IS 613– Database Management Systems

Semester: Spring 2020
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Course Description: This course provides an introduction to database concepts, SQL, and web-based database design. The major goal is to provide students with an understanding of the basic concepts underlying the use of a database system. We will be using Microsoft Access 2016 as the primary database management system to illustrate various concepts discussed in the course. In addition, Microsoft Visio 2016 will be the vehicle for illustrating data-modeling diagrams and entity-relationship diagrams.

Course Objectives:
Upon successful completion of this course, students will be able to:

- Describe the general notions and terminology associated with database and database management systems.
- Design and draw an entity-relationship model.
- Modeling, development, and implementation of database systems, using storage structures, data definition languages, and data manipulation languages for the relational approach to database management.
- Database integrity and security problems. Prepare and use various information gathering techniques for eliciting user information requirements.
- Construct and interpret a variety of system description documents including physical and logical data flow diagrams, entity-relationship diagrams, structure charts and decision tables as well as screen, form and report layouts.

Blackboard: http://blackboard.pace.edu Unless specified, students are expected to use Blackboard to view course documents and submit assignments. All course related announcements will be posted on the site.

Textbook: Database Concepts, 8th edition, David M. Kroenke, David J. Auer, Scott Vandenberg, and Robert Yoder

Course Assignments, Exams, Project and Grade:
The course is graded according to how well you perform on:

Discussion Board	10%
Assignments	20%
Quizzes (2)	15%
Midterm	30%
Final Project	25%

Week	Date	Content	Readings	Homework (due one week and two days from the date indicated by 9:00 am that day)
1	2/1	Class begins (Use Blackboard/Discussion Board to introduce yourself and your backgrounds in IT.) Introduction to Database Fundamentals	Ch1	**Assignment #1**
2	2/8	The Relational Model	Ch2	**Assignment #2**
3	2/15	Structured Query Language Appendix A: Microsoft SQL 2016	Ch 3	**Assignment #3**
4	2/22	***Semester Project Begins***		**Quiz #1 due 2/29**
5	2/29	Data Modeling and the Entity-Relationship Model Appendix G: Microsoft Visio 2016	Ch 4, Appendix G	**Assignment #4**
6	3 / 7	Database Design	Ch 5	**Assignment #5**
7	3/14	*Midterm Exam Ch. 1-5* ***Semester Project Proposal Due***		**Midterm due 3/28**
		Spring Break – No Classes		
8	3/28	Database Administration	Ch 6	**Assignment #6**
9	4/4	Database Processing Applications	Ch 7	
10	4/11	Big Data, Data Warehouses, and Business Intelligence Systems	Ch 8	
11	4/18	Careers involving Databases Transaction Management	Selected Readings	**Quiz #2 due 4/25**
12	4/25	Database Security	Selected Readings	
13	5/6	Course Wrap-Up and Prep for Final Projects		
14	5/13	***Semester Project Due***		