Certified Medical Assistant (CMA)

Course Name	Certified Medical Assistant (CMA)	Course = 1 Carnegie Unit Credit
Course Description	Certified Medical Assistant (CMA) course provides preparation for the American Association of Medical Assistants (AAMA) CMA certification exam. The course also instills the knowledge and standards needed for excellence in Certified Medical Assistant practice. The AAMA CMA certification is an approved certification found on the Career Development Incentive Program (CDIP) approved programs list.	
Note:	- This is a suggested scope and sequence for the course content. The content will work with any textbook or instructional resource. If locally adapted, make sure all competencies are covered. - Please contact your local community college partner for credit options available. - There is no age requirement for the CMA exam, but programs must be a CAAHEP or ABHES-accredited post-secondary program, which typically translates to 18+.	
Schedule:	Schedule calculation based on 120 contact hours. 60% of instruction time should be geared in meeting the course competencies in the scope and sequence. The remaining 40% of the instructional time allows for guest speakers, student presentations, field trips, remediation, or other content topics.	

All courses taught in an approved CTE program must include Essential Skills embedded into the course content. The Essential Skills Framework for this course can be found at **https://www.cde.state.co.us/standardsandinstruction/essentialskill**		

Instructional Unit Topic	Suggested Length of Instruction	CTE or Academic Standard Alignment (NHSS)	Competency / Outcomes

Clinical Workflow: Patient Intake and Discharge		NHSS 10.1	1. Vital Signs
			   a. Blood pressure principles and technique
			   b. Pulse points and techniques
			     i. Rate and rhythm
			   c. Height/Weight/BMI
			   d. Body temperature techniques and equipment
			   e. Pulse oximetry
			   f. Respiration rate and pattern
			   g. Pain scale
			   h. Pediatric measurements/Growth chart
			   i. Recognize/Document/Report age-specific normal and abnormal vital signs

		NHSS 1.1.1, 2.2	2. Medical Terminology

			a. Word parts (roots, combining forms, prefixes, suffixes) b. Diagnostic procedures c. Surgical procedures

		NHSS 2.1	3. Interviewing Techniques
			  a. Obtain concise and accurate reporting of relevant information
			  b. Open-ended/Exploratory questions
			  c. Closed/Direct questions

		NHSS 2.3	4. Documentation of Care
			  a. Chief complaint
			  b. Subjective data/Present illness
			  c. Review of systems
			  d. Past medical history
			  e. Reconciliation of medications and/or allergies
			  f. Family history
			  g. Social and occupational history
			  h. Objective data/Examination
			  i. Treatment/Compliance
			  j. Making addendums/corrections

		NHSS 9.1.3	5. Patient Screenings/Wellness Assessments
			  a. Cancer prevention and screening
			  b. Prevention/Screening of sexually transmitted infections
			  c. Nicotine risks and cessation
			  d. Recognition of substance use/ addiction
			  e. Osteoporosis screening
			  f. Domestic violence screening and detection
			  g. Suicide awareness and response
			  h. Depression screening

		NHSS 9.1.1	6. Processing Provider Orders
			  a. Diabetic teaching
			  b. Instructions on use of mobility equipment and assistive devices (e.g., crutches, cane, walker, wheelchair)
			  c. Pre-/Post procedure/treatment instructions
			  d. Patient-administered treatments and medications (e.g., self injections, nebulizers)
			  e. Home monitoring (e.g., blood pressure, anticoagulation, blood sugar)

			f. Alternative medicine/Massage/ Acupuncture
			g. Nutrition counseling
			    i. Basic nutritional elements
			      1. Carbohydrates
			      2. Fats
			      3. Proteins and amino acids
			      4. Minerals and electrolytes
			      5. Vitamins
			      6. Fiber
			      7. Water
			    ii. Function of dietary supplements and herbs
			    iii. Special dietary needs
			      1. Weight control
			      2. Diabetes
			      3. Cardiovascular disease/ Hypertension
			      4. Cancer
			      5. Food sensitivity/intolerance (e.g., lactose, gluten, nut)
			      6. Kidney disease
			    iv. Food label interpretation
			    v. Eating disorders

Safety and Infection Control		NHSS 7.1	1. Infectious Agents
			    a. Bacteria
			    b. Viruses
			    c. Protozoa/Parasites
			    d. Fungi/Yeast

		NHSS 7.1	2. Infection Cycle/Chain of Infection a. Body's natural barriers

		NHSS 7.1	3. Modes of Infectious Transmission
			    a. Direct
			    b. Indirect

		NHSS 3.1.1.c	4. Standard Precautions and Exposure Control
			    a. Occupational Safety and Health Administration (OSHA)
			    b. Personal protective equipment
			    c. Hand hygiene (handwashing, alcohol-based gel)
			    d. Post-exposure protocol/Eyewash station
			    e. Sharps/Needle safety

		NHSS 7.1.2	5. Medical Asepsis

			a. Sanitization b. Disinfection c. Cleaning (equipment, examination room, procedure area, business office, reception/scheduling areas)
		NHSS 7.4	6. Biohazard Disposal/Regulated Waste a. Blood/Body fluids/Body tissue disposal b. Spill kit (when and how to use)
		NHSS 7.4	7. Safety Resources a. Safety signs, symbols, labels b. Safety data sheets (SDS)/ Globally Harmonized System of Classification and Labeling Chemicals (GHS)
		NHSS 7.5	8. Safety and Emergency Procedures a. Workplace safety/Emergency preparedness/Evacuation b. Crash cart supplies/equipment c. Fire prevention/regulations/ extinguisher
		NHSS 10.1.2	9. Emergency Management, Identification, and Response/Basic First Aid a. Bleeding control b. Burns c. Cardiac/Respiratory arrest d. Foreign body obstruction e. Diabetic ketoacidosis f. Insulin shock g. Bone fractures h. Poisoning i. Seizures j. Shock k. Cerebrovascular accident (CVA) l. Syncope m. Lacerations/Avulsions/Punctures/Abrasions n. Cold/Heat exposure o. Joint dislocations/Sprains/Strains p. Asthmatic attack q. Hyperventilation r. Animal/Insect bite s. Head trauma t. Chemical exposure
		NHSS 7.2.2	10. Body Mechanics/Ergonomics

		NHSS 5.2.7	11. Risk Management, Quality Assurance, and Safety Procedures
			    a. Reporting unsafe or unlawful activities and behaviors
			    b. Conflicts of interest
			    c. Incident reporting/Patient safety variance reporting

Procedures/Examinations		NHSS 7.2.2	1. Prepare Patients for Examinations, Procedures, and Treatments
			    a. Examination Methods
			        i. Auscultation
			        ii. Inspection
			        iii. Mensuration
			        iv. Palpation
			        v. Percussion
			    b. Body positioning
			        i. Dorsal recumbent
			        ii. Fowler's
			        iii. Knee-chest
			        iv. Lithotomy
			        v. Prone
			        vi. Sims
			        vii. Supine
			    c. Pediatric examinations
			    d. Obstetric/Gynecologic examinations

			2. Supplies, Equipment, Techniques, and Patient Instruction
			    a. Eye irrigation
			    b. Ear irrigation
			    c. Suture/Staple removal
			    d. Cast care/Splints/Slings

			3. Surgical Assisting
			    a. Surgical asepsis
			    b. Surgical scrub
			    c. Surgical tray prep/Sterile field boundaries
			    d. Antiseptic skin prep

			4. Wound Care
			    a. Chronic/Non-healing
			    b. Bandaging/Dressing change
			    c. Post-op incision care
			    d. Ostomy care

			5. Instruments a. Classifications

			b. Identification
			c. Use
			d. Sterilization techniques/Autoclave
			    i. Preparing items
			    ii. Wrapping items/Label/Date
			    iii. Sterilization indicators/Quality control measures

		NHSS 1.1, 1.2	6. Anatomy and Physiology
			  a. Human growth and development
			  b. Normal developmental patterns/ milestones across the life-span
			  c. Structural units (cell/tissue/organ)
			  d. Anatomical divisions, body cavities
			  e. Anatomical positions and directions
			  f. Body planes and quadrants
			  g. Body systems, **NORMAL** structure and function
			    i. Integumentary
			    ii. Musculoskeletal
			    iii. Nervous
			    iv. Cardiovascular, hematopoietic, and lymphatic
			    v. Respiratory
			    vi. Digestive
			      1. Urinary
			    vii. Reproductive
			    viii. Endocrine
			    ix. Sensory
			  h. Body systems, **ABNORMAL** structure and function, recognition and etiology
			    i. Integumentary
			    ii. Musculoskeletal
			    iii. Nervous
			    iv. Cardiovascular, hematopoietic, and lymphatic
			    v. Respiratory
			    vi. Digestive
			    vii. Urinary
			    viii. Reproductive
			    ix. Endocrine
			    x. Sensory

		NHSS 7.1.2	7. Specimen Collection Techniques a. Methods of collection

			i. Blood
			        1. Venipuncture technique (site selection/patient prep)
			        2. Equipment/Needles
			        3. Tube additives
			        4. Specimen preparation (serum/plasma/whole blood)
			        5. Capillary/Dermal puncture (finger, heel, ear)
			    ii. Urine
			        1. Random
			        2. Midstream clean catch
			        3. Timed (e.g., 24-hour) collection
			        4. Catheterization
			        5. Pediatric urine collection
			        6. Drug screen/Chain of custody
			   iii. Fecal specimen
			   iv. Sputum specimen
			    v. Swabs
			        1. Throat
			        2. Wound
			        3. Nasopharyngeal

		NHSS 2.3	8. Prepare, Process, and Examine Specimens
			  a. Proper specimen labeling
			  b. Sources of specimen contamination
			  c. Specimen preservation
			      i. Refrigeration
			     ii. Fixative
			  d. Centrifuge
			  e. Microscope
			  f. Wet mount (saline and KOH) slides

		NHSS 11.1	9. Laboratory Quality Control/Quality Assurance/Clinical Laboratory Improvement Act (CLIA) Requirements
			  a. Testing records and performance logs
			  b. Equipment calibration and maintenance
			  c. Quality control testing
			  d. Monitor and document temperature controls

		NHSS 1.2	1. Laboratory Panels and Selected Tests
			  a. Urinalysis
			      i. Physical

ii. Chemical
iii. Microscopic
b. Hematology
   i. Hematocrit
   ii. Hemoglobin
   iii. Erythrocytic sedimentation rate (ESR)
   iv. Automated cell counts
      1. Red blood cell (RBC)
      2. White blood cell (WBC)
      3. White cell differential
      4. Platelet
   v. Coagulation testing (INR)
c. Chemistry/Metabolic testing
   i. Glucose
   ii. Kidney function
   iii. Liver function
   iv. Lipid profile
   v. Hemoglobin A1 C
   vi. Electrolytes
   vii. Thyroid function
d. Specialized testing
   i. Mononucleosis
   ii. Rapid Group A Streptococcus
   iii. C-reactive protein (CRP)
   iv. HCG (pregnancy test)
   v. H. pylori
   vi. Influenza
   vii. Genetic/Hereditary
   viii. Tuberculosis tests/Purified protein derivative (PPD) skin test
   ix. Cardiovascular
      1. Electrocardiography
         a. Perform standard 12-lead
         b. Recognize and eliminate artifacts
         c. Recognize rhythms, arrhythmias
      2. Holter/Event monitors
      3. Cardiac stress test
   x. Vision

			1. Color vision
			2. Visual acuity
			    a. Near vision
			    b. Distance vision
			3. Ocular pressure/Tonometry
			4. Visual fields
			xi. Audiometric/Hearing
			    1. Pure tone audiometry
			    2. Speech and word recognition
			    3. Tympanometry
			xii. Allergy
			    1. Scratch test
			    2. Intradermal skin test
			    3. Patch test
			    4. Radioallergosorbent test (RAST)
			xiii. Respiratory
			    1. Pulmonary function tests (PFTs)
			    2. Spirometry
			    3. Peak flow rate
			xiv. Diagnostic imaging (e.g., MRI, CT scan, nuclear, ultrasound)
			e. Differentiate between normal and abnormal laboratory and diagnostic test results

Pharmacology			1. Medications
			    a. Classes of drugs
			    b. Drug actions/Desired effects/Indications for use
			    c. Adverse reactions/Side effects/ Allergic reactions
			    d. Contraindications
			    e. Storage of drugs/Inventory control

		NHSS 1.1, 2.3	2. Preparing and Administering Oral and Parenteral Medications
			    a. Rights of medication administration
			    b. Dosage of medications
			      i. Metric conversion
			      ii. Units of measure
			      iii. Calculations of medication dosage
			    c. Routes of administration including safety precautions
			      i. Intramuscular
			      ii. Z-track

			iii. Subcutaneous
			iv. Oral/Sublingual/Buccal
			v. Topical/Transdermal
			vi. Inhalation
			vii. Instillation (eye, ear, nose)
			viii. Intradermal
			ix. Vaginal/Rectal
			d. Injections
			   i. Site selection
			   ii. Needle length and gauge
			e. Medication documentation
			   i. Documenting administration of medications
			   ii. Reporting medication errors

			3. Immunization Resources
			a. Centers for Disease Control and Prevention (CDC)
			   i. Childhood/Adult immunizations
			   ii. Recordkeeping for immunizations
			   iii. Vaccine Information Statement (VIS)
			   iv. Vaccine Adverse Event Reporting System (VAERS)
			   v. Vaccine storage

Legal and Ethical Issues		NHSS 5.1	1. Health Insurance Portability and Accountability Act (HIPAA) a. Maintain confidentiality/patient privacy (verbal and written) b. Health Information Technology for Economic and Clinical Health Act (HITECH) c. Patients' right to inspect, amend, and restrict access to their medical records d. Patients' Bill of Rights legislation/Patient Care Partnership e. Security of electronic transmission of information (encryption, password, firewall, activity log)

			2. Protected Health Information (PHI)
			a. Authorization to release
			   i. Drug and alcohol treatment records
			   ii. HIV-related information
			   iii. Mental health records
			   iv. Genetic Information Nondiscrimination Act of 2008 (GINA)
			   v. Release for continuity of care

			b. Authorization to rescind release c. Use and disposal of PHI

		NHSS 5.2.4	3. Consent
			  a. Informed/Written
			  b. Implied/Verbal
			  c. Exceptions (e.g., mature or emancipated minor, dependent adult, emergency situations)

		NHSS 7.2.1, 11.1.4	4. Federal and State Regulations
			  a. Professional Liability Torts
			    i. Negligence
			    ii. Slander
			    iii. Libel
			    iv. Abandonment
			    v. Assault
			    vi. Battery
			  b. Current standard of care
			  c. Legal terms and doctrines
			    i. Subpoena/Subpoena duces tecum
			    ii. Deposition
			    iii. Respondeat superior
			    iv. Good Samaritan laws/acts
			  d. Contracts (physician-patient relationships)
			    i. Legal obligations to the patient
			    ii. Termination of medical care
			      1. Elements/Behaviors for withdrawal of care
			      2. Patient notification/documentation

			5. Pharmaceutical Laws
			  a. Prescriptions/e-Prescribing
			  b. Drug schedules
			  c. Controlled substances (use and abuse)

		NHSS 5.1.1	6. Mandatory Reporting/Public Health Statutes
			  a. Communicable diseases
			  b. Vital statistics
			  c. Abuse/Neglect/Exploitation of child, elder, partner
			  d. Wounds of violence

		NHSS 4.1	7. Ethical Standards (Behaviors, Decisions, and Reporting)
			8. Medical Directives a. Advance directives

			b. Living will (Do Not Resuscitate [DNR] and Do Not Intubate [DNI]) c. Medical durable power of attorney d. Patient Self Determination Act (PSDA)

Communication		NHSS 2.1, 8.2.2.a	1. Interpersonal Relationship Skills/ Customer Service
			   a. Understanding human behavior and mental health
			   b. Defense mechanisms: recognition and adaptive responses
			   c. Identify and adapt approach to communication barriers with empathy and compassion
			      i. Death and dying/Terminal illness
			      ii. Visually/Hearing impaired/Interpreter
			      iii. Non-English speaking/English as a second language/Interpreter
			      iv. Americans with Disabilities Act Amendments Act (ADAAA) compliance
			      v. Illiterate
			      vi. Intellectually challenged
			      vii. Age-specific therapeutic/adaptive responses
			         1. Geriatric
			         2. Pediatric/Adolescent
			   d. Non-verbal communication (e.g., posture, facial expression, eye contact, gestures, touch)
			   e. Personal boundaries (e.g., sexual harassment, bullying, unwanted attention)
			   f. De-escalation techniques
			   g. Listening skills
			   h. Service recovery/Patient satisfaction

		NHSS 2.1.2	2. Therapeutic/Adaptive Responses
			   a. Cultural diversity and beliefs
			   b. Recognize stereotypes and biases and display impartial conduct (race, religion, age, gender, etc.)

			3. Learning Styles
			   a. Assessing and adapting to level of understanding (sender receiver-feedback)
			   b. Identifying and overcoming barriers to communication (internal/external/environmental distractions)

		NHSS 4.1.1, 8.1, 8.2	4. Health Care Team Roles

			a. Understanding/Communicating plan of care and referral coordination b. Serving as patient navigator/ advocate/case manager/health c. coach d. Utilizing a team approach to patient care management e. Identifying medical specialties
		NHSS 4.1	5. Professional Telephone Etiquette/ Techniques a. Message protocols b. Screening/Gathering data
Billing, Coding and Insurance		NHSS 11.1	1. Coding Applications a. Procedural coding (Current Procedural Terminology [CPT]) i. Modifiers ii. Upcoding/Downcoding iii. Bundling/Unbundling of charges b. Diagnostic coding (International Classification of Diseases, Clinical Modification [ICD-CM]) c. Healthcare Common Procedure Coding System (HCPCS Level II) d. Linkage of procedure and diagnostic coding to meet medical necessity guidelines
		NHSS 3.1.4	2. Insurance Fraud and/or Abuse
		NHSS 3.1.4	3. Coverage for Patient Services and Waivers a. Insurance eligibility verification b. Insurance claims i. Submission ii. Explanation of benefits (for patients) iii. Remittance advice (for providers) iv. Claim rejection and follow-up v. Tracking unpaid claims c. Advance Beneficiary Notice (ABN)
		NHSS 3.1.4	4. Insurance Types/Third-Party Payers a. Commercial plans b. Medicare/Medicare Advantage Plans c. Medicaid/State Children's Health Insurance Program (SCHIP) d. TRICARE/CHAMPVA e. Managed care

			f. Workers' compensation

			5. Authorizations and Resources
			   a. Precertification/Prior authorization
			      i. Diagnostic and surgical procedures
			      ii. Medications/Drug formulary
			   b. Denials/Appeals

			6. Financial Terminology
			   a. Accounts receivable
			   b. Accounts payable
			   c. Debits
			   d. Credits/Credit balance
			   e. Deductible

			7. Patient Account Financial Procedures
			   a. Post charges
			   b. Post payments
			   c. Post adjustments/Write-offs
			   d. End-of-day reconciliation

		NHSS 1.3	8. Financial Calculations

		NHSS 1.3	9. Billing/Collections
			   a. Itemized statements
			   b. Aging of accounts
			   c. Collecting payments (e.g., co-pay, pre-pay, co-insurance, self-pay)
			   d. Preplanned payment options/ credit arrangements
			   e. Use of collection agencies
			   f. Account collection rules

Scheduling Appointments and Health Information Management		NHSS 11.1	1. Scheduling Appointments
			   a. New patient
			   b. Established patient
			   c. Routine versus urgent
			   d. Coordinate facility/equipment/ personnel requirements
			   e. Ancillary services (laboratory, X-ray, surgery, outpatient procedures, hospital admissions)
			   f. Cancellations/No-shows/Physician delay or unavailability

			2. Medical Reception/Patient Registration
			   a. Patient identification/Obtain patient demographics
			   b. Identity theft protection
			   c. Obtain accurate billing information

| | | NHSS 11.1 | 1. Electronic Health Records
   a. Patient portal
   b. Recognize/Identify/Organize medical reports
      i. History and physical
      ii. Discharge summary
      iii. Operative note
      iv. Diagnostic test/Laboratory report
      v. Clinic progress note
      vi. Consultation report
      vii. Growth charts, graphs, tables
   c. Medical record preparation/Previsit planning
      i. Obtain copy of patients' outside medical record and/or pertinent test results |