

2010/2011 Database Software Applications

PTI305 - 36 weeks

DoDEA Course Description and Competencies

About the Program

Database Software Applications prepares students for careers in business. The course sequence focuses on duties and tasks performed by professionals using database software as well as pre-employment and employment skills.

Major Concepts/Content: Database Software Applications provides students with the opportunity to develop professional level skills in database management. Skills include structuring a database, creating and formatting database elements, entering and modifying data, creating and modifying queries, presenting and sharing data, managing and maintaining databases.

Major Instructional Activities: Instruction will be provided in a lab utilizing individualized instruction and electronic learning services. Students successfully completing this course will be **eligible** to take at least one of the user or specialist exams for database certification.

Major Evaluative Techniques: Assessment will be accomplished by checking student work in progress to ensure that each student adheres to the timelines throughout the course and that the assignments are successfully completed. In addition, objective and problem-solving tests, projects and other means deemed appropriate by the facilitator will be used.

Essential Software: The focus of this course will be the use of Microsoft Access to produce a variety of databases, tables and forms.

The table below is a competency list for the Database Applications Software course. The competencies are considered essential and are required of all students.

PTI305 36 weeks	Database Software Applications TASKS/COMPETENCIES
Implementing DoDEA's CTE Course Requirements	
• 001	Demonstrate DoDEA's Workplace Readiness Skills in course activities.
• 002	Identify issues related to the field of study that affect the environment and impact local and global communities.
• 003	Identify Internet safety issues and procedures for complying with acceptable use standards.
Exploring Computer Concepts	
• 004	Explain the functions of computer system components.
• 005	Identify basic networking components.
• 006	Know and use appropriate technology vocabulary.
Exploring Ethical Issues Related to Computers and Computer Systems	
• 007	Identify security issues related to computer hardware, software, and data.
• 008	Identify concepts related to copyright, public domain, copy protection, and licensing agreements.
• 009	Identify concepts of security, integrity, courtesy, and confidentiality related to information and communications systems.
• 010	Investigate physical and logical security issues related to technology (e.g., viruses,

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	firewalls, spam, system backup, passwords).
• 011	Investigate computer crimes and privacy issues related to Internet use.
Managing Computer Systems	
• 012	Maintain workstation, equipment, software, and supplies.
• 013	Obtain assistance via electronic and hard copy references and documentation.
• 014	Troubleshoot minor hardware problems (e.g., power supply, network and peripheral connections, printer malfunctions).
• 015	Identify user interface components (e.g., menus, toolbars, icons).
• 016	Manage the desktop environment (e.g., creating shortcuts/aliases).
• 017	Manage files and directories (in networked and stand alone environments).
Developing Databases	
• 018	Define and modify field types.
• 019	Define and modify field properties.
• 020	Explain how using other software applications (e.g., word processing and spreadsheet) to create and manage a database differs from applications specifically designed for database use (e.g., Access, FileMaker, Oracle 11g, etc.).
• 021	Define the capabilities and uses of a relational database system.
• 022	Manage and customize the database application environment.
• 023	Investigate relational database objects and relationships.
• 024	Identify and establish Primary and Foreign keys in database tables and relationships.
• 025	Enter, edit, sort and filter database information.
• 026	Create forms for efficient data entry.
• 027	Generate simple reports.
• 028	Create and run select queries with and without criteria to access information (e.g., sorts, joins, comparison operators, logical operations).
• 029	Plan, design, and create relational databases containing basic and advanced features.
• 030	Integrate information into word processing and spreadsheet applications.
Managing Databases	
• 031	Identify dependencies.
• 032	Analyze and modify database tables, table design and data organization to enhance database function.
• 033	Design, create, customize and enhance forms using calculated fields, formatting features and graphics.
• 034	Generate customized reports using multiple source objects, advanced formatting features (e.g., grouping, sorting, calculated fields) and graphics.
• 035	Create and conduct advanced queries to access and manipulate information (e.g., calculated fields, action queries, parameter queries).
• 036	Analyze data using advanced queries (e.g., summaries, crosstab queries and PivotTables).
• 037	Integrate sub-forms and sub-reports into appropriate database objects.
• 038	Automate database operations (e.g., macros, VBA, splash screen, switchboard).
• 039	Import and export data to and from a database.

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• 040	Maintain databases (e.g., compact, repair, backup, protect, document).
• 041	Plan and execute delivery of databases (e.g., previous versions, data access pages, XML).
Communicating through Technology	
• 042	Incorporate information from the World Wide Web into a business project.
Preparing for Industry Certification	
• 043	Describe the process and requirements for obtaining industry certifications related to the Database Software Applications course.
• 044	Identify testing skills/strategies for a certification examination.
Developing Employability Skills	
• 045	Create or update a portfolio containing representative samples of student work.