Course Description

This course is a study of major advancements in database technology that have taken place in recent years. It does not assume any prior background in the field of databases, and, hence, starts with basic introductory concepts, but covers advanced topics as well. The course will cover both conceptual and hands-on material in the area of database management, thus enabling students to have the maximum amount of comprehension and retention of material covered in the course. The student must have access to MS Access 2010 or higher. This software is not provided by the Resource grant and must be purchased/provided by the student.

Course Scope

This Database Management Systems course is designed to provide students with a thorough knowledge of the concepts to develop a business application. INFO321 begins with the introduction to concepts highlighting key advantages and disadvantages of database systems. A foundation of any database is the ability to extract relevant information. The course will provide an examination of relational databases and demonstrate the querying functions to successfully extract the data. In addition, successful completion of the course will enable students to analyze database requirements and design a working application for use in business operations. You will describe the methodology used to develop the application and the planning involved in the construction of the database. A clear and concise understanding of database management system concepts will be obtained from weekly exercises from
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the chapter review questions, periodic threaded discussions, case study analysis, and exercises. The course concludes with the student demonstrating an understanding of the concepts by developing a database management application.

Note to Students: The Resources, assignments, learning outcomes, and expectations in this upper level undergraduate course assume that the student has completed all lower level general education and career planning coursework necessary to develop research, writing, and critical thinking skills. Students who have not fulfilled all general education requirements through courses or awarded transfer credit should strongly consider completing these requirements prior to registering for this course.

This course has been evaluated by the American Council on Education. Credit Recommendation - at the upper level/baccalaureate degree level 3 semester hours in Management Information Systems.

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Course Objectives

The successful student will fulfill the following learning objectives:

1. Evaluate the evolution of relational databases as a tool for information management
2. Assess the key components of a database management system.
3. Discuss the process and methodologies for designing databases.
4. Explain the importance and functions of database administration.
5. Examine the rudiments of the Structured Query Language; also evaluate database table normalization.
6. Evaluate the data integrity, security, and availability issues related to relational databases.
7. Apply your knowledge of database design and development by designing and developing a database management system.

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Course Delivery Method

This B.S. in Information Technology Management course delivered via distance learning will enable students to complete academic work in a flexible manner, completely online. Resources and access to an online learning management system will be made available to each student. Online assignments are due by the dates listed in the schedule below and include Forum questions (accomplished in groups through a threaded Forum), examinations and quizzes (graded electronically), and individual assignments (submitted for review by the Faculty Member). Assigned faculty will support the students throughout this eight-week course. Students must have access to MS Access 2010.
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Resources

Required Text


Optional Text


Web-based Readings (Optional)

- **Week1**
- **Week2**
- **Week3**
- **Week4**
- **Week5**
- **Week6**
- **Week7**
- **Week8**

Software Requirements

- MS Word or any word processor with the ability to export a *.txt file.
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- MS Access 2010 Availability
- Adobe Acrobat Reader (Click here for free download)

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Evaluation Procedures

The grading will be based on eight graded assignments, seven weekly Forum postings, an individual project paper with topic, outline, and presentation assignments, a network design diagram, an open book quiz, and a case study.

1. There will be seven assignments (4-5% each) counting a total of 31% of the final grade. The assignments will follow each of the major milestones of the course. These assignments will be problems or questions from the text. They are a combination of Lesson Reviews and Lesson Activities and/or Labs. They are selected to provide the student with information to understand the concepts discussed. Assignments should be prepared in Microsoft Word and uploaded into the student folder by the due date. Assignment also may include work in MS Access and uploading of the Access file in the assignment area.

2. There will be eight weekly Forum postings you will need to respond to. Answers should be 3-4 paragraphs with a topic sentence that restates the question and supporting sentences using the terms, concepts, and theories from the required readings. Each answer should be a minimum of 250 - 300 words (about 6 to 8 good sentences). You may attack, support or supplement other students’ answers using the terms, concepts and theories from the required readings. All responses should be a courteous paragraph that contains a topic sentence with good supporting sentences. You may respond multiple times with a continuous discussion with points and counter points. The key requirement is to express your idea and then support your position using the terms, concepts and theories from the required readings to demonstrate to me that you understand the material. The Forum postings will count as 24% (3% for each forum posting) of the final grade. In an online environment communication and exchange of ideas is critical. These Forum postings allow us the opportunity to discuss trends in the technology we are studying, future possibilities, updates and above all, allow us an opportunity to get to know each other and work as a group. This can only happen, when students and instructors work together. It is not out of the ordinary when students participate in a "hot" discussion and the exchange of ideas and arguments is achieved. Forum submissions are due by Wednesday of each week, in order to give other students the opportunity to read your post and respond.

Instructions to review and submit Forum input:

1. Log into the classroom
2. Click the “Forum” link
3. Click the appropriate Forum under the column labeled “Group Name”
4. Choose a specific thread to see all the messages and choose a specific message to reply.
5. Click on the “reply to this message” link.
6. Provide your input.
7. Click the “submit” button.

Forum Grading Rubric

Your post should add value to the classroom discussions to be counted for participation. It can be a new analogy, scenario, case study, different viewpoint or even a good question.

Forum Grading Rubric (100 Points)
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<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Points Possible</th>
<th>% of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Synthesis of Concepts</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>Clear Citations using APA format</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Writing Standards</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Timeliness</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Peer Reviews (minimum of 2)</td>
<td>15</td>
<td></td>
</tr>
</tbody>
</table>

3. There will be a **Term Project (17%)** with **Project Proposal (5%)**, and **Final Term Project (12%)** throughout the session, due the 8th week.

4. There will be **two** one hour long and non-proctored **quizzes (5% each)** in week 4 and week 7 which count as **10%** of the final grade. The quizzes are multiple-choice selections and will be open book and open note.

5. There will be a **Case Study** in week 6, counting as **18%** of the final grade. Strongly encouraged to start at least 1-2 weeks earlier than when it is due.

**Grading Instrument:**

<table>
<thead>
<tr>
<th>Subject Areas</th>
<th>Points Possible</th>
<th>% of Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forum Postings and Participation</td>
<td>800</td>
<td>24%</td>
</tr>
<tr>
<td>1 per week * 3% : 8 total</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Database Exercises</td>
<td>700</td>
<td>31%</td>
</tr>
<tr>
<td>wk 1-4 * 4% = 16%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>wk 5-7 * 5% = 15%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Term Project</td>
<td>200</td>
<td>17%</td>
</tr>
<tr>
<td>Project Proposal:</td>
<td>5%</td>
<td></td>
</tr>
<tr>
<td>Project Paper:</td>
<td>12%</td>
<td></td>
</tr>
<tr>
<td>Quizzes</td>
<td>200</td>
<td>10%</td>
</tr>
<tr>
<td>Wk 4 * 5% : 5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wk 7 * 5% :5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Case Study</td>
<td>100</td>
<td>18%</td>
</tr>
<tr>
<td>Case Study Work * 18%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Totals</td>
<td>2000</td>
<td>100%</td>
</tr>
</tbody>
</table>

**Due Dates**

All assignments, Forums, quizzes, tests, papers, projects are due Sunday of each week by 11:59:00 PM.

**Database Exercise Rubric**

| Understanding of DBMS | A clear response to the Database exercises | 45% |
Concepts demonstrating a mastery of the underlying DBMS concepts.

Apply Database Concepts to Assignment The student can apply learned database concepts to successfully complete database exercises. 45%

Grammar The student was able to clearly articulate a thoughtful response to assignment. 10%

Total 100%

Announcements

In the announcement area there will be an overview of the information for the week, a summary of the assignments, and key terms enabling focused studying of concepts from the readings. These key terms will be used as the basis for the mid-term and final exams. This information will be located in the announcements section of the online classroom.

Lecture

Each week, students will review the power point lecture located in the Resources section of the online classroom.

Case Study - week 6 - (18%):

You are a star consultant from "Databases R US" IT consulting and managing firm. Just graduated from APUS and this is your first critical job. You just got hired by "Home Solutions Inc" a construction and parts company to help them with their customer and parts data management. Unfortunately, the company has been depending on the owner's nephew for their data needs and Joe has done his best to come through for the family business. His lack of experience with data management is hurting the business as they have been unable to successfully keep track of their inventory system, customers and sales. Joe has put together a spreadsheet, see below, and they have been using it as a database of sorts, to track their customers and inventory.

Your specific tasks to help the business are in parenthesis are the percentage that correspond to the per item payment (grade weight):

1) Review the existing spreadsheet, and their sample data and make any assumptions you need about the company. Make any comments about the approach that you are going to follow, as you see fit. (10%)
2) Redesign the spreadsheet into a database with tables, add any fields that you think could be useful, even though it is not absolutely necessary. Explain your actions as you go along.
3) Perform a functional dependency analysis, and include it as part of your deliverables, for every step of the normalization process (25%)
4) Clearly take the existing un - normalized structure through distinct 1NF, 2NF and finally 3NF stages, using the shorthand representation. All three stages of normalization have to be clearly defined and depicted for full payment by the proprietor. Do not forget Primary keys assignment.(25%)
5) Finally, create an MS Access prototype (actual database), including the data provided, with the newly designed tables. Upload the prototype to the assignment area as part of the deliverables (5%).
6) Create a Query (in MS Access) that may include one or more tables, as needed, that provides the answer to the following request: List the Invoice number, Customer Name, and Parts Description for purchases by Customers that have an Account Balance of $3,000 or higher. Short them with the highest balance being displayed first (Descending values) (5%)
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7) Create one Form: New Customer Input - this form should include any relevant fields that you think "Home Solutions Inc" might need (In MS Access) (5%)

8) Create One Report: Items Price List - this report should include any relevant fields that you think "Home Solutions Inc" might need (In MS Access) (5%)

- Make sure you document your work as you go along for full payment, as the owner of the business, wants to be able to show your work to new hires and they should be able to pick it up and understand why the database was put together the specific way you are suggesting.
- Below you can find the "database" that Joe has put together with his limited data management knowledge, and your starting point.

<table>
<thead>
<tr>
<th>Invoice</th>
<th>CompanyName</th>
<th>Acct Balance</th>
<th>Acct Limit</th>
<th>Part1</th>
<th>Quantity1</th>
<th>Price1</th>
<th>Part2</th>
<th>Quantity2</th>
<th>Price2</th>
</tr>
</thead>
<tbody>
<tr>
<td>87</td>
<td>Mary’s IT Services</td>
<td>5000</td>
<td>20000</td>
<td>Bolt</td>
<td>50</td>
<td>10</td>
<td>Nut</td>
<td>40</td>
<td>20</td>
</tr>
<tr>
<td>72</td>
<td>Mel’s Hotdogs</td>
<td>7200</td>
<td>7200</td>
<td>Bolt</td>
<td>100</td>
<td>10</td>
<td>Screw</td>
<td>45</td>
<td>30</td>
</tr>
<tr>
<td>57</td>
<td>Brookings</td>
<td>500</td>
<td>12000</td>
<td>Screw</td>
<td>60</td>
<td>30</td>
<td>Bolt</td>
<td>65</td>
<td>10</td>
</tr>
<tr>
<td>67</td>
<td>Parker’s</td>
<td>1000</td>
<td>5000</td>
<td>Nut</td>
<td>70</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Action Computer’s</td>
<td>1000</td>
<td>10000</td>
<td>Screw</td>
<td>40</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Kline’s</td>
<td>8000</td>
<td>9999</td>
<td>Bolt</td>
<td>30</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>John’s</td>
<td>10000</td>
<td>30000</td>
<td>Nail</td>
<td>25</td>
<td>50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Lee’s</td>
<td>700</td>
<td>1000</td>
<td>Bolt</td>
<td>75</td>
<td>10</td>
<td>Nail</td>
<td>120</td>
<td>50</td>
</tr>
<tr>
<td>19</td>
<td>Al’s</td>
<td>7000</td>
<td>7000</td>
<td>Screw</td>
<td>110</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Al’s</td>
<td>7000</td>
<td>7000</td>
<td>Nut</td>
<td>90</td>
<td>20</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

You can assume that the quantities reflect packages and the prices are per item

**Term Project and Proposal (17%)**

The Term project is a database design exercise. It includes a Project Proposal and the actual Term Project

1) **Term Project Proposal week 5 (5%)**

You should select a data storage problem of your interest and identify the various pieces of data that should be stored in a database. Then, in the actual Term Project, take it through the normalization process and design the actual database tables (see Assignment Term Paper for complete details of this). You should submit your term project proposal in Week 5 for approval by the instructor and submit the completed work in the final week.

The Proposal for the Term Project, MS Word doc - **500 words minimum** - should include:

1) Name and main idea of the project
2) Purpose and goal of the project
3) Possible users and administrators
4) How is this work being done now, without the database and how will the database specifically improve
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5) Data elements to be involved: entities, attributes - High Level
6) Platform to be used: what type of database. (i.e. Short term will use MS Access, for ease of use and prototyping but long term will switch to a more robust platform like MS SQL, or Oracle, or remain in MS Access)
7) Other interesting related points

**2) Term Project delivery week 8 (12%)**

You should select a data storage problem of your interest and identify the various pieces of data that should be stored in a database.

Make sure that your Term Paper follows the following format/outline:

1) Term Paper Abstract
2) Purpose and goal of the project
3) Users and administrators
4) How is this work being done now, without the database and how will the database specifically improve the process
5) Data elements to be involved: entities, attributes - Detailed Level
6) Platform to be used: what type of database. (i.e. Short term will use MS Access, for ease of use and prototyping but long term will switch to a more robust platform like MS SQL, or Oracle, or remain in MS Access)

7) Take the database through the normalization process and design the actual database tables.
8) Do include the functional dependency analysis
9) Do include any Primary and Foreign Key designation, as needed, as well as an explanation of why you designated them as such.
10) Document the whole process and information in MS Word document. Especially make sure that you include the description of the various entities, attributes in detail, their inter-relationship and the way the database is going to be used.

You should submit your term project proposal in Week 6 for approval by the instructor and submit the completed work in the final week in a Word Document *(1,000 word minimum)*. Relevant parts of the Project Proposal may be incorporated in the above outline, modified from earlier versions/submissions as needed

**Quiz Completion Procedures**

1. Log into the classroom
2. Click the “exams” link
3. Click the "INFO321 Quiz week4" or "INFO321 quiz week 7" link.
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Submission of Written Assignments

Although distance learning provides an optimal amount of flexibility, students are expected to follow the syllabus expectations and schedule.

NOTE: Submitted assignments are time stamped using east coast time. This time stamp is my verification of an on time submittal. If you live in another time-zone, keep this in mind when submitting assignments. Use the time-zone converter at this link http://www.timezoneconverter.com/cgi-bin/tzc.tzc to help you submit assignments in a timely manner.

Written assignments – term project/PPE/database exercise submission instructions:

1. Log into the classroom.
2. Click the “assignments” link.
3. Click the corresponding assignment (i.e. INFO321 Week 1 Assignment).
4. Upload file to the assignment. Ensure the file is a MS Word document.
5. Check the box “submit for grading.”
6. Click the “submit” button.

LATE ASSIGNMENTS

Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals I understand you must manage competing demands on your time. Should you need additional time to complete an assignment please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and may result in points deducted from your final course grade. Assignments submitted late without a prearranged extension will be subject to a 10% late penalty. No late assignments will be accepted after the last day of the course.

Grading Scale

Please see the student handbook to reference the University’s grading scale.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic(s)</th>
<th>Learning Objective(s)</th>
<th>Reading(s)</th>
<th>Assignment(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Forum Personal Introduction</td>
<td>CO1</td>
<td>Introduce Premier Products, the fictional company used as the basis for many examples throughout the text. Introduce basic database terminology. Describe database management systems. Describe the characteristics of a DBMS. Describe the importance of ACID model. Explain the advantages and disadvantages of database processing</td>
<td>Concepts of Database Management: Chapter 1 - Introduction to Database Management Illustrated Series: MS Office Access 2010: Unit A: Getting Started with Microsoft Office 2010 &amp; Access 2010: Unit A Getting started with Access 2010 Week1 Web Readings. See Resources section of syllabus.</td>
</tr>
<tr>
<td>2</td>
<td>Using a Database Management System</td>
<td>CO2</td>
<td>Describe the relational model. Assess the function Query-By-Example (QBE). Explain the criteria used in QBE. Create calculated columns in QBE. Calculate statistics in QBE. Describe data sorting in QBE. Demonstrate join tables in QBE. Modify data using QBE. Explain the concepts of relational algebra.</td>
<td>Concepts of Database Management Chapter 2 - The Relational Model 1: Introduction, QBE, and Relational Algebra Illustrated Series: MS Office Access 2010 - Unit B: Building and Using Queries Week2 Web Readings. See Resources section of syllabus.</td>
</tr>
<tr>
<td>3</td>
<td>Managing, Retrieving and Manipulating Data</td>
<td>CO3 Assess the term SQL. Define the simple and compound conditions of SQL. Explain and demonstrate the functions of SQL. Use SQL to update an existing and create a table in the database.</td>
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<td></td>
<td>Concepts of Database Management Chapter 3 – The Relational Model: SQL Illustrated Series: MS Office Access 2010 - Unit E: Modifying the Database Structure Week3 Web Readings. See Resources section of syllabus.</td>
<td>Review the weekly terms from the announcements. Review the corresponding PowerPoint lecture in the Resources section of the classroom. Review Forum Question(s) in the weekly discussion forum and participate accordingly. Weekly post of 250 words minimum by Wednesday, and 2 peer review postings, 100 words minimum.</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Database Exercise 3: Go to <a href="http://sqlcourse.com/create.html">http://sqlcourse.com/create.html</a> and use the SQL interpreter to create a table with the following columns: CustomerNum 3 characters CustomerName 15 characters Street 15 characters City 15 characters State 2 characters Zip 5 characters Balance 8, 2 Decimals CreditLimit 8, 2 Decimals RepNum 5 Characters. The table name should be your last name and student number. Insert the following three records into the table: (123, Bob Smith, 8215 Cherry St, Grove, FL, 33331, 500.23, 1000, FP123) (456, Lucy James, 4711 Ohio St, Chicago, IL, 60644, 7000.44, 5000.80, FP123) (789, John Jones, 925 Main St, Grove, FL, 33385, 87.50, 2000.72, FP123) NOTE: The SQL INSERT Command differs slightly with the SQL Interpreter. The SQL Interpreter requires identification of the columns in the SQL Command to proper execute. Review this webpage for more specifics of the online SQL Interpreter INSERT INTO Command. <a href="http://sqlcourse.com/insert.html">http://sqlcourse.com/insert.html</a> Our textbook version does not use the column names in the command.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 4 | Managing, Retrieving and Manipulating Data Continued | CO4 | Develop the same table in MS Access.  
Your input should include screen captures of the table with the three records in a word file. Ensure you include your SQL Insert Command in the word file. Also upload your MS Access file. |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Concepts of Database Management Chapter 4 – The Relational Model: Advanced Topics</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Illustrated Series: MS Office Access 2010 - Unit F: Improving Queries</td>
</tr>
<tr>
<td></td>
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<td></td>
<td>Week4 Web Readings. See Resources section of syllabus.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Review the weekly terms from the announcements.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Review the corresponding PowerPoint lecture in the Resources section of the classroom.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Review Forum Question(s) in the weekly discussion forum and participate accordingly. Weekly post of 250 words minimum by Wednesday, and 2 peer review postings, 100 words minimum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Database Exercise 4: Use the week4 database file, located in the course materials section of the online classroom, to complete the Alexamara María Group Case on page 152.</td>
</tr>
<tr>
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<td>1) Complete exercises 1, 2, 3, 4, and 6. You can display the data output, results, either by uploading the Access file, or by copy and paste of the VIEWS/Queries</td>
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<td>2) In addition to the above Access exercise, please provide the SQL statements that would be needed to generate the same views in an SQL environment (not the Access SQL generated code). You do not have to execute this code, just show the code. Make sure that you provide &quot;SQL statements&quot; for all 5 exercises above.</td>
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<td><strong>Complete online quiz - week 4.</strong></td>
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<td>5</td>
<td>Normalization</td>
<td>CO5</td>
<td>Review the weekly terms from the announcements.</td>
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<td>Review the corresponding PowerPoint lecture in the Resources section of the classroom.</td>
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<td>Review Forum Question(s) in the weekly discussion forum and participate accordingly. Weekly post of 250 words minimum by Wednesday, and 2 peer review postings, 100 words minimum</td>
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<td>Database Exercise 5: Complete the Chapter 5 review question 11</td>
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<td>6</td>
<td>Database Design Methodology</td>
<td>CO6</td>
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<td>Examine the general process and goals of database design. Assess user view and explain the functionality. Define database design language and use it to document database designs. Create an entity-relationship diagram to visually represent a database design. Present a methodology for database design at the information level and view examples illustrating this methodology. Explain the physical level design process. Examine some alternative approaches to entity relationship diagrams. Examine and explain top-down and bottom-up approaches to database design. Develop and use a survey form to gather information on customer requirements. Explain documentation review prior to beginning a design. Define and explain one-to-one, one-to-many, and many-to-many relationships in database design.</td>
<td>Concepts of Database Management Chapter 6 – Database Design 2: Design Methodology Illustrated Series: MS Office Access 2010 - Unit D: Using Reports Week6 Web Readings. See Resources section of syllabus.</td>
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<td>AND the exercise 1 from Premier Products Exercises. Both assignments are on page 180 of the Pratt / Adamski book. Capture your output in a Word document and submit it in the assignment area. Submit Term Project Proposal – see the term project description for details.</td>
<td>Review the weekly terms from the announcements. Review the corresponding PowerPoint lecture in the Resources section of the classroom. Review Forum Question(s) in the weekly discussion forum and participate accordingly. Weekly post of 250 words minimum by Wednesday, and 2 peer review postings, 100 words minimum Database Exercise 6: Complete Chapter 5 Exercise 12 (page 180) in Pratt textbook. Capture your 3NF output in a Word document and submit it. Complete Case Study, see Case Study area in syllabus for details.</td>
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<td>Week</td>
<td>DBMS Data Security, Recovery, and Support</td>
<td>CO7 Define and explain the function provided by a DBMS. Describe how a DBMS handles updating and retrieving data. Examine the catalog feature of a DBMS. Illustrate the concurrent update problem and describe how a DBMS resolves the issue. Explain the data recovery process in a database. Describe the security features of a DBMS. Examine the data integrity feature provided by a DBMS. Describe data independence within a DBMS Define and describe data replication.</td>
<td>Concepts of Database Management Chapter 7 – DBMS Functions Illustrated Series: MS Office Access 2010 - Unit G: Enhancing Forms Week 7 Web Readings. See Resources section of syllabus.</td>
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<td>8</td>
<td>Database Administration</td>
<td>Co7 – cont... Explain the need for database administration Describe database access privileges. Examine issue pertaining to database security and disaster planning. Examine database dictionary management Examine database testing and performance issues</td>
<td>Concepts of Database Management Chapter 8 – Database Administration Week 8 Web Readings. See Resources section of syllabus.</td>
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Policies

Please see the student handbook to reference all University policies. Quick links to frequently asked question about policies are listed below.

Drop/Withdrawal Policy
Plagiarism Policy
Extension Process and Policy

WRITING EXPECTATIONS
All written submissions should be submitted in a font and page set-up that is readable and neat. It is recommended that students try to adhere to a consistent format, which is described below.

- Typewritten in double-spaced format with a readable style and font and submitted inside the electronic classroom (unless classroom access is not possible and other arrangements have been approved by the professor).
- Arial 11 or 12-point font or Times New Roman styles.
- Page margins Top, Bottom, Left Side and Right Side = 1 inch, with reasonable accommodation being made for special situations and online submission variances.

CITATION AND REFERENCE STYLE
Assignments completed in a narrative essay or composition format must follow APA guidelines. This course will require students to use the citation and reference style established by the American Psychological Association (APA), in which case students should follow the guidelines set forth in Publication Manual of the American Psychological Association (6th ed.). (2010). Washington, D.C.: American Psychological Association.

LATE ASSIGNMENTS
Students are expected to submit classroom assignments by the posted due date and to complete the course according to the published class schedule. As adults, students, and working professionals I understand you must manage competing demands on your time. Should you need additional time to complete an assignment please contact me before the due date so we can discuss the situation and determine an acceptable resolution. Routine submission of late assignments is unacceptable and may result in points deducted from your final course grade. Assignments submitted late without a prearranged extension will be subject to a 10% late penalty. No late assignments will be accepted after the last day of the course.

ONLINE LIBRARY RESEARCH CENTER & LEARNING RESOURCES
The Online Library Resource Center is available to enrolled students and faculty from inside the electronic campus. This is your starting point for access to online books, subscription periodicals, and Web resources that are designed to support your classes and generally not available through search engines on the open Web. In addition, the Center provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to orc@apus.edu.

- Charles Town Library and Inter Library Loan: The University maintains a special library with a limited number of supporting volumes, collection of our professors' publication, and services to search and borrow research books and articles from other libraries.
- Electronic Books: You can use the online library to uncover and download over 50,000 titles, which have been scanned and made available in electronic format.
- **Electronic Journals**: The University provides access to over 12,000 journals, which are available in electronic form and only through limited subscription services.

- **Turnitin.com**: Turnitin.com is a tool to improve student research skills that also detect plagiarism. Turnitin.com provides resources on developing topics and assignments that encourage and guide students in producing papers that are intellectually honest, original in thought, and clear in expression. This tool helps ensure a culture of adherence to the University's standards for intellectual honesty. Turnitin.com also reviews students’ papers for matches with Internet materials and with thousands of student papers in its database, and returns an Originality Report to instructors and/or students.

- **Smarthinking**: Students have access to 10 free hours of tutoring service per year through Smarthinking. Tutoring is available in the following subjects: math (basic math through advanced calculus), science (biology, chemistry, and physics), accounting, statistics, economics, Spanish, writing, grammar, and more. Additional information is located in the Online Research Center. From the ORC home page, click on either the “Writing Center” or “Tutoring Center” and then click “Smarthinking.” All login information is available.

### Selected Bibliography


Appendix A – Grading Rubric

All written assignments will be assessed according to this rubric. Note that a score of 0 may be assigned in any category where your work does not meet the criteria for the beginning level.

<table>
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<tr>
<th>APUS Assignment Rubric Undergraduate Level 300-400</th>
<th>EXEMPLARY LEVEL 4</th>
<th>ACCOMPLISHED LEVEL 3</th>
<th>DEVELOPING LEVEL 2</th>
<th>BEGINNING LEVEL 1</th>
<th>TOTAL POINTS</th>
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<tbody>
<tr>
<td><strong>FOCUS/THESIS</strong></td>
<td>Student exhibits a defined and clear understanding of the assignment. Thesis is clearly defined and well constructed to help guide the reader throughout the assignment. Student builds upon the thesis of the assignment with well-documented and exceptional supporting facts, figures, and/or statements.</td>
<td>Establishes a good comprehension of topic and in the building of the thesis. Student demonstrates an effective presentation of thesis, with most support statements helping to support the key focus of assignment.</td>
<td>Student exhibits a basic understanding of the intended assignment, but the thesis is not fully supported throughout the assignment. While thesis helps to guide the development of the assignment, the reader may have some difficulty in seeing linkages between thoughts. While student has included a few supporting facts and statements, this has limited the quality of the assignment.</td>
<td>Exhibits a limited understanding of the assignment. Reader is unable to follow the logic used for the thesis and development of key themes. Introduction of thesis is not clearly evident, and reader must look deeper to discover the focus of the writer. Student’s writing is weak in the inclusion of supporting facts or statements.</td>
<td>10</td>
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<td><strong>CONTENT/SUBJECT KNOWLEDGE</strong></td>
<td>Student demonstrates proficient command of the subject matter in the assignment. Assignment shows an impressive level of depth of student’s ability to relate course content to practical examples and applications. Student provides comprehensive analysis of details, facts, and concepts in a logical sequence.</td>
<td>Student exhibits above average usage of subject matter in assignment. Student provides above average ability in relating course content in examples given. Details and facts presented provide an adequate presentation of student’s current level of subject matter knowledge.</td>
<td>The assignment reveals that the student has a general, fundamental understanding of the Resource. Whereas, there are areas of some concerning in the linkages provided between facts and supporting statements. Student generally explains concepts, but only meets the minimum requirements in this area.</td>
<td>Student tries to explain some concepts, but overlooks critical details. Assignment appears vague or incomplete in various segments. Student presents concepts in isolation, and does not perceive to have a logical sequencing of ideas.</td>
<td>20</td>
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<td>CRITICAL THINKING SKILLS</td>
<td>Student demonstrates a higher-level of critical thinking necessary for 300-400 level work. Learner provides a strategic approach in presenting examples of problem solving or critical thinking, while drawing logical conclusions which are not immediately obvious. Student provides well-supported ideas and reflection with a variety of current and/or world views in the assignment. Student presents a genuine intellectual development of ideas throughout assignment.</td>
<td>Student exhibits a good command of critical thinking skills in the presentation of material and supporting statements. Assignment demonstrates the student’s above average use of relating concepts by using a variety of factors. Overall, student provides adequate conclusions, with 2 or fewer errors.</td>
<td>Student takes a common, conventional approach in guiding the reader through various linkages and connections presented in assignment. However, student presents a limited perspective on key concepts throughout assignment. Student appears to have problems applying information in a problem-solving manner.</td>
<td>Student demonstrates beginning understanding of key concepts, but overlooks critical details. Learner is unable to apply information in a problem-solving fashion. Student presents confusing statements and facts in assignment. No evidence or little semblance of critical thinking skills.</td>
<td>20</td>
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<td>ORGANIZATION OF IDEAS/FORMAT</td>
<td>Student thoroughly understands and excels in explaining all major points. An original, unique, and/or imaginative approach to overall ideas, concepts, and findings is presented. Overall format of assignment includes an appropriate introduction (or abstract), well-developed paragraphs, and conclusion. Finished assignment demonstrates student’s ability to plan and organize research in a logical sequence. Student uses at least of 5-7 references in assignment.</td>
<td>Student explains the majority of points and concepts in the assignment. Learner demonstrates a good skill level in formatting and organizing material in assignment. Student presents an above average level of preparedness, with a few formatting errors. Assignment contains less than 5 resources.</td>
<td>Learner applies some points and concepts incorrectly. Student uses a variety of formatting styles, with some inconsistencies throughout the paper. Assignment does not have a continuous pattern of logical sequencing. Student uses less than 3 sources or references.</td>
<td>Assignment reveals formatting errors and a lack of organization. Student presents an incomplete attempt to provide linkages or explanation of key terms. The lack of appropriate references or source materials demonstrates the student’s need for additional help or training in this area. Student needs to review and revise the assignment.</td>
<td>20</td>
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<tr>
<td>WRITING CONVENTIONS (GRAMMAR &amp; MECHANICS)</td>
<td>Student demonstrates an excellent command of grammar, as well as presents research in a clear and concise writing style. Presents a thorough, extensive</td>
<td>Student provides an effective display of good writing and grammar. Assignment reflects student’s ability to select appropriate word usage</td>
<td>Assignment reflects basic writing and grammar, but more than 5 errors. Key terms and concepts are somewhat vague and not completely explained by</td>
<td>Topics, concepts, and ideas are not coherently discussed or expressed in assignments. Student’s writing style is weak and needs</td>
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Student excels in the selection and development of a well-planned research assignment. Assignment is error-free and reflects student's ability to prepare a high-quality academic assignment.

and present an above average presentation of a given topic or issue. Assignment appears to be well written with no more than 3-5 errors. Student provides a final written product that covers the above-minimal requirements.

Student uses a basic vocabulary in assignment. Student's writing ability is average, but demonstrates a basic understanding of the subject matter.

improvement, along with numerous proofreading errors. Assignment lacks clarity, consistency, and correctness. Student needs to review and revise assignment.

| USE OF COMPUTER TECHNOLOGY/ APPLICATIONS | Student provides a high-caliber, formatted assignment. Learner exhibits excellent use of computer technology in the development of assignment. Quality and appropriateness of stated references demonstrate the student's ability to use technology to conduct applicable research. Given assignment includes appropriate word processing, spreadsheet and/or other computer applications as part of the final product. | Assignment presents an above-average use of formatting skills, with less than 3 errors. Students has a good command of computer applications to format information and/or figures in an appropriate format. Student uses at least two types of computer applications to produce a quality assignment. | Student demonstrates a basic knowledge of computer applications. Appearance of final assignment demonstrates the student's limited ability to format and present data. Resources used in assignment are limited. Student may need to obtain further help in the use of computer applications and Internet research. | Student needs to develop better formatting skills. The student may need to take additional training or obtain help from the Educator Help Desk while preparing an assignment. Research and resources presented in the assignment are limited. Student needs to expand research scope. The number of formatting errors is not acceptable. | 10 |
| TOTAL POINTS | 100 | 100 | Table of Contents |