



Course Syllabus

ITSC 2435 – Application Problem Solving

Catalog Description: This course focuses on the utilization of appropriate application software to solve advanced problems and generate customized solutions.

Lecture hours = 3, Lab hours = 3

Prerequisites: IMED 1401, ITSW 1401, ITSW 1404, ITSW 1407, ITSW 1410, IMED 1416, POFI 2431, and **INSTRUCTOR APPROVAL**. This course is a CAPSTONE course and is designed to be completed the LAST semester when completing the AAS degree in Computer Information Technology. For the greatest probability of success, all courses listed for semesters 1, 2, and 3 should be completed prior to enrolling in this course.

Semester Credit Hours: 4

Lecture Hours per Week: 3

Lab Hours per Week: 3

Contact Hours per Semester: 96

State Approval Code: 11.0101

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 skills necessary to utilize appropriate application software to solve advanced problems, 3) provide learners with fundamental skills necessary to generate customized solutions.

Learning Outcomes:

1. Evaluate project parameters.
2. Design and document a solution based on the project parameters.
3. Implement the solution.
4. Present the project.

Specific Course Objectives (includes SCANS):

After studying all materials and resources presented in the course, the student will be able to:

1. Given a complex business application, the learner will evaluate the specified parameters. (1a-i, 1a-iv, 1c-i, 1c-iv, 1c-v, 2a-i, 2c-i)
2. Based on the evaluation of the specified parameters of the complex business application, the learner will design and document a solution. (1a-ii, 1b-ii, 1b-v, 1b-vi, 1c-i, 1c-iv, 1c-v, 2a-i, 2c-iii, 2d-i, 2e-i)
3. Integrating a variety of application software, the learner will implement the solution for the complex business application. (1c-i, 1c-iv, 1c-v, 2a-i, 2b-ii, 2c-iv, 2e-i)
4. The learner will present his or her solution to the complex business application. (1c-iii1c-i, 1c-iv, 1c-v, 2a-i, 2c-iv, 2e-i, 2e-ii)

Course Content:

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

1. Complete reading activities.
2. Complete software review activities.
3. After evaluating parameters of a complex business application (MAJOR PROJECT), submit a proposal for a design solution.
4. Based on the submitted proposal, implement the design solution.
5. Present the completed project solution.

Methods of Instruction/Course Format/Delivery:

Learners in both the traditional class and in the online class will have access to this course via the current Learning Management System. Learners in the traditional class will meet regularly for discussion of course activities. Learners in the online class will only be required to meet with the instructor to discuss the Business Running Case and Major Project.

All assignments will be and submitted through the current Learning Management.

Learners will complete a Business Running Case and a Major Project. The Major Project will be presented.

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. Please always include a subject line and your name in your email.

Assessment:

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

- **Review Activities**

To review software skills, learners will complete a variety of cases. These cases may include but is not limited to word processing, spreadsheet, database, web page design, and presentation graphics software. Because this is a CAPSTONE course and learners should be prepared to enter the workforce, submission due dates, quality of work, and attitude will be a component of the grade.

- **Major Project**

Learners will be given project parameters for a complex business application. Based on the parameters, a proposal will be submitted describing a solution for the project. Learners will integrate software to complete the solution for the project. Learners may collaborate on this project. The project will be presented. Because this is a CAPSTONE course and learners should be prepared to enter the workforce, submission due dates, quality of work, and attitude will be a component of the grade.

Course Grade:

The grading scale for this course is as follows:

- Major Project – 60%
- Review Activities – 40%

Texts, Materials, and Supplies:

- CUSTOM Program for CIS ITSC 2435
 - ISBN: 9780558624729
 - Author: CIS/CIT
 - Publisher: Pearson

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:
- Reading: locate, understand, and interpret written information in prose and in documents such as manuals, graphs, and schedules.
 - Writing: communicate thoughts, ideas, information, and messages in writing, and create documents such as letters, directions, manuals, reports, graphs, and flow charts.
 - Arithmetic and Mathematical Operations: perform basic computations and approach practical problems by choosing appropriately from a variety of mathematical techniques.
 - Listening: receive, attend to, interpret, and respond to verbal messages and other cues.
 - 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:
- Creative Thinking: generate new ideas.
 - Decision Making: specify goals and constraints, generate alternatives, consider risks, and evaluate and choose the best alternative.
 - Problem Solving: recognize problems and devise and implement plan of action.
 - Visualize ("Seeing Things in the Mind's Eye"): organize and process symbols, pictures, graphs, objects, and other information.
 - Knowing How to Learn: use efficient learning techniques to acquire and apply new knowledge and skills.
 - 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.
- Responsibility: exert a high level of effort and persevere toward goal attainment.
 - Self-Esteem: believe in one's own self-worth and maintain a positive view of oneself.
 - Sociability: demonstrate understanding, friendliness, adaptability, empathy, and politeness in group settings.
 - Self-Management: assess oneself accurately, set personal goals, monitor progress, and exhibit self-control.
 - 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.
- Time: select goal-relevant activities, rank them, allocate time, and prepare and follow schedules.
 - Money: Use or prepare budgets, make forecasts, keep records, and make adjustments to meet objectives.
 - 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.
- Participate as a Member of a Team: contribute to group effort.
 - Teach Others New Skills.
 - Serve Clients/Customers: work to satisfy customer's expectations.
 - Exercise Leadership: communicate ideas to justify position, persuade and convince others, responsibly challenge existing procedures and policies.
 - Negotiate: work toward agreements involving exchange of resources, resolve divergent interests.
 - 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.
- Acquire and Evaluate Information.
 - Organize and Maintain Information.
 - Interpret and Communicate Information.
 - 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.
- Understand Systems: know how social, organizational, and technological systems work and operate effectively with them.
 - Monitor and Correct Performance: distinguish trends, predict impacts on system operations, diagnose deviations in systems' performance and correct malfunctions.
 - 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.
- Select Technology: choose procedures, tools or equipment including computers and related technologies.
 - Apply Technologies to Task: understand overall intent and proper procedures for setup and operation of equipment.
 - 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.