COURSE SYLLABUS

Course Title: Database Design I

Department: Business and Technology

Curriculum: Computer Information Systems

Course Code: CSC*231

Course Type: X

Prerequisites: C- or better in Introduction to Computers (CSC*101) OR Database Applications (CSA*140)

Elective Type: G/LAS

Credit Hours: 3

Corequisites: None

Developmental: No

Contact Hours:

Lecture: 3

Clinical: 0

Lab: 0

Studio: 0

Other: 0

TOTAL: 3

Class Maximum: 24

Semesters Offered: F/S

Catalog Course Description:
Introduces students to the design, implementation, and management of database systems. A variety of database models will be presented including relational, entity-relationship and object-oriented. Topics such as normalization, Structured Query Language (SQL), distributed databases, client server systems and data warehouses will be covered. Students will have the opportunity to design and implement a small database system.

Topical Outline:
1. What is a database system?
2. The Relational Database Model
3. The Entity-Relationship Model
4. Database Normalization
5. SQL
6. Distributed Database Management Systems
7. Transaction Management and Concurrency
8. The Object-Oriented Model
9. Client/Server Systems
## Outcomes:

Describe measurable skills or knowledge that students should be able to demonstrate as evidence that they have mastered the course content.

<table>
<thead>
<tr>
<th>COURSE:</th>
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<tr>
<td>1. design and implement a small database system</td>
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<tr>
<td>2. modify an existing database system</td>
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<tr>
<td>3. normalize the Files in a database system</td>
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| PROGRAM: (Numbering reflects Program Outcomes as they appear in the college catalog) |
| Computer Information Systems Associate Degree                         |
| APPLICATIONS SOFTWARE:                                                |
| 1. produce a simple database design and implement database applications using standard query language |

| GENERAL EDUCATION: (Numbering reflects General Education Outcomes as they appear in the college catalog) |
| 2. Critical Analysis/ Logical Thinking - Students will be able to organize, interpret, and evaluate evidence and ideas within and across disciplines; draw reasoned inferences and defensible conclusions; and solve problems and make decisions based on analytical processes. |
| Demonstrates: Identifies the issue(s); formulates an argument; explains and analyzes relationships clearly; draws reasonable inferences and conclusions that are logical and defensible; provides support by evaluating credible sources of evidence necessary to justify conclusions. |
| Does Not Demonstrate: Identifies few or no issues; formulates an argument without significant focus; provides an unclear explanation of analysis and relationships; drawing few reasonable inferences and conclusions that are illogical and indefensible; provides little to no support using credible sources of evidence necessary to justify conclusions. |

11. Written Communication (embedded) - Students will be prepared to develop written texts of varying lengths and styles that communicate effectively and appropriately across a variety of settings.

Demonstrates: Writes articulate texts using appropriate evidence and appeals as determined by the rhetorical situation.

Does Not Demonstrate: Writes texts lacking appropriate evidence and appeals as determined by the rhetorical situation.

## Evaluation:

List how the above outcomes will be assessed.

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<th>Assessment will be based on the following criteria:</th>
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<td>1. Students will create tables, forms and reports to demonstrate basic skills.</td>
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<td>2. Written examinations will test for an understanding of terminology, concepts and skills.</td>
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<tr>
<td>3. Student will complete a comprehensive project to demonstrate database design implementation and administration skills. This project will be uploaded to ePortfolio.</td>
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## Instructional Resources:

List library (e.g. books, journals, on-line resources), technological (e.g. Smartboard, software), and other resources (e.g. equipment, supplies, facilities) required and desired to teach this course.

Required: Computer Lab
Desired: None

## Textbook(s):

Refer to current academic year printout.