SAN JUAN COLLEGE
Success Matters

COSC 190-DATABASE CONCEPTS & PRINCIPLES 3 CREDITS

SYLLABUS

CATALOG DESCRIPTION

A study of how relational databases are designed for maximum data manipulation is the first step in the field of data management and analytics. Topics covered include core database concepts, how to create database objects and manipulate data. May be preparation for an industry certification exam.

Prerequisites: MATH-096, ENGL-095 and (RDNG-099 or RDNG 113) or appropriate Math, English, and Reading Accuplacer scores.

Semester Offered: Spring

Common Student Learning Outcomes

Upon successful completion of San Juan College programs and degrees, the student will demonstrate competency in…

BROAD AND SPECIALIZED LEARNING
Students will actively and independently acquire, apply, and adapt skills and knowledge with an awareness of global contexts.

CRITICAL THINKING
Students will think analytically and creatively to explore ideas, make connections, draw conclusions and solve problems.

CULTURAL AND CIVIC ENGAGEMENT
Students will act purposefully, reflectively, and ethically in diverse and complex environments.

EFFECTIVE COMMUNICATION
Students will exchange ideas and information with clarity in multiple contexts.

INFORMATION LITERACY
Students will be able to recognize when information is needed and have the ability to locate, evaluate, and use it effectively.

INTEGRATING TECHNOLOGIES
Students will demonstrate fluency in the application and use of technologies in multiple contexts.

Student work from this class may be randomly selected and used anonymously for assessment of course, program, and/or institutional learning outcomes. For more information, please refer to the Dean of the appropriate School.

Course Learning Outcomes

Upon successful completion of the course, the student will be able to…

1. Describe how data is stored in tables.
2. Understand relational database concepts.

3. Select, insert, update and delete data.
4. Understand data manipulation language (DML) and data definition language (DDL).
5. Choose data types.
6. Understand tables and how to create them.
7. Create views.
8. Understand normalization.
9. Understand primary, foreign, and composite keys.
10. Create stored procedures and functions.
11. Understand indexes.
12. Examine database security concepts.
13. Create database backups and restore.