



**CIS 5316, CRN 10176, Advanced Database Management  
Spring 2020**

Texas A&M University-Central Texas

**COURSE DATES, MODALITY, AND LOCATION**

Dates: January 13, 2020 – May 8, 2020

Location: Online

Modality: This is a 100% online course, and uses the A&M-Central Texas Canvas Learning Management System [<https://tamuct.instructure.com/>].

**INSTRUCTOR AND CONTACT INFORMATION**

Instructor: Randy Brown

Office: FH 323-J

Phone: 254-519-5462

Email: For course related communications, please use Canvas “Inbox”

For non-course related, use [rwbrown@tamuct.edu](mailto:rwbrown@tamuct.edu)

COBA Department Main Phone Number: (254) 519-5437

COBA Department Main Email: [cobainfo@tamuct.edu](mailto:cobainfo@tamuct.edu)

COBA Department Main Fax#: (254) 501-5825

**Office Hours**

Location	Mon	Tues	Wed	Thurs	Fri
FH 323J	By Appointment	1:00 - 4:00 pm, & by appointment	By Appointment	1:00 - 4:00 pm, & by appointment	By Appointment
Virtual	By Appointment	By Appointment	By Appointment	By Appointment	By Appointment

**Student-instructor interaction**

Please send all course related correspondence through Canvas “Inbox”. Please use TAMUCT email only when Canvas is not available (or for non-course related correspondence). I check email several times a day during the week and at least once during the weekends. I will attempt to respond within 24 hours Mon-Thurs and within 48 hours on Fri through Sun. Please do not hesitate to stop by my office during the scheduled office hours or contact me via phone, Canvas Inbox, or TAMUCT email, if there are any personal problems or challenges that are hindering your regular progress in the course.

## **WARRIOR SHIELD**

### **Emergency Warning System for Texas A&M University-Central Texas**

Warrior Shield is an emergency notification service that gives Texas A&M University-Central Texas the ability to communicate health and safety emergency information quickly via email, text message, and social media. All students are automatically enrolled in Warrior Shield through their myCT email account.

Connect to Warrior Shield by [911Cellular](https://portal.publicsafetycloud.net/Account/Login) [https://portal.publicsafetycloud.net/Account/Login] to change where you receive your alerts or to opt out. By staying enrolled in Warrior Shield, university officials can quickly pass on safety-related information, regardless of your location.

## **COURSE INFORMATION**

### **Course Overview and description**

This course will examine the methodologies of database management including data models, database design, normalization, SQL/ PLSQL, NoSQL, performance and reliability, distributed database, data dictionaries, data integrity, security, and privacy.

### **Course Objective or Goal**

#### **Student Learning Outcomes**

Successful completion of this course should enable the student to:

- Apply methodologies such as entity relationship diagrams and normalization in the design, implementation and modification of database
- Use SQL statements in a procedural programming language to manipulate database data
- Use the advanced SQL to create subqueries and correlated queries
- Use SQL functions to manipulate dates, strings, and other data
- Create and use views, updatable views, triggers and stored procedures
- Discuss what concurrency control is and what role it plays in maintaining the database's integrity
- Describe distributed database management systems (DDBMSs) and their components
- Analyze factors that affect the performance of a database system
- Formulate efficient queries and tune the DBMS for optimal performance • Discuss the four major approaches of the NoSQL data model and how they differ from the relational model

### **Required Reading and Textbook(s)**

Note: A student of this institution is not under any obligation to purchase a textbook from a university-affiliated bookstore. The same textbook (in this or other formats) may also be available from an independent retailer, including an online retailer.

1. Book 1:
  - a. Database Systems: Design, Implementation, & Management, 12<sup>th</sup> Ed.
  - b. Author: Carlos Coronel, Steven Morris
  - c. ISBN: 9781305627482
2. Book 2:

- a. T-SQL Fundamentals, 3<sup>rd</sup> Ed.
- b. Author: Ben-Gan
- c. ISBN: 9781509302000

## **COURSE REQUIREMENTS**

- 1. Reading Assignments:** All assigned chapters will be used as basis for class and/or blackboard discussions. Study the assigned readings before each class.
  
- 2. Attendance/Participation Policy:** Class attendance is required. The policy as officially stated by the University will be enforced. Students are expected to make arrangements with the instructor before missing a series of classes due to job requirements. Students are responsible for any material missed during an absence. In all cases, the responsibility remains with the students to meet/obtain all course requirements/changes. If you are not present the class period your presentation is scheduled, the presentation grade is zero. Regular course progress is expected. It is each student's responsibility to review the blackboard and syllabus for the latest information, assignments and examinations.

NOTE 1: (from TAMU-CT Student Catalog): Student absences are considered by the University to be strictly between the individual student and faculty member. The faculty member has the responsibility and authority to determine whether make-up work can be done because of absences. Students may request make-up consideration for valid and verifiable reasons such as illness, death in the immediate family, legal proceedings, or participation in University-sponsored activities. Students who participate in University-sponsored activities are responsible for obtaining a written explanation for their absence from the faculty/staff member who is responsible for the activity.

NOTE 2: As this is an online course, there will be weekly discussions (most weeks, not all) which will account for your participation. Participation will count as 10% (100 Points) of your total grade.

- 3. Examinations:** There will be a midterm and a final exam worth 200 points each (40%). Makeup exams will be given ONLY when arrangements have been made PRIOR to the class meeting.
  
- 4. Homework/Case Problems:** Homework will be assigned most weeks and is intended to reinforce the concepts discussed in class. Each homework assignment will be worth 20 points, but only the top 10 will count (200 points total).

**5. Group Project:**

Yes, I know this is an online course and meetings can be a challenge, but that’s the world we live in today with everything becoming virtual... Each Student will be assigned to a group required to design a communications system. More information about this project will be distributed by the end of the fourth week of class. Groups will be randomly assigned after the first week of class. The group project will include a presentation and will be worth 300 points (30%).

**6. Late Submissions:** Homework Assignments will be considered late if submitted after the due date/time. A late penalty of 10% per class day (max of 20% deduction per week) will be applied. That means that NO submissions will be accepted if submitted more than 5 weeks after the due date. In addition, discussions MUST be completed within the week during which the discussion is assigned (i.e. late discussions will NOT be allowed). Late tests will NOT be accepted!

NOTE: NO work will be accepted after 5/8/2020.

**7. Other Notes about assignments:**

Most (ALL) assignments will be submitted via Canvas.

- 2.1 If there are multiple parts, submit all parts in a **SINGLE** zip file. I would suggest you create a folder for each assignment, then you can zip that entire folder at once...
- 2.2 Make sure all parts are labelled in a logical manner that makes it easy for me to figure out which part of the assignment is which.

**Grading Criteria Rubric and Conversion**

Assignment	Points	Percent	My Grade
Mid-Term/Final Exam	400	40%	
Group Project	300	30%	
Homework	200	20%	
Attendance/Participation	100	10%	
<b>Total</b>	<b>1000</b>	<b>100%</b>	

Percentage	Points	Grade
90.0-100%	900-1000	A
80.0-89.9%	800-899	B
70.0-79.9%	700-799	C
60.0-69.9%	600-699	D
0-59.9%	0-599	F

**Posting of Grades**

All student grades will be posted on the Canvas Grade book and students should monitor their grading status through this tool. Grades for weekly assignments, discussions, quizzes and exams *should* be posted (no guarantees) within 7 days following the due date.

Canvas Grade Book has weighted columns for each of the groups of assignments (Mid-Term, Final, Project, and Homework) as well as a weighted column for the entire course. These columns put 0's for all incomplete assignments, so they all start at 0% and go up as you submit assignments. So, at any given time, you can see what your grade would be if you did no additional work.

## COURSE OUTLINE AND CALENDAR

### Complete Course Calendar

Week	Date	Content	Assignments Due at End of Week (Sunday)
1	13-Jan	Syllabus/Introductions	Syllabus Acknowledgement, Introduction Discussion
2	20-Jan	Chapters 1 & 2	
3	27-Jan	Chapter 3	Homework 1; Group Project Deliverable 1
4	3-Feb	Chapter 4 & 5	Homework 2
5	10-Feb	Chapter 6	Homework 3
6	17-Feb	Chapter 7	Homework 4; Group Project Deliverable 2
7	24-Feb	Chapter 8	Homework 5
8	2-Mar	Chapter 9	Homework 6
	9-Mar	<b>Spring Break - NO CLASS</b>	
9	16-Mar	Chapter 10	Homework 7; Group Project Deliverable 3
10	23-Mar	Chapter 11	Homework 8
11	30-Mar	Chapter 12	Homework 9
12	6-Apr	Chapter 13	Homework 10; Group Project Deliverable 4
13	13-Apr	Chapter 14	Homework 11
14	20-Apr	Chapter 15	Homework 12
15	27-Apr	Chapter 16	Homework 13
16	4-May	Final Exam (Due 5/8/2020)	Group Project Final Project

### Important University Dates

Please refer to the online TAMUCT calendar found [here](http://catalog.tamuct.edu/undergraduate_catalog/general-information/academic20calendars20and20final20exam20schedule/) (http://catalog.tamuct.edu/undergraduate\_catalog/general-information/academic20calendars20and20final20exam20schedule/)

## TECHNOLOGY REQUIREMENTS AND SUPPORT

### Technology Requirements

This course will use the A&M-Central Texas Instructure Canvas learning management system. **It is strongly recommend you use the latest versions of Chrome or Firefox browsers. Canvas no longer supports any version of Internet Explorer.**

Logon to A&M-Central Texas Canvas [<https://tamuct.instructure.com/>] or access Canvas through the TAMUCT Online link in myCT [<https://tamuct.onecampus.com/>]. You will log in through our Microsoft portal.

Username: Your MyCT email address. Password: Your MyCT password

### **Canvas Support**

Use the Canvas Help link, located at the bottom of the left-hand menu, for issues with Canvas. You can select “Chat with Canvas Support,” submit a support request through “Report a Problem,” or call the Canvas support line: 1-844-757-0953.

For issues related to course content and requirements, contact your instructor.

### **Other Technology Support**

For log-in problems, students should contact Help Desk Central

24 hours a day, 7 days a week

Email: [helpdesk@tamu.edu](mailto:helpdesk@tamu.edu)

Phone: (254) 519-5466

[Web Chat](http://hdc.tamu.edu): [<http://hdc.tamu.edu>]

*Please let the support technician know you are an A&M-Central Texas student.*

---

## **UNIVERSITY RESOURCES, PROCEDURES, AND GUIDELINES**

### **Drop Policy**

If you discover that you need to drop this class, you must complete a [Drop Request Form](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf) [[https://www.tamuct.edu/registrar/docs/Drop\\_Request\\_Form.pdf](https://www.tamuct.edu/registrar/docs/Drop_Request_Form.pdf)].

Professors cannot drop students; this is always the responsibility of the student. The Registrar’s Office will provide a deadline on the Academic Calendar for which the form must be completed, signed and returned. Once you return the signed form to the Registrar’s Office, you must go into Warrior Web and confirm that you are no longer enrolled. If you still show as enrolled, FOLLOW-UP with the Registrar’s Office immediately. You are to attend class until the procedure is complete to avoid penalty for absence. Should you miss the drop deadline or fail to follow the procedure, you will receive an F in the course, which may affect your financial aid and/or VA educational benefits.

### **Academic Integrity**

Texas A&M University -Central Texas values the integrity of the academic enterprise and strives for the highest standards of academic conduct. A&M-Central Texas expects its students, faculty, and staff to support the adherence to high standards of personal and scholarly conduct to preserve the honor and integrity of the creative community. Academic integrity is defined as a commitment to honesty, trust, fairness, respect, and responsibility. Any deviation by students from this expectation may result in a failing grade for the assignment and potentially a failing grade for the course. Academic misconduct is any act that improperly affects a true and honest evaluation of a student’s academic performance and includes, but is not limited to, working

with others in an unauthorized manner, cheating on an examination or other academic work, plagiarism and improper citation of sources, using another student's work, collusion, and the abuse of resource materials. All academic misconduct concerns will be referred to the university's Office of Student Conduct. Ignorance of the university's standards and expectations is never an excuse to act with a lack of integrity. When in doubt on collaboration, citation, or any issue, please contact your instructor before taking a course of action.

For more [information regarding the Student Conduct process](https://www.tamuct.edu/student-affairs/student-conduct.html),  
[https://www.tamuct.edu/student-affairs/student-conduct.html].

If you know of potential honor violations by other students, you may [submit a report](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=0),  
[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\_id=0].

### **Academic Accommodations**

At Texas A&M University-Central Texas, we value an inclusive learning environment where every student has an equal chance to succeed and has the right to a barrier-free education. The Office of Access and Inclusion is responsible for ensuring that students with a disability receive equal access to the university's programs, services and activities. If you believe you have a disability requiring reasonable accommodations please contact the Office of Access and Inclusion, WH-212; or call (254) 501-5836. Any information you provide is private and confidential and will be treated as such.

For more information please visit our [Access & Inclusion](https://tamuct.instructure.com/courses/717) Canvas page (log-in required)  
[https://tamuct.instructure.com/courses/717]

### **Important information for Pregnant and/or Parenting Students**

Texas A&M University-Central Texas supports students who are pregnant and/or parenting. In accordance with requirements of Title IX and related guidance from US Department of Education's Office of Civil Rights, the Dean of Student Affairs' Office can assist students who are pregnant and/or parenting in seeking accommodations related to pregnancy and/or parenting. Students should seek out assistance as early in the pregnancy as possible. For more information, please visit [Student Affairs](https://www.tamuct.edu/student-affairs/index.html) [https://www.tamuct.edu/student-affairs/index.html]. Students may also contact the institution's Title IX Coordinator. If you would like to read more about these [requirements and guidelines](http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf) online, please visit the website [http://www2.ed.gov/about/offices/list/ocr/docs/pregnancy.pdf].

Title IX of the Education Amendments Act of 1972 prohibits discrimination on the basis of sex and gender—including pregnancy, parenting, and all related conditions. A&M-Central Texas is able to provide flexible and individualized reasonable accommodation to pregnant and parenting students. All pregnant and parenting students should contact the Associate Dean in the Division of Student Affairs at (254) 501-5909 to seek out assistance. Students may also contact the University's Title IX Coordinator.

## **Tutoring**

Tutoring is available to all A&M-Central Texas students, both on-campus and online. Subjects tutored on campus include Accounting, Advanced Math, Biology, Finance, Statistics, Mathematics, and Study Skills. Tutors are available at the Tutoring Center in Warrior Hall, Suite 111. Tutor.com tutoring **will not offer writing support** beginning August 1, 2019, but will continue to offer other tutoring support.

If you have a question regarding tutor schedules, need to schedule a tutoring session, are interested in becoming a tutor, or have any other question, contact Academic Support Programs at (254) 501-5836, visit the Office of Student Success at 212F Warrior Hall, or by emailing [studentsuccess@tamuct.edu](mailto:studentsuccess@tamuct.edu) .

Chat live with a tutor 24/7 for almost any subject from on your computer! Tutor.com is an online tutoring platform that enables A&M-Central Texas students to log in and receive online tutoring support at no additional cost. This tool provides tutoring in over 40 subject areas. Access Tutor.com through Canvas.

## **University Writing Center**

Located in Warrior Hall 416, the University Writing Center (UWC) at Texas A&M University–Central Texas (TAMUCT) is a free workspace open to all TAMUCT students from 10:00 a.m.-5:00 p.m. Monday thru Thursday with satellite hours in the University Library Monday thru Thursday from 6:00-9:00 p.m. This semester, the UWC is also offering online only hours from 12:00-3:00 p.m. on Saturdays.

Tutors are prepared to help writers of all levels and abilities at any stage of the writing process. While tutors will not write, edit, or grade papers, they will assist students in developing more effective composing practices. By providing a practice audience for students' ideas and writing, our tutors highlight the ways in which they read and interpret students' texts, offering guidance and support throughout the various stages of the writing process. In addition, students may work independently in the UWC by checking out a laptop that runs the Microsoft Office suite and connects to WIFI, or by consulting our resources on writing, including all of the relevant style guides. Whether you need help brainstorming ideas, organizing an essay, proofreading, understanding proper citation practices, or just want a quiet place to work, the UWC is here to help!

Students may arrange a one-to-one session with a trained and experienced writing tutor by visiting the UWC during normal operating hours (both half-hour and hour sessions are available) or by making an appointment via [WOnline](https://tamuct.mywconline.com/) [https://tamuct.mywconline.com/]. In addition, you can email Dr. Bruce Bowles Jr. at [bruce.bowles@tamuct.edu](mailto:bruce.bowles@tamuct.edu) if you have any questions about the UWC and/or need any assistance with scheduling.

## **University Library**

The University Library provides many services in support of research across campus and at a



distance. We offer over 200 electronic databases containing approximately 250,000 eBooks and 82,000 journals, in addition to the 85,000 items in our print collection, which can be mailed to students who live more than 50 miles from campus. Research guides for each subject taught at A&M-Central Texas are available through our website to help students navigate these resources. On campus, the library offers technology including cameras, laptops, microphones, webcams, and digital sound recorders.

Research assistance from a librarian is also available 24 hours a day through our online chat service, and at the reference desk when the library is open. Research sessions can be scheduled for more comprehensive assistance, and may take place on Skype or in-person at the library. Assistance may cover many topics, including how to find articles in peer-reviewed journals, how to cite resources, and how to piece together research for written assignments.

Our 27,000-square-foot facility on the A&M-Central Texas main campus includes student lounges, private study rooms, group work spaces, computer labs, family areas suitable for all ages, and many other features. Services such as interlibrary loan, TexShare, binding, and laminating are available. The library frequently offers workshops, tours, readings, and other events. For more information, please visit our [Library website](http://tamuct.libguides.com/index) [http://tamuct.libguides.com/index].

---

## **OPTIONAL POLICY STATEMENTS**

### **A Note about Sexual Violence at A&M-Central Texas**

Sexual violence is a serious safety, social justice, and public health issue. The university offers support for anyone struggling with these issues. University faculty are mandated reporters, so if someone discloses that they were sexually assaulted (or a victim of Domestic/Dating Violence or Stalking) while a student at TAMUCT, faculty members are required to inform the Title IX Office. If you want to discuss any of these issues confidentially, you can do so through Student Counseling (254-501-5955) located on the second floor of Warrior Hall (207L).

Sexual violence can occur on our campus because predators often feel emboldened, and victims often feel silenced or shamed. It is incumbent on ALL of us to find ways to actively create environments that tell predators we don't agree with their behaviors and tell survivors we will support them. Your actions matter. Don't be a bystander; be an agent of change. For additional information on campus policy and resources visit the [Title IX webpage](https://www.tamuct.edu/departments/compliance/titleix.php) [https://www.tamuct.edu/departments/compliance/titleix.php].

### **Behavioral Intervention**

Texas A&M University-Central Texas cares about the safety, health, and well-being of its students, faculty, staff, and community. If you are aware of individuals for whom you have a concern, who are exhibiting concerning behaviors, or individuals causing a significant disruption to our community, please make a referral to the Behavioral Intervention Team. Referring your concern shows you care. You can complete the [referral](#) online

[[https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout\\_id=2](https://cm.maxient.com/reportingform.php?TAMUCentralTexas&layout_id=2)].

Anonymous referrals are accepted. Please see the [Behavioral Intervention Team](https://www.tamuct.edu/student-affairs/bat.html) website for more information [<https://www.tamuct.edu/student-affairs/bat.html>]. If a person's behavior poses an imminent threat to you or another, contact 911 or A&M-Central Texas University Police at 254-501-5800.

---

#### **INSTRUCTOR POLICIES.**

1. Instructor reserves the right to modify the syllabus during the course of the semester for the benefit of the students.
2. Instructor reserves the right to supplement the material presented in the text with addition material that may benefit the students by either providing additional information or a different point of view.
3. Instructor expects that the students will act in a curious and professional manner in all interactions with other students and the instructor.
4. Instructor reserves the right to modify grading rubrics. Changes to grading rubrics are only made to current and/or future assignments.
5. Any changes made will be announced on Canvas.

#### **Copyright Notice.**

Students should assume that all course material is copyrighted by the respective author(s). Reproduction of course material is prohibited without consent by the author and/or course instructor. Violation of copyright is against the law and Texas A&M University-Central Texas' Code of Academic Honesty. All alleged violations will be reported to the Office of Student Conduct.

Copyright. 2020 by Randy Brown at Texas A&M University-Central Texas, College of Business Administration; 1001 Leadership Place, Killeen, TX 76549; 254-519-5462; Fax 254-501-5825; [rwbrown@tamuct.edu](mailto:rwbrown@tamuct.edu)