

# University of North Texas at Dallas

## Syllabus

<b>CSCE 4360</b>		<b>Database Administration (3 Hrs)</b>		<b>Spring 2019</b>
<b>Department:</b>	Mathematics and Information Sciences	<b>School:</b>	Liberal Arts and Life Sciences	
<b>Instructor name:</b>	Dr. Saif Al Sultan			
<b>Office Location:</b>	Founders Hall 222			
<b>Office Phone:</b>	972-338-1539			
<b>Email Address:</b>	Saif.alsultan@untdallas.edu			
<b>Office Hours:</b>	MW 1:00 PM – 3:00 PM TuTh 1:00 PM – 3:00 PM <b>Or by appointments</b>			
<b>Classroom Time &amp; Location:</b>	TuTh: 11:30 AM - 12:50 PM in FH-213			
<b>Course Catalog Description:</b>	Topics include the installation, configuration, planning, tuning, and monitoring of a database server. Other tasks deal with the management of users, access rights and security, management of views, tables and indexes, backup, restoration and recovery, performance monitoring.			
<b>Prerequisites:</b>	CSCE 4350			
<b>Required Text:</b>	Microsoft SQL Server 2016: A Beginner's Guide, 6th Edition, by Dusan Petkovic, ISBN-13: 978-1259641794, McGraw-Hill Education; 2016			
<b>Recommended Texts and References:</b>	Journals, conference papers and lecture notes.			
<b>Access to Learning Resources:</b>	UNT Dallas Library: phone: (972) 780-3625; web: <a href="http://www.unt.edu/unt-dallas/library.htm">http://www.unt.edu/unt-dallas/library.htm</a> UNT Dallas Bookstore: phone: (972) 780-3652; e-mail: <a href="mailto:1012mgr@fhcg.follett.com">1012mgr@fhcg.follett.com</a>			
<b>Course Goals:</b> This course covers the most crucial aspects of database administration, and the tasks carried out by a database administrator. These includes the installation, configuration, planning, tuning, and monitoring of a database server. Other tasks deal with the management of users, access rights and security, management of views, tables and indexes, backup, restoration and recovery, performance monitoring. The goal of this course is to enable students to gain hands-on skills related to the administration of MS SQL database server.				
<b>Student Learning Outcomes:</b> Upon successful completion of this course, the student will be able to:				
<ul style="list-style-type: none"> <li>• Install and configure a database server</li> <li>• Manage user groups</li> <li>• Manage views, tables and indexes</li> <li>• Secure the database and related resources</li> <li>• Optimize the operation of the server through monitoring</li> <li>• Maintain the DB server</li> </ul>				

## Course Outline

This schedule is subject to change by the instructor, any changes to this schedule will be announced in class.

<b>Date</b>	<b>Topics</b>	<b>Reference in the Text</b>
1/15	Overview	
1/17	Relational Database Systems	Chapter 1
1/22	Server Installation and Setup	Chapter 2
1/24	SQL Server Management Studio	Chapter 3
1/29	SQL Server Management Studio	Chapter 3
1/31	System Catalog	Chapter 9
2/5	Indices	Chapter 10
2/7	Indices	Chapter 10
2/12	Views	Chapter 11
2/14	Views	Chapter 11
<b>2/19</b>	<b>Review</b>	
<b>2/21</b>	<b>Exam 1</b>	
2/26	Concurrency Control	Chapter 13
2/28	Concurrency Control	Chapter 13
3/5	Concurrency Control	Chapter 13
3/7	System Environment of the DB Engine	Chapter 15
3/19	System Environment of the DB Engine	Chapter 15
3/21	Backup, Recovery and System Availability	Chapter 16
3/26	Backup, Recovery and System Availability	Chapter 16
<b>3/28</b>	<b>Exam 2</b>	
4/2	Automating System Administration Tasks	Chapter 17
4/4	Automating System Administration Tasks	Chapter 17
4/9	Automating System Administration Tasks	Chapter 17
4/11	Query Optimizer	Chapter 19
4/16	Query Optimizer	Chapter 19
4/18	Query Optimizer	Chapter 19
4/23	Performance Tuning	Chapter 20
4/25	Performance Tuning	Chapter 20
4/30	Performance Tuning	Chapter 20
<b>5/2</b>	<b>Review</b>	
<b>TBD</b>	<b>Final Exam</b>	

## Course Evaluation Methods

This course will utilize the following instruments to determine student grades and proficiency of the learning outcomes for the course. The following matrix is subject to change by the instructor, any changes to this schedule will be announced in class.

### Grading Matrix

Assessment method	Points	Total
Assignments/quizzes	Assignments/quizzes will be given on different topics with different weights. Assignments will involve designing and writing computer programs to apply the concepts discussed in each topic.	40%
Attendance	5%	5%
Exam 1	15%	15%
Exam 2	15%	15%
Final Exam	25%	25%
Total:		100%

The following standard grading scale will be used to determine your final letter grade:

A = 90% or better

B = 80 – 89 %

C = 70 – 79 %

D = 60 – 69 %

F = less than 60%

## University Policies and Procedures

### Students with Disabilities (ADA Compliance):

#### Chapter 7(7.004) Disability Accommodations for Students

The University of North Texas at Dallas makes reasonable academic accommodation for students with disabilities. Students seeking accommodations must first register with the Disability Services Office (DSO) to verify their eligibility. If a disability is verified, the DSO will provide you with an accommodation letter to be delivered to faculty to begin a private discussion regarding your specific needs in a course. You may request accommodations at any time, however, DSO notices of accommodation should be provided as early as possible in the semester to avoid any delay in implementation. Note that students must obtain a new letter of accommodation for every semester and must meet/communicate with each faculty member prior to implementation in each class. Students are strongly encouraged to deliver

letters of accommodation during faculty office hours or by appointment. Faculty members have the authority to ask students to discuss such letters during their designated office hours to protect the privacy of the student. For additional information see the Disability Services Office website at <http://www.untDallas.edu/disability>. You may also contact them by phone at 972-338-1777; by email at [UNTDisability@untDallas.edu](mailto:UNTDisability@untDallas.edu) or at Building 2, room 204.

### **Course Evaluation Policy:**

The student evaluation of teaching effectiveness is a requirement for all organized classes at UNT Dallas. This short survey will be made available to you at the end of the semester, providing you a chance to comment on how this class is taught. I am very interested in the feedback I get from students, as I work to continually improve my teaching. I consider a student's evaluation to be an important part of your participation in this class.

### **Assignment Policy:**

All assignments are due in class on the due dates stated on the assignments. No late assignments will be accepted, except for documented emergencies. All assignments are to be done individually unless stated otherwise on the assignment.

### **Make-Up Exams:**

Exams should be taken as scheduled. No makeup examinations will be allowed, except for documented emergencies (See Student Handbook).

### **Email Policy:**

Use your Blackboard email account to contact me. You should check your email every day as you are responsible for all information I send out. Due to privacy rights, I will not discuss grades over the phone and I will only answer emails from your Blackboard account.

### **Academic Integrity:**

Academic integrity is a hallmark of higher education. You are expected to abide by the University's code of Academic Integrity policy. Any person suspected of academic dishonesty (i.e., cheating or plagiarism) will be handled in accordance with the University's policies and procedures. Refer to the Student Code of Academic Integrity at [http://www.untDallas.edu/sites/default/files/page\\_level2/pdf/policy/7.002%20Code%20of%20Academic\\_Integrity.pdf](http://www.untDallas.edu/sites/default/files/page_level2/pdf/policy/7.002%20Code%20of%20Academic_Integrity.pdf) for complete provisions of this code.

Academic dishonesty includes, but is not limited to, cheating, plagiarizing, fabrication of information or citations, facilitating acts of 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.

**Inclement Weather Policy:**

On those days that present severe weather and driving conditions, a decision may be made to close the campus. In case of inclement weather, call UNT Dallas Campuses main voicemail number (972) 780-3600 or search postings on the campus website [www.unt.edu/dallas](http://www.unt.edu/dallas). Students are encouraged to update their Eagle Alert contact information, so they will receive this information automatically.

**Attendance and Participation Policy:**

The University attendance policy is in effect for this course. Class attendance and participation is mandatory because the class is designed as a shared learning experience and because essential information not in the textbook will be discussed in class. The dynamic and intensive nature of this course makes it impossible for students to make-up or to receive credit for missed classes. Attendance and participation in all class meetings is essential to the integration of course material and your ability to demonstrate proficiency. Students are responsible to notify the instructor if they are missing class and for what reason. Students are also responsible to make up any work covered in class. It is recommended that each student coordinate with a student colleague to obtain a copy of the class notes, if they are absent. Successfully completing this class is a function of many factors. Two such factors are class attendance and assignment completion.

**Diversity/Tolerance Policy:**

Students are encouraged to contribute their perspectives and insights to class discussions. However, offensive & inappropriate language (swearing) and remarks offensive to others of particular nationalities, ethnic groups, sexual preferences, religious groups, genders, or other ascribed statuses will not be tolerated. Disruptions which violate the Code of Student Conduct will be referred to the Office of Student Life as the instructor deems appropriate.

**Cell Phones:**

Cell Phone use (ringing, texting, reading, etc.) in class is strictly prohibited.

**General Policies:**

Leaving class early is generally prohibited. You may leave class if you are not returning in the case of an emergency. Leaving class should be by the permission of the instructor.

It is the students' responsibility to be aware of all announcements made for the class and changes made to the syllabus.