

ADVANCED EMT STUDENT MINIMUM COMPETENCIES (SMC)

This document was created to provide standards for the verification of AEMT student minimum competencies. It endeavors to maximize efficiency, consistency of instructional quality, and student competence. Further, it supports a system of EMS personnel licensure that is consistent with other healthcare occupations.

Beginning July 1, 2024, the National Registry will require verification by the AEMT Program Director that student minimum competency has been verified in compliance with state EMS office requirements and in a manner consistent with this document. Any AEMT course finishing after June 30, 2024, must include the SMC.

Principles of Design

Age/Development-
Based
Competency

Pathology
Competency

Skills
Competency

Field Experience

**LOUISIANA BUREAU
OF EMS**

7273 Florida Blvd.
Baton Rouge, LA 70806

(225) 925-4022
Fax: (225) 925-7244

<http://ems.ldh.la.gov>

ACKNOWLEDGMENTS

The Bureau of EMS acknowledges and thanks the subject matter experts who contributed their time and effort to the project. Extensive dialogue, as well as the sharing of knowledge and experience, brought about compromise, convergence, and consensus of ideas. The following individuals were instrumental in the development of Louisiana's AEMT Student Minimum Competencies.

Susan Bailey, Bureau of EMS

John Cavell, Bureau of EMS

Doug Champlin, Bureau of EMS

Jeff Anderson, Bossier Parish Community College

Justin Arnone, Louisiana Firefighters Foundation

Otha Henry, East Baton Rouge EMS

Jared Kimball, Southern Training Consultants

David Marcus, Northshore EMS

Kayla Rains, Louisiana Delta Community College

David Rogers, East Baton Rouge EMS

Patti Thompson, Northeast Louisiana Ambulance

Modeled off the NASEMSO Advanced Emergency Medical Technician (AEMT) Student Minimum Competency Guideline (2023).

INTRODUCTION

The goal of this document is to describe minimum expectations for student formative experiences and minimum expectations by which the program ensures entry-level competency. Formative experience is defined as an activity in which the student's performance is assessed to provide feedback during the educational experience and to expose the student to the variety of patients and conditions seen by a practicing AEMT. Reasonable evidence of competency is defined as the performance expectation by which the educational program can attest that the student has amassed a portfolio of demonstrated performance of skills and abilities necessary for safe and effective care. The standards for reasonable evidence of competency are built on the concept that competent performance must be demonstrated over time in a variety of conditions.

A single evaluation of skills performance by the educational institution cannot provide sufficient evidence of competency. The use of portfolios is an established tool that contributes to the valid and reliable evaluation of competency.

The tracking system (e.g. portfolio) for demonstration of skills and experiences during training should track each of the four (4) dimensions for the educational activity that assesses skills and abilities:

- Description of the assessed skill or ability
- The age or developmental category of the patient
- Pathophysiology or type of patient presentation
- The environment of the evaluation: laboratory setting, simulated patient encounter, or live patient encounter

Each experience can then be compared to the tables that follow later for expected minimums.

Portfolios are subject to the record retention policy in force by the Louisiana Bureau of EMS of a minimum of two consecutive license cycles. These portfolios may be subject to audit to ensure a minimum level of quality and competency is maintained.

The Bureau of EMS does allow agencies to decide the most appropriate format for the portfolio. Electronic and paper mediums are both acceptable.

PRINCIPLES OF DESIGN

The principles behind this document are to communicate minimum expectations in a manner that enables consistency of application and verification of competency. The following principles guided the development of the document:

Simplicity

- The document should be easily summarized and understood. It should provide a consistent standard for data storage and data communication that is scalable and open. AEMT educational programs range in size and structure, and the expectations should provide a common baseline that can be implemented and tracked.
- The document should focus on the “what” rather than the “how.” This principle is particularly important as medical science and educational practices evolve. The document does not specify how a skill should be performed but rather focuses that the skill should be performed according to the current standard of care.

Modularity

- This document aims to provide a modular format that adapts to evolving standards.
- This document aims to provide a framework and model that can be used for all levels of EMS personnel.
- State EMS offices have the authority and responsibility to establish training standards and program approval for AEMT educational programs.

Clarity

- The document aims to identify which tasks are essential for the verification of competency, including skills. The aim is clear identification and communication of minimum expectations that constitute reasonable evidence that the student can perform the task on demand.
- The document also aims to identify standards for areas that require exposure and experience with live patients versus the ability to simulate experiences, recognizing the limitations of current simulation capabilities.

AGE/DEVELOPMENTAL-BASED COMPETENCY

Patients of different ages present with distinct anatomies, physiologies, and disease processes. Students must have exposure to patients of various ages to build both competence and confidence. As a result of these differences and learner needs, the SMC includes distinctive age considerations for assessment and management. The educational institution must assess student ability to provide safe and effective care for a variety of ages of patients.

Because of the distinct anatomies, physiologies, developmental milestones, and disease processes for different age groups, there is educational value in exposure to live patients among different age groups. The full presentation of the assessment for patients with or without injury or disease is difficult to fully simulate. This difficulty is particularly pronounced for students who have had limited previous exposure to patients in different age groups. Recognizing this difficulty, exposure to live patients—even those without disease or injury—is better than simulated experiences and must be a strong goal.

Live exposures are defined as live patients that are encountered in the field, clinical, or lab setting (with or without actual illness/injury). Illnesses/injuries can be simulated on or by a live person. Simulated exposures are considered illnesses/injuries simulated on or with a manikin or other technology (e.g. Virtual Reality)

Table 1 - Ages

Student Minimum Competency (SMC)	Exposure in Laboratory, Hospital/Clinical, and Field Experience, and Capstone Field Internship
Total live patient exposures during the laboratory, clinical/hospital, and field phases	Minimum of 30 live exposures
Pediatric patients with pathologies or complaints (birth to 18 years of age)	Minimum of 5 exposures
Adult (19 to 65 years of age)	Minimum of 15 exposures
Geriatric (older than 65 years of age)	Minimum of 15 exposures

Students are required to be exposed to a total minimum of 30 live patients regardless of age or environment (Laboratory, Hospital/Clinical, Field Experience, or Internship). The minimum of each specific age group can be met by either live or simulated (manikin) patients.

For example – A student has 20 exposures to live Adult patients, 7 exposures to live Geriatric patients, and 4 exposures to live Pediatric patients. They have met the minimum “live exposure goal” but are still in need of additional Geriatric and Pediatric exposures to meet the individual age group goals. The student can then participate in simulations to obtain the additional exposures needed. This would be a minimum of 8 Geriatric and 1 pediatric simulation that would be needed.

AEMT STUDENT MINIMUM COMPETENCIES

The pediatric community has also recommended consideration that developmental differences among pediatric patients present difficulties. Recognizing challenges in accessibility to a wide variety of ages for AEMT educational programs, recommendations for subgroups of pediatric patients based on development have not been provided. If accessible, the AEMT educational program may want to consider tracking exposure in the following developmental categories:

- Neonate (birth to 30 days)
- Infant (1 month to 12 months)
- Toddler (1 to 2 years)
- Preschool (3 to 5 years)
- School-aged/Pre-adolescent (6 to 12 years)
- Adolescent (13 to 18 years)

Each patient encounter or simulation should only have one age designation. If a simulation involves multiple patients, the competency should be assessed for each patient.

Alternative areas to provide exposure, such as primary care healthcare settings, childcare environments, and long-term care, can provide important context that is valuable while learning to differentiate abnormal presentations from normal ones.

PATHOLOGY COMPETENCY

Competent assessment and management of an emergency require distinct approaches depending on the patient's condition. The educational institution must assess student ability to provide safe and effective care for a variety of patient conditions. Appropriate student evaluation mixes formative and summative evaluations to ultimately ensure competency

Each patient encounter or simulation could include more than one condition or impression per patient.

Before assessing student performance in the management of emergency conditions, the student should have received education and have clear expectations for performance on the following:

- General patient assessment
- General history taking
- Family and patient communications
- Crew Resource Management (CRM) and team performance expectations
- Assessment and actions to ensure provider safety (including standard and personal protective equipment (PPE))

A single performance is rarely, if ever, a valid assessment of competency. AEMT educational programs should verify competency as reliable performance in multiple situations over time as a valid assessment of competency rather than a single skills examination. The need for verification in multiple situations over time must be balanced by concerns for opportunities for performance and time constraints of the educational program.

Formative exposure in laboratory, hospital/clinical, or field experiences can be used to assist in the development of curriculum as well as clinical and simulation sequences. Peer evaluation may augment, but should not replace evaluation by a supervisor, preceptor, examiner, or instructor.

Competency Evaluation in Hospital/Clinical or Field Experience or Capstone Field Internship and Simulation in Designated Cases are the recommended minimum acceptable requirements for program evaluation of student minimum competency. Simulations may be required to satisfy some of the pathologies and complaints. In an ideal setting, live exposures would be preferred over simulation.

The allowance for simulation is indicated in the table that follows for pathologies and complaints that are infrequently experienced in the clinical/hospital, or Field Experience/Capstone Field Internship phases of an AEMT course. The program must document that the student met the standards for program completion for each patient's age, condition, and intervention.

AEMT STUDENT MINIMUM COMPETENCIES

Table 2 – Pathology/Complaint (Conditions)

Student Minimum Competency by Pathology or Complaint	Live Exposure vs. Simulation	Exposure in Laboratory, Clinical/Hospital, or Field Experience/Capstone Field Internship*
Trauma	Live exposure	Minimum of 5 exposures
Psychiatric/Behavioral	Live exposure	Minimum of 5 exposures
Uncomplicated and/or Complicated Obstetric Delivery**	Simulation is permissible, based on competency determined by the Program Director and Medical Director	Minimum of 3 exposures
Distressed neonate	Simulation is permissible, based on competency determined by the Program Director and Medical Director	Minimum of 3 exposures
Cardiac pathologies or complaints (for example, acute coronary syndrome, cardiac chest pain)	Live exposure	Minimum of 5 exposures
Cardiac arrest	Simulation is permissible, based on competency determined by the Program Director and Medical Director	Minimum of 5 exposures
Medical neurological pathologies or complaints (for example, transient ischemic attack, stroke, syncope, or altered mental status presentation)	Live exposure	Minimum of 5 exposures
Respiratory pathologies or complaints (for example, respiratory distress, respiratory failure, respiratory arrest, acute asthma episode, lower respiratory infection)	Live exposure	Minimum of 5 exposures
Other medical conditions or complaints***	Live exposure	Minimum of 5 exposures
Sum of the Pathologies/Complaints	N/A	<i>Minimum of 50 total exposures</i>

* Conducts a patient assessment and develops a management plan for the evaluation of each patient with minimal to no assistance.

** Should include normal and complicated obstetric deliveries such as breech, prolapsed cord, shoulder dystocia, precipitous delivery, multiple births, premature birth, abnormal presentation, postpartum hemorrhage

AEMT STUDENT MINIMUM COMPETENCIES

*** For example, gastrointestinal, genitourinary, gynecologic, reproductive pathologies, or abdominal pain complaints, infectious disease, endocrine disorders or complaints, overdose or substance abuse, toxicology, hematologic disorders, non-traumatic musculoskeletal disorders, diseases of the eyes, ears, nose, and throat.

SKILLS COMPETENCY

Skills listed in the National EMS Scope of Practice Model must be assessed. The educational institution must assess student ability to provide safe and effective performance of skills. Ultimately, the student should successfully be able to consistently perform a listed skill for a variety of conditions and patient ages.

It is important to note that this table only includes simple (isolated) and discrete motor skills—not complex integrated (or combined skills used to run an entire EMS event) judgment and performance. Motor skills are tracked separately because the valid evaluation of pure motor skills requires a log of skills performed over time in various conditions—not single point-in-time evaluations such as a summative examination. Each patient encounter or simulation may contain several skills, but each skill is assessed individually.

A single performance is not a valid assessment of competency. AEMT educational programs should verify competency as reliable performance in multiple situations over time as a valid assessment of competency rather than a single skills examination.

Formative skill instruction experiences should be conducted in the AEMT educational program to learn motor skills before clinical or field experiences. Development of curriculum, hospital/clinical, and simulation sequences should support the progression of learning from introduction to simulation as a learning experience, to verification of competency. Peer evaluation may augment, but should not replace evaluation by a supervisor, preceptor, examiner, or instructor.

The minimum successful individual motor skills evaluated in real or simulated patient exposure are the minimum acceptable recommendations for exposure in the laboratory, hospital/clinical encounters, or field events. Simulation is permitted when a skill is extremely difficult to obtain.

Limited availability of skill performance may dictate that competency be verified in a relatively small number of simulated or live patient encounters. Peer student evaluation may be useful for formative evaluation but should not be used for summative competency verification.

AEMT STUDENT MINIMUM COMPETENCIES

Table 3 - Skills

Recommended Motor Skills Assessed and Success	Minimum Successful Motor Skills assessed on patients during the Laboratory, Clinical, or Field Experience or Capstone Field Internship*
Venous blood sampling	4*
Establishing intravenous access	20
Administering IV bolus / IO medication	5*
Administering IM injection	2*
Intranasal medication	2*
Establishing intraosseous access	5*
Establish Pediatric IO	5*
Performing endotracheal suctioning	2*
Inserting supraglottic airway	5*
Defibrillation: Automated and Semi-automated	2*
Performing chest compressions	2*

* Simulation permitted for skills with an asterisk.

FIELD EXPERIENCE

Field experience is an opportunity to apply the knowledge gained in the classroom with precepted practice in the field. Students must be precepted for the entire duration of a call for it to count as a field experience.

Capstone experience integrates coursework, knowledge, skills, and experiential learning to enable the student to demonstrate a broad mastery of learning across all three domains: didactic, psychomotor, and affective.

Table 4 – Field Experience/Capstone Field Internship

Field Experience	Capstone Field Internship
Conducts competent assessment and management of prehospital patients with assistance while TEAM LEADER <i>or</i> TEAM MEMBER	Successfully manages the scene, performs patient assessments, and directs medical care and transport as TEAM LEADER with minimal to no assistance
Minimum of 5 exposures	Minimum of 5 exposures

AEMT STUDENT MINIMUM COMPETENCIES

NOTES:

