropped. (That means each exam is worth 20%.) Missed exams will count as zero; no makeup exams will be given.

**Note:** Any questions concerning a grade on a lab, exam, or homework must be handled during office hours within one week of the class in which the item was returned.

**Financial Aid Notice:**

Students receiving a Tennessee Education Lottery Scholarship (TELS) must maintain a certain minimum TELS GPA (Grade Point Average) to keep their scholarship. A grade of C, D, F, or I in any course may negatively impact TELS eligibility. Dropping a class after the first 14 days of the semester may also impact eligibility; if you withdraw from a course and consequently fall to below full-time status (that is, have less than 12 credit hours), you may lose eligibility for your lottery scholarship. TELS recipients are eligible to receive the scholarship for a maximum of five years from the date of initial enrollment or until a bachelor degree is earned. For more TELS eligibility information, see [http://scholarships.web.mtsu.edu/telsconteligibility.htm](http://scholarships.web.mtsu.edu/telsconteligibility.htm).

**Students receiving any form of financial aid should always consult the Financial Aid Office before dropping a course.** For additional information, contact the Financial Aid Office (898-2830) or see [http://financialaid.web.mtsu.edu](http://financialaid.web.mtsu.edu).

**Reasonable accommodation for students with disabilities:** If you have a disability that may require assistance or accommodation, or you have questions related to any accommodations for testing, note takers, readers, etc., please speak with me as soon as possible. Students may also contact the Office of Disabled Students Services (898-2783) with questions about such services.

**Problems, Complaints, or Suggestions:**
If you are having problems with the course, or have a complaint or suggestion you would like to voice, please bring this to the attention of the course instructor as soon as possible.