Instructor: Dr. Abdullah N. Arslan   **Office:** JOUR206
Office Hours: TWR 2:30pm-4:30pm   **E-mail:**Abdullah.Arslan@tamuc.edu
                                                 Office Phone: 903 468 3097

                   Additional by appointment
                   Please when you e-mail include 520 in the subject of your message

COURSE DESCRIPTION
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

Course Content: Most chapters from the textbook and some select additional topics such as sparse
                      matrices

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

STUDENT LEARNING OUTCOMES (SLO)

1) To understand the concept of sparse matrices, stacks, and queues
2) To examine the differences between linear and linked representation of stacks, queues and ordered data
3) 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

TOPICS BY WEEKS

WEEK	TOPIC
1-2	Sparse 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

COURSE EVALUATION
Basis for Evaluation:

Two midterm exams	35%
Assignments	20%
Quizzes	20%
Comprehensive final test	25%

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

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.

Final Test Section: 520.002	**Date:** 12/12/2012	**Time:** 7:20pm-10pm

COURSE POLICIES

Quizzes: *are to be solved independently during the class period. The quizzes will be administered in class. Makeup quizzes will not be given. Any class material missed by the student is the student's responsibility to acquire.*

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*.

Attendance:

"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***

After a students' third absence, the professor may drop the student from the course. If this is not possible then the final grade for the course will become an automatic **F**. 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.

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

The professor may make supplementary information for the course available online. 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 likely within the first few weeks.**

There is also a separately scheduled and separately graded lab course CSCI 597.02L
> Student must enroll in and successfully complete the required lab class for this course in order to receive a passing grade for the lecture class. The lab course is considered to be successfully completed if you receive a grade of C or better.

Class Time: F 2:30pm-4:10pm   Location: JOUR 102

STUDENT LEARNING OUTCOMES (SLO)

> 1) To gain experience in writing code to manipulate various data structures
> 2) To gain experience creating efficient code in C/C++

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

The lab assignments every week will be from the topics covered in CSCI 520 lectures

> Students must enroll in the Information Structures class while taking this lab course.

> Lab assignments (100%). Assignments to be completed during scheduled weekly lab time. Assignments will include code to be written and tested. Assignments will be uploaded to a specified destination by the graduate assistant for this class. Bring a storage device to save a copy of your code for yourself.