



Course Number and Title: ITN 180 Database Technology I

Campus Location:

Georgetown, Dover, Stanton, Wilmington

Effective Date:

2021-52

Prerequisite:

SSC 100 or concurrent

Co-Requisites:

None

Course Credits and Hours:

3.00 credits

2.00 lecture hours/week

2.00 lab hours/week

Course Description:

This course provides students with an introduction to database technology and foundational concepts. Students learn to design and create databases, create tables with appropriate keys and integrity constraints, modify table structures, design queries using data manipulation language and built-in functions, and create reports.

Required Text(s):

Obtain current textbook information by viewing the [campus bookstore - https://www.dtcc.edu/bookstores](https://www.dtcc.edu/bookstores) online or visit a campus bookstore. Check your course schedule for the course number and section.

Additional Materials:

Access to high-speed Internet

Schedule Type:

Classroom Course

Video Conferencing

Web Conferencing

Hybrid Course

Online Course

Disclaimer:

None

Core Course Performance Objectives (CCPOs):

1. Apply the concepts of database mechanics and relationships between data. (CCC 1, 5 ; PGC 1, 3, 4)
2. Design and develop statements to manipulate data. (CCC 2, 6; PGC 1, 4)
3. Design, create, and alter database structures. (CCC 2, 6; PGC 1, 4)
4. Construct an analysis for data-driven decision-making. (CCC 1, 2, 3, 4, 6 ; PGC 1, 3, 4)

See Core Curriculum Competencies and Program Graduate Competencies at the end of the syllabus. CCPOs are linked to every competency they develop.

Measurable Performance Objectives (MPOs):

Upon completion of this course, the student will:

1. Apply the concepts of database mechanics and relationships between data.
 1. Implement concepts of securely storing and retrieving sensitive data.
 2. Compare and contrast the characteristics of relational and nonrelational databases.
 3. Compare and contrast the characteristics of data normalization and transactional data storage.
2. Design and develop statements to manipulate data.
 1. Prepare source data for import into the database.
 2. Construct SELECT statements.
 3. Construct INSERT statements.
 4. Construct UPDATE statements.
 5. Construct DELETE statements.
 6. Use JOIN functions to display data from multiple tables.
 7. Use built-in functions.
3. Design, create, and alter database structures.
 1. Model table structures, key relationships, and constraints to meet organizational needs.
 2. Use developer tools to create database structures based on models.
 3. Construct administrative queries to alter database structures.
4. Construct an analysis for data-driven decision-making.
 1. Develop queries based on specific organizational needs.
 2. Interpret query results of a data set.
 3. Effectively communicate results of an analysis.

Evaluation Criteria/Policies:

The grade will be determined using the Delaware Tech grading system:

90	-	100	=	A
80	-	89	=	B
70	-	79	=	C
0	-	69	=	F

Students should refer to the [Student Handbook - https://www.dtcc.edu/handbook](https://www.dtcc.edu/handbook) for information on the Academic Standing Policy, the Academic Integrity Policy, Student Rights and Responsibilities, and other policies relevant to their academic progress.

Core Curriculum Competencies (CCCs are the competencies every graduate will develop):

1. Apply clear and effective communication skills.
2. Use critical thinking to solve problems.
3. Collaborate to achieve a common goal.
4. Demonstrate professional and ethical conduct.
5. Use information literacy for effective vocational and/or academic research.
6. Apply quantitative reasoning and/or scientific inquiry to solve practical problems.

Program Graduate Competencies (PGCs are the competencies every graduate will develop specific to his or her major):

1. Solve technology-related problems using critical thinking and troubleshooting skills.
2. Articulate the role of the technology professional in organizations to support the ethical use of information technology.
3. Apply fundamental security concepts and strategies for maintaining and securing information technology.
4. Read and interpret technical information and effectively communicate to a wide range of audiences using oral, print, and multimedia strategies.
5. Demonstrate the importance of lifelong learning that empowers personal and professional growth.

Disabilities Support Statement:

The College is committed to providing reasonable accommodations for students with disabilities. Students are encouraged to schedule an appointment with the campus Disabilities Support Counselor to request an accommodation needed due to a disability. A listing of campus Disabilities Support Counselors and contact information can be found at the [disabilities services - https://www.dtcc.edu/disabilitysupport](https://www.dtcc.edu/disabilitysupport) web page or visit the campus Advising Center.