

Pellissippi State Community College
Master Syllabus

**INTRODUCTION TO DATABASE DESIGN
CSIT 1810**

Class Hours: 3.0
Laboratory Hours: 3.0
Credit Hours: 4.0
Revised: August 2011

Instructor:
Office:
Phone:
Email:

Catalog Course Description:

A study of database management systems and their impact on information technology. Topics include database models, data modeling techniques, conceptual and physical design, storage techniques and data administration. Special emphasis will be placed on relational systems and application of query languages using relational operations.

Entry Level Standards:

The entering student should have a familiarity with the Windows environment. The student is expected to have moderate programming abilities in a high-level language or a scripting language. Problem solving skills will be essential. The student must have math, writing, verbal and English language skills at the college level.

Pre-requisite: CSIT 1110 or WEB 2010

Textbooks and Other Related Material Basic to the Course:

Textbook: *Database Systems: Design, Implementation and Management; (9th. Edition)*, by Rob, Peter and Carlos Coronel, Course Technology, 2010, ISBN-13 978-0-538-46968-5, ISBN-10 0-538-46968-4.

Textbook: *Microsoft® Office Access 2010: Introductory*, by Grauer, Robert, Prentice Hall, 2011, ISBN-13 978-0-13-209227-2, ISBN-10 0-13-209227-1.

I. Week/Chapter/Topic Basis:

Week	Chap	Lecture Topic(s)
1	1	Database Systems
2	2	Database Models
3	3	The Relational Database Model
4	7	Introduction to SQL
5, 6	4, 6	Entity-Relationship Modeling
7, 8	5	Normalization
9	7, 8	SQL Queries, Creating Tables and Views in SQL
10	9	Database Design
11	10	Transaction Management and Concurrency
12	12	Distributed Systems
13	13	Data Warehouses, Data Mining
14	14	Databases in E-Commerce, Web Database Design
15	→	Final Exam

II. Course Goals*:

The course will:

- A. Enhance the student's knowledge of the advantages and disadvantages of using a database management system rather than conventional filing methods. II III IV V
- B. Foster the ability to recognize the language of data definition and data manipulation and its importance. II III IV V
- C. Foster the ability to recognize the components of a database model and appreciate how implementation as system may vary from the model. II III IV V
- D. Develop an awareness of the factors involved in the transformation of a conceptual design into a logical data base design and to a physical database design. I II III IV V
- E. Enhance the student's knowledge of the database administration function. I II III IV V
- F. Foster the ability to a database management package including use of a query language. II III IV V

*Roman numerals after course objectives reference goals of the Computer Science & Information Technology program.

III. Expected Student Learning Outcomes:

Student will be able to:

- 1. Explain the similarities and differences of hierarchical, network, and relational data models. C D E
- 2. Perform database normalization. D E
- 3. Develop Entity-Relationship Models. D E
- 4. Describe the functions of database administration. E
- 5. Develop applications using a development tool. D F
- 6. Define schema and subschema and explain the generic terminology associated with them. B C D E
- 7. Use a query language. B D E F
- 8. Implement a database using real-world case studies. A D E F

IV. Evaluation:

- A. Testing Procedures: 60% of grade
A minimum of three tests is recommended. Tests will cover material presented in class. Tests are not to be missed without a valid excuse.
- B. Laboratory Expectations: 30% of grade
Lab attendance is required. Assignments will be given and must be completed and handed in at the designated date and time.
- C. Field Work: N/A
- D. Other Evaluation Methods: 10% of grade
Unannounced quizzes and/or homework will also comprise part of the final grade for the course.

E. Grading Scale:

93 – 100 % of total points possible	A
88 – 92 % of total points possible	B+
83 – 87 % of total points possible	B
78 – 82 % of total points possible	C+
73 – 77 % of total points possible	C
65 – 72 % of total points possible	D
Below 65 % of total points possible	F

V. Policies:

A. Attendance Policy:

Pellissippi State Community College expects students to attend all scheduled instructional activities. As a minimum, students in all courses must be present for at least 75 percent of their scheduled class and laboratory meetings in order to receive credit for the course. Maintaining continuous attendance in your classes is very important. If you are considering dropping or withdrawing from a course, please check with the Financial Aid Office before doing so. Dropping or withdrawing from a class can adversely affect your financial aid and/or lottery eligibility.

B. Academic Dishonesty:

Plagiarism, cheating and other forms of academic dishonesty are prohibited. A student guilty of academic misconduct, either directly or indirectly through participation or assistance, is immediately responsible to the instructor of the class. In addition to other possible disciplinary sanctions that may be imposed through the regular Pellissippi State procedures as a result of academic misconduct, the instructor has the authority to assign an F or a zero for the exercise or examination or to assign an F in the course.

C. Accommodation for Disabilities:

Students who need accommodations because of a disability, have emergency medical information to share, or need special arrangements in case the building must be evacuated should inform the instructor immediately, privately after class or in her or his office. Students must present a current accommodation plan from a staff member in Services for Students with Disabilities (SSWD) in order to receive accommodations in this course. Services for Students with Disabilities may be contacted by going to Goins 127, 132, 134, 135, 131 or by phone: 539-7153 or TTY 694-6429. More information is available at www.pstcc.edu/departments/swd/.

D. Other:

1. Plagiarism, cheating, software piracy, non-educational use of computer systems and other forms of academic dishonesty are strictly prohibited. A student caught cheating or infracting specific rules will be given a grade of "F" for the course.
2. Make-up exams: All exams are required, and make-ups will be allowed only in the rarest of cases. In the event of an emergency, notification of the instructor must be made in advance.
3. It is the student's responsibility to request help from the instructor prior to an assignment's due date.