



South Portland, Maine 04106 Computer
Information Technology

Title: Database Fundamentals

Catalog Number: CMIT 110

Credit Hours: 3

Total Contact Hours: 45

Lecture (or Lab): Lecture

Instructor: Department Faculty

Office Hours – Location: CSEC 024

Contact Information: wplourde@smccme.edu

Tuesday & Thursday 12:00 – 1:00

Web Site : <https://sites.google.com/a/smccme.edu/professor-plourdes-classroom/courses/cmpt-110>

Course Syllabus

Course Description

This course covers relational databases and systems commonly used in Information Technology. Topics include creating, query usage, and maintaining a database; reports, forms and creating a menu driven applications. Other topics include server-side systems in the IT industry. This course will utilize working in groups to emphasize how to plan, create and implement a project in the business setting. A student can expect to spend 4 hours on homework outside the classroom a week. Students registering for this course are expected to be familiar with the common functions of microcomputer operating systems and applications.

Co-requisite(s) MAT 050, ENG 075

Course Objectives/ACM Learning Outcomes

An ability to demonstrate core IT competency in database and information management

10. Describe the data management activities associated with the data lifecycle.
11. Diagram a database design based on an identified scenario.
14. Discuss issues relevant to dealing with very large data sets, both structured and unstructured.
15. Identify database administration tasks.
16. Produce simple database queries.
17. Use data analytics to support decision making for a given scenario.

An ability to function effectively as a member of a diverse team to accomplish common goals

42. Use communication, negotiation, and collaboration skills as a member of a diverse team.

An ability to read and interpret technical information, as well as listen effectively to, communicate orally with, and write clearly for a wide range of audiences

43. Describe the attitudes, knowledge and abilities associated with quality customer service.
44. Produce technical documentation responsive to an identified computing scenario.
45. Use documentation or a knowledge base to resolve a technical challenge in an identified computing scenario.

After successfully completing the course, the student will be able to:

1. Create a relational database using the database design process
2. Work as part of a team in designing a database using the database design process
3. Demonstrate relational databases and the use of unique identifiers.
4. Create reports, forms and queries in a database management system.
5. Create a menu driven database application using a database management system.
6. Describe server-side database systems and their uses.

Weekly Learning Objectives

Week 1	Introduction to virtual learning Introduction to Client/Server Database systems
Week 2	Installing Access 2013 on a Virtual computer Introduction to a DBMS Using Access 2013 to create a database
Week 3	Chapter 1 - Level 1: -Discover and evaluate sources of existing data - Research sources of missing data - Assigning data to tables and use field types and sizes to define data
Week 4	Chapter 2- Level 1 -Review the database design -Create the database tables using the database design -Working in design view Quiz 1
Week 5	Chapter 2 – Level 2 -Create additional tables for the database -Import data into the database tables -Work with primary and foreign keys -Create one-to-many and many-to-many relationships between tables - Use a sub datasheet to view related records
Week 6	Chapter 2 – Level 3 - Maintaining and Securing a Database -Learn about the role of a database administrator -Compact repair and backup a database -Secure the database from unauthorized use
Week 7	One – to – Many Relationship – Not in the book - Group activity one Task 1
Week 8	Chapter 3 Queries- Level 1 -Filter, sorting data -Create simple queries to answer business questions -Develop queries using comparison operators and wildcards -Display SQL view and analyze syntax Chapter 3 Queries- Level 2 -Design queries that compare one table to another -Refine table relationships by specifying the join type -Perform calculations in queries Chapter 3 - Level 3 -Calculate and restructure data to improve analysis -Make decisions in a query using immediate IF (IFF) function -Develop queries using SQL
Week9	Understanding many-to-many relationships - Not in the book - Group 2 activity

Week10	Review for Task 2 Task 2
Week 11	Chapter 4 - Level 1 -Design forms for efficient data entry - Develop a consistent user interface Chapter 4 - Level 2 -Create mutitable forms Forms as menu systems - Not in the book
Week 12	Chapter 5 - Level 1 -Create and modify basic reports -Using groups and calculations in reports -Using design view with reports -Using multiple tables in a report - One-to-Many Relationships
Week 13	Chapter 6 - Level 1 -Automating using macros -the use of macros in menu systems Design Documentation Process - Not in the book -Working with clients in the design process
Week 14	One to One relationships Group 3 Activity
Week 15	Review for Task 3 Task 3
Week 16	Presentation of Final Projects

Course Requirements

Students will create one final project to be presented the last week of the semester. Three hands-on test in the form of a task will be given during scheduled class times. One hands-on assignment will be due each week in class.

Student Evaluation and Grading

Tasks	40%
Assignments/Labs	20%
Final Project	25%
Attendance/Participation	15%

A	93 - 100	C+	77 - 79
A-	90 - 92	C	73 - 76
B+	87 - 89	C-	70 - 72
B	83 - 86	D+	67 - 69
B-	80 - 82	D	63 - 66
		F	62.999

Text, Tools and / or Supplies

Succeeding in Business with Microsoft Access 2013: A Problem-Solving Approach ISBN-13:
978-1285077581 or ISBN-10: 128507758X

You should have a notebook for taking notes and a writing instrument. It is mandatory strongly recommended for students to have a USB drive to store copies of all assignments and work on. And please always bring your sense of humor!

Attendance Policy

Regular and prompt attendance will contribute to your success in this class. Missing 3 consecutive classes will result in being recorded as a no-show. 5 or more unexcused absences may result in academic failure. If you come in after the start of the class you may be marked as absent.

End-of-Course Evaluation

Students complete evaluations for each course attended at SMCC. Evaluations are submitted online and can be accessed through the student portal. Students can access the course evaluations beginning one week before the end of classes. The deadline for submission of evaluations occurs Monday at 5 PM following the last day of the class. You will receive an email to your student email account when course evaluations are available.

ADA Syllabus Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-741-5798. If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the Disability Services Coordinator, Sandra Lynham, who can be reached at 741-5923. Further information about services for students with disabilities and the accommodation process is available upon request at this number. Course policies about online testing are modified to suit each individual's accommodations.

SMCC Pay-for-Print Policy

Per Page Costs

Each semester students receive a \$20 printing credit. The balance resets at the end of the semester and any remaining credits are removed. The cost varies depending upon page size and whether printing is done in black and white or color.

- a. There is a \$0.10 per page fee for standard 8.5" by 11" black and white documents.
- b. The reverse sides of duplex (double-sided) documents are free.
- c. There is a \$.50 per page fee for standard 8.5" by 11" color documents.
- d. There is a \$.20 per page fee for 8.5" by 14" (legal) or 11" by 17" (tabloid) black and white documents.
- e. There is a \$1.00 per page fee for 8.5" by 14" (legal) or 11" by 17" (tabloid) color documents.

Duplex charges (printing on both sides of a page) work in the following fashion: One page is \$0.10, two pages are \$0.10, three pages are \$0.20, and four pages are \$0.20, etc. The flipsides are free, but another

sheet of paper is \$0.10. Please be aware that a document with any color at all (when printed to a color printer) will by default be printed in color. You are responsible for setting the print job to print black and white if you do not need color. For directions, please go to the IT Help tab in My SMCC.

How does it work?

The College's pay-for-print system monitors printing on all printers (including those in general access labs, library printers, the Academic Achievement Center, Noisy Lounge and technology labs). Students can check the number of pages they have printed by using the Printing Balance tool available on SMCC computers (located in the lower right corner of the screen, near the clock). Departments with work study students who need to print documents for the department should contact the Help Desk at 741-5696 to have a special account set up.

Refunds

Print jobs are eligible for a refund in the event of mechanical or electronic error on the part of the printer, print server, or software used to submit the job. Jobs are not eligible for a refund in cases where the job was not set up correctly, was submitted multiple times, or the student is not satisfied with the result. To request a refund, please bring the offending print to the IT Department in the basement of the Ross Technology Center. Refunds will be granted in the form of a credit to the student's account.

Why is SMCC charging for printing?

The pay-for-print system is an effort to control escalating printing costs. Charging for printing helps offset the increasing cost of supplies and encourages students to conserve resources. To find ways to reduce your printing charges, please go to the IT Help tab on My SMCC. If you have questions about the payfor-printing policy or your printing charges, please contact the Help Desk at 741-5696 or send an email to helpdesk@smccme.edu.

Be sure to log OUT of the system when you've finished your printing, to prevent unauthorized access to your account.

Add-Drop Policy

Students who drop a course during the one-week "add/drop" period in the fall and spring semesters and the first three days of summer sessions receive a 100% refund of the tuition and associated fees for that course. Please note any course that meets for less than the traditional semester length, i.e., 15 weeks, has a pro-rated add/drop period. There is no refund for non-attendance.

Withdrawal Policy

A student may withdraw from a course only during the semester in which s/he is registered for that course. The withdrawal period is the second through twelfth week of the fall and spring semesters and the second through ninth week of twelve-week summer courses. This period is pro-rated for shorter-length courses. To withdraw from a course, a student must complete and submit the appropriate course withdrawal form, available at the Enrollment Service Center (no phone calls, please). The designation "W" will appear on the transcript after a student has officially withdrawn. A course withdrawal is an uncompleted course and may adversely affect financial aid eligibility. Failure to attend or ceasing to attend class does not constitute withdrawal from the course. There is no refund associated with a withdrawal.

Plagiarism Statement

Adherence to ethical academic standards is obligatory. Cheating is a serious offense, whether it consists of taking credit for work done by another person or doing work for which another person will receive credit. Taking and using the ideas or writings of another person without clearly and fully crediting the source is plagiarism and violates the academic code as well as the Student Code of Conduct. If it is suspected that a student in any course in which s/he is enrolled has knowingly committed such a violation, the faculty member should refer the matter to the College's Disciplinary Officer and appropriate action will be taken under the Student Code of Conduct. Sanctions may include suspension from the course and a failing grade in the course. Students have the right to appeal these actions to the Disciplinary Committee under the terms outlined in the Student Code of Conduct.