

# Thaddeus Stevens College of Technology

**Course:** CSET 155 - Database Design  
**Classroom:** Orange St

**Semester:** Spring 2022  
**Lecture:** Mon - Fri 07:30am - 12:00pm  
Wed 07:30am – 11:30 am

**Instructor:** Fahim Shams

**Email:** [shams@stevenscollege.edu](mailto:shams@stevenscollege.edu)

**Office Location:** Orange St

**Office Hours:** Tues 12:00pm - 3:00pm

## Catalog Description:

The course develops skills in the administration of databases. Students learn to organize data, and to store the data for use and retrieval. Common systems of data storage are introduced. Students will build a database, script a process to load data, and outline how to retrieve data from that database.

## Digital Description:

- Credit Hours: 3
- Lecture Hours per Week: 2.5
- Lab Hours per Week: 3.75

## Prerequisites:

## Minimum Grade Required

- |   |   |
|---|---|
| • CSET 110 Web Development I                          | C |
| • CSET 115 Technical Requirements and Data Structures | C |

## Learning Outcomes:

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

- Discuss the major data storage options (SQL, NoSQL, etc.), the differences between them, and when to use each type
- Model a simple data system using SQL and NoSQL
- Model a simple data system using a relational database
- Understand principles of relational data (e.g., different types of joins, primary and foreign keys)
- Explain the concepts of ORMs (Object Relational Mappers) and when they should be used

- Develop a database for a laboratory project starting with a simple set of data (customers, addresses, orders) in CSV
- Script a process to load a data set into the database of a laboratory project
- Develop a process using SQL Queries to extract data from a laboratory project

**Planned Sequence of Learning Activities:**

WEEK	ACTIVITY	COMMENTS
1	Introduction to Databases and SQL.	
2	Types and Integrity. Imports and Exports.	
3	Relationships and Joins.	
4	Table Design.	
5	Inspecting and Manipulating Data.	
6	ORMs. Other Database Systems.	

**Teaching Strategies:**

This course is a lecture lab course. Concepts will be introduced via presentations and students will be provided time and guidance to develop projects, labs, and assignments in a workshop setting.

**Grading:**

50% - Labs

50% - Participation & Assessments.

**Classroom Policies:**

- Above all, be respectful.
- Check your school email daily. The college will send out important information that you need to know about. Not seeing the email is not an excuse.
- All course discussion will be held on [stevenscollege.edu](http://stevenscollege.edu) website portal including announcements, assignment instructions, and lecture notes/slides.
- Be prepared for class every day with a notebook, writing instrument, and your laptop and charger. A failure to be prepared is not an excuse to miss course work.
- *Don't use your phone/electronic device for personal use and there's a penalty if you do. (e.g. I'll ask you to leave, I'll take your phone away, there's a grade consequence or some combination of these). Exception: Laptop can be used only for lecture purposes in class.*

**Attendance:**

The following are recognized as legitimate excuses to miss class. Tests cannot be made up without documentation of one of the following four types of documentation. Additionally, students who are more than 15 minutes late to an exam cannot participate without documentation.

- Death in the immediate family;
- Illness verified by a doctor's excuse;
- College activities as approved by the Dean of Student Services, Dean of Student Success, or Vice-President for Academic Affairs;
- Circumstances verified by a campus counselor. (Contact [bareuther@stevenscollege.edu](mailto:bareuther@stevenscollege.edu) or [schuch@stevenscollege.edu](mailto:schuch@stevenscollege.edu).)

You have one day per excused absence to make up missed assignments. Three lates equal one absence. After two unexcused absences from a technical course, a student will be given a warning from the office of Academic Affairs. Five absences are grounds for dismissal from the college.

Attendance records will not be modified after one week so check your attendance records daily.

Faculty that notice students failing to engage, turn in work, participate in real-time instruction and are not responding to communication will report this to the VP of Academic Affairs. The VP will issue a warning letter to the student. Once a warning letter is issued and the student still fails to engage, the student will be liable for dismissal from the course and/or the college. The college will attempt to communicate with the student and provide resources and support that is needed to avoid dismissal.

**Academic Integrity:**

Academic integrity is the pursuit of scholarly activity in an open, honest and responsible manner. Academic integrity is a basic guiding principle for all academic activity at Thaddeus Stevens College of Technology, and all members of the College community are expected to act in accordance

with this principle. Consistent with this expectation, College's Code of Conduct demands that students conduct themselves in a responsible manner that corresponds to acceptable and mature adult standards of behavior and comply with all College regulations and directives. All students should act with personal integrity, respect other students' dignity, rights and property, and help create and maintain an environment in which all can succeed.

Academic integrity includes a commitment not to engage in or tolerate acts of falsification, misrepresentation or deception. Such acts of dishonesty violate the fundamental ethical principles of the College community and compromise the worth of work completed by others.

**Academic Honesty:**

Section 7324 of the Crimes Code of Pennsylvania makes it a misdemeanor of the 3rd degree to sell or offer for distribution any term paper, essay, report, or other written assignment, or to sell or offer for distribution any assistance in the preparation of such assignments, for submission to an educational institution to meet the requirements for a degree, certificate, or course of study. (Assignment is defined as a written, recorded, pictorial, artistic, or other academic task. To prepare is defined as to create, write, or in any way produce in whole or substantial part any such assignment.)

**Plagiarism:**

Plagiarism is defined as ...

- Submitting an assignment claiming to be original work but which has been wholly or partially created by someone else.
- Allowing your work to be submitted by another student as if it were that student's own original work.
- Presenting as one's own the ideas (i.e., paraphrases or summaries of research), organization, or the wording (i.e., direct quotations) of another work without appropriate acknowledgement of the sources within the text of your work and a works cited page per the standards of an accepted academic documentation system (i.e., Chicago Manual of Style, APA, or MLA).

**Disciplinary Sanctions:**

Penalties that may be imposed include but are not limited to the following:

- Faculty may lower the grade or fail that particular assignment, lower the course grade, give a failing course grade and/or dismiss that student from the course. Additionally, faculty may recommend further involvement from the Vice President of Academic Affairs.
- The Vice President for Academic Affairs may impose harsher measures within the context of the College.
- Students cannot withdraw from a course in which they have plagiarized and been given a failing grade by the course instructor.

**Course Recordings & Privacy:**

Students may not make audio or video recordings of any course activity unless the student has an approved accommodation from the Counseling and Disability Office permitting the recording of class meetings. In such cases, the accommodation letter must be presented to the instructor in advance of any recording being done and all students in the course will be notified whenever recording will be taking place. Students who are permitted to record classes are not permitted to redistribute audio or video recordings of statements or comments from the

course without the express permission of the faculty member and classmates. Distribution without permission is a violation of educational privacy law.

**Students with Disabilities Requesting Accommodations:**

The Americans with Disabilities Act and Amendment Act of 2009 states students may be eligible for accommodations that do not alter the essential skills required for a course or program of study. Students must meet with the Accessibilities Coordinator to discuss their challenges and provide documentation from a qualified professional in order to be approved.

Contact Debra Schuch, Counselor/Accessibilities Coordinator, between 8:30- 4:30 weekdays. Phone 717-299-7408 or email [schuch@stevenscollege.edu](mailto:schuch@stevenscollege.edu) to schedule an appointment.

Any individual who appears to be providing academic or personal support for a student with respect to coursework must be cleared and approved as an accommodation for that student. This is to ensure academic integrity, and that the support being provided is not exceeding accommodations that have been approved. The names of these individuals should be listed under the FERPA release. This release is related specifically to the formal review of student records not a day-to-day update on student grades or progress.

Instructors are permitted to discuss student progress and student accommodations with individuals employed by the college who have a need to know due to providing supports for that student. Any individual requesting information other than approved staff will be directed to contact the Accessibility Coordinator.

Note: This syllabus is tentative and subject to change

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Student's signature