

Competency-based Emergency Medical Technician Program



Table of Contents

Background	3
Didactic and Lab	4
Clinical Behavior/Judgment.....	5
Hospital/Clinical Experience	10
Competency Allocation and Tracking	11



Background

In 2006, at the request of several municipal and college based training programs, the Training and Certification Committee opted to begin a pilot program which would allow Emergency Medical Technician (EMT) programs conducted in established, accredited facilities to be taught by EMS providers who were not certified EMT-Instructors.

The pilot program, conducted from 2006 to 2009, resulted in the development of a state approved, competency-based EMT program. The pilot program participants were:

- Prince William County Fire-Rescue
- Roanoke Valley Regional Fire Training Center
- J. Sargeant Reynolds Community College
- Tidewater Community College

The Virginia Competency-based EMT program, outlined below, requires that that individual/training entity offering the program be accredited in order to have non-certified EMT-Instructors teach the program.

Currently certified EMT-Instructors may make use of the program, however without accreditation, they must ensure that a certified EMT-Instructor is present for all instruction as required in the EMS Rules and Regulations 12VAC5-31.



Didactic and Lab

The Virginia Competency-based EMT program is—at a minimum—comprised of a total of 154 hours which are assigned as follows.

The following table outlines—at a minimum—the content area and hour requirements of the EMT program. The Course Coordinator shall assure course content includes all areas of the [Virginia EMS Education Standards \(VEMSES\)](#). Although the *Elaboration of Knowledge* is not identified for each of the VEMSES Content Areas, the Course Coordinator shall cover all material in class to the depth and breadth necessary for student competency to be achieved.

The Course Coordinator shall conduct classroom didactic, laboratory and clinical instruction that follows the Virginia Office of EMS Rules and Regulations and Training Program Administration Manual.

VEMSES Content Area	Minimum Required Hours
Preparatory	11
Anatomy & Physiology	3
Medical Terminology	1
Pathophysiology	4
Life Span Development	1
Public Health	1
Pharmacology	3
Airway Management, Respiration and Artificial Ventilation	7
Assessment	8
Medicine	21
Shock and Resuscitation	3
Trauma	24
Special Patient Populations	11
EMS Operations	23*
Clinical Behavior/Judgment	23**
Hospital/Clinical Experience	10
Total	154 hours

* EMS Operations – The Elaboration of Knowledge section for this competency can be achieved as described in TPAM T-570.

** See pages 5-10 of this document.



Clinical Behavior/Judgment

Psychomotor Skills

The Course Coordinator shall assure that the following psychomotor skill competencies are met for each of the VEMSES Content Areas below. These competencies may be obtained through practical skill labs or the use of scenarios. See Appendix A of this document for sample scenarios which can be used in this program.

Content Area	Competency Area	# Required
Preparatory	Must demonstrate the ability to select, don, remove and discard PPE	2
	Must Demonstrate the ability to properly disinfect/clean EMS equip/ambulance	2
	Must demonstrate the ability to properly comply w/infectious control exposure using local protocols	1
	Must demonstrate the ability to assess a patient for breathing difficulty	5
	Must demonstrate ability to acquire a pulse providing rate, rhythm, and strength	5
	Must demonstrate ability to assess the skin color, temp, and condition in an adult	5
	Must demonstrate ability to assess capillary refill in pt. < 6 years old	2
	Must demonstrate ability to assess the pupils as to equality, size, reactivity	5
	Must demonstrate ability to obtain a blood pressure	5
	Must demonstrate ability to obtain a SAMPLE history	5
	Operate stretcher	2
	Operate Stair chair	2
	Move Patient using Spine board	2
	Move pt. from ambulance stretcher to a hospital bed	1
Airway	Must demonstrate ability to perform a chin-lift during an airway scenario	5
	Must demonstrate ability to perform a jaw thrust during an airway scenario	5
	Must demonstrate ability to perform suctioning during an airway scenario using soft/rigid suction devices	5
	Must demonstrate ability to provide mouth to mouth ventilation using BSI (pocket mask)	5
	Must demonstrate ability to assemble, connect to O2 and ventilate during airway scenario using BVM	5



	Must demonstrate ability to ventilate using a BVM for 1 min each demonstration	5
	Must demonstrate ventilating with a flow restricted, oxygen powered ventilation device	2
	Demonstrate how to artificially ventilate patient w/stoma	2
	Demonstrate how to insert OP airway during an airway scenario	5
	Demonstrate how to insert NP airway during an airway scenario	5
	Correctly operate O2 tanks and regulator	5
	Demonstrate use of non-rebreather and adjust O2 flow requirements needed for use during airway scenario	5
	Demonstrate use of nasal cannula and adjust O2 flow requirements needed for use during airway scenario	5
	Demonstrate how to artificially ventilate an infant and child during scenario	2
	Demonstrate O2 administration to infants and children	2
Patient Assessment	While reviewing scenes identify potential hazards	3
	Demonstrate the techniques for assessing mental status in a scenario	3
	Demonstrate techniques for assessing the airway in a scenario	3
	Demonstrate techniques for assessing if pt. is breathing in a scenario	3
	Demonstrate techniques for assessing if pt. has a pulse scenario	3
	Demonstrate Techniques for assessing pt. for external bleeding in a scenario	3
	Demonstrate techniques for assessing pt. skin color, temp. condition in scenario	3
	Demonstrate the ability to prioritize pt. in scenario	3
	Demonstrate rapid trauma assess based on mech. of injury in scenario	3
	Demonstrate pt. assessment skills in responsive pt. with no known history in scenario	3
	Demonstrate pt. assessment skills in an unconscious/ALOC pt. in scenario	3
	Demonstrate skills in detailed physical exam	3
	Demonstrate skills in ongoing assessment	3
	Perform a simulated, organized, concise radio transmission (lab setting)	3



	Perform pt. report that would be given to staff at receiving facility (lab setting)	3
	Perform report that would be given to ALS provider in (lab setting)	3
	Complete pre-hospital care report (lab setting)	3
Medical	Demonstrate General steps for assisting pt. with self administration of meds	5
	Read labels and inspect each type of meds	5
	Demonstrate emergency medical care for breathing difficulty in scenario	5
	Perform steps in using inhaler scenario	2
	Demonstrate assessment and care for chest pain pt. in scenario	5
	Demonstrate application and operation of AED in scenario w/CPR	5
	Demonstrate maintenance of AED	2
	Demonstrate assessment and documentation of patient response to AED	5
	Demonstrate skills to complete the automated defibrillator: operators shift checklist	2
	Perform steps for use of Nitro for chest pain/discomfort in scenario	2
	Demonstrate assessment and documentation of pt. response to nitro in scenario	2
	Practice completing PPCR for cardiac emergency in scenario	3
	Demonstrate steps in emergency medical care for Pt. taking diabetic medicine w/ALOC in scenario	3
	Demonstrate steps in administration of oral glucose in scenario	2
	Demonstrate assessment and documentation of pt response to oral glucose in scenario	2
	Demonstrate how to complete PPCR for Pt. w/diabetic emergency in scenario	3
	Demonstrate care for Pt. w/allergic reaction in scenario	3
	Demonstrate use of EPI-Pen in scenario	2
	Assessment/documentation of Pt. in response to EPI-Pen in scenario	2
	Demonstrate proper disposal of equipment in scenario	2
	demonstrate completion of PPCR for Pt. Allergic reaction in scenario	3
	Demonstrate care of Pt. w/possible overdose scenario	3
	Demonstrate assessment/care of pt. w/exposure to cold	2



	in scenario	
	Demonstrate assessment/care of pt. w/exposure to heat in scenario	2
	Assessment/care of near drowning pt in scenario	2
	Complete prehospital care report for pt. w/environmental emergencies in scenario	2
	Assessment/care of pt w/behavioral emergency in scenario	3
	Demonstrate techniques to restrain pt. with behavioral problem in scenario	2
	Demonstrate steps to assist in normal cephalic delivery	2
	Demonstrate necessary care for fetus as head appears	2
	Demonstrate infant neonatal procedures	2
	Demonstrate post delivery care of infant	2
	Demonstrate how and when to cut umbilical cord	2
	Attend to steps in the delivery of the placenta	2
	Demonstrate post-delivery care of mother	2
	Demonstrate the procedures for following abnormal deliveries (vaginal bleeding, breech birth, prolapsed cord, limb presentation)	1
	Demonstrate steps in care of mother with excessive bleeding	1
	Complete PPCR of OB pt	1
Trauma	Demonstrate direct then diffuse pressure by applying dressing to the head	2
	Demonstrate direct then diffuse pressure by applying dressing to the shoulder	2
	Demonstrate direct then diffuse pressure by applying dressing an extremity	3
	Demonstrate direct then diffuse pressure by applying dressing to the hip	2
	Demonstrate use of pressure point/tourniquet at brachial	2
	Demonstrate use of pressure point/tourniquet at Femoral	2
	Demonstrate care of pt. w/signs and symptoms of internal bleeding/shock	1
	Complete PPCR on Bleeding and/or shock Pt.	1
	Demonstrate the care of closed soft tissue injuries	1
	Demonstrate the care of open soft tissue injuries	1
	Demonstrate care of open chest wound	2
	Demonstrate care of open abdominal wounds	2
	Demonstrate care of impaled object	2



	Demonstrate care of pt w/amputation and the amputated part	1
	Demonstrate care of pt. with superficial burns	1
	Demonstrate care of pt. with partial thickness burns	1
	Demonstrate care of pt. with full thickness burns	1
	Demonstrate care of pt. w/chemical burns	1
	Complete PPCR w/pt. having soft tissue injuries	1
	Demonstrate care of pt. with painful swollen deformed forearm	2
	Demonstrate care of pt. with painful swollen deformed arm	2
	Demonstrate care of pt. with painful swollen deformed clavicle	2
	Demonstrate care of pt. with painful swollen deformed thigh	2
	Demonstrate care of pt. with painful swollen deformed calf	2
	Demonstrate care of pt. with painful swollen deformed ankle/foot	2
	Complete PPCR w/pt. having painful, swollen deformity	2
	Demonstrate opening airway in pt. with suspected spinal cord injury. (during scenario)	2
	Demonstrate evaluating a responsive patient with a suspected spinal cord injury. (during scenario)	2
	Demonstrate stabilization of the cervical spine. (during scenario)	4
	Demonstrate the four person log roll for a pt. with a suspected spinal cord injury (during scenario)	1
	Demonstrate how to log roll a pt. with a suspected spinal cord injury using two people (during scenario)	2
	Demonstrate securing a patient to a long spine board (during scenario)	4
	Demonstrate using the short board technique	3
	Demonstrate procedure for rapid extrication	2
	Demonstrate preferred methods for stabilization of a helmet	2
	Demonstrate helmet removal techniques	2
	Demonstrate completing a PPCR for patients with head and spinal injuries	2
Infants/ Pediatrics	Demonstrate the techniques of foreign body airway obstruction removal in the infant	3
	Demonstrate the techniques of foreign body airway obstruction removal in the child	3



	Demonstrate the assessment of an infant and a child	3
	Demonstrate bag-valve-mask artificial ventilations for the infant	3
	Demonstrate bag-valve-mask artificial ventilations for the child	3
	Demonstrate oxygen delivery for the infant and child	3
OPS	Given a scenario of a mass casualty incident perform triage	1

Hospital/Clinical Experience

Each student is required to comply with the VEMSES standards for this section.

- Students should observe emergency department operations for a period of time sufficient to gain an appreciation for the continuum of care.
- Students must participate in and document patient contacts in a field experience approved by the Medical Director and Program Director.
- Students must perform 10 patient assessments
 - A minimum of five (5) patient assessments must be performed on live patients. These should be performed on an ambulance or in an emergency department or may be completed in a clinic, nursing home, doctor's office, etc.
 - No more than five of the required 10 patient assessments may be performed on standardized programmed patients or advanced simulation mannequins.
 - Standardized Program Patients is defined as:
 - The use of individuals trained to portray the roles of patients, family members or others to allow students to practice physical exam skills, history taking skills, communication skills and other exercises.
 - Experiential Learning with a Standardized Patient
 - Standardized Patient (SP) is a person carefully recruited and trained to take on the characteristics of a real patient thereby affording the student an opportunity to learn and to be evaluated on learned skills in a simulated clinical environment.
 - During an interaction with a student the SP may:
 - present case history in response to questioning by the student



- undergo a limited physical examination at the student's direction
- assist students in developing their communication and clinical skills
- assist students in working through difficult emotional situations in a safe environment
- Advanced Simulation Manikins are defined as:
 - A realistic interactive training manikin for simulating a wide range of advanced life saving skills in medical emergencies.
 - Meeting the following minimum specifications as defines by the Medical Direction Committee on January 19, 2005:
 - 12 pulse points
 - Advanced IV arm
 - Bilateral Tension Pneumothorax
 - Oral and nasal intubation
 - Tongue edema and laryngospasm
 - Crichothyrotomy
 - 4 lead ECG monitoring and defib
 - CPR with difibrillation
 - Upper teeth break out
 - Inflation of pulses and pneumothorax
 - Bilateral chest tube insertion with simulated fluid discharge
 - IM injection site on deltoid
 - Left and right lungs and stomach that distends
 - Heart and lung sounds selection
 - Variable blood pressures

Competency Allocation and Tracking

Students who are enrolled in a Virginia Competency-based EMT program must fulfill all the competency requirements as outlined in this document in order to be considered as having successfully completed the training program and be eligible for state testing.

Competencies can be earned any number of ways—either through practical skill labs or the use of scenarios. EMT-Instructors involved in the pilot testing of this new program found that the use of scenarios enhanced the educational process while at the same time allowing multiple competencies to be earned as the scenario played out.

In the following appendices, you will find scenario templates (Appendix A) and competency allocation/tracking guidance (Appendix B).



Regardless of how you choose to award competencies, it is imperative that you maintain accurate and adequate records for each student which verifies successful completion of the required competencies.



Appendix A

Please see the Office of EMS web page for these downloads.

<http://www.vdh.virginia.gov/OEMS/Training/CompetencyBasedEMTProgram.htm>

Appendix B

Please see the Office of EMS web page for these downloads.

<http://www.vdh.virginia.gov/OEMS/Training/CompetencyBasedEMTProgram.htm>