

## **BCIS 5420 – Foundations of Database Management Systems V-1**

**CLASS TIME:** 6:30 - 9:20 pm, Wednesday

**CLASSROOM:** BLB 060

**INSTRUCTOR:** Dipak P Pravin, PhD

**OFFICE:** BLB 357B

**E-MAIL:** [dipakkumar.pravin@unt.edu](mailto:dipakkumar.pravin@unt.edu)

E-mail subject line Prefix: 5420:S20 <your topic>

Text for urgent situations (716-830-6129): Use prefix: 5420:your name

**OFFICE HOURS:** Wednesday 5:00 pm to 6:00 pm and by appointment.

**Tutor :** TBA

**Tutor HOURS:** TBA:

### **COURSE DESCRIPTION**

Introduction to database and database management systems technology within the framework of a business environment. Topics include the study of analysis, design, development and implementation of database-oriented file organizations in business applications.

### **COURSE OBJECTIVES**

This course is an introduction to database design in a corporate environment. Its primary focus is on the technical and management issues of database technology. The student will analyze, design, develop, and implement a database-oriented business application. Upon completion of the course, the student should be able to define, load, and navigate a GUI database application.

### **COURSE FORMAT**

Although the course is a graduate level class for all majors, it is part of the BCIS Master of Science program. Consequently, it will be an intensive learning experience. The students in this class will be knowledgeable, inquisitive, persevering, and highly self-motivated. Thus, the knowledge gained will be limited only by the efforts put forth by the individual. Students will receive outside assignments in terms of reading material and computer work. Direction will be given on all outside work. However, it is the student's responsibility to determine their level of understanding of the assignments, ask for additional clarification and amplification when necessary, and complete that work in a timely manner. Students are responsible for all reading assignments, whether directly addressed in class or not.

### **TEXTBOOKS AND OTHER READING MATERIALS**

- Hoffer, Jeffery A., Remesh, V., and Topi, Heikki., *Modern Database Management*, 12<sup>th</sup> ed., Pearson, 2016. ISBN: 9780133544619
- The book may be available as eTextbook; please check [www.coursesmart.com](http://www.coursesmart.com)
- <https://www.tutorialspoint.com/mongodb/>
- <https://www.mongodb.com/download-center/community>
- <https://tutorialzine.com/2016/01/learn-sql-in-20-minutes> This site allow you to run some SQL queries that you can write at the site.
- <https://www.geeksforgeeks.org/sql-where-clause/> This site has given a number simpler examples for different options for SELECT statement.

## **LAPTOP REQUIRED**

During the later part of this course, students will be doing programming assignments in the class, so if this an issue, please discuss with the instructor.

## **CLASS LEARNING MANAGEMENT SITE**

The course utilizes Canvas (<https://canvas.unt.edu>) for communication between the instructor and students and among students. Be sure to check the course site regularly for the latest announcements and assignments as well as your grades.

## **TUTORS**

Specialized tutorial assistance will be provided for students registered in this class. The location, date, and times for this service will be announced in class and also on the website. The tutor's primary responsibility is debugging assistance. Each student is responsible for the successful completion of all assignments. The tutor is NOT responsible for incorrect interpretations of assignment instructions. The tutor is NOT to do the assignments for you.

## **ASSIGNMENTS:**

All assignments are designed to provide an environment to practice and refine your programming development and debugging skills. As such, they require application of **all** programming and system knowledge gained in the previous courses. From experience with previous students, these assignments are extremely difficult to complete with any level of proficiency if started late and rushed. As assignments, they are an integral part of the learning process required to master course material. Assignments should be started **AS SOON AS POSSIBLE, AND FINISHED BEFORE THEY ARE DUE**. Exams will cover material from lectures, reading assignments, and skills learned from the computer assignments. Failure to complete an assignment will be detrimental to your grade on the project as well as on the quiz.

## **GROUP PRESENTATION**

Students will form a team of 2 members and will select and present an article that relates to some aspects of databases/data management/data analytics... There are many sources you may choose from. CIO Magazine, Wired, and InformationWeek are examples. You should prepare a PowerPoint Presentation that lasts around 10 minutes that summarizes the article. Each team will be allocated a time slot during class to make the presentation. Both members of the team must participate in the presentation. The team should submit a legible softcopy of the article together with the PowerPoint Slides to the instructor at least 24 hours before the scheduled presentation time.

## **DATABASE PROJECT**

As a part of the class you will work to design a simple database system using Oracle and other approved development tools. The project is designed to provide you with realistic experience in systems analysis and design and is expected to be a very time consuming component of the course. More details about the project requirement will be posted soon on Blackboard.

## CLASS SCHEDULE

Date	Topics and Readings	Deliverables
1/15	Course overview / self-introductions / chit-chat...	One blank sheet of paper.
1/22	Ch.1: The Database Environment and Development Process	Assignment 1,2,3 Available
1/29	Ch.2: Data Modeling in Organizations	
2/5	Ch. 3: Enhanced E-R Modeling	
2/12	Ch.6: Introduction to SQL & Oracle	<b>Assignment 1 due</b> and Project available.
2/19	Ch 6: SQL Queries In-Depth, In-Class Exercises.	
2/26	<b>Midterm Exam (Ch. 1 – 3, 6) 6:30 – 8:30 pm</b>	
3/4	Ch.4: Logical Database Design and the Relational Model Ch.5: Physical Database Design and Performance	<b>Assignment 2 due</b>
3/11	<b>NO CLASS: Spring Brake Mar-9 to Mar-13</b>	
3/18	Ch.7: Advanced SQL	Team presentations <b>Project part 1 due</b> Assignment 4, 5 Available
3/25	Team Presentations	
4/1	Ch 11: An Introduction to NoSQL Databases	<b>Assignment 3 due</b>
4/8	Mongo DB Introduction	
4/15	Using Mongo DB Part-I	<b>Assignment 4 Due</b>
4/22	Special SQL Topics	<b>Assignment 5 due</b>
4/29	<b>Review</b>	<b>Project complete folder due</b>
5/06	<b>Final Exam (Ch. 4, 5, 6, 7, 11, NoSQL &amp; Mongo DB, Special SQL Topics) 6:30 – 8:30 pm</b>	

## GRADING

### Point Distribution

Component	Points
Midterm exam	100
Final exam	150
5 assignments (25 points each)	125
Team presentation (25 points)	25
Database Project part 1 (Team)	50
Database Project Complete Folder (Team)	50
<b>Total</b>	<b>500</b>

### Grading Scale

Percent	Grade
90.0 – 100 %	A
80.0 – 89.9 %	B
70.0 – 79.9 %	C
60.0 – 69.9 %	D
Less than 60 %	F

## ATTENDANCE AND CLASS PARTICIPATION

Regular and punctual attendance for the full class period is expected. You must attend the entire class to avoid being recorded absent. Any student whose absences exceed the equivalent of two weeks of the class without proper notice may be dropped by the instructor with a WF for nonattendance.

You are expected to come to class prepared. That means you will need to read the assigned chapters before coming to class and be prepared to discuss them.

## CODE OF CONDUCT AND ETHICS

Consult the University of North Texas *Student Handbook* ([www.unt.edu/student/code.htm](http://www.unt.edu/student/code.htm)) for guidelines and policies regarding student academic conduct.

Scholastic integrity *must* be exhibited in your academic work, conduct, and methods. Course work for which you receive an individual grade *must* be your original, individual effort. If any evidence of copying, cheating, or any other form of academic dishonesty on all or part of any of your graded course work, you (and any others involved) will be given a zero for that work. A second incident will result in a grade of F in this course and a recommendation for further action by the Dean of Students.

## PROFESSIONAL BEHAVIOR GUIDELINES

A student with an unprofessional and disruptive behavior will be asked to leave the class. The student may be administratively dropped from the course for repeated violations. Disruptive behaviors are, but not limited to, actions such as being late, leaving early, talking on the phone, texting during the lecture, doing homework, talking to other students at inappropriate times, etc.

## STUDENTS WITH DISABILITIES

The College of Business Administration complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disability. If you have an established disability as defined in the Americans with Disabilities Act and would like to request accommodation, please see your instructor as soon as possible.

## EMERGENCY EVACUATION PROCEDURES FOR BUSINESS LEADERSHIP BUILDING:

**Severe Weather** In the event of severe weather, all building occupants should immediately seek shelter in the designated shelter-in-place area in the building. If unable to safely move to the designated shelter-in-place area, seek shelter in a windowless interior room or hallway on the lowest floor of the building. All building occupants should take shelter in rooms 055, 077, 090, and the restrooms on the basement level. In rooms 170, 155, and the restrooms on the first floor.

**Bomb Threat/Fire** In the event of a bomb threat or fire in the building, all building occupants should immediately evacuate the building using the nearest exit. Once outside, proceed to the designated assembly area. If unable to safely move to the designated assembly area, contact one or more members of your department or unit to let them know you are safe and inform them of your whereabouts. Persons with mobility impairments who are unable to safely exit the building should move to a designated area of refuge and await assistance from emergency responders. All building occupants should immediately evacuate the building and proceed to the south side of Crumley Hall in the grassy area, west of parking lot 24.

## **MISCELLANEOUS POLICIES**

**INCOMPLETE GRADES:** A grade of “I” will be given only in *exceptional* circumstances to **passing** students, and only for circumstances occurring during the last week of regular class meetings. That is, only emergency situations such as an illness or death in your immediate family constitute exceptional circumstances (and these must be fully documented).

**GRADING PROBLEMS:** You have **one week** after the return of an assignment or exam to request a review of its grade. The instructor has final authority to determine the credit for an assignment or examination.

## **THREE BEFORE ME RULE:**

If you have any issues or questions about assignments, class policies and schedules, etc. and want to speak with me, then here is my policy: You must have attempted at least three different options before you come to me. You must tell me what you tried and the results before I will answer any questions.

**The instructor reserves the right to make any revision to the Syllabus during the semester.**