

Medical Assistant

Subject: Career and Technical Education

Grade: 11

Expectations: 79

Breakouts: 235

(a) Introduction.

1. Career and technical education instruction provides content aligned with challenging academic standards, industry-relevant technical knowledge, and college and career readiness skills for students to further their education and succeed in current and emerging professions.
2. The Health Science Career Cluster focuses on planning, managing, and providing therapeutic services, diagnostics services, health informatics, support services, and biotechnology research and development.
3. The Medical Assistant course provides students with the knowledge and skills to pursue a career as a medical assistant and to improve college and career readiness. Students will obtain communication skills, clinical ethics knowledge, safety awareness, and information related to medical assisting career opportunities.
4. To pursue a career in the health science industry, students should learn to reason, think critically, make decisions, solve problems, and communicate effectively. Students should recognize that quality health care depends on the ability to work well with others.
5. Professional integrity in the health science industry is dependent on acceptance of ethical and legal responsibilities. Students are expected to employ their ethical and legal responsibilities, recognize limitations, and understand the implications of their actions.
6. Students are encouraged to participate in extended learning experiences such as career and technical student organizations and other leadership or extracurricular organizations.
7. Statements that contain the word "including" reference content that must be mastered, while those containing the phrase "such as" are intended as possible illustrative examples.

(b) Knowledge and Skills Statements

- (1) The student applies professional standards/employability skills as required by business and industry. The student is expected to:
 - (A) apply appropriate verbal communication in a clear, concise, and effective manner;
 - (i) apply appropriate verbal communication in a clear manner
 - (ii) apply appropriate verbal communication in a concise manner
 - (iii) apply appropriate verbal communication in [an] effective manner
 - (B) apply appropriate non-verbal communication in a clear, respectful, and effective manner;
 - (i) apply appropriate non-verbal communication in a clear manner
 - (ii) apply appropriate non-verbal communication in a respectful manner
 - (iii) apply appropriate non-verbal communication in [an] effective manner

- (C) apply appropriate adaptability skills such as problem solving and creative thinking;
 - (i) apply appropriate adaptability skills
 - (D) create or evaluate a career plan using methods such as identifying educational pathways, professional organizations, career goals, continuing education opportunities, and individual aptitudes;
 - (i) create or evaluate a career plan using methods
 - (E) demonstrate teamwork;
 - (i) demonstrate teamwork
 - (F) create an occupation-specific resume; and
 - (i) create an occupation-specific resume
 - (G) identify and demonstrate soft skills desired by employers in health care.
 - (i) identify soft skills desired by employers in health care
 - (ii) demonstrate soft skills desired by employers in health care
- (2) The student evaluates the roles and responsibilities of the medical assistant as a member of the healthcare team. The student is expected to:
- (A) explain the role of the medical assistant in various healthcare settings;
 - (i) explain the role of the medical assistant in various healthcare settings;
 - (B) discuss the scope of practice, including responsibilities and limitations of a medical assistant;
 - (i) discuss the scope of practice, including responsibilities of a medical assistant
 - (ii) discuss the scope of practice, including limitations of a medical assistant
 - (C) explain the level of authority within the healthcare professional hierarchy; and
 - (i) explain the level of authority within the healthcare professional hierarchy
 - (D) identify the members of an interdisciplinary healthcare team and their roles such as licensed vocation nurse, registered nurse, primary care provider, specialists, and other allied health professionals.
 - (i) identify the members of an interdisciplinary healthcare team
 - (ii) identify [the] roles [of an interdisciplinary healthcare team]
- (3) The student applies professional communication skills to provide information to patients and team members in a healthcare setting. The student is expected to:
- (A) demonstrate the ability to report abnormal results in writing and orally to the patient's provider;
 - (i) demonstrate the ability to report abnormal results in writing to the patient's provider
 - (ii) demonstrate the ability to report abnormal results orally to the patient's provider

- (B) demonstrate how to communicate with patients, caregivers, and the interdisciplinary team to assist in the planning, delivery, and coordination of patient-centered care;
 - (i) demonstrate how to communicate with patients to assist in the planning of patient-centered care
 - (ii) demonstrate how to communicate with patients to assist in the delivery of patient-centered care
 - (iii) demonstrate how to communicate with patients to assist in the coordination of patient-centered care
 - (iv) demonstrate how to communicate with caregivers to assist in the planning of patient-centered care
 - (v) demonstrate how to communicate with caregivers to assist in the planning of patient-centered care
 - (vi) demonstrate how to communicate with caregivers to assist in the coordination of patient-centered care
 - (vii) demonstrate how to communicate with the interdisciplinary team to assist in the planning of patient-centered care
 - (viii) demonstrate how to communicate with the interdisciplinary team to assist in the delivery of patient-centered care
 - (ix) demonstrate how to communicate with the interdisciplinary team to assist in the coordination of patient-centered care
 - (C) evaluate different communication techniques for responding to the needs of individuals in a diverse society;
 - (i) evaluate different communication techniques for responding to the needs of individuals in a diverse society
 - (D) practice conflict-resolution techniques such as cooperation, contribution, compromise, and collaboration in various situations; and
 - (i) practice conflict-resolution techniques
 - (E) practice providing patient education on health-related topics such as clean catch urine collection, the risks and benefits of vaccinations, use of a peak-flow, and nebulizer treatments.
 - (i) practice providing patient education on health-related topics
- (4) The student demonstrates knowledge of healthcare ethical principles in their practice of medical assisting. The student is expected to:
- (A) evaluate principles of ethical behavior, including beneficence, non-maleficence, justice, and autonomy;
 - (i) evaluate principles of ethical behavior, including beneficence
 - (ii) evaluate principles of ethical behavior, including non-maleficence
 - (iii) evaluate principles of ethical behavior, including justice
 - (iv) evaluate principles of ethical behavior, including autonomy
 - (B) debate ethical issues related to technological advances in health care such as stem cells, robotics, and immunologic therapies in health care;
 - (i) debate ethical issues related to technological advances in health care

- (C) evaluate ethical issues and legal ramifications related to malpractice, negligence, and liability; and
 - (i) evaluate ethical issues related to malpractice
 - (ii) evaluate ethical issues related to negligence
 - (iii) evaluate ethical issues ramifications related to liability
 - (iv) evaluate legal ramifications related to malpractice
 - (v) evaluate legal ramifications related to negligence
 - (vi) evaluate legal issues ramifications related to liability
 - (D) summarize legal and ethical standards, including Patient Bill of Rights, Advanced Directives, and the Health Insurance Portability and Accountability Act (HIPAA).
 - (i) summarize legal standards, including Patient Bill of Rights
 - (ii) summarize ethical standards, including Patient Bill of Rights
 - (iii) summarize legal standards, including Advanced Directives
 - (iv) summarize ethical standards, including Advanced Directives
 - (v) summarize legal standards, including the Health Insurance Portability and Accountability Act (HIPAA).
 - (vi) summarize ethical standards, including the Health Insurance Portability and Accountability Act (HIPAA).
- (5) The student demonstrates knowledge of the administrative duties of a medical assistant in a healthcare setting. The student is expected to:
- (A) identify considerations for scheduling a patient such as availability of test results, availability of staff, patient flow, triage, and coordination of care;
 - (i) identify considerations for scheduling a patient
 - (B) discuss considerations related to managing an office schedule such as types of scheduling, under booking, over booking, cancellations, add-ons, and no-shows;
 - (i) discuss considerations related to managing an office schedule
 - (C) define the terms used in medical billing such as diagnosis codes, billing codes, billing cycle, co-pay, deductibles, maximum out-of-pocket, and time of service;
 - (i) define the terms used in medical billing
 - (D) describe the elements of completing patient registration such as recording demographics, emergency contact, and insurance information;
 - (i) describe the elements of completing patient registration
 - (E) analyze different types of health insurance coverage, including Medicare, Medicaid, TRICARE, Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA), private insurance, employer-based insurance, and workers' compensation;
 - (i) analyze different types of health insurance coverage, including Medicare
 - (ii) analyze different types of health insurance coverage, including Medicaid
 - (iii) analyze different types of health insurance coverage, including TRICARE

- (iv) analyze different types of health insurance coverage, including Civilian Health and Medical Program of the Department of Veterans Affairs (CHAMPVA)
 - (v) analyze different types of health insurance coverage, including private insurance
 - (vi) analyze different types of health insurance coverage, including employer-based insurance
 - (vii) analyze different types of health insurance coverage, including workers' compensation
- (F) identify the components of an insurance card such as plan name, group number, ID number, patient co-pay, co-insurance, and phone numbers;
- (i) identify the components of an insurance card
- (G) define insurance plan terminology such as prior authorization, formulary, explanation of benefits, denial, appeal, and referrals;
- (i) define insurance plan terminology
- (H) define electronic health records systems and their components such as demographics, financial insurance information, orders and referrals, correspondence, and test results; and
- (i) define electronic health records systems
 - (ii) define electronic health records components
- (I) analyze the benefits and risks of electronic health records systems.
- (i) analyze the benefits of electronic health records systems
 - (ii) analyze risks of electronic health records systems
- (6) The student uses appropriate medical terminology as a medical assistant. The student is expected to:
- (A) use directional terms and anatomical planes related to body structure;
- (i) use directional terms related to body structure
 - (ii) use anatomical planes related to body structure
- (B) use occupationally specific terms such as terms relating to the body systems, surgical and diagnostic procedures, diseases, and treatment; and
- (i) use occupationally specific terms
- (C) apply knowledge of prefixes, suffixes, and root words to translate medical terms to conversational language to facilitate communication.
- (i) apply knowledge of prefixes to translate medical terms to conversational language to facilitate communication
 - (ii) apply knowledge of suffixes to translate medical terms to conversational language to facilitate communication
 - (iii) apply knowledge of root words to translate medical terms to conversational language to facilitate communication
- (7) The student practices or models patient intake skills as a medical assistant. The student is expected to:

- (A) collect and document patient information during an intake interview, including chief complaint; patient care team; past medical, surgical, social, and family histories; patient allergies; and comprehensive medication list;
 - (i) collect patient information during an intake interview, including chief complaint
 - (ii) document patient information during an intake interview, including chief complaint
 - (iii) collect patient information during an intake interview, including patient care team
 - (iv) document patient information during an intake interview, including patient care team
 - (v) collect document patient information during an intake interview, including past medical histories
 - (vi) document patient information during an intake interview, including past medical histories
 - (vii) collect patient information during an intake interview, surgical histories
 - (viii) document patient information during an intake interview, including surgical histories
 - (ix) collect patient information during an intake interview, including social histories
 - (x) document patient information during an intake interview, including social histories
 - (xi) collect patient information during an intake interview, including family histories
 - (xii) document patient information during an intake interview, including family histories
 - (xiii) collect patient information during an intake interview, including patient allergies
 - (xiv) document patient information during an intake interview, including patient allergies
 - (xv) collect patient information during an intake interview, including [a] comprehensive medication list
 - (xvi) document patient information during an intake interview, including [a] comprehensive medication list
- (B) explain how to use a medical chart to identify patient care needs;
 - (i) explain how to use a medical chart to identify patient care needs
- (C) identify normal ranges for vital signs per age group, including blood pressure, temperature, heart rate, respiratory rate, and oxygen saturation;
 - (i) identify normal ranges for vital signs per age group, including blood pressure
 - (ii) identify normal ranges for vital signs per age group, including temperature
 - (iii) identify normal ranges for vital signs per age group, including heart rate
 - (iv) identify normal ranges for vital signs per age group, including respiratory rate
 - (v) identify normal ranges for vital signs per age group, including oxygen saturation
- (D) measure and record accurate vital signs, including manual blood pressure, temperature, heart rate, respiratory rate, and pain scale;
 - (i) measure accurate vital signs, including manual blood pressure
 - (ii) measure accurate vital signs, including temperature
 - (iii) measure accurate vital signs, including heart rate
 - (iv) measure accurate vital signs, including respiratory rate
 - (v) measure accurate vital signs, including pain scale

- (vi) record accurate vital signs, including manual blood pressure
 - (vii) record accurate vital signs, including temperature
 - (viii) record accurate vital signs, including heart rate
 - (ix) record accurate vital signs, including respiratory rate
 - (x) record accurate vital signs, including pain scale
- (E) measure and record accurate anthropometric measurements, including height, weight, and head circumference; and
- (i) measure accurate anthropometric measurements, including height
 - (ii) record accurate anthropometric measurements, including height
 - (iii) measure accurate anthropometric measurements, including weight
 - (iv) record accurate anthropometric measurements, including weight
 - (v) measure accurate anthropometric measurements, including head circumference
 - (vi) record accurate anthropometric measurements, including head circumference
- (F) calculate accurate conversions between different units of measurement such as kilograms to pounds, centimeters to inches, and Fahrenheit to Celsius.
- (i) calculate accurate conversions between different units of measurement
- (8) The student demonstrates knowledge and application of point of care testing as a medical assistant. The student is expected to:
- (A) define point of care testing;
- (i) define point of care testing
- (B) identify and correlate specimen types and collection methods, including throat swabs, capillary blood, and urine used in point of care testing;
- (i) identify specimen types, including throat swabs used in the point of care testing
 - (ii) identify specimen types, including capillary blood used in the point of care testing
 - (iii) identify specimen types, including urine used in point of care testing
 - (iv) identify collection methods, including throat swabs used in point of care testing
 - (v) identify collection methods, including capillary blood used in point of care testing
 - (vi) identify collection methods, including urine used in point of care testing
 - (vii) correlate specimen types and collection methods, including throat swabs used in point of care testing
 - (viii) correlate specimen types and collection methods, including capillary blood used in point of care testing
 - (ix) correlate specimen types and collection methods, including urine used in point of care testing
- (C) describe tests that might be performed as a point of care test in an office such as rapid strep, rapid flu, glucose, urine dip, urine pregnancy, vision screening, and electrocardiogram (EKG) tests;
- (i) describe tests that might be performed as a point of care test in an office

- (D) perform and document a vision screening using the Snellen eye chart; and
 - (i) perform a vision screening using the Snellen eye chart
 - (ii) document a vision screening using the Snellen eye chart
 - (E) locate landmarks for performing a 12-lead electrocardiogram (EKG).
 - (i) locate landmarks for performing a 12-lead electrocardiogram (EKG)
- (9) The student demonstrates knowledge of medication preparation and administration in a clinical setting specific to the role of a medical assistant. The student is expected to:
- (A) apply the six rights of medication administration, including right patient, right medication, right dose, right time, right route, and right documentation;
 - (i) apply the six rights of medication administration, including right patient
 - (ii) apply the six rights of medication administration, including right medication
 - (iii) apply the six rights of medication administration, including right dose
 - (iv) apply the six rights of medication administration, including right time
 - (v) apply the six rights of medication administration, including right route
 - (vi) apply the six rights of medication administration, including right documentation
 - (B) identify drug classifications and the indication for use;
 - (i) identify drug classifications
 - (ii) identify the indication for use [of drug classifications]
 - (C) define drug-related terms, including adverse event, therapeutic response, side effect, drug interactions, and allergic reaction;
 - (i) define drug-related terms, including adverse event
 - (ii) define drug-related terms, including therapeutic response
 - (iii) define drug-related terms, including side effect
 - (iv) define drug-related terms, including drug interactions
 - (v) define drug-related terms, including allergic reaction;
 - (D) calculate the amount of medication to administer based on the dosage ordered and the strength of medication supply on hand;
 - (i) calculate the amount of medication to administer based on the dosage ordered
 - (ii) calculate the amount of medication to administer based on the strength of medication supply on hand
 - (E) evaluate a patient for known allergies and contraindications prior to administering any medication;
 - (i) evaluate a patient for known allergies prior to administering any medication
 - (ii) evaluate a patient for known contraindications prior to administering any medication

- (F) identify routes of medication administration, including oral, buccal, sublingual, inhaled, intranasal, otic, ophthalmic, intravaginal, anal, topical, transdermal, intradermal, subcutaneous, intramuscular, intravenous, and intrathecal;
- (i) identify routes of medication administration, including oral
 - (ii) identify routes of medication administration, including buccal
 - (iii) identify routes of medication administration, including sublingual
 - (iv) identify routes of medication administration, including inhaled
 - (v) identify routes of medication administration, including intranasal
 - (vi) identify routes of medication administration, including otic
 - (vii) identify routes of medication administration, including ophthalmic
 - (viii) identify routes of medication administration, including intravaginal
 - (ix) identify routes of medication administration, including anal
 - (x) identify routes of medication administration, including topical
 - (xi) identify routes of medication administration, including transdermal
 - (xii) identify routes of medication administration, including intradermal
 - (xiii) identify routes of medication administration, including subcutaneous
 - (xiv) identify routes of medication administration, including intramuscular
 - (xv) identify routes of medication administration, including intravenous
 - (xvi) identify routes of medication administration, including intrathecal
- (G) use proper technique when preparing medications for administration, including injections, oral, sublingual, inhaled, otic, ophthalmic, and topical;
- (i) use proper technique when preparing medications for administration, including injections
 - (ii) use proper technique when preparing medications for administration, including oral
 - (iii) use proper technique when preparing medications for administration, including sublingual
 - (iv) use proper technique when preparing medications for administration, including inhaled
 - (v) use proper technique when preparing medications for administration, including otic
 - (vi) use proper technique when preparing medications for administration, including ophthalmic
 - (vii) use proper technique when preparing medications for administration, including topical
- (H) use proper technique when administering medications, including injections, oral, sublingual, inhaled, otic, ophthalmic, and topical;
- (i) use proper technique when administering medications, including injections
 - (ii) use proper technique when administering medications, including oral
 - (iii) use proper technique when administering medications, including sublingual
 - (iv) use proper technique when administering medications, including inhaled

- (v) use proper technique when administering medications, including otic
 - (vi) use proper technique when administering medications, including ophthalmic
 - (vii) use proper technique when administering medications, including topical
- (I) identify appropriate muscle groups for intramuscular injections, including deltoid, vastus lateralis, and ventrogluteal;
- (i) identify appropriate muscle groups for intramuscular injections, including deltoid
 - (ii) identify appropriate muscle groups for intramuscular injections, including vastus lateralis
 - (iii) identify appropriate muscle groups for intramuscular injections, including ventrogluteal
- (J) explain the factors that influence intramuscular injection site selection, including patient size, patient age, viscosity of medication, and muscular density;
- (i) explain the factors that influence intramuscular injection site selection, including patient size
 - (ii) explain the factors that influence intramuscular injection site selection, including patient age
 - (iii) explain the factors that influence intramuscular injection site selection viscosity of medication
 - (iv) explain the factors that influence intramuscular injection site selection, including muscular density
- (K) explain the factors that affect needle size and gauge selection, including medication viscosity, patient size, muscular density; and
- (i) explain the factors that affect needle size including medication viscosity
 - (ii) explain the factors that affect gauge selection, including medication viscosity
 - (iii) explain the factors that affect needle size including patient size
 - (iv) explain the factors that affect gauge selection, including patient size
 - (v) explain the factors that affect needle size muscular density
 - (vi) explain the factors that affect gauge selection, including muscular density
- (L) demonstrate knowledge of syringe styles and markings on various size syringes such as Luer Lock, oral, insulin, TB, 1ml, 3ml, 5ml, and 10ml syringes.
- (i) demonstrate knowledge of syringe styles on various size syringes
 - (ii) demonstrate knowledge of syringe markings on various size syringes
- (10) The student demonstrates knowledge of collecting, labeling, storing, and transferring lab specimens. The student is expected to:
- (A) identify how to properly store and transfer lab specimens such as blood, urine, fecal, and sputum samples;
- (i) identify how to properly store lab specimens
 - (ii) identify how to properly transfer lab specimens
- (B) list the proper order of draw for blood collection tubes;
- (i) list the proper order of draw for blood collection tubes

- (C) select the proper collection tubes for specific types of blood tests such as complete blood count (CBC), comprehensive metabolic panel (CMP), and lipid panel;
 - (i) select the proper collection tubes for specific types of blood tests
- (D) locate veins used for blood draws;
 - (i) locate veins used for blood draws
- (E) demonstrate proper technique and post procedural care for venous blood draws; and
 - (i) demonstrate proper technique for venous blood draws
 - (ii) demonstrate proper post procedural care for venous blood draws
- (F) demonstrate proper labeling of lab specimens, including patient name, date of birth, source, date, time, and initials of collector.
 - (i) demonstrate proper labeling of lab specimens, including patient name
 - (ii) demonstrate proper labeling of lab specimens, including date of birth
 - (iii) demonstrate proper labeling of lab specimens, including source
 - (iv) demonstrate proper labeling of lab specimens, including date
 - (v) demonstrate proper labeling of lab specimens, including time
 - (vi) demonstrate proper labeling of lab specimens, including initials of collector

(11) The student demonstrates knowledge of patient populations and their specific care considerations. The student is expected to:

- (A) discuss and identify stages of development throughout a patient's lifespan;
 - (i) discuss stages of development throughout a patient's lifespan
 - (ii) identify stages of development throughout a patient's lifespan
- (B) describe coping and defense mechanisms exhibited by patients such as emotion-focused behaviors, problem-focused behaviors, denial, displacement, intellectualization, projection, rationalization, and regression;
 - (i) describe coping mechanisms exhibited by patients
 - (ii) describe defense mechanisms exhibited by patients
- (C) identify and discuss end-of-life considerations such as advanced directives, power of attorney, stages of grief, and family support;
 - (i) identify end-of-life considerations
 - (ii) discuss end-of-life considerations
- (D) practice appropriate methods of care for working with patients with mental, physical, and developmental disabilities;
 - (i) practice appropriate methods of care for working with patients with mental disabilities
 - (ii) practice appropriate methods of care for working with patients with physical disabilities
 - (iii) practice appropriate methods of care for working with patients with developmental disabilities

- (E) explain how socioeconomic factors such as income, transportation, access to community resources, employment, and education level can influence patient outcomes; and
 - (i) explain how socioeconomic factors can influence patient outcomes
 - (F) explain how various multicultural values can affect patient care decisions.
 - (i) explain how various multicultural values can affect patient care decisions
- (12) The student demonstrates knowledge of safety practices and procedures as related to medical assisting. The student is expected to:
- (A) employ standard precautions in a healthcare scenario;
 - (i) employ standard precautions in a healthcare scenario
 - (B) identify various modes of disease transmission, including vector borne, air borne, direct or indirect contact, and vehicle;
 - (i) identify various modes of disease transmission, including vector borne
 - (ii) identify various modes of disease transmission, including air borne
 - (iii) identify various modes of disease transmission, including direct or indirect contact
 - (iv) identify various modes of disease transmission, including vehicle
 - (C) distinguish between the types of isolation precaution signage used to address modes of disease transmission such as contact, droplet, and airborne;
 - (i) distinguish between the types of isolation precaution signage used to address modes of disease transmission
 - (D) identify personal protective equipment (PPE);
 - (i) identify personal protective equipment (PPE)
 - (E) apply the knowledge of PPE used in various situations such as venipuncture, collecting a throat swab, or dipping urine;
 - (i) apply the knowledge of PPE used in various situations
 - (F) demonstrate proper putting on (donning) and removing (doffing) of PPE;
 - (i) demonstrate proper putting on (donning) of PPE
 - (ii) demonstrate proper removing (doffing) of PPE
 - (G) define the use of a sharps container, biohazard container, shredding bin, and trash receptacle;
 - (i) define the use of a sharps container
 - (ii) define the use of a biohazard container
 - (iii) define the use of a shredding bin
 - (iv) define the use of a trash receptacle
 - (H) practice safe handling of sharps such as not recapping after injection and prompt disposal in a sharps container;
 - (i) practice safe handling of sharps

- (I) identify symptoms of anaphylaxis and the proper emergency response;
 - (i) identify symptoms of anaphylaxis
 - (ii) identify proper emergency response
- (J) explain storage requirements for medications, vaccines, and lab specimens;
 - (i) explain storage requirements for medications
 - (ii) explain storage requirements for vaccines
 - (iii) explain storage requirements for lab specimens
- (K) locate and use the safety data sheets (SDS) to retrieve information such as proper storage, clean up, and exposure response; and
 - (i) locate safety data sheets (SDS) to retrieve information
 - (ii) use the safety data sheets (SDS) to retrieve information
- (L) define and apply knowledge of medical asepsis.
 - (i) define medical asepsis
 - (ii) apply knowledge of medical asepsis