



CSCI 520-002: Information Structures

FALL 2015

Instructor: Dr. Mingon Kang
Lecturing Time: M 4:30pm-7:10pm, Meets 08/31/2015 through 12/18/2015
Lecturing Room: BA 258
Office Hours: M: 1-4pm, W: 1-2pm, 3-4pm, Th: 2:30-4pm or anytime my door is open
Office: JOUR 212
Email: Mingon.Kang@tamuc.edu
Website: TBA

Please when you e-mail include 'CSCI 520-002' in the subject of your message

COURSE DESCRIPTION

MAIN OBJECTIVE: To study the basic data structures, their efficient implementations and applications. You should be able to compare and understand the differences between each data structure and be able to determine best data structures for a given application based on memory usage and/or execution time

EXPECTED STUDENT LEARNING OUTCOMES

- To understand the concept of sparse matrices, stacks, and queues
- To examine the differences between linear and linked representation of stacks, queues and ordered data
- To understand and implement tree structures and compare various sorting algorithms

The assignments, quizzes, and tests will include questions and tasks on each of the course objective listed above by which the students learning outcomes are measured

Software: Visual Studio.net or Dev C++ available in JOUR 101/102

Recommended Text: Algorithms in C++, Third Edition, Parts 1-4, Fundamentals, Data Structures, Sorting, Searching by Robert Sedgewick, Addison Wesley, ISBN 0-201-35088-2, 2009

Prerequisite: CSCI515

There is also a separately scheduled lab course CSCI 520L.02L

Student must enroll in and successfully complete the required lab class for this course. No grade is assigned to a student for lab. However, students' lab scores will contribute to their letter grade in 520.

Class Time: F 12:00pm-1:40pm

Location: JOUR 102

COURSE EVALUATION

Basis for Evaluation:

Two midterm exams	35% (15% each)
Assignments	20%
Presentation	10%
Comprehensive final test	35%

Grading Policy:

A:	100% - 90%
B:	89% - 80%
C:	79% - 70%
D:	69% - 60%
F:	Less than 59 %

If the grade received on your final exam is greater than one of the earlier exams, then I will replace the lower of the earlier two exam grades with the grade received on the final exam.

The professor reserves the rights to reward students for continuous hard work or for an exceptional novel scientific work (as judged by the instructor) relevant to the topics covered.

The programs will be submitted in an electronic form, whereas the other assignments are to be written in paper.

Any student caught plagiarizing on an assignment will receive a zero on that assignment.

COURSE POLICIES

TESTS: *The two in-class midterm exams will be given roughly at regular intervals. Students will be informed of the test dates around a week in advance. There will be a final exam too. The test will take one class period and will be given at the scheduled times only. No opportunity will be given to take the test at earlier or later times except in extreme cases as judged by the instructor.*

MAKEUP: *Except extreme cases (as judged by the instructor), no individual makeup test will be permitted. All quizzes and tests are closed book.*

During the exams laptops and phones must be switched off all the time.

ATTENDANCE:

From the Students' Handbook: *"Students are expected to be present for all class meetings of any course for which they are enrolled. Per University Procedure A13.02, effective September 1, 1996, students are responsible for learning about and complying with the attendance policy stated in the catalog, Student's Guidebook, and/or faculty syllabus. It is the prerogative of the faculty to drop students from courses in which they have accrued excessive absences as defined in the course syllabus."* **Student Handbook**

The instructor will take the attendance at the beginning of each lecture and only once. AFTER THAT THE INSTRUCTOR WILL CLOSE THE CLASSROOM DOOR AND/OR PUT A NOTE AT THE DOOR INDICATING LECTURE IS ON. NO STUDENT WILL BE ALLOWED TO THE LECTURE AFTER THIS.

If a student misses 3 or more lectures without legitimate reasons, the instructor will make the student drop the course. If this is not possible, the letter grade of 'F' will be assigned to the student.

Lateness and leaving class early may count as an absence and are not acceptable unless you are ill or a family emergency exists. If you miss a class, it is your responsibility to obtain notes from

a fellow student. Office hours are not meant for individual lectures. Any class material missed by the student is the student's responsibility to acquire.

LATE POLICY:

The deadline for any assignment can be extended with a 15% penalty per day. No deadline can be extended by more than two days. Assignments will NOT be accepted 48 hours after the due date.

MAKEUP POLICY:

There will be no makeup exams in general. Makeup exams may be given to students under extreme circumstances, such as hospitalization, serious injury, death in the family, etc, with prior notification and valid documents.

COLLABORATION POLICY:

Students are encouraged to talk to each other, to the instructor, or to anyone else about any of the assignments. Any assistance, though, must be limited to discussion of the problem and sketching general approaches to a solution. Each student must write out his or her own solutions to the homework. Consulting another student's or group's solution is prohibited, and submitted solutions may not be copied from any source. These and any other form of collaboration on assignments constitute cheating. If you have any question about whether some activity would constitute cheating, please feel free to ask.

ACADEMIC DISHONESTY:

Academic integrity is the pursuit of scholarly activity free from fraud and deception and is an educational objective of this institution. Academic dishonesty includes, but is not limited to, **cheating, plagiarizing**, fabricating of information or citations, facilitating acts of academic dishonesty by others, having unauthorized possession of examinations, submitting work of another person or work previously used without informing the instructor, or tampering with the academic work of other students. If you are caught in an academic dishonesty situation on **any** course work, you will be given a grade of **F** for the course and referred to the Dean of Students for further disciplinary action.

"All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment." (See **Student's Guide Handbook, Polices and Procedures, Conduct**).

WITHDRAWAL POLICY:

There are deadlines for withdrawing from this course. It is the student's responsibility to follow these deadlines.

STUDENTS WITH DISABILITIES:

The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. Among other things, this legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you have a disability requiring an accommodation, please contact:

Office of Student Disability Resources and Services
Texas A&M University-Commerce
Gee Library
Room 132
Phone (903) 886-5150 or (903) 886-5835
Fax (903) 468-8148
StudentDisabilityServices@tamuc.edu

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The professor will make supplementary information for the course available in eCollege. These include class notes, assignments, PowerPoint slides, class announcements, the course syllabus, test dates, etc. The professor will announce in class when such information becomes available electronically. It is the student's responsibility to follow these announcements.

The professor maintains the right to modify the course policy within the semester if need arises.

Some changes are possible within the first few weeks.

Schedule (Tentative)

WEEK	TOPIC
1-2	matrices, linear linked-lists, and applications
3	Stacks
4	Review
5	Exam 1
6-8	Queues and trees
9	Review
10	Exam 2
11-12	Sorting Algorithms
13	Review
14	Final Exam