

Course Syllabus

CSCI532-01W Algorithm Design

Summer II, 2026

Class Meetings: Web-based, 7/6/2026-8/6/2026

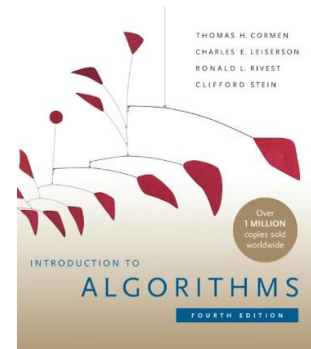
Instructor:

Name: Dr. S. Suh
Regents Professor | William L. Mayo Professor
Computer Science
East Texas A&M University

Office: Jour 223
Office Hours: TBA
Phone: 903.468.8199;
E-mail: sang.suh@etamu.edu (Preferred form of communication)

Textbook required:

Introduction to Algorithms | Thomas H. Cormen, Charles E. Leiserson, Ronald L. Rivest and Clifford Stein | The MIT Press, 2022, 4th Ed. ISBN 978-0-262-04630-5



Course Description:

Algorithms, being the foundation of computing, enables the creation of well-defined sequences of computational steps in order to solve computational problems – with stipulation on input/output relations, correctly and efficiently within a definite time-period. This course introduces the modern day study of computer algorithms. In particular, the course will cover the design and analysis of algorithms with special emphasis on algorithm correctness, asymptotic notations, divide-and-conquer, dynamic programming, greedy algorithms, graph algorithms, shortest paths, and selected special topics.

Prerequisites: CSCI 520.

Course Objectives:

The main objective of this course is to teach students how to analyze practical problems in order to identify and develop best algorithms (in terms of time complexity and memory usage) for their solutions.

The syllabus/schedule are subject to change.

Student Learning Outcomes (SLOs):

- 1) Analyze algorithms in order to determine their calculation complexity in the terms of Big Oh, Big theta and Omega. Recursions.
- 2) Understand sorting algorithms (such as mergesort and quicksort) and their applications.
- 3) Comprehend Binary search trees and optimal binary search trees, and their applications.
- 5) Design dynamic programming algorithms for problems such as line scheduling, matrix chain multiplication, longest common subsequence, and their practical applications.
- 6) Perform greedy algorithms for problems such as the activity selection problem and its application to resource planning.
- 7) Graph Algorithms such as Minimum Spanning Tree algorithms and Dijkstra's shortest path algorithm (as time permits).

Course Requirements:**Prerequisite:**

CSCI 520 or Instruction Permission

Minimal Technical Skills Needed

Using Microsoft Word and PowerPoint, using presentation and graphics programs, etc.

Tips for Success in the Course

Completion of weekly exercise assignment (2 hours estimated weekly)

Weekly preview of chapters to be covered (2 hours estimated weekly)

Review of chapters covered (1 hour estimated weekly)

Student Responsibilities:

Regular attendance of class. In case of absence, the student is responsible for the make-up of covered material.

TECHNOLOGY REQUIREMENTS (LMS)

All course sections offered by Texas A&M University-Commerce have a corresponding course shell in the myLeo Online Learning Management System (LMS). Below are technical requirements

LMS Requirements:

<https://community.brightspace.com/s/article/Brightspace-Platform-Requirements>

LMS Browser Support:

https://documentation.brightspace.com/EN/brightspace/requirements/all/browser_support.htm

YouSeeU Virtual Classroom Requirements:

<https://support.youseeu.com/hc/en-us/articles/115007031107-Basic-System-Requirements>

ACCESS AND NAVIGATION

You will need your campus-wide ID (CWID) and password to log into the course. If you do not know your CWID or have forgotten your password, contact the Center for IT Excellence (CITE) at 903.468.6000 or helpdesk@tamuc.edu.

Note: Personal computer and internet connection problems do not excuse the requirement to complete all course work in a timely and satisfactory manner. Each student needs to have a backup method to deal with these inevitable problems. These methods might include the availability of a backup PC at home or work, the temporary use of a computer at a friend's home, the local library, office service companies, Starbucks, a TAMUC campus open computer lab, etc.

COMMUNICATION AND SUPPORT

Brightspace Support Need Help? Student Support

If you have any questions or are having difficulties with the course material, please contact your Instructor.

Technical Support

If you are having technical difficulty with any part of Brightspace, please contact Brightspace Technical Support at 1-877-325-7778. Other support options can be found here:

<https://community.brightspace.com/support/s/contactsupport>

System Maintenance

D2L runs monthly updates during the last week of the month, usually on Wednesday. The system should remain up during this time unless otherwise specified in an announcement. You may experience minimal impacts to performance and/or look and feel of the environment.

COMMUNICATION AND SUPPORT:

Preferred form of communication: Email

Communication response time: 48 hours

COURSE AND UNIVERSITY PROCEDURES/POLICIES

Course Policies:

Attendance/Lateness: Students are expected to be present at all class lectures. The maximum number of excused absences allowed per semester will be 3. 3 or more absences will automatically result in F as course grade.

Missed Exams and Quizzes: Missed exams and quizzes will result in 0 in all circumstances.

Extra Credit: No extra credit work will be given under any circumstances.

Withdrawal: Any student wishing to withdraw from the course must do so officially as outlined in the class schedule. THE INSTRUCTOR CANNOT DROP OR WITHDRAW ANY STUDENT.

The syllabus/schedule are subject to change.

Syllabus Change Policy:

The syllabus is a guide. Circumstances and events, such as student progress, may make it necessary for the instructor to modify the syllabus during the semester. Any changes made to the syllabus will be announced in advance.

Running Times and Divide & Conquer (Chapters 3 and 4) Running Times and Divide & Conquer (Chapters 3 and 4)

UNIVERSITY SPECIFIC PROCEDURES**Student Conduct:**

All students enrolled at the University shall follow the tenets of common decency and acceptable behavior conducive to a positive learning environment. The Code of Student Conduct is described in detail in the Student Guidebook.

<http://www.tamuc.edu/admissions/registrar/documents/studentGuidebook.pdf> Students should also consult the Rules of Netiquette for more information regarding how to interact with students in an online forum: Netiquette

<http://www.albion.com/netiquette/corerules.html>

TAMUC Attendance:

For more information about the attendance policy please visit the Attendance webpage and Procedure 13.99.99.R0.01.

<http://www.tamuc.edu/admissions/registrar/generalInformation/attendance.aspx>

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/academic/13.99.99.R0.01.pdf>

Academic Integrity:

Students at Texas A&M University-Commerce are expected to maintain high standards of integrity and honesty in all of their scholastic work. For more details and the definition of academic dishonesty see the following procedures:

Undergraduate Academic Dishonesty 13.99.99.R0.03

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/undergraduates/13.99.99.R0.03UndergraduateAcademicDishonesty.pdf>

Graduate Student Academic Dishonesty 13.99.99.R0.10

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/13students/graduate/13.99.99.R0.10GraduateStudentAcademicDishonesty.pdf>

ADA STATEMENT**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:

The syllabus/schedule are subject to change.

Office of Student Disability Resources and Services:

Texas A&M University-Commerce

Gee Library- Room 162

Phone (903) 886-5150 or (903) 886-5835

Fax (903) 468-8148

Email: studentdisabilityservices@tamuc.edu

Website: [Office of Student Disability Resources and Services](http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/)

<http://www.tamuc.edu/campusLife/campusServices/studentDisabilityResourcesAndServices/>

Nondiscrimination Notice:

Texas A&M University-Commerce will comply in the classroom, and in online courses, with all federal and state laws prohibiting discrimination and related retaliation on the basis of race, color, religion, sex, national origin, disability, age, genetic information or veteran status. Further, an environment free from discrimination on the basis of sexual orientation, gender identity, or gender expression will be maintained.

Campus Concealed Carry Statement:

Texas Senate Bill - 11 (Government Code 411.2031, et al.) authorizes the carrying of a concealed handgun in Texas A&M University-Commerce buildings only by persons who have been issued and are in possession of a Texas License to Carry a Handgun. Qualified law enforcement officers or those who are otherwise authorized to carry a concealed handgun in the State of Texas are also permitted to do so. Pursuant to Penal Code (PC) 46.035 and A&M-Commerce Rule 34.06.02.R1, license holders may not carry a concealed handgun in restricted locations.

For a list of locations, please refer to the [Carrying Concealed Handguns On Campus](#) document and/or consult your event organizer.

Web url:

<http://www.tamuc.edu/aboutUs/policiesProceduresStandardsStatements/rulesProcedures/34SafetyOfEmployeesAndStudents/34.06.02.R1.pdf>

Pursuant to PC 46.035, the open carrying of handguns is prohibited on all A&M-Commerce campuses. Report violations to the University Police Department at 903- 886-5868 or 9-1-1.

Smoke, Vapor & Tobacco Free Environment:

University Procedure 34.05.99.R1 now prohibits the use of vapor/electronic cigarettes, smokeless tobacco, snuff and chewing tobacco inside and adjacent to any building owned, leased, or operated by A&M – Commerce.

Method of Evaluation (Tentative):

Midterm Exam	(30%)
Final Exam	(50%)
Project	(20%)

Final grades in this course will be based on the following scale:

A = 90%-100%
B = 80%-89%
C = 70%-79%
D = 60%-69%
F = 59% or Below

Course Coverage:

From the textbook, selected sections from Chapters 3, 4, 6, 7, 10, 12, 14, 15 and 20 will be covered. Revisions to the syllabus shall be announced through either email or announcement in D2L.

Course Outline/Calendar:

UNITS	SUBJECTS TO BE COVERED
(7/06) M	Running Times and Divide & Conquer (Chapters 3 and 4)
(7/13) M	Heap Sort and Quick Sort (Chapters 6 and 7)
(7/20) M	Data Structures and Binary Search Trees (Chapters 10 and 12) – Midterm Exam @6PM, 7/24/26 (Friday)
(7/27) R	Dynamic Programming and Greedy Algorithms (Chapters 14 and 15); Graph Algorithms (Chapter 20 – Optional)
(7/31) F	Final Exam (Comprehensive with focus on all chapters covered) @6PM, 7/31/26 (Friday)
(8/02) U	Project Presentation and Submission – Due 8/2/26 (Sunday)