IST 334 Online
Database Processing
Spring 2013

INSTRUCTOR: Dr. Stephen C. Shih
Professor
School of Information Systems and Applied Technologies
Southern Illinois University Carbondale

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SCHEDULE/CLASSROOM
Section 001/002: 11:00 a.m. – 12:15 a.m. TR / ASA 112D

STUDY REFERENCES:
1. TEXTBOOKS (~ 70%)

2. SUPPLEMENTARY MATERIALS (~ 30%)

COURSE DESCRIPTION
This course is designed to provide students with essential knowledge and pragmatic skills of databases modeling, design and processing. Essential topics include database development life cycle, conceptual data modeling, logical database design and normalization, and queries and Structure Query Language (SQL) for data processing and manipulation. For pragmatic and hands-on learning, this course focuses on the use of relational database management systems for constructing database system objects, such as tables, queries, and SQL code. A grade of C or better is required. Prerequisite: ISAT 229. Restricted to IST major.
COURSE OBJECTIVES

Up successfully completion of this course, the students should be able to:

1. Acquire basic knowledge of database development life cycle.
2. Understand fundamental and advanced database modeling and design concepts.
3. Develop Entity-Relationship Diagrams (ERDs) for a database using a given set of business rules and assumptions.
4. Use Microsoft Visio and Microsoft Access to develop ERDs.
5. Perform data analysis and normalization.
6. Develop queries and write Structured Query Language (SQL) statements for a variety of data definition and data manipulation scenarios.

Desire2Learn (D2L) will be employed for both face-to-face and online learning management. It will be used in this class as the primary tool for posting teaching materials and assignments, and in the meantime, for conveying necessary communications among students as well as dialogues between students and instructor. Use the following link to get access to the SIU Online Site powered by D2L:
https://online.siu.edu/

*** IMPORTANT – Learning Materials Updates and Online Communications ***

- There will be newly updated learning materials posted every Monday morning (around 10 a.m.)
- Due to my other academic obligations and assignments, please understand that I won’t be able to be available online for this class 24/7. Under normal circumstances, I will manage to check your inquiries as frequently as possible and will get back to you in 2 business days. For some urgent requests, I will do my best to reply as soon as possible.
Policies

Exams and Make-up Tests

- All students are to take examinations on the scheduled dates. Missing an examination will result in a grade of "0" (zero), unless exceptional circumstances justify that the student may take the examination on a different date.
- Make-up test will be allowed by consent of the instructor and justified reasons only, official written documentation is required, no exception.
- Cheating will not be tolerated on any assessment given for this course.
  Consequences – There will be no second chances. If you are caught cheating, you will receive an "F" for the course.
- Incomplete Grades – Incomplete grades will not be given unless there are extraordinary circumstances as deemed by the instructor.

Evaluation Criteria

Your grade will be determined by the percentage of the total points you get. The components of the course grade are:

<table>
<thead>
<tr>
<th>Tests (x 4)</th>
<th>100 points per test</th>
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<tbody>
<tr>
<td>Exercises (at least one per week)</td>
<td>10 – 20 points per exercise submission</td>
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Grading Scale: Unless instructed otherwise, assume the following grading policy:

- A  90 % and above
- B  80 - 89 %
- C  70 - 79 %
- D  60 - 69 %
- F  Below 60 %
### TENTATIVE COURSE OUTLINE

<table>
<thead>
<tr>
<th>Weeks</th>
<th>Subjects</th>
<th>Exams</th>
<th>Textbook Reading Assignments</th>
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</table>
| 1 - 4  | The Big Picture                               | Test 1 | Chapter 1
        |       |                     | Chapter 9
        |       |                     | (Selective Sections)                                           |
        |       | Basic Data Modeling                           |        | Combined Materials of Chapters 2, 3, & 4                          |
        |       |       |                     |                                                                  |
        |       |       |                     |                                                                  |
        |       |       |                     |                                                                  |
| 5 – 8  | Advanced Data Modeling                        | Test 2 | Chapter 5                                                          |
| 9      | Spring Vacation                                |        |                                                                  |
| 10 - 12| Logical Database Design:                      | Test 3 | Chapter 6                                                          |
|        | Normalization of Database Tables              |        | Supplementary Materials + Selective Sections of Chapter 7         |
|        | Data Processing with Microsoft Access Queries & SQL |        |                                                                  |
|        |       | o Query Basics                               |        |                                                                  |
| 13 - 16| Data Processing with Microsoft Access Queries & SQL |     |                                                                  |
|        |       | o Advanced Queries                           | Test 4 | Supplementary Materials + Selective Sections of Chapter 8         |

### ACADEMIC CALENDAR

- Semester Classes Begin: Monday, January 14
- Martin Luther King, Jr.’s Birthday Holiday: Monday, January 21
- Spring Vacation: Saturday, March 9, 12:00 Noon through Sunday, March 17
- Final Examinations: Monday, May 6 through Friday, May 10
- Commencement: Saturday, May 11, 2013

### REGISTRATION CALENDAR

[HTTP://REGISTRAR.SIU.EDU/CALENDARS/REGISTRATION13SP.HTML](HTTP://REGISTRAR.SIU.EDU/CALENDARS/REGISTRATION13SP.HTML)
SIUC EMERGENCY RESPONSE PLAN AND BUILDING EMERGENCY RESPONSE TEAM (BERT) PROGRAM

Southern Illinois University Carbondale is committed to providing a safe and healthy environment for study and work. Because some health and safety circumstances are beyond our control, we ask that you become familiar with the SIUC Emergency Response Plan and Building Emergency Response Team (BERT) program. Emergency response information is available on posters in buildings on campus, available on the BERT website at www.bert.siu.edu, Department of Public Safety’s website at www.dps.siu.edu (disaster drop down) and in Emergency Response Guidelines pamphlet. Know how to respond to each type of emergency.

Instructors will provide guidance and direction to students in the classroom in the event of an emergency affecting your location. It is important that you follow these instructions and stay with your instructor during an evacuation or sheltering emergency. The Building Emergency Response Team will provide assistance to your instructor in evacuating the building or sheltering within the facility.