



## TECHNICAL COLLEGE OF THE LOWCOUNTRY

Technical College of the Lowcountry  
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### **CPT 242 Database**

#### **Course Description**

This course introduces database models and the fundamentals of database design. Topics include database structure, database processing, and application programs that access a database. Prerequisites: CPT 172, ENG 101

#### **Course Focus**

This course is designed to provide the student with basic knowledge of the fundamentals of database design and models.

#### **Text and References**

Refer to the TCL Bookstore page on the TCL Website for the most recent textbook information at [www.tcl.edu/bookstore](http://www.tcl.edu/bookstore)

**Software:** Microsoft Access 2016/Office 365

#### **Computer Requirements**

It is best if you use a PC for this class. If you have a Mac computer, you will most likely run into some difficulty in completing the assignments because the Microsoft Access software for a Mac is different from the Access software for a PC. The textbook provides instructions using Access software that runs on a PC. You may use the computers on campus to complete assignments, and the TCL library loans out PCs to students as well.

#### **Course Goals**

The following list of course goals will be addressed in the course.

1. identify the elements of a database
2. explain the purpose of a database management system (DBMS)
3. open existing tables, queries, forms, and reports
4. creating tables, queries, forms, and reports
5. navigate existing tables, queries, forms, and reports
6. understand basic relational terminology
7. define different types of data
8. create keys; enforce referential integrity
9. apply the normalization process
10. explain functional dependency
11. write QBE and SQL statements for creating database structures

12. create QBE and SQL SELECT statements
13. write QBE and SQL statements for modifying and deleting data, tables, and constraints
14. define, describe and use views
15. use Database Design Language to document database designs
16. explain the physical-level design process
17. use a survey form to obtain information from users prior to beginning the database design process
18. explain the data recovery process in a database environment
19. examine data integrity features provided by a DBMS
20. use indexes to improve database performance
21. examine security features of a DBMS
22. define and use a system catalog
23. explain the use of stored procedures, triggers, and data macros
24. write QBE and SQL statements for using special operators
25. understand the basic stages of database development
26. understand the purpose and role of data models
27. construct ER diagrams
28. validate data models
29. transform ER data models into relational designs
30. create joins using QBE and SQL statements
31. apply basic administrative and managerial database administrator (DBA) functions
32. understand the need for concurrency control, security, and backup and recovery
33. examine the ways databases are accessed on the web
34. identify basic Extensible markup Language (XML) concepts
35. define data warehouses and explain their structure and access

### **Student Contributions**

This is an online course. Each student is expected to spend approximately 3-4 hours per week completing assignments/tests to turn in weekly as specified in Blackboard.

### **Course Evaluation**

Final grades for this course are calculated as follows:

- Tests: 40%
- Assignments: 40%
- Final Exam: 20%

### **Course Schedule**

The schedule for this course is provided on the Assignments page in Blackboard.

Approved by: Kelli Boniecki Developed/Revised: August 2019  
Division Dean for Business & Industrial Divisions

### **ADA Statement**

The Technical College of the Lowcountry provides access, equal opportunity and reasonable accommodation in its services, programs, activities, education and employment for individuals with disabilities. To request disability accommodation, contact the counselor for students with disabilities at (843) 525-8228 during the first ten business days of the academic term.

## Academic Misconduct

There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student's responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the *TCL Student Handbook*, the Division Office, and the Learning Resources Center.

## Attendance

1. The College's statement of policy indicates that students must attend ninety percent of total class hours or they will be in violation of the attendance policy.
2. Students not physically attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
3. Students taking an online/Internet class must sign in **and** communicate with the instructor within the first ten calendar days from the start of the semester to indicate attendance in the class. Students not attending class during the first ten calendar days from the start of the semester must be dropped from the class for NOT ATTENDING.
4. Reinstatement requires the signature of the division dean.
  - a. In the event it becomes necessary for a student to withdraw from the course OR *if a student stops attending class*, it is the student's responsibility to initiate and complete the necessary paperwork. Withdrawing from class may have consequences associated with financial aid and time to completion.
  - b. When a student exceeds the allowed absences, the student is in violation of the attendance policy. The instructor MUST withdraw the student with a grade of "W", "WP", or "WF" depending on the date the student exceeded the allowed absences and the student's progress up to the last date of attendance or
  - c. Under extenuating circumstances and at the discretion of the faculty member teaching the class, allow the student to continue in the class and make-up the work. This exception must be documented at the time the allowed absences are exceeded.
  - d. Absences are counted from the first day of class. There are no "excused" absences. All absences are counted, regardless of the reason for the absence.
  - e. A student must take the final exam or be excused from the final exam in order to earn a non-withdrawal grade.

**A copy of TCL's STATEMENT OF POLICY NUMBER: 3-1-307 CLASS ATTENDANCE (WITHDRAWAL) is on file in the Division Office and in the Learning Resources Center.**

## Online Attendance Procedure

For all online courses, students must complete an assignment designated by the instructor during the first week of classes. The instructor will drop the student from the course if the initial assignment is not completed.

Instructors will withdraw students from the class when 90% attendance is not maintained. Attendance in an online course is defined by regular course access and by timely completion of assignments as required by the instructor. Each student will be expected to access the web class at least once a week and complete 90% of assignments on time. Additional access is encouraged and may be necessary for successful completion of classes.

Failure to log in and complete assignments will result in the student being withdrawn from the course. The instructor will assign a grade of “W,” “WP,” or “WF” based upon the student’s academic standing as of the last date of attendance, which is the last login. **Students are responsible for any financial matters associated with an administrative withdrawal.** If a student fails to email the instructor (using the my.tcl.edu email account) requesting to be dropped from the course and has not submitted the initial assignment required during the first week of class, the instructor will assign a “Never Attended” code in the student information system (Self-Service) no later than ten calendar days after the first day of the class. Students who are dropped as a result of never attending the course **are still responsible for all fees associated with the course.**

### **Hazardous Weather**

In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVW 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVA 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students will also receive text alerts and are highly encouraged to verify and/or update contact information at <https://www.tcl.edu/campus-life/campus-security/text-alert/>.

### **Emergency Text Message Alert**

Students are automatically opted in to the Emergency Text Message Alert System based on the information on file for you. Students will receive immediate notification of emergency events via text messaging on cell phones. If you would like to verify and/or update your contact information, go to <https://www.tcl.edu/campus-life/campus-security/text-alert/>.

### **Syllabus Safety Addendum**

#### Purpose

The purpose of this safety addendum is to provide each student with safety guidelines during an incident, emergency, or disaster at TCL. In addition, it provides students guidelines for lockdown procedures, evacuation procedures, and active shooter.

#### Definition

**An incident** is any event, potential or actual, that may impact normal operations but has no immediate health or life threatening consideration or serious effect on the overall functional capacity of the College. An event of this nature should be reported to the Office of the Vice President for Administrative Services. Also, notify the off-site campus administrator if applicable.

**An emergency** is any incident, potential or actual, which may endanger life or health or which affects an entire building or buildings, and will disrupt the overall operations of the College. Outside emergency services will probably be required, as well as major efforts from campus support services. Major policy considerations and decisions will usually be required from the college administration during times of crises. An emergency should be reported immediately by directly using **911** if life or health/injury considerations exist and then to the Office of the President or Vice President for Administrative Services as quickly as possible. Also, notify the off-site campus administrator if applicable.

**A disaster** is any event or occurrence that has taken place and has seriously impaired or halted the operations of the College. In some cases, mass personnel casualties and severe property damage may be sustained. A coordinated effort of all campus-wide resources is required to effectively control the situation. Outside emergency services will be essential. In all cases of disaster, an Emergency Control Center will be activated, and the appropriate support and operational plans will be executed. The disaster should be immediately reported, first by calling **911** and then

to the Office of the President or Vice President for Administrative Services. Also, notify the off-site campus administrator if applicable.

### Types of Emergencies

- Hurricane
- Tornado
- Fire
- Biochemical or Radiation Spill
- Explosion/Bomb
- Downed Aircraft (crash which directly impacts campus operations)
- Utility Failures
- Violent or criminal behavior
- Psychological Crisis

### Procedures

**Active Shooter** Run/hide/fight video at (<http://www.fbi.gov/about-us/cirg/active-shooter-and-mass-casualty-incidents/run-hide-fight-video> )

#### **Building Evacuation**

1. Building evacuations occur when an alarm sounds and/or upon notification by Security or the Emergency Director.
2. When the building evacuation alarm is activated during an emergency, individuals should exit according to the building evacuation plan and alert others to do the same.
3. Once outside, individuals should proceed to a clear area that is at least 500 feet away from the affected building. Streets, fire lanes, hydrant areas and walkways should be kept clear for emergency vehicles and personnel.
4. Individuals should not return to an evacuated building unless told to do so by Security or the Emergency Director.
5. Individuals should assist persons with disabilities in exiting the building. Elevators are reserved for disabled persons

#### **Campus Evacuation**

1. A uniformed Security Guard, the Emergency Director, or an Emergency Resource Team member will announce evacuation of all or part of the campus grounds.
2. All persons (students and staff) are to immediately vacate the campus, or in the case of a partial evacuation relocate to another part of the campus grounds as directed.

#### **Lockdown**

1. Clear the halls
2. Report to the nearest classroom/office
3. Assist those needing special assistance
4. Ensure classroom/office doors are closed and locked
5. Turn off lights
6. Stay away from doors and windows (out of the line of sight)
7. BE QUIET and follow instructor's directions
8. Silence cell phones
9. Wait for the "All Clear" before leaving