MDCA 1391 - Special Topics in Medical Assisting
MDCA1391.401 Course Syllabus

Description
Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

Semester Offered
Fall and Spring semesters
Credits 3
Lecture Hours 2
Lab Hours 3
Extended Hours 0
Contact Hours 80
State Approval Code CIP 51.0801
Instructor Name Kimberly Bishop, RHIT, MLT(AMT), RMA(AMT)
Semester/Year Spring 2025

Meeting Time and Location
Online -- students are expected to spend at least 3-4 hours per week reading, reviewing, and participating in assigned activities for successful completion of this course.

Alternate Operations During Campus Closure
In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Panola College to move to altered operations. During this time, Panola College may opt to continue delivery of instruction through methods that include, but are not limited to: online learning management system (CANVAS), online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor Panola College's website (www.panola.edu) for instructions about continuing courses remotely, CANVAS for each class for course-specific communication, and Panola College email for important general information.

Student Basic Needs
Unexpected circumstances may arise, but Panola College offers various resources to support students. If you need mental health services or are facing challenges with transportation, affording class materials and supplies, or accessing food regularly—issues that may impact your class performance—please visit panola.edu/resources.

Class Attendance
Regular and punctual attendance of classes and laboratories is required of all students. When a student has been ill or absent from class for approved extracurricular activities, he or she should be allowed, as far as possible, to make up for the missed work. If a student has not actively participated by the census date, they will be dropped by the instructor for non-attendance. This policy applies to courses that are in-person, online, hybrid, and hyflex.

Attendance in online courses is determined by submission of an assignment or participation in an activity. According to federal guidelines, simply logging into a distance learning course without participating in an

academic assignment does not constitute attendance. Distance learning is defined as when a majority (more than 50%) of instruction occurs when the instructor and students are in separate physical locations. Students must engage in an academic activity prior to the course census date.

When an instructor feels that a student has been absent to such a degree as to invalidate the learning experience, the instructor may recommend to the Vice President of Instruction that the student be withdrawn from the course. Instructors may seek to withdraw students for non-attendance after they have accumulated the following number of absences:

Fall or spring semesters:

3 or more class meeting times per week - 5 absences

2 class meeting times per week - 3 absences

1 class meeting per week - 2 absences

The student is responsible for seeing that he or she has been officially withdrawn from a class. A student who stops attendance in a class without officially withdrawing from that class will be given a failing grade; consequently, the student must follow official withdrawal procedures in the Admissions/Records Office.

Please note: Health Science and Cosmetology courses may require more stringent attendance policies based on their accreditation agencies. Please see the addendum and/or program handbook for further information concerning attendance.

Pregnant/Parenting Policy

Panola College welcomes pregnant and parenting students as a part of the student body. This institution is committed to providing support and adaptations for a successful educational experience for pregnant and parenting students. Students experiencing a need for accommodations related to pregnancy or parenting will find a Pregnancy and Parenting Accommodations Request form in the Student Handbook or may request the form from the course instructor.

Artificial Intelligence (AI) Course Policy

Use of generated AI Permitted under some classroom circumstances with permission.

There are situations throughout the course where you may be asked to use artificial intelligence (AI) tools to explore how they can be used. Outside of those circumstances, you should not use AI tools to generate content that will end up in any student work (assignments, activities, discussion responses, etc.). In such cases for Option #2, no more than 25% of the student work should be generated by AI. Use of any AI-generated content in this course without the instructor's consent qualifies as academic dishonesty and violates Panola College's standards of academic integrity.

Instructional Goals and Purposes

Topics address recently identified current events, skills, knowledge, and/or attitudes and behaviors pertinent to the technology or occupation and relevant to the professional development of the student. This course was designed to be repeated multiple times to improve student proficiency.

Learning Outcomes

1. Students will prepare for the Certified EKG Technician (CET) certification exam by obtaining the knowledge and learning the standards needed in EKG practice (safety, compliance and coordinated patient care; EKG acquisition; EKG analysis and interpretation). Entire Study Guide Content 2 hours, extra module features 0.75, module quizzes 1.5 hours. (total study time 4.25 hours) Each student must be able to provide evidence that he/she has performed a minimum of 10 successful EKGs before sitting for the certification exam. (3 hours)
2. Students will prepare for the Certified Phlebotomy Technician (CPT) certification exam by obtaining the knowledge and learning the standards needed in phlebotomy practice (phlebotomy fundamentals; safety and compliance; patient preparation; routine blood collections; special collections; processing specimens; focus on phlebotomy). Entire Study Guide content 11 hours, practice test implementation 8 hours (total study time 19 hours). Each student must be able to provide evidence that he/she has performed a minimum of 30 successful venipunctures and 10 capillary/finger sticks before sitting for the certification exam. (3.75 hours)

3. Students will give back to the medical field by observing a medical specialty (OB, pediatrics, dermatology, etc.), volunteering (locally or at the state association), or doing a service learning project (20 hours).
4. Students will work on career preparation (interview, resume, e-Portfolio) (10 hours).
5. Students will learn how to earn professional development and prepare for credential maintenance. (10 hours)
6. Students will earn continuing education credit hours by taking free courses from Texas Health and Human Services website. (10 hours).

Specific Course Objectives (includes SCANS)

- **(1a-v, 1b-ii, 2c-iii)**
- Describe the six components of the chain of infection and the safety precautions that will break the chain.
- Define healthcare-associated infections.
- Explain the correct procedure for performing routine hand hygiene.
- Identify the personal protective equipment (PPE) used by phlebotomists.
- Describe the procedures for donning and doffing PPE.
- Define Standard Precautions (SPs).
- Describe procedures for transmission prevention.
- Explain the procedures followed by phlebotomists in transmission-based and protective/reverse isolation areas.
- Name a common disinfectant for blood and body fluids.
- Describe the requirements mandated by the Occupational Exposure to Bloodborne Pathogens (BBPs) compliance directive.
- List the actions to take when an exposure to BBPs occurs.
- Describe safety precautions used when handling chemicals and the purpose of a safety data sheet (SDS).
- Describe the use of the Globally Harmonized System (GHS).
- State when a phlebotomist should avoid areas marked with a radiation symbol.
- Discuss electrical safety and the procedure to follow in cases of electrical shock.
- Define the acronyms RACE and PASS.
- Identify types of fire extinguishers and the National Fire Protection Association (NFPA) hazardous materials symbols.
- List precautions observed by phlebotomists to avoid physical hazards..
- **(1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)**
- State the traditional and expanding duties of the phlebotomist.
- Describe the professional characteristics that are important for a phlebotomist to possess.
- Discuss the importance of communication and interpersonal skills for the phlebotomist within the laboratory, with patients, and with personnel in other departments of the hospital.
- Describe the three components of effective communication.
- List the barriers to verbal communication and methods to overcome them.
- Describe correct listening and body language skills expected of a phlebotomist.
- State six rules of proper telephone etiquette.
- Define cultural diversity and discuss the actions needed by a phlebotomist when encountering an individual from a different culture.
- State the competencies expected of a certified phlebotomist.
- Discuss the role of each of the following in the regulation of health care: the Clinical Laboratory Improvement Amendments (CLIA), the Clinical and Laboratory Standards Institute (CLSI), The Joint Commission (TJC), the College of American Pathologists (CAP), and the Commission on Laboratory Assessment (COLA).
- Describe the functions of the nursing, support, fiscal, and professional hospital service areas and the functions of the departments contained in these service areas.
- Describe the different health-care settings in which a phlebotomist may be employed.
- **(1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)**
- Distinguish between the two main divisions of the laboratory and the subsections within each of these divisions.
- Describe the qualifications and functions of the personnel employed in a clinical laboratory.

- Discuss the basic functions of each of the following sections: hematology, chemistry, blood bank (BB; immunohematology), serology (immunology), microbiology, and urinalysis (UA).
- Describe the appropriate collection and handling of specimens analyzed in the individual sections of the clinical laboratory.
- Identify the tests performed most commonly in the individual sections of the clinical laboratory and state their functions.
- **(1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)**
- Define and state the purpose of prefixes, word roots, suffixes, and combining forms.
- Correctly form medical terms using prefixes, word roots, suffixes, and combining vowels.
- State the meaning of the commonly used prefixes, suffixes, and word roots.
- Associate common word roots with the corresponding body system.
- State the different plural forms of medical terms, and demonstrate correct pronunciation of medical terms.
- Define the meanings of common medical abbreviations.
- Name the abbreviations on The Joint Commission's "Do Not Use" list.
- **(1a-v, 1a-i, 1b-ii, 1c-ii, 2c-iii)**
- Explain the levels of organization of the human body.
- Use directional terms to describe the position and location of body structures.
- List the body cavities, and name the main organs contained in each cavity.
- Use the correct medical terminology to list all the body systems, and identify their functions and major components.
- List the major disorders associated with each body system.
- Relate the major diagnostic laboratory tests to their associated systems.
- **(1a-i, 1a-v, 1b-v, 2c-I, 2c-ii, 2c-iii)**
- Briefly describe the functions of the blood vessels, heart, and blood.
- Differentiate between arteries, veins, and capillaries by structure and function.
- Locate the femoral, radial, brachial, and ulnar arteries.
- Locate the basilic, cephalic, median cubital, radial, superior vena cava, inferior vena cava have and saphenous veins.
- Trace the pathway of blood through the heart, and define the function of each chamber.
- Explain the purpose of the coronary circulation.
- Describe the cardiac cycle, and explain the function of the sinoatrial (SA) node.
- Identify the components of blood.
- State the major function of red blood cells (RBCs), white blood cells (WBCs), and platelets.
- Briefly explain the coagulation process.
- Describe the major disorders associated with the circulatory system.
- State the clinical correlations of laboratory tests associated with the circulatory system.
- **(1a-v, 1b-ii, 2c-iii)**
- Discuss the use of a blood collection tray, mobile phlebotomy workstations, and drawing stations.
- List the items that should be carried on a blood collection tray.
- Differentiate among the various safety needle sizes as to gauge, length, and purpose.
- Describe the correct methods to safely dispose of contaminated needles.
- Differentiate among an evacuated tube system (ETS), a syringe system, and a winged blood collection set, and state the advantages and disadvantages of each for blood collection.
- Identify the types of evacuated tubes by color code, and state the anticoagulants and additives present, any special characteristics, and the purpose of each.
- State the mechanism of action, advantages, and disadvantages of the anticoagulants ethylenediaminetetraacetic acid (EDTA), sodium citrate, potassium oxalate, and heparin.
- List the correct order of draw when collecting multiple tubes of blood.
- Describe the purpose and types of tourniquets.
- Name the substances used to cleanse the skin before venipuncture.
- Discuss the use of gauze, bandages, gloves, and slides when performing venipuncture.
- Describe the quality control of venipuncture equipment.
- Correctly select and assemble venipuncture equipment when presented with a clinical situation.
- **(1a-v, 1b-ii, 2c-iii)**
- List the required information on a test requisition form.
- Discuss the appropriate procedure to follow when greeting and reassuring a patient.

- Describe correct identification procedures for inpatients and outpatients.
- Describe patient preparation and positioning.
- Correctly assemble venipuncture equipment and supplies.
- Identify the three veins used most frequently for venipuncture.
- Correctly apply a tourniquet, and state why the tourniquet can be applied for only 1 minute.
- Describe vein palpation.
- Discuss the procedure for cleansing the venipuncture site.
- State the steps in a venipuncture procedure, and correctly perform a routine venipuncture using an evacuated tube system (ETS).
- Demonstrate safe disposal of contaminated needles and supplies.
- List the information required on a specimen tube label.
- Explain the importance of delivering specimens to the laboratory in a timely manner.
- **(1a-v, 1b-ii-v, 1c-ii 2c-iii)**
- Explain the procedure for coordinating requisition forms, patient identification, and labeling of tubes for unidentified patients.
- Discuss the procedures to follow when patients are asleep, not in their rooms, or being visited by a physician, member of the clergy, or friend.
- Describe the identification procedure for patients who are too young, are cognitively impaired have or whose first language is not English.
- Explain the preexamination variables that affect laboratory test results.
- Identify patient complications, and describe methods to handle each situation.
- Discuss the procedure to follow when a patient develops syncope during the venipuncture procedure.
- State the facility policy regarding patients who refuse to have their blood drawn.
- List the reasons why a tourniquet can be applied for only 1 minute.
- Describe methods used to locate veins that are not prominent.
- Describe conditions in which it is not advisable to draw from veins in the legs or feet.
- Explain the reasons why blood should not be drawn from a hematoma, a burned or scarred area, or an arm adjacent to a mastectomy.
- State the procedure to follow when drawing blood from a patient with an arteriovenous fistula.
- Describe the venipuncture procedure using a syringe, including equipment preparation have technique for exchanging syringes, transfer of blood to evacuated tubes, and disposal of the equipment.
- Describe the venipuncture procedure using a winged blood collection set, the technique involved, and disposal of the equipment.
- Identify technical complications during venipuncture, and describe remedies for each situation.
- State reasons why blood may not be obtained immediately from a venipuncture, and describe the procedures to follow to obtain blood.
- List venipuncture errors that may produce hemolysis as well as the tests affected.
- List causes of hematomas.
- List reasons for rejecting a specimen.
- **(1a i-v, 1b ii-iv 2c i-iii)**
- Explain the importance of various test collection priorities.
- Define a fasting specimen, and name three tests affected by not fasting.
- List four reasons for requesting timed specimens.
- Explain the requirements for oral glucose tolerance tests (OGTTs).
- Discuss diurnal variation of blood constituents, and list substances that are affected.
- Differentiate between a trough level and a peak level in therapeutic drug monitoring, and state the importance of collecting the specimen at the prescribed time.
- Discuss the timing sequences for the collection of blood cultures, the reasons for selecting a particular timing sequence, and the number of specimens collected.
- Describe the aseptic techniques required when collecting blood culture specimens.
- Discuss blood collection from venous access devices.
- Describe the procedure for collecting specimens for cold agglutinins and cryoglobulins.
- List tests that must be chilled immediately after collection and methods for transporting specimens to the laboratory.
- List tests for which the results are affected by exposure of the specimen to light.
- Define the chain of custody.
- Describe the criteria for collection and processing of specimens requested for forensic studies.

- List tests frequently requested for molecular diagnostic studies.
- Describe physical and emotional conditions in pediatric and geriatric patient populations and the effects of these conditions on blood
- **(1a-i, 1a-v, 1b-v, 2c-i, 2c-ii, 2c-iii)**
- State the complications associated with puncture of the deep veins in infants.
- List the reasons for performing dermal punctures on infants, children, and adults, and explain why certain tests cannot be performed on capillary specimens.
- Describe the composition of capillary blood, and name four test results that may differ when obtained with capillary versus venous blood.
- Describe the types of equipment needed for collection of a dermal specimen.
- Identify acceptable and unacceptable sites for performing heel and finger punctures and the times when each is performed.
- Discuss the purpose and method for warming the puncture site.
- State the complications resulting from the presence of alcohol at the puncture site.
- State the correct positioning of the lancet for dermal puncture.
- Name the major causes of contamination of capillary specimens.
- State the order of collection for capillary specimens.
- Describe the correct labeling of capillary specimens.
- Correctly perform dermal punctures on the heel and the finger.
- Discuss the necessary precautions for collecting high-quality specimens for newborn bilirubin tests.
- Discuss why and how newborn filter paper screening tests are collected.
- Describe the collection of capillary blood gases (CBGs), including sources of technical error.
- Explain the reason for thick and thin blood smears and describe how they are made
- **(1a-v, 1bii-v, 1c-ii 2c-iii)**
- State the recommended requirements for personnel performing arterial punctures.
- Define arterial blood gases (ABGs), and describe their diagnostic function.
- List the equipment and materials needed to perform arterial punctures.
- Define “steady state,” and list additional patient information that must be recorded when performing blood gas determinations.
- State four factors that should be considered when selecting a site for arterial puncture, and name the preferred site.
- State the purpose of and steps for performing the modified Allen test.
- Describe the steps in the performance of an arterial puncture.
- State five technical errors associated with arterial puncture and the effect of each error on the specimen.
- Discuss six complications of arterial puncture, including their effects on the patient and the precautions taken to avoid them.
- List reasons for a specimen to be rejected.
- **(1a-v, 1bii-v, 1c-ii 2c-iii)**
- Define point-of-care testing (POCT).
- Discuss the advantages and disadvantages of POCT.
- Explain Clinical Laboratory Improvement Amendments (CLIA) classification, regulatory requirements, and competency testing for POCT.
- Describe quality management for POCT.
- Discuss the function and types of quality control (QC) for POCT.
- Identify critical elements for common point-of-care tests.
- Demonstrate understanding of the three phases of laboratory testing.
- List the tests and instrumentation commonly used in POCT.
- **(1a-v, 1b-iii, 1c-I, 2a-I, 2c-iv)**
- Provide patients with instructions and containers for the collection of random, first-morning have clean-catch midstream, and 24-hour urine specimens.
- Provide patients with instructions and containers for the collection of random and timed fecal specimens.
- Provide patients with instructions and containers for the collection of semen specimens.
- Correctly collect a throat culture.
- Correctly obtain a nasopharyngeal (NP) specimen.

- Describe the purpose of and the collection procedure for sweat electrolytes, including precautions to protect specimen integrity.
- Describe the purpose of and the collection procedure for bone marrow specimens.
- Discuss the major components and concerns of the blood donor selection process.
- Describe the differences between the blood donor collection process and the routine venipuncture.
- Describe the purpose of and the tests performed on various nonblood specimens.
- Discuss the responsibilities of a phlebotomist when accessioning specimens into the laboratory and shipping specimens from the laboratory.
- Describe the safety precautions associated with specimen processing.
- State the rules for safe operation of a centrifuge.
- State routine phlebotomy duties that can involve a phlebotomist in the use of a laboratory information management system.
- **(1a-v, 1b-iii, 1c-i, 2a-i, 2c-iv)**
- Explain the role of the phlebotomist in complying with patients' rights.
- Differentiate between ethics and medical law.
- State the primary role of the phlebotomist in complying with the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Health Information Technology for Economic and Clinical Health (HITECH) Act.
- Define legal terms.
- Describe how a phlebotomist could be involved in a malpractice suit.
- State examples of how informed consent is obtained.
- Describe how a phlebotomist should respond to a patient who refuses a venipuncture.
- Describe the requirement for obtaining consent for collection of a specimen for HIV testing.
- Discuss the goals of a risk management department.
- Define a sentinel event, and give examples of how a phlebotomist could be involved in such an event.
- **(1a-v, 1b-iii, 1c-v, 2a-i, 2c-iv)**
- Differentiate between quality control (QC) and quality assessment (QA).
- Discuss forms of documentation used in the phlebotomy department.
- List the information contained in a procedure manual.
- Describe how the procedure manual is used by the phlebotomist.
- Discuss the role of variables in the development of a quality management program.
- Differentiate among preexamination, examination, and postexamination variables related to the phlebotomist's scope of practice.
- For each step of the phlebotomy collection procedure, state a QC procedure failure that can affect the collection of a quality specimen.
- Describe a quality management system (QMS).
- State and describe the 12 quality essentials used in a QMS.
- Describe the purpose of quality indicators.
- Describe how each of the six areas of the Lean system can benefit the phlebotomy department.
- State the purpose of Six Sigma methodology in a management system.
- Demonstrate knowledge of root cause analysis (RCA) as it relates to phlebotomy.

Course Content

1. Students will prepare for the Certified EKG Technician (CET) certification exam by obtaining the knowledge and learning the standards needed in EKG practice (safety, compliance and coordinated patient care; EKG acquisition; EKG analysis and interpretation). Entire Study Guide Content 2 hours, extra module features 0.75, module quizzes 1.5 hours. (total study time 4.25 hours) Each student must be able to provide evidence that he/she has performed a minimum of 10 successful EKGs before sitting for the certification exam. (3 hours)
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3. Students will give back to the medical field by observing a medical specialty (OB, pediatrics, dermatology, etc.), volunteering (locally or at the state association), or doing a service learning project (20 hours).
4. Students will work on career preparation (interview, resume, e-Portfolio) (10 hours).
5. Students will learn how to earn professional development and prepare for credential maintenance. (10 hours)
6. Students will earn continuing education credit hours by taking free courses from Texas Health and Human Services website. (10 hours).

Methods of Instruction/Course Format/Delivery

Students are expected to demonstrate basic competency in reading, writing, oral communication, math, and computer skills. Students are expected to be an active learning participant by assuming accountability in preparing for each class by completing required readings and/or other learning activities as listed in each unit assignment. Proficiency will be measured by examination scores, oral discussions and/or presentations, case studies and internet research activities.

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Students should use the Email within Canvas to communicate with the instructor. Using Canvas email gives you access to the instructor and other classmates without having to remember or type email addresses – you must select a name from the list. If you are not able to contact me using email in Canvas, you may use my Panola College email address, contact me by telephone, or stop by my office. I attempt to respond to all email within 24 hours. Please always include a subject line and your name in your email.

Major Assignments/Assessments

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

Assignments

1. EKG Technician (CET) Study Guide
2. EKG Technician (CET) Practice Exams
3. Certified Phlebotomy Technician (CPT) Study Guide
4. Certified Phlebotomy Technician (CPT) Practice Exams
5. Complete service learning project.
6. Complete resume and interview.
7. Complete professional development for credential maintenance.
8. Join Professional Organization for career field (AAMA)

Assessments

1. EKG Technician (CET) Practice Exams
2. Certified Phlebotomy Technician (CPT) Practice Exams
3. Service learning project.
4. Resume and interview.
5. Professional development modules.

Course Grade

The grading scale for this course is as follows:

- Maintaining Credentials- 20%
- Electrocardiography- 20%
- Phlebotomy- 20%
- Service Learning Project- 20%
- Career Preparation- 20%

Texts Materials, and Supplies

NHA Study Guide and Practice Exams for CPT and CET

Required Readings

NHA Study Guide and Practice Exams for CPT and CET

Addendum

Mrs. Bishop's Office Hours Spring 2025

Monday: 12:00 PM - 2:00 PM PSC2302

Tuesday: 12:00 PM - 2:00 PM PSC2302

Wednesday: 8:00 AM - 10:00 AM PSC2302

Thursday: 12:00 PM - 2:00 PM PSC2302

Other

- Courses conducted via video conferencing may be recorded and shared for instructional purposes by the instructor.
- For current texts and materials, use the following link to access bookstore listings: https://www.panolacollegestore.com.
- For testing services, use the following link: https://www.panola.edu/student-services/studentsupport/academic-testing-center.
- 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 Charles C. Matthews Student Center or go to https://www.panola.edu/studentservices/student-support/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: https://www.panola.edu/ (located on at the bottom under student)

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 timeline 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 databases 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.