ITSS 4300.501 Syllabus
Fall 2016

Course Information

Course:	ITSS 4300.501
Course Name:	Database Fundamentals
Location:	JSOM 1.212
Time:	Tuesday 7:00 PM – 9:45 PM
Website:	https://elearning.utdallas.edu/

Professor Contact Information

Instructor:	Russell R. Torres, Ph.D.
Office:	3.807
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Office Hours:	Tuesday 4:00 PM – 5:00 PM
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	Or by Appointment
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Course Pre-requisites, Co-requisites, and/or Other Restrictions

- ITSS 3300
- ITSS 3312
- MATH 1325 or MATH 2413 or MATH 2417

Course Description

Introduces the basic concepts for the design and development of relational databases and database management. Topics include entity-relationship data model, logical database design, data administration, Structured Query Language, and database management issues, such as concurrency control, data security, and integrity. A database management system software package is used to implement working database systems.

Student Learning Objectives/Outcomes

Upon completion of this course, the student will:
1. Demonstrate understanding of basic database concepts and terminology
2. Demonstrate ability to create a conceptual data model when requirements are provided
3. Demonstrate ability to convert a conceptual data model into a physical relational database structure
4. Demonstrate ability to perform standard database operations using MySQL
5. Demonstrate ability to write SQL statements using MySQL
6. Demonstrate ability to design and create basic database using MySQL
7. Demonstrate understanding of database management concepts relating to concurrency, security and transaction management.

Required Textbooks and Materials

Textbooks:	Database Systems: Design, Implementation, & Management, 12e, Carlos Coronel and Steven Morris, Cengage, ISBN: 978-1-305-62748-2
Software:	MySQL Community Server – An open source database management system available for free download at https://dev.mysql.com/downloads/mysql/.
Laptop Computer:	This course is heavily hands-on with many class exercises. Students are required to install MySQL on their laptops promptly after first class, and to bring laptops to each class thereafter (except for exam days).

Suggested Course Materials

Optional Books:	Murach's MySQL, 2e, by Joel Murach. Mike Murach & Associates, ISBN: 978-1-890774-82-0

Assignments & Academic Calendar

Week	Day	Topic	Reading	Notes
1	8/23	Course Introduction Database Concepts	Syllabus Chapter 1	
2	8/30	Data Models Relational Database Model	Chapter 2 Chapter 3	
3	9/6	Entity Relationship Modeling Advanced Data Modeling	Chapter 4 Chapter 5	Group Project Milestone 1
4	9/13	Normalization	Chapter 6	
5	9/20	Database Design	Chapter 9	Assignment 1 Due
6	**9/27**	**Exam 1**		
7	10/4	Basic SQL	Chapter 7	Group Project Milestone 2
8	10/11	Advanced SQL	Chapter 8	
9	10/18	Performance Tuning/Query Optimization	Chapter 11	Assignment 2 Due
10	**10/25**	**Exam 2**		
11	11/1	Transaction Management/ Concurrency Control	Chapter 10	Group Project Milestone 3
12	11/8	Database Administration and Security	Chapter 16	Group Project Milestone 4
13	11/15	Business Intelligence and Data Warehouses Big Data Analytics and Security	Chapter 13 Chapter 14	Group Project Milestone 5
14	11/22	THANKSGIVING BREAK – NO CLASS		
15	11/29	Project Presentations		Assignment 3 Due
16	**12/6**	**Exam 3**		

Grading Policy

Grades will be based on student performance relative to other students who have completed this course in the past as well as the students who are currently taking the course. Adherence to instructions will be considered an important part of the grade.

Assessment:

Deliverable	Percent of Score
Assignments	30%
Attendance, Class Participation/Professionalism, In-Class Quizzes	5%
Group Project	20%
Exam 1	15%
Exam 2	15%
Exam 3	15%
Total	**100%**

Approximate Grading Scale:**

Scaled Score	Letter Grade
97-100	A+
95-96	A
90-94	A-
87-89	B+
84-86	B
80-83	B-
77-79	C+
74-76	C
70-73	C-
67-69	D+
64-66	D
60-63	D-
0-59	F

** Subject to Change.

Course & Instructor Policies

Announcements
You are responsible for any announcements made in class or through eLearning, including changes to the schedule or syllabus. You are also responsible for material distributed in class or through eLearning (so check eLearning regularly).

Submission of Assignments
All assignments and project reports must be submitted through eLearning. Alternative submission methods, e.g., by paper, by e-mail or on disk/USB drive, is not acceptable unless prior permission of instructor is obtained. Submissions after the deadline will not be accepted, and accordingly a grade of zero will be automatically applied for a missing submission after the deadline.

Exams
All exams are closed-book, closed-notes and require individual-effort. Unless under extreme circumstances, make-up exams will not be arranged. A make-up exam will include significant discussion, essay, and short answer questions.

Participation
Grade allocation for group projects and assignments will be determined, in part, by peer evaluation. In extreme cases, such as when a student contributes significantly less to group assignments or projects throughout the semester, *a severe penalty will be imposed in the form of directly deducting assignment and/or project points*.

Make Up Exams
Make up exams will be rare. You must have an excused absence on the day of the exam and a make up exam will be allowed ONLY with the prior permission of the instructor.

Other Important Information

Academic Integrity
The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrates a high standard of individual honor in his or her scholastic work.

Academic Dishonesty: Academic dishonesty can occur in relation to any type of work submitted for academic credit or as a requirement for a class. It can include individual work or a group project. Academic dishonesty includes plagiarism, cheating, fabrication, and collaboration/collusion. In order to avoid academic dishonesty, it is important for students to fully understand the expectations of their professors. This is best accomplished through asking clarifying questions if an individual does not completely understand the requirements of an assignment.

Additional information related to academic dishonesty and tips on how to avoid dishonesty may be found here: https://www.utdallas.edu/conduct/dishonesty/.

Copyright Notice
It is the policy of the University of Texas at Dallas to adhere to the requirements of the United States Copyright Law of 1976, as amended, (Title 17, United States Code), including ensuring that the restrictions that apply to the reproduction of software are adhered to and that the bounds of copying permissible under the fair use doctrine are not exceeded. Copying, displaying, reproducing, or distributing copyrighted material may infringe upon the copyright owner's rights. Unauthorized distribution of copyrighted material, including unauthorized peer-to-peer file sharing, may subject students to appropriate disciplinary action as well as civil and criminal penalties. Usage of such material is only appropriate when that usage constitutes "fair use" under the Copyright Act. For more information about the fair use exemption, see http://copyright.lib.utexas.edu/copypol2.html. As a UT Dallas student, you are required to follow UT Dallas' copyright policy (UTDPP1043 at http://policy.utdallas.edu/utdpp1043) and the UT System's policy, UTS107 at http://www.utsystem.edu/board-of-regents/policy-library/policies/uts107-use-copyrighted-materials.

Email Use
The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. All official student email correspondence will be sent only to a student's UT Dallas email address and UT Dallas will only consider email requests originating from an official UT Dallas student email account. This allows the University to maintain a high degree of confidence in the identity of each individual's corresponding via email and the security of the transmitted information. The University of Texas at Dallas furnishes each student with a free email account that is to be used in all communication with university personnel. The Office of Information Technology provides a method for students to have their UT Dallas mail forwarded to other email accounts. To activate a student UT Dallas computer account and forward email to another account, go to http://netid.utdallas.edu.

Class Attendance
Regular and punctual class attendance is expected. Students who fail to attend class regularly are inviting scholastic difficulty. Absences may lower a student's grade where class attendance and class participation are deemed essential by the instructor. In some courses, instructors may have special attendance requirements; these should be made known to students during the first week of classes.

Withdrawal from Class
The administration at UT Dallas has established deadlines for withdrawal from any course. These dates and times are published in the Comet Calendar (http://www.utdallas.edu/calendar) and in the Academic Calendar http://www.utdallas.edu/academiccalendar). It is the student's responsibility to handle withdrawal requirements from any class. In other words, a professor or other instructor cannot drop or withdraw any student unless there is an administrative drop such as the following:

- Have not met the prerequisites for a specific course
- Have not satisfied the academic probationary requirements resulting in suspension
- Office of Community Standards and Conduct request
- Have not made appropriate tuition and fee payments
- Enrollment is in violation of academic policy
- Was not admitted for the term in which they registered

It is the student's responsibility to complete and submit the appropriate forms to the Registrar's Office and ensure that he or she will not receive a final grade of "F" in a course if he or she chooses not to attend the class after being enrolled.

Student Grievance Procedures
Procedures for student grievances are found in university policy UTDSP5005 (http://policy.utdallas.edu/utdsp5005). In attempting to resolve any student grievance regarding disputes over grades, application of degree plan, graduation/degree program requirements, and thesis/and dissertation committee, adviser actions and/or decisions, evaluations, and/or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originated.

Incomplete Grade Policy
As per university policy, incomplete grades may be given, at the discretion of the instructor of record for a course, when a student has completed at least 70% of the required course material but cannot complete all requirements by the end of the semester. An incomplete course grade (grade of 'I') must be completed within the time period specified by the instructor, not to exceed eight (8) weeks from the first day of the subsequent long semester. Upon completion of the required work, the symbol 'I' may be converted into a letter grade (A through F). If the grade of Incomplete is not removed by the end of the specified period, it will automatically be changed to F.

AccessAbility Services
It is the policy and practice of The University of Texas at Dallas to make reasonable accommodations for students with properly documented disabilities. However, written notification from the Office of Student AccessAbility (OSA) is required. If you are eligible to receive an accommodation and would like to request it for this course, please discuss it with your professor and allow one week advance notice. Students who have questions about receiving accommodations, or those who have, or think they may have, a disability (mobility, sensory, health, psychological, learning, etc.) are invited to contact OSA for a confidential discussion. OSA is located in the Student Services Building, SSB 3.200. They can be reached by phone at 972-883-2098, or by email at studentaccess@utdallas.edu.

Religious Holy Days
The University of Texas at Dallas will excuse a student from class or other required activities, including examinations and travel time for the observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, of the Texas Tax Code.

Students are encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment.

Excused students will be allowed to take missed exams or complete assignments within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the President of UT Dallas or from the President's designee. The chief executive officer or designee must take into account the legislative intent of Texas Education Code 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Resources to Help You Succeed
The Office of Student Success operates the Student Success Center (SSC, http://www.utdallas.edu/studentsuccess), which offers assistance to students in the areas of writing, mathematics, communication, multiple science fields, reading, study skills, and other academic disciplines. These services are available through individual and small group

appointments, workshops, short courses, and a variety of online and instructional technologies. All students enrolled at UT Dallas are eligible for these services.

The **Math Lab** gives short-term and semester long support for a variety of introductory and advanced mathematics courses. Students may drop in to visit with a math tutor on a regular basis. Comet card is required.

The **Writing Center** offers a collaborative learning environment for one-to-one and small group assistance with general and advanced writing assignments and overall writing skills. Scheduling an appointment is strongly recommended, but walk in appointments are possible if a tutor is available.

The **Peer Tutoring** program offers free tutoring assistance in multiple locations for many of the historically challenging undergraduate subjects at UT Dallas. Tutoring sessions, offered every weekday on a drop-in basis, are one-on-one or in a small group format. The sessions are designed to meet students' individual questions and needs related to course/subject concepts. All peer tutors are current UT Dallas students who made an A- or better in the course and have a strong faculty/staff recommendation. Students should check the Student Success Center website each semester for subject offerings and session times.

The **Peer-Led Team Learning (PLTL)** program provides an active, engaged learning experience for students who meet in small groups once a week with a Peer Leader who helps guide them through a potentially difficult gateway course. Students that attend sessions regularly typically earn a half to a whole letter grade higher than students that do not participate in the PLTL program.

Supplemental Instruction (SI) provides free, peer-facilitated weekly study sessions for students taking historically difficult courses. SI sessions encourage active, collaborative learning based on critical thinking and transferable study skills. SI leaders attend lectures, take notes, and read assigned material just like the enrolled students. Students should check the SSC website for subject and session times.

The **Communication Lab (CommLab)** offers one-on-one and group consultations where you will gain practical feedback for improving oral and group presentations.

Success Coaches are available for individual student appointments to discuss study skills, time management, note taking, test taking and preparation, and other success strategies.

The Student Success Center's main office is located in the McDermott Library Building and can be contacted by calling 972-883-6707 or by sending an email to ssc@utdallas.edu.

Comet Creed
This creed was voted on by the UT Dallas student body in 2014. It is a standard that Comets choose to live by and encourage others to do the same:

"As a Comet, I pledge honesty, integrity, and service in all that I do."

UT Dallas Syllabus Policies and Procedures

The information contained in the following link constitutes the University's policies and procedures segment of the course syllabus. If in conflict, University syllabus policies supersede those contained in this syllabus.

Please go to http://go.utdallas.edu/syllabus-policies for these policies.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.