

## Syllabus

### *Sul Ross State University*

**Instructor:** Neal Xiong **Office**      **Course:** CS 3331 – Advanced Database Systems **Office**

**Location:** BAB Floor 3

**Phone:** 404-645-4067

**Text:** 404-645-4067

**Class:** *face to face*

**Email:** [neal.xiong@sulross.edu](mailto:neal.xiong@sulross.edu);

**Office Hours:** MWF 10-11am, M noon-3pm, TR 10:30 -  
12:30 am, +by appointment

#### **Program Learning Objective**

1. Understand the fundamental concepts of computer science including algorithms and data structures.
2. Understand modern computer systems, databases and networking.
3. Display an understanding and ability to implement current programming methodologies.
4. Become proficient with systems design based on object-oriented programming.
5. Work as a team in workgroup environments.

#### **Course Objectives:**

Study of the concepts of database management systems. Topics include file structures, access methods, database modeling and design, structured query language (SQL), and high level language interfaces to database systems. Offered spring even years. Prerequisite: CS 2315

#### **Textbook:**

This textbook is not required. You will be responsible for mastering the material in the book chapters, which is not directly covered in class.

1. Visual Quickstart Guide SQL, 3rd Edition (2008), by Chris Fehily, Peach Pit Press, 2002. ISBN: #: 0-321-55357-8
2. Microsoft SQL Server 2000, Programming Step by Step, by Rebecca Riordan, Microsoft Press, 2001. ISBN # 0-7356-1142-4.
3. Elmasri and Navathe, Fundamentals of Database Systems, Sixth Edition, Addison-Wesley, 2010. (It is for “Recommended reading” in the course schedule)
4. R. Sunderraman, Oracle 10g Programming - A Primer, Addison-Wesley, 2008. ISBN: 0321463048
5. Hoffer, Ramesh, Topi. Modern Database Management, 10th Edition. Prentice-Hall ISBN: 013688430

#### **Teaching Methods**

## **Assignments:**

Exercises will be periodically assigned to help support and supplement material found in the textbook. No make ups are allowed, unless medical or extreme conditions are considered. Late assignments/tests submitted after the due time or the due date will be penalized 20%. It is the student's responsibility to find out what assignments and / or tests they are missing.

## **Grading**

Letter grades will be determined using a standard percentage point evaluation as outlined below.

GRADES: Grades will be calculated in the following manner:

Exams (Middle Exam and Final Exam); Lab or workshop exercises (6~7; 1);

Homework (HW1~HW2); Attendance (100);

The instructor reserves the right to lower the cutoffs for each grade, but he will not raise the cutoff. In other words, an 86% may end up being an A at the instructor's discretion, but a 91% is guaranteed to be an A. I will let you know after each exam what the current grading scale is.

For simplicity, we use a 1,00-point scale (calculated as a percentage %).

90+ = A; 80 - 89 = B;

70 - 79 = C; 60 - 69 = D;

less than 60= F

**Please Note:** Fragrances may be disruptive to the class. Students are respectfully requested to abstain from using fragrance prior to class. Sometimes we forget this and that is understandable. In such cases, students wearing fragrance sit in the back of the classroom with the door open.

## **Attendance:**

Distance Education Statement: Students enrolled in distance education courses have equal access to the university's academic support services, such as Smarthinking, library resources, such as online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login

information to verify students' identities and to protect students' information. [If the course requires students to take proctored exams or to purchase additional software or equipment, please describe those requirements here. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

### **Need for Assistance:**

Qualified students with disabilities needing academic or other accommodations to ensure full participation in the programs, services and activities at Sul Ross State University should contact the Disabilities Services Coordinator, in Counseling and Prevention Services, Ferguson Hall 112, Box C-117, Alpine, Texas 79832. Please notify the professor before the third day of classes.

### **Course Polices:**

Quizzes, assignments, discussion board responses, and test must be submitted in APA format. If you are having issues that are interfering with your course, please inform your professor. Fragrances may be disruptive to the class and are requested not to be worn to class.

**Code of Conduct:** This is an undergraduate level course and students are expected to behave as professional adults. Students are expected to do their own work on all tests and assignments. Cheating and plagiarism on tests or assignments will result in a grade of "F" on that part of the course, a possible grade of "F" for the entire course, and possible recommendation for suspension from the university.

Plagiarism consists of presenting the work of another as one's own (i.e., without proper acknowledgment of the source) and submitting examinations or other work in whole or in part as one's own when such work has been prepared by another person or copied from another person (see the Student Handbook).

Open discussion of course issues is encouraged, however, abusive, offensive or otherwise inappropriate language will not be tolerated – this includes profanity, racial/ethnic slurs, personal attacks on other members of the course, etc. Part of the learning process is learning to communicate effectively and professionally. A direct quote from a published source may

occasionally contain such language, but use of the quote should be limited and explained – why is it necessary to use such quote?

Any assignment containing abusive, offensive, or profane language, or creating an offensive environment in the course will result in a grade of 0 for that assignment. The introductory question and the student café are not graded; however occurrences in these areas will result in 20 points per occurrence being subtracted from the overall Discussion Question grade – just like getting a 0 on one of the graded questions.

### **Additional resources:**

Stacks:

<https://www.youtube.com/watch?v=FNZ5o9S9prU>

<https://www.youtube.com/watch?v=2JpfHyGhIfs>

<https://www.youtube.com/watch?v=Z7f3IFqID0s>

Queues:

<https://www.youtube.com/watch?v=PjQdvpWfCmE>

<https://www.youtube.com/watch?v=GRzV2D5gsIM>

Heaps:

<https://www.youtube.com/watch?v=v1YUApMYXO4>

Priority Queues

[https://www.youtube.com/watch?v=QJ\\_7S1p0Kj8](https://www.youtube.com/watch?v=QJ_7S1p0Kj8)

<https://www.youtube.com/watch?v=P4toxBX9M>

<https://www.youtube.com/watch?v=w647KdGJmpI>

Hash Tables

<https://www.youtube.com/watch?v=MfhjkfocRR0>

<https://www.youtube.com/watch?v=Ke tII6Y0GE>

**Student Learning Outcomes (SLO):**

At the end of this course, students will be able to: understand the basic operating systems concepts, including multiprogramming, resources allocation and management, and their implementation.

**Marketable Skills:**

1. Students will develop logical and analytical skills
2. Students will use problem-solving skills
3. Students will know computing methodologies in demand by public and private sectors