

**COURSE SYLLABUS FOR
CIT 170-90Z1 (3 Credit Hours)
Database Design Fundamentals
People Soft Number 55985
2021 Fall (16 Weeks)**

INSTRUCTOR: Charles W(Bill) Marshall

EMAIL ADDRESS: cmarshall0050@kctcs.edu

OFFICE LOCATION: Not Applicable / Off Campus

OFFICE HOURS: Announced weekly via email and Blackboard

MEET ME LINK FOR APPOINTMENTS: use email

OFFICE PHONE NUMBER/EXTENSION: 606 375-2076

TEACHING ASSISTANT: Janet Garrison

EMAIL ADDRESS: Janet.Garrison@kctcs.edu

OFFICE LOCATION: Maysville Campus, Administration Bld. 319

OFFICE PHONE NUMBER/EXTENSION: (606) 759-7141 Ext. 66139

OFFICIAL COURSE DESCRIPTION:

Provides an overview of database and database management system concepts, internal design models, normalization, network data models, development tools, and applications.

COURSE PREREQUISITES:

(CIT 105 OR OST 105 OR IMD 100) AND (MAT 085 OR MAT 126) OR Consent of Instructor.

COURSE COMPETENCIES:

Upon completion of this course, the student can

1. Define a database and its uses.
2. Describe the difference between traditional files and databases.
3. Define a database management system (DBMS) and describe the services a DBMS provides to users.
4. Identify and describe the main features of hierarchical, network, and relational database models.
5. Demonstrate an understanding of the difference between logical and physical design.
6. Model a realistic business application using a technology-independent data model.

7. Design and implement a database using the relational model, with emphasis on data integrity and security.
8. Define and use the normalization process to further refine the relational table definitions.
9. Demonstrate an understanding of the database administration function.
10. Define and be able to use data definition language, data manipulation language, and instructions that apply relational algebra.
11. Demonstrate an understanding of distributed database systems.
12. Evaluate and select an appropriate DBMS for a given application.

II

I. Database Concepts

- A. Traditional files versus databases
- B. Database systems
- C. Data models

II. Modeling and Design Concepts

- A. Relational database model
- B. Entity relationship (ER) model
- C. Advanced data models
- D. Normalization of database tables

III. Design and Implementation

- A. Introduction to Structured Query Language (SQL)
- B. Advanced SQL
- C. Database design

IV. Database Optimization

- A. Transaction management and concurrency control
- B. Database performance tuning and query optimization
- C. Database administration and security

V. Implementation Strategies

- A. Distributed database management systems
- B. Business intelligence and data warehouses
- C. Database connectivity and web technologies

GENERAL EDUCATION INFORMATION:

SOUTHERN ASSOCIATION OF COLLEGES AND SCHOOLS COMMISSION ON COLLEGES (SACSCOC) QUALITY ENHANCEMENT PLAN (QEP) UPDATE:

MCTC is accredited through the SACSCOC and was reaffirmed by the Commission in 2019. As part of the reaffirmation of accreditation process, a comprehensive QEP was developed at MCTC focusing on Problem-solving Skills.

The MCTC students will improve problem-solving skills by learning to:

- Examine the evidence

- Define the problem
- Identify strategies
- Analyze potential solutions
- Implement the solution
- Reflect on the outcome

CIT-170 specifically addresses the following Student Learning Outcomes from the General Education Competencies:

- Quantitative literacy

TEXT(S) AND SUPPLIES: * NO PURCHASE REQUIRED *****

Free, web-based course materials (posted in Blackboard) will be used.

EVALUATION AND GRADING POLICY:

Grading Scale	The scale below shows the relationship between your semester percent average and the letter grade you will receive.
A=	90% +
B=	80% - 89%
C=	70% - 79%
D=	60% - 69%
E=	0% - 59%

Category	Weight
ePortfolio	05%
Concepts / Terms Quizzes	15%
Database Design Project	50%
Project Presentation	10%
Final Exam	20%
TOTAL	100%

Online lecture/demonstration with hands-on computer work using an Entity Relationship Diagram (ERD) modeling tool such as Quest Software’s “Toad” data modeling design tool (or equivalent product) and a relational database management system (RDBMS) such as Microsoft Access (or Microsoft SQL Server Express, MySQL, etc.). This class focuses heavily on project-based learning and therefore all students are required to complete an individual class project.

ATTENDANCE POLICY:

Class attendance/participation is required and contributes to your success as well as your course grade. Students are responsible for completing ALL assigned tasks. Students are

required to log into the Blackboard on a weekly basis and to participate in online activities/assignments. Students who do not attend and/or participate in class activities during the first week of class will be reported to the Financial Aid and Academic Affairs offices as a “no-show” which may result in decreased financial aid eligibility.

At the end of the academic semester, the instructor is required to report the “last date of attendance” for students who fail the course. Attendance is measured in terms of active attendance/participation within the class assignments (face-to-face and/or online). Again, this information is reported to the Financial Aid and Academic Affairs offices.

October 11

WITHDRAWAL POLICY (KCTCS policy & Instructor’s policy)

KCTCS POLICY states a W: represents a withdrawal from class without completing course requirements. A student may officially withdraw from any class up to and including the date of mid-term with a W grade.

The Midterm Date or the last day for students, at their discretion, to officially withdraw from this course and receive a grade of W is: October 11 2021

After the date of midterm and through the last class of the semester or session, any student may officially request to withdraw from a course and receive a W which may be given at the discretion of the instructor. Each instructor shall state on the first or second class meeting the factors to be used in determining if a student will be allowed to withdraw during the discretionary period. An instructor shall not assign a student a W for a class unless the student has officially withdrawn from that class in a manner prescribed by the college. The grade of W may be assigned by the College Appeals Board in cases involving a violation of student academic rights or for academic offenses.

HOW TO WITHDRAW FROM THE COURSE:

Students must submit a course withdrawal through their Student Self-Service.

Log into your Student Self-Service through MYPATH.

Click on the Manage Classes Tile.

Click on Drop Courses and follow the instructions.

You will receive an email when the process is complete.

INSTRUCTOR’S WITHDRAWAL POLICY (After Midterm):

After the date of midterm and through the last class of the semester or session, any student may officially request to withdraw from a course and receive a W which may be given at the discretion of the instructor. Each instructor shall state on the first or second class meeting the factors to be used in determining if a student will be allowed to withdraw during the discretionary period. An instructor shall not assign a student a W for a class unless the student has officially withdrawn from that class in a manner prescribed by the college. The grade of W may be assigned by the College Appeals Board in cases involving a violation of student academic rights or for academic offenses.

COURSE

COURSE ACCESSIBILITY:

Maysville Community and Technical College is committed to creating a learning environment that meets the needs of its diverse student body. If you anticipate or experience any barriers to learning in this course, please feel welcome to discuss your concerns with me. If you have a disability, or think you may have a disability, see the information sheet below for how to contact disability services.

College Statement Regarding Flexible Instructional Delivery:

The College must remain flexible to meet challenges that may include epidemics, pandemics, natural disasters, human-influenced disasters, and any and all threats to the College campus, students, employees, and surrounding communities. To ensure the safety and well-being of our constituencies, the College maintains the right to move classes temporarily or permanently to online, remote platforms; to a hybrid section that includes some face-to-face learning and some remote learning; or to a different campus, location, building, or time. Additionally, the College reserves the right to institute plans or practices in the physical classroom/lab/activity spaces and common areas to protect students and faculty. The College will attempt to make these changes as minimally disruptive as possible, but the College reserves the sole right to alter the particular type, place, or time for their classes.

ADDITIONAL INFORMATION

In case of emergency call 911 or dial 9-911 from any campus phone.

Emergency Procedures are posted in each of the on-campus classrooms for students to review.

Off-campus classes will follow the procedures of the facility in which they meet.

Students, please inform your emergency contacts who your instructor is, what class you are taking, and in what room the class is taught. This will expedite locating you if there is an emergency.

Other important safety information such as lockdown procedures and safety plan can be found online at our website under Student Life or at: [Campus Safety & Security](#)

SNAP Alerts

Notification of a campus lockdown can be communicated via the (SNAP) Alert System. Snap stands for Safety Notification Alert System. *Site to register for **SNAP**: [KCTCS SNAP](#)*

1. There will be a P.A. announcement, if available.
2. All IP phones will announce and display the message.
3. All computers on MCTC network will display the message.
4. Anyone off campus that is signed up for SNAP should receive a text message and phone call and remain off campus.

User Account Center Setup

You can access and manage your information online 24/7 through your User Account Center. You can activate your account, find your ID, and even reset your password. Login through:

[KCTCS User Account Center](#)

Student Service Center

The Student Service Center is available all day, every day, online and on the phone.

Our specialist team is standing by to answer whatever questions you might have on Financials, Passwords, Blackboard, Learn on Demand... and more.

Call the Go KCTCS! Student Service Center anytime, 1-855-GO-9MCTC or login through:

[KCTCS Student Service Center](#)

Student Self Service Help

Log into MyPath and click on the Student Self-Service tile to take full advantage of all the Self-Service tools including: searching for classes; making payments; viewing your schedule, and more!

KCTCS STUDENT CODE OF CONDUCT

Kentucky Community and Technical College System (KCTCS) faculty and students are bound by principles of truth and honesty that are recognized as fundamental for a community of teachers and scholars. The college expects students and faculty to honor, and faculty to enforce, these academic principles. The college affirms that it will not tolerate academic dishonesty including, but not limited to, violation of academic rights of students and student offenses. Students may refer to the KCTCS Code of Student Conduct: [KCTCS Student Code of Conduct](#)

Information on student rights, academic offenses, and student's right to appeal is also available on the MCTC "Current Student" web page: [MCTC Student Policies and Procedures](#)

Hard copies are available in the Student Development Office.

Division Chair Contact Information:

The first step in any class dispute is to talk with the Instructor. If disputes cannot be resolved in this way or if you are having communication difficulties, you can contact the Division Chair for further guidance.

NAME: (Chair) Natasha Maddox

DIVISION: Business and Related Technologies

Maysville Community & Technical College

1755 US 68

Maysville, KY 41056

606-759-7141 Ext. 66162

CHEATING:

Using an electronic device or other materials without permission during an exam will be considered cheating regardless of intent. Other forms of cheating will include, but are not limited to: having information available in any non-approved form, such as papers, books, notes, materials hidden in apparel, written on self or desks, tabbing out to another computer screen, looking at other students' work, communicating with other students in any manner

PLAGIARISM:

Collegiate work requires a strict standard of academic responsibility. While engaged in academic coursework, we encounter other people's ideas. How we incorporate these ideas into our own work requires caution. When these ideas are not properly credited, this is referred to as plagiarism. Plagiarism involves the intentional and/or unintentional use of others' words and thoughts without acknowledgement.

Examples of plagiarism:

- Turning in someone else's work as your own
- Copying words or ideas from someone else without giving credit
- Failing to put a quotation in quotation marks
- Giving incorrect information about the source of a quotation
- Changing words or phrases (paraphrasing) while keeping the structure of a source without giving credit
- Copying so many words or ideas from a source that it makes up the majority of your work, whether you give credit or not
- Using information or graphics from an internet site without citing your source
- Giving your rough draft to another person to revise or rewrite
- A form of plagiarism that is not always found in typical definitions is self-plagiarism. Self-plagiarism involves duplication of original essays in part or whole. Resubmitting written work that has previously been presented in another course is considered self-plagiarism. Self-plagiarism is as serious as other forms of plagiarism and will carry the same consequences.

If you are unsure whether or not a specific situation constitutes plagiarism, ask your instructor.

At MCTC PLAGIARISM is a serious academic offense which can result in a student failing an assignment, failing a course or being dismissed from the college. Be aware of your instructor's rules and regulations concerning plagiarism, this can be found in your course syllabus.

Students are expected to exhibit honesty in all work. Students caught plagiarizing or cheating will be subjected to the disciplinary policy as stated in the KCTCS Student Code of Conduct.

Review these links for tips on avoiding plagiarism:

- MCTC Library Citation Guides: [Plagiarism](#)

DISABILITY SERVICES

MCTC has a continuing commitment to providing reasonable accommodations for students with documented disabilities. Like so many things this Spring, the need for accommodations and the process for arranging them may be altered by the COVID-19 changes we are experiencing and the safety protocols currently in place. Students with disabilities who may need some accommodation in order to fully participate in this class are urged to contact the Disability Support Services (DSS) Office, as soon as possible, to explore what arrangements need to be made to assure access. Please contact Teresa Conway, Disability Support Services (DSS) at 606-759-7141 ext. 66319 [Student Support Services](#)

Teresa Conway
Disability Support Services Coordinator/ College Counselor
Maysville Community and Technical College
400 Rocky Adkins Tech Drive
Morehead, KY 40351
606.759.7141 ext. 66319.

MCTC is committed to providing a safe environment for students, faculty, and staff and that is why we support Green Dot and work to prevent violence.