American Public University System

The Ultimate Advantage is an Educated Mind

School of Science and Technology
Department of Information Technology
INFO262: Relational Databases with MS Access: Project
3 Credit Hours
8 weeks
Prerequisite(s): INFO261: Relational Databases with MS Access: Advanced

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Instructor Information

Instructor: **(Bio)**
Email:
Phone:

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Course Description (Catalog)

This course is a study and application of the MS Access VBA Programming; it takes you from using Access to programming with Access. This course translates ERD diagrams into database designs, examines the VBA programming model, converts macros to VBA code, delves into the rudiments of the Visual Basic for Application (VBA) language system, uses the VBA editor, uses VBA to connect to Access, utilizes VBA to perform DDL actions in Access, creates sub procedures, implements functions, handles errors, performs debugging, and utilizes the built-in functions. This course also includes implementing database access in Windows-based and Web-based solutions. This course also includes an examination of the Security Model in the context of Access and VBA. Students must have access to Microsoft Access 2010 (or higher) software. This software is not provided by the course material grant and must be purchased/provided by the student. (Prerequisite: INFO261).

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Course Scope

This is the third course in the MS-Access development courses that focuses on the concepts of relational databases using the Microsoft Access database. This course focuses on the VBA programming in MS-Access. Students must purchase and install Microsoft Access 2010 or higher software on their computer. Prerequisite(s): INFO261 - Relational Databases with MS Access: Advanced.

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Course Objectives

The successful student will fulfill the following learning objectives:

1. Discuss the features, functionality, power, and advantages of MS Access VBA that have made it a viable tool for developing Windows Based and Web Based database solutions.
2. Discuss the impact of Microsoft's Access on Information Technology Management and on Global Economies as it applies to developing, deploying, and managing database applications.
3. Examine the application development process in MS Access; also examine the rudiments of the Visual Basic for Applications (VBA) language.
4. Differentiate between MS Access applications without VBA and MS Access applications with VBA.
5. Examine the VBA Programming Model; also examine the architecture of the VBA Editor.
6. Evaluate the role of the Project Explorer in managing modules; also examine the impact of the Project Explorer on Information Technology Management and on Configuration Management.
7. Explain the security features provided in Access; also specifically evaluate the Jet Sandbox and Macro Security features.
8. Apply your knowledge of the three Access courses (Introduction, Advanced, and Project) to build a database application.

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Course Delivery Method

This 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 last day of each week** and include Forum (Newsgroup) 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.

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Resources

Authors	Book Title	Publication Info	ISBN
Joyce Cox and Joan Lambert	Microsoft Access 2010 Step by Step	Microsoft Press © 2010	ISBN:9780735626928
Teresa Hennig, Rob Cooper, Geoffrey Griffith and Jerry Dennison	Microsoft Access 2010: Programmer's Reference	Wrox Press © 2010	ISBN:9780470591666

Software: **MS-Access 2010 or 2010 version of the software must be installed.**

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Evaluation Procedures

Evaluation Criteria

Graded Assignment	Percent of Final Grade
Week 1 Discussion	2
Week 1 Assignment	10
Week 2 Discussion	2
Week 2 Assignment	10
Week 3 Discussion	2
Week 3 Assignment	10
Week 4 Discussion	2
Week 4 Assignment	10
Week 5 Discussion	2
Week 5 Assignment	10
Week 6 Discussion	2
Week 6 Assignment	15
Week 7 Discussion	2
Week 7 Assignment	15
Week 8 Assignment	4
Week 8 Discussion	2
Total	**100**

Assignments: This course utilizes a set of exercise. The goal is to organize, synthesize, and demonstrate your comprehension of core concepts investigated during this course by applying a combination of the concepts and details you have learned in a systematic way.

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Grading Scale

Please see the student handbook to reference the University's grading scale.

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Course Outline

Week	Topic(s)	Learning Objective(s)	Reading(s)	Assignment(s)
1	MS Access Environment	CO-1	Textbook: Step By Step Introduction, Ch 1,2	Week 1 Assignment Week 1 Forum Activity plus Introductions
2	Creating Database and tables	CO-2	Textbook: Step By Step Ch 2,3,4	Week 2 Assignment Week 2 Forum Activity
3	Creating Forms and Intro to VBA	CO-3	Textbook: Programmer's Reference Ch 5,6,7,14	Week 3 Assignment Week 3 Forum Activity
4	Creating Reports	CO-4	Textbook: Step By Step Ch 5	Week 4 Assignment Week 4 Forum Activity
5	Creating Custom Forms	CO-5	Textbook: Programmer's Reference Ch 5,6,7,14 Textbook: Step By Step Ch 7	Week 5 Assignment Week 5 Forum Activity
6	DAO, ADO to access Data	CO-6	Textbook: Programmer's Reference Ch 11,12, 13	Week 6 Assignment Week 6 Forum Activity
7	External Data, Links and Direct Access	CO-7	Textbook: Programmer's Reference Ch 11,12, 13 Textbook: Step By Step Ch 10	Week 7 Assignment Week 7 Forum Activity
8	Review	CO-8	Textbook: Step By Step - Review all previously assigned chapters	Week 8 Assignment Week 8 Forum Activity

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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.

Please note that Wikipedia is NOT an acceptable source for use in your academic writing at APUS, due to the fact that it is open for editing by anyone and is not guaranteed to be reviewed for accuracy. Use your judgment when choosing sources and try to stick with articles and websites from reputable organizations that are likely to be accurate and authoritative, rather than blogs and wikis that are subjective in nature.

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.**

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Academic Services

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 Online Library provides access to special learning resources, which the University has contracted to assist with your studies. Questions can be directed to librarian@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 Library. At the **Online Library** home page, look under **Tutorial Center** and **General Studies** and click on the "**Smarthinking**" Link. All login information is available.

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Selected Bibliography

Getz, Ken.& Gilbert, Mike. (2001). *VBA Developers Handbook*, Sybex.

Hurt-Davis, Guy. (2005) *Mastering Microsoft VBA*, Sybex.

Prague, Cary N., Irwin, Michael R.,& Reardon, Jennifer. (2007 or 2010). *Access 2007 or 2010 Bible*, Wiley.

Viescas, John L. (2007 or 2010). *Microsoft Office Access 2007 or 2010 Inside Out*. Microsoft Press.

Viescas, John L. (2005). *Building Microsoft Access Applications*. Microsoft Press.

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Grading Rubrics

APUS Assignment Rubric Undergraduate Level (100-200 level)	EXEMPLARY LEVEL 4	ACCOMPLISHED LEVEL 3	DEVELOPING LEVEL 2	BEGINING LEVEL 1	TOTAL POINTS
FOCUS/THESIS	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.	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.	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.	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.	20
CONTENT/SUBJECT KNOWLEDGE	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.	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.	The assignment reveals that the student has a general, fundamental understanding of the course material. 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.	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.	20
CRITICAL THINKING SKILLS	Student demonstrates a higher-level of critical thinking necessary for	Student exhibits a good command of critical thinking skills in the	Student takes a common, conventional approach in guiding the reader through	Student demonstrates beginning understanding of key	20

	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.	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.	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.	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.	
ORGANIZATION OF IDEAS/FORMAT	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.	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.	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.	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.	15
WRITING	Student demonstrates an	Student provides an	Assignment reflects basic	Topics, concepts, and	15

CONVENTIONS (GRAMMAR & MECHANICS)	excellent command of grammar, as well as presents research in a clear and concise writing style. Presents a thorough, extensive understanding of word usage. 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.	effective display of good writing and grammar. Assignment reflects student's ability to select appropriate word usage 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.	writing and grammar, but more than 5 errors. Key terms and concepts are somewhat vague and not completely explained by student. Student uses a basic vocabulary in assignment. Student's writing ability is average, but demonstrates a basic understanding of the subject matter.	ideas are not coherently discussed or expressed in assignments. Student's writing style is weak and needs 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