Course Syllabus

ITSW 1407 – Introduction to Database

Revision Date: 08/22/2016

Catalog Description: Introduction to database theory and the practical applications of a database.

Lecture hours = 3, **Lab hours** = 3

Prerequisites: None

Semester Credit Hours: 4
Lecture Hours per Week: 3
Lab Hours per Week: 3
Contact Hours per Semester: 96

State Approval Code: 11.0802

Instructional Goals and Purposes:

Panola College's instructional goals include 1) creating an academic atmosphere in which students may develop their intellects and skills and 2) providing courses so students may receive a certificate/an associate degree or transfer to a senior institution that offers baccalaureate degrees.

The purpose of this course is to: 1) fulfill academic requirements of an Associate of Applied Science degree or a technical certificate at Panola College, 2) provide learners with a foundation of database concepts and terms, and 3) provide learners with fundamental skills necessary to use current database application software.

Learning Outcomes:

1. Identify database terminology and concepts.
2. Plan, define, and design a database.
3. Design and generate tables.
4. Design and generate forms
5. Design and generate reports.
6. Devise and process queries.

Specific Course Objectives (includes SCANS):

After studying all materials and resources presented in the course, the student should be able to complete all objectives listed below with a minimum competency of 70% on assignments and exams.

1) Introduction to Microsoft Access 2016 (1a-i, 1a-ii, 1b- ii, 1b-v, 1c-i, 2a-iii, 2c-i, 2c-ii, 2c-iv, 2e-ii)
   a) Identify Good Database Design
   b) Create a Table and Define Fields in a Blank Desktop Database
   c) Change the Structure of Tables and Add a Second Table
   d) Create a Query, Form, and Report
   e) Close a Database and Close Access
   f) Use a Template to Create a database
   g) Organize Objects in the Navigation Pane
   h) Create a New Table in a Database Created with a Template
   i) Print a Report and a Table
2) Sort and Query a Database (1a-i, 1a-ii, 1b- ii, 1b-v, 1c-i, 2a-iii, 2c-i, 2c-ii, 2c-iv, 2e-ii)
   a) Open and Save an Existing Database
   b) Create Table Relationships
   c) Sort Records in a Table

d) Create a Query in Design View
e) Create a New Query From an Existing query
f) Sort Query Results
g) Specify Criteria in a Query
h) Specify Numeric Criteria in a Query
i) Use Compound Criteria in a Query
j) Create a query Based on More Than One Table
k) Use Wildcards in a Query
l) Create Calculated Fields in a Query
m) Calculate Statistics and Group Data in a Query
n) Create a Crosstab Query
o) Create a Parameter Query
3) Forms, Filters, and Reports (1a-i, 1a-ii, 1b- ii, 1b-v, 1c-i, 2a-iii, 2c-i, 2c-ii, 2c-iv, 2e-ii)
a) Create and Use a Form to Add and Delete Records
b) Filter Records
c) Create a Form by Using the Form Wizard
d) Modify a Form in Layout View and in Design View
e) Create a Report by Using the Report Tool and Modify the Report in Layout View
f) Create a Report by Using the Report Wizard
g) Modify the Design of a Report
h) Keep Grouped Data Together in a Printed Report
4) Enhancing Tables (1a-i, 1a-ii, 1b- ii, 1b-v, 1c-i, 2a-iii, 2c-i, 2c-ii, 2c-iv, 2e-ii)
a) Manage Existing Tables
b) Modify Existing Tables
c) Change Data Types
d) Attach Files to Records
e) Create a Table in Design View
f) Create a Lookup Field
g) Set Field Properties
h) Create Data Validation Rules and Validation Text
5) Enhancing Queries (1a-i, 1a-ii, 1b- ii, 1b-v, 1c-i, 2a-iii, 2c-i, 2c-ii, 2c-iv, 2e-ii)
a) Create Calculated Fields in a Query
b) Use Aggregate Functions in a Query
c) Create a Crosstab Query
d) Find Duplicate and Unmatched Records
e) Create a Parameter Query
f) Create a Make Table Query
g) Create an Append Query
h) Create a Delete Query
i) Create an Update Query
j) Modify the Join Type
6) Customizing Forms and Reports (1a-i, 1a-ii, 1b- ii, 1b-v, 1c-i, 2a-iii, 2c-i, 2c-ii, 2c-iv, 2e-ii)
a) Create a Form in Design View
b) Change and Add Controls
c) Format a Form
d) Make a Form User Friendly
e) Create a Report in a Query Using a Wizard
f) Create a Report in Design View
g) Add Controls to a Report
h) Group, Sort, Total Records in Design View

Course Content

A general description of lecture/discussion topics included in the course are listed in the Learning Objective / Specific Course Objectives section of this syllabus.

Students in all sections of this course will be required to do the following:

1. Complete reading activities.
2. Complete terms and concepts quizzes
3. Complete simulation training.
4. Complete simulation assessment quizzes.
5. Complete skills projects homework.
6. Complete skill projects assessment quizzes.
7. Complete a MINIMUM of two proctored exams.
8. Complete a Final exam.

Methods of Instruction/Course Format/Delivery:

Learners in the traditional class, hybrid class, and online class will have access to this course via the current Learning Management System. Learners in the traditional class and hybrid class will meet regularly for discussion on the new material. Learners in the online class will only be required to meet with the instructor or the proctor in a verified testing center for exams. Details will be posted in the Learning Management System.

All assignments will be completed and submitted via the current Learning Management System or the MYITLAB Web site.

Learners may complete the following using the MYITLAB site: a) A MINIMUM of two proctored exams; b) Skills training and quizzes; c) Graded project homework and assessment quizzes; d) Concepts

Learners in both the traditional and Internet classes should use the messaging (email) component of the current Learning Management System to communicate with the instructor and others in the learning community. If you are unable to contact the instructor using this method, you may use the instructor's Panola College email address. Panola College instructors attempt to respond to all email within 24 hours when on campus or during virtual office hours. Always include a subject line and your name in your email.

Major Assignments / Assessments:

The following items will be assigned and assessed during the semester and used to calculate the student's final grade.

Assignments

1. Concepts Quizzes
   For each chapter (or group of chapters) assigned, the learner may complete a quiz on the terms and concepts introduced.

2. Skills Quizzes
   For each chapter assigned (or group of chapters), the learner may complete simulation training and a simulation assessment quiz on the skills introduced*.
   For each chapter assigned, the learner may complete a grader project homework activity and a grader project assessment quiz on the skills introduced*.

Assessment(s)

Major Exams
1. A minimum of two proctored exams will be assigned per semester.
2. A final exam will be assigned.

Course Grade:

The grading scale for this course is as follows:

Major Exams	60%
Other Activities	40
90 and above	A
80 – 89	B
70 – 79	C
60 – 69	D
Under 60	F

Texts, Materials, and Supplies:

- MyITLab with Pearson eText Access Card for GO! with Office 2016
    ISBN-10: 0134497910
    ISBN-13: 9780134497914
    Authors:
      Shelley Gaskin, Alicia Vargas, Debra Geoghan, & Nancy Graviett
    Publisher: Pearson
    Copyright: 2017
    Access to a reliable computer and high-speed Internet.
- Access to Microsoft ACCESS 2016
- Student data files and lab instructions (details provided in the Learning Management System)

NOTE: Purchase ONE code.

The GO! with Office 2016 (with eText) will allow access to required materials the following courses:
   BCIS 1305 (Business Computer Applications)
   ITSW 1407 (Database)
   ITSW 1410 (Intro to Presentation Graphics)

Required Readings:

E-Text included with the GO! with Office 2016 access code.

Recommend Readings:

None

Other:

- For current texts and materials, use the following link to access bookstore listings: http://www.panolacollegestore.com
- For testing services, use the following link: http://www.panola.edu/elearning/testing.html
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Administration Building or go to http://www.panola.edu/student-success/disability-support-services/ for more information.
- Withdrawing from a course is the student's responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.
- Student Handbook, *The Pathfinder:* http://www.panola.edu/student-success/documents/pathfinder.pdf

SCANS CRITERIA

1) **Foundation skills are defined in three areas: basic skills, thinking skills, and personal qualities.**

   a) **Basic Skills**: A worker must read, write, perform arithmetic and mathematical operations, listen, and speak effectively. These skills include:
   i) Reading: locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.
   ii) Writing: communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
   iii) Arithmetic and Mathematical Operations: perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
   iv) Listening: receive, attend to, interpret, and respond to verbal messages and other cues.
   v) Speaking: Organize ideas and communicate orally.

   b) **Thinking Skills**: A worker must think creatively, make decisions, solve problems, visualize, know how to learn, and reason effectively. These skills include:
   i) Creative Thinking: generate new ideas.
   ii) Decision Making: specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
   iii) Problem Solving: recognize problems and devise and implement plan of action.
   iv) Visualize ("Seeing Things in the Mind's Eye"): organize and process symbols, pictures, graphs, objects, and other information.
   v) Knowing How to Learn: use efficient learning techniques to acquire and apply new knowledge and skills.
   vi) Reasoning: discover a rule or principle underlying the relationship between two or more objects and apply it when solving a problem.

   c) **Personal Qualities**: A worker must display responsibility, self-esteem, sociability, self-management, integrity, and honesty.
   i) Responsibility: exert a high level of effort and persevere toward goal attainment.
   ii) Self-Esteem: believe in one's own self-worth and maintain a positive view of oneself.
   iii) Sociability: demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings.
   iv) Self-Management: assess oneself accurately, set personal goals, monitor progress, and exhibit self-control.
   v) Integrity and Honesty: choose ethical courses of action.

2) **Workplace competencies are defined in five areas: resources, interpersonal skills, information, systems, and technology.**

   a) **Resources**: A worker must identify, organize, plan, and allocate resources effectively.
   i) Time: select goal-relevant activities, rank them, allocate time, and prepare and follow schedules.
   ii) Money: Use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives.
   iii) Material and Facilities: Acquire, store, allocate, and use materials or space efficiently.
   Examples: construct a decision time line chart; use computer software to plan a project; prepare a budget; conduct a cost/benefits analysis; design an RFP process; write a job description; develop a staffing plan.

   b) **Interpersonal Skills**: A worker must work with others effectively.
   i) Participate as a Member of a Team: contribute to group effort.
   ii) Teach Others New Skills.
   iii) Serve Clients/Customers: work to satisfy customer's expectations.
   iv) Exercise Leadership: communicate ideas to justify position, persuade and convince others, responsibly challenge existing procedures and policies.
   v) Negotiate: work toward agreements involving exchange of resources, resolve divergent interests.
   vi) Work with Diversity: work well with men and women from diverse backgrounds.
   Examples: collaborate with a group member to solve a problem; work through a group conflict situation, train a colleague; deal with a dissatisfied customer in person; select and use appropriate leadership styles; use effective delegation techniques; conduct an individual or team negotiation; demonstrate an understanding of how people from different cultural backgrounds might behave in various situations.

   c) **Information**: A worker must be able to acquire and use information.
   i) Acquire and Evaluate Information.
   ii) Organize and Maintain Information.
   iii) Interpret and Communicate Information.
   iv) Use Computers to Process Information.
   Examples: research and collect data from various sources; develop a form to collect data; develop an inventory record-keeping system; produce a report using graphics; make an oral presentation using various media; use on-line computer data bases to research a report; use a computer spreadsheet to develop a budget.

   d) **Systems**: A worker must understand complex interrelationships.
   i) Understand Systems: know how social, organizational, and technological systems work and operate effectively with them.
   ii) Monitor and Correct Performance: distinguish trends, predict impacts on system operations, diagnose deviations in systems' performance and correct malfunctions.
   iii) Improve or Design Systems: suggest modifications to existing systems and develop new or alternative systems to improve performance.
   Examples: draw and interpret an organizational chart; develop a monitoring process; choose a situation needing improvement, break it down, examine it, propose an improvement, and implement it.

   e) **Technology**: A worker must be able to work with a variety of technologies.
   i) Select Technology: choose procedures, tools or equipment including computers and related technologies.
   ii) Apply Technologies to Task: understand overall intent and proper procedures for setup and operation of equipment.
   iii) Maintain and Troubleshoot Equipment: Prevent, identify, or solve problems with equipment, including computers and other technologies.
   Examples: read equipment descriptions and technical specifications to select equipment to meet needs; set up and assemble appropriate equipment from instructions; read and follow directions for troubleshooting and repairing equipment.