Southeast Technical Institute
2320 N Career Ave
Sioux Falls, SD 57107

COURSE NAME: CIS 194 Database

CREDIT(S): 3 semester hours **INSTRUCTOR: Roger Morris**
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PHONE: (605)367-5858

TEXT: None
SOFTWARE: On-line
COMPANION WEBSITE: https://academy.oracle.com/
https://iacademy.oracle.com/pls/htmldb/f?p=4365

COURSE DESCRIPTION:

This course is broken into two parts. The first part is Database Design and the second part is Database Programming with SQL.

Database Design

This part lays the foundation for understanding relational databases and database design. After learning about the Oracle Academy and Oracle's commitment to education, students plunge into the theory and practice of data modeling. A data model is a conceptual representation of the data structures in a database. The data structures include the data objects (entities), the associations between data objects (relationships), and the rules that dictate operations on the objects (business rules). Students are exposed to data modeling through many real life examples that are relevant to their age group -- case studies include a fast food restaurant and a small music business.

In addition to data modeling concepts, the course engages students in activities designed to develop "professional skills." The skills highlighted in the Database Design course include teamwork and team building, public speaking, interviewing, presentation, and project management.

The data modeling portion of the course culminates in Section 15 with a final project which assesses all of the data modeling skills learned to date. After completing the project, students begin to learn the Structured Query Language (SQL), the standard language for querying and modifying relational databases. The final three sections of the course (Sections 16-18) introduce the SQL programming language and teach students how to write basic SELECT statements

Database Programming with SQL

In this part students gain an understanding of relational databases through the powerful Structured Query Language (SQL). The SQL commands, functions, and operators supported by Oracle as extensions to standard SQL are emphasized. Students learn to create and maintain database objects such as tables, indexes, views, constraints, and sequences. Students practice SQL using SQL Workshop, an application that is available via a web browser in Oracle HTML DB. The Database Programming with SQL portion of the Academy curriculum is designed to help prepare students to pass the Oracle Certified Professional (OCP) exam, "Introduction to Oracle9i SQL Exam." As part of the Academy, many students will want to take the OCP exam as it is the industry standard for proficiency with SQL.

In the Database Programming with SQL course, students focus on searching for a job, job interviewing skills, and writing cover and thank you letters.

COURSE OBJECTIVES:

Upon successful completion of this course, the student shall be able to

1. Define and utilize database terminology effectively.
2. Create queries using SQL.
3. Diagram users' requirements using modeling techniques.
4. Transform data models into normalized relations.
5. Describe database access standards.

METHODS OF INSTRUCTION:

- Lecture, with on-line coursework
- Individual laboratory and written assignments, team projects & presentations

COURSE REQUIREMENTS:

Schedule: 1 hours lecture per week Lab Time: 4 hours instructor-supervised lab per week
Attendance: Attendance is strongly encouraged and the student should not miss more than 3 classes per term.
Prerequisites: CIS106 computer applications.
Test Make-ups and Retakes: If a student is absent on the day of an exam, the student will need to take the exam within 1 week of the exam date. Test retakes may be considered by the instructor, and arranged on an individual basis. Test retakes are averaged with the original exam score.
Late Assignments: Students shall demonstrate responsibility and commitment to learning by submitting all assignments on or before the designated due date and by attending all scheduled classes. Up to 10% of the points may be deducted from late assignments. Some late assignments may not be accepted, as decided by the instructor**.**
Unethical Behavior: Cheating or plagiarism may result in at the very least a zero for that work for all parties involved. Repeated cheating will be reported to Student Services for follow-up actions. (See student handbook) Examples of cheating, but not limited to just these:
* using email or the network to pass files with answers or code to another student, which is much more than 'working together'
* cutting and pasting code or answers written by someone else into a document then passing it off as your own work
* taking code from libraries or folders with or without permission of another
* retrieving code printouts from the waste basket and using it as your own
* downloading code from another student
* using instant messaging during an exam or quiz or performance test
* extensive collaboration - if in doubt, check with the instructor

Computer privileges may be modified or discontinued if they are abused. See STI Student Handbook for current policies.

ASSESSMENT OF STUDENT LEARNING:

Exams & Quizzes (50% of grade) Exams will be given after major topics. Quizzes may be given unannounced. Test questions may consist of coding, multiple choice, true/false, fill-in-the-blank, logic questions, definitions, short answer, completion, and matching. Some tests may be performance-based.
Labs/Database Projects (50% of grade) Lab problems may be individual or team learning exercises, which may involve presentations. Group and individual grades are combined to balance independent work as well as team-oriented exercises.

A+ 99-100%	B+ 89%	C+ 79%	D + 69%	F = 59% and Below
A 94-98%	B 84-88%	C 74-78%	D 64-68%	
A- 90-93%	B- 80-83%	C- 70-73%	D- 60-63%	

The instructors and the faculty members in this course will act with integrity and strive to engage in equitable verbal and nonverbal behavior with respect to differences arising from age, gender, race, handicapping conditions and religion. If you have special needs as addressed by the American with Disabilities Act and need course materials in alternative formats, notify your instructor immediately. Reasonable efforts will be made to accommodate your special needs. Violations of safety to self and others and/or violation of safe operating practices of equipment may result in: the reduction or loss of your daily grade; removal from class; and/or other disciplinary action.

Student success is important to our faculty, and all faculty are involved in assessing learning. Upon completion of a degree, Southeast graduates will have competence in the following areas:

Science and Technology: Technical competence including knowledge of technology and/or scientific principles as these apply to programs.

Problem Solving & Critical Thinking: The ability to select and use various approaches to solve a wide variety of problems -- scientific, mathematical, social and personal. Graduates will also be able to evaluate information from a variety of perspectives, analyze data and make appropriate judgments.

Communication: The ability to communicate effectively in several forms -- oral, written, nonverbal and interpersonal. Graduates will also demonstrate knowledge of how to manage and access information.

Professionalism: Strong work ethic, including responsible attendance; skill in teamwork and collaboration, as well as an ability to work with others, respecting diversity; ability to adapt to change; commitment to lifelong learning; adherence to professional standards; and positive self-esteem and integrity.