

National EMS Education Standards Transition Template

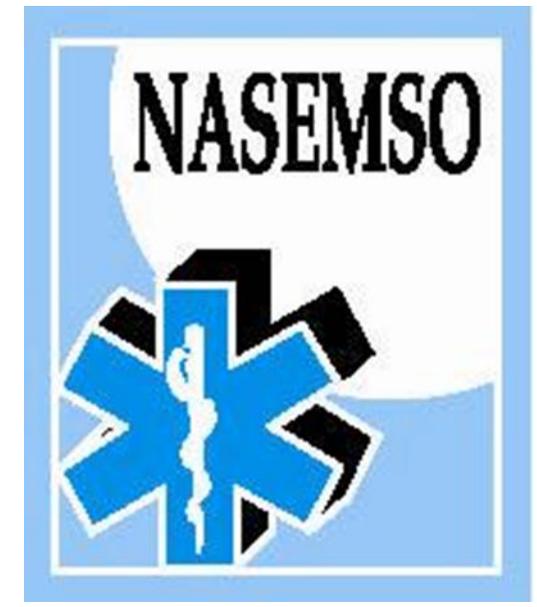
A Comparison of EMS Knowledge and Skills to Assist the Transition and Implementation of the National EMS Education Standards for the

EMT Intermediate 85 to Advanced Emergency Medical Technician

June 2011

National Association of State EMS Officials

Falls Church, VA



Background:

In 1996, the National Highway Traffic Safety Administration (NHTSA) and the Health Resources and Services Administration (HRSA) published the national consensus document titled *EMS Agenda for the Future (Agenda)*. The intent of the *Agenda* is to create a common vision for the future of EMS and is designed for use by government and private organizations at the national, state and local levels to help guide EMS planning, decision making, and policy. In 2000, the *Agenda* was followed by the *EMS Education Agenda for the Future: A Systems Approach (Education Agenda)*. Since the release of the *Agenda*, the *National EMS Core Content (Core Content)*, *National EMS Scope of Practice Model (Scope of Practice Model)*, and the *National EMS Education Standards (Education Standards)* have been completed and published along with Instructional Guidelines geared to each practitioner level. States license EMS personnel and EMS agencies as a means of ensuring public health and safety. Because of this common and important function, the National Association of State EMS Officials (NASEMSO) has taken the lead in coordinating implementation of the *Education Agenda*. Because states may need to revise or develop processes to facilitate a smooth transition from the *U.S. Department of Transportation National Standard Curricula (NSC)* to the new *Education Standards*, the National Association of State EMS Officials (NASEMSO) collaborated with a panel of experts and several national stakeholder groups to establish a *Gap Analysis Template* in 2009. States were encouraged to consider several important factors to implement of the *Education Standards*:

- Individual states are encouraged to use the *National EMS Scope of Practice Model* as a foundation to establish state EMS practitioner levels.
- Individual states are encouraged to use the *Gap Analysis Template* to help define system processes that support the transition of EMS practitioners to the state-adopted scope of practice.
- The *Education Standards* promotes increased flexibility, encourages creativity within each EMS education program and encourages alternative delivery methods. The *Education Standards* do not represent a prescriptive sequence or content grouping for a class presentation. States and/or educational programs will need to determine the sequence for teaching the materials.
- Course outcome evaluations should be based on student competency, not the time to course completion, as this may vary. Time estimates may be provided to guide the *planning* for presentation of course materials.
- States and/or education programs should re-evaluate student qualifications, co-requisites, or pre-requisites for all EMS practitioner levels.
- States and/or programs should consider co-requisites or pre-requisites for transition courses to help establish the depth and breadth of new content.
- Individuals transitioning within a level (i.e. EMT-P to Paramedic) are responsible for the knowledge and skills that are implicit to all previous levels.

States retain the authority to credential individual practitioners in a way that best meets the needs of the state. Some states have already identified state-based learning objectives and educational priorities that exist both above and below the *Education Standards* making it difficult to establish a “national curriculum” for transition. Because a transition course per se would have a limited shelf life as the *Education Standards* are implemented, available resources have been focused on developing materials that will support implementation of the new practitioner levels and pre-packaged educational materials geared specifically *to the changes* are generally unavailable. To assist this effort, NASEMSO has utilized the Gap Analysis Template to help identify the generic “Gap Content” that can be used to enhance the knowledge and skills of existing practitioners that desire certification/licensure at the level of the *Education Standards*. Proper learning objectives should be developed by end users and accompany an identification of methods (i.e. medical literature, publisher materials, in-service programs, and Learning Management Systems) that can be used to achieve educational goals. Page guides have been

included to cross reference content with the *Education Standards* and more detail regarding content can be found within the Instructional Guidelines. Time frames (rough estimates) have been provided to assist in planning and are not intended to serve as a mandate. For the purposes of the Transition Templates:

- **“Essential Content”** is content or material that has been identified by an expert panel as having significantly changed (including expanded) from the NSC with sufficient clinical relevance that review and/or instruction during the transition process is **strongly recommended**.
- **“Supplemental Content”** is content or material that has been highlighted by the panel as changed (including expanded) from the NSC with sufficient clinical relevance that review and/or instruction **should be considered**.

Content areas that do not include time frames likely contain content changes that were felt to be insufficient to warrant updating. These content areas should, at a minimum, be reviewed by the state and added to transition learning requirements if deemed appropriate. Proper learning objectives should be developed by end users and accompany an identification of methods (i.e. medical literature, publisher materials, in-service programs, and Learning Management Systems) that can be used to achieve educational goals. Page guides have been included to cross reference content with the *Education Standards* and more detail regarding content can be found within the Instructional Guidelines. Declarative time frames (rough estimates) have been provided to assist planning efforts and are not intended to serve as a mandate. In addition, the *Education Standards* recognize the National Incident Management System (NIMS) and Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, 29 CFR 1910.120 as pre- or co-requisite training requirements. Additional time may be needed to accommodate this content.

States will need to determine which content and/or skills must be tested and/or verified to complete state-based transition processes and communicate this information to stakeholders.

A list of EMS publisher materials that support the implementation of the Education Standards is maintained by NASEMSO on our web site at www.nasemso.org. *Education Standards* and *Instructional Guidelines* listed in this document serve as an example for convenience of the reader. Official documents published by NHTSA are available at www.ems.gov.

The NASEMSO Implementation Team is available to provide technical assistance to states with *Education Agenda* implementation efforts. State officials that desire additional information can contact NASEMSO via info@nasemso.org or call NASEMSO Program Advisor Kathy Robinson at (703) 538-1799 ext 1708.

Transition of EMT Intermediate 85 to Advanced Emergency Medical Technician

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
Preparatory	Applies fundamental knowledge of the EMS system, safety/well-being of the AEMT, medical/legal and ethical issues to the provision of emergency care. (P. 11)			Total for Section E = 65 min. S = 30 min	
• EMS Systems	Fundamental depth, foundational breadth • Quality improvement • Patient safety (P. 11)	More detailed discussion on patient safety issues, strategies to decrease medical errors	II. Patient Safety A. Significant – One of the Most Urgent Health Care Challenges B. Incidence C. High-Risk Activities D. How Errors Happen E.. Preventing Errors (P. 1)	15 min.	Essential
• Research	Simple depth, simple breadth • Evidence-based decision making (P. 11)	Extremely limited information on evidence based decision making	Refer to EMT Level Guidelines (P. 4) I. Evidence-Based Decision-Making A. Traditional Medical Practice B. High-Quality Patient Care Should Focus on Procedures Proven Useful in Improving Patient Outcomes C. The Challenge for EMS Is the Relative Lack of Prehospital Research D. Evidence-Based Decision-Making Technique	5 min.	Essential
• Workforce Safety and Wellness	Fundamental depth, foundational breadth • Standard safety precautions • Personal protective equipment • Stress management o Dealing with death and dying • Prevention of work related injuries • Lifting and moving patients • Disease transmission • Wellness principles (P. 12)	Emphasizes the difference between body substance isolation and personal protective equipment; brief discussion on bariatric issues, neonatal isolettes and medical restraint	Refer to EMT Level Guidelines (PP. 4-5) I. Standard Safety Precautions A. Hand washing B. Adherence to Standard Precautions/OSHA Regulation C. Safe Operation of EMS/Patient Care Equipment D. Environmental Control E. Occupational Health and Blood borne Pathogens II. Personal Protective Equipment V. (Selected Topics in) Lifting and Moving Patients	20 min.	Supplemental
• Documentation	Complex depth, foundational breadth • Principles of medical documentation and report writing (P. 13)	The Health Insurance Portability and Accountability Act (HIPAA) did not exist when either of the EMT-I curricula was authored	B. Prehospital Care Report (P. 7)	0	Covered in Medical/Legal Ethics

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
<ul style="list-style-type: none"> EMS System Communication 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> EMS communication system Communication with other health care professionals Team communication and dynamics (P. 13) 	More detailed information about improving communication	II. Communicating With Other Health Care Professionals (P. 8)	10 min.	Supplemental
<ul style="list-style-type: none"> Therapeutic Communications 	Simple depth, simple breadth Principles of communicating with patients in a manner that achieves a positive relationship <ul style="list-style-type: none"> Dealing with difficult patients (P. 13) 	More detailed information about improving communication with the patient	I. Principles of Communicating With Patients in a Manner That Achieves a Positive Relationship (P. 12)	15 min.	Essential
<ul style="list-style-type: none"> Medical/Legal Ethics 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> Consent/refusal of care Confidentiality Advanced directives Tort and criminal actions Evidence preservation Statutory responsibilities Mandatory reporting Ethical principles/moral Obligations (P. 13) 	The Health Insurance Portability and Accountability Act (HIPAA) did not exist when the EMT-I curriculum was authored; should include a state-specific discussion on privileged communication; includes a brief discussion on living wills, surrogate decision makers, and civil and criminal court cases; ethics	Refer to EMT Level Guidelines (P. 21) II. Confidentiality A. Obligation to Protect Patient Information B. Health Information Portability and Accountability Act (HIPAA) C. Responsibility Arising From Physician – Patient Relationship D. Privileged Communications E. Breach of Confidentiality III. Advanced Directives A. Patient Self-Determination Act IV. Tort and Criminal Actions A. Criminality B. Civil Tort C. Mandatory Reporting	30 min.	Essential
Anatomy and Physiology	Integrates complex knowledge of the anatomy and physiology of the airway, respiratory and circulatory systems to the practice of EMS. (P. 14)	More detailed discussion than in the previous version	I. Anatomy and Body Functions D. Respiratory System E. Circulatory II. Life Support Chain A. Fundamental Elements B. Issues Affecting Fundamental Elements III. Age-Related Variations for Pediatrics and Geriatrics (P. 14)	Total for Section E = 60 min. S = 0 min.	
Medical Terminology	Uses foundational anatomical and medical terms and abbreviations in written and oral communication with colleagues and other health care professionals. (P. 14)	Although not detailed, this content is new to this level	Refer to EMT Level Guidelines (P. 29)	Total for Section E = 0 min. S = 5 min.	
Physiology	Applies comprehensive knowledge of the pathophysiology of respiration and perfusion to patient assessment and management. (P. 14)	This content is new to this level but only focuses on respiratory and perfusion dysfunction along with shock	III. Alteration in Cells and Tissues IV. Cellular Injury V. Hypoperfusion A. Pathogenesis B. Types of Shock (P. 21)	Total for Section E = 45 min. S = 0 min.	

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
Life Span Development	Applies fundamental knowledge of life span development to patient assessment and management. (P. 14)	New information at this level	Refer to EMT Level Guidelines (P. 34)	Total for Section E = 0 min. S = 5 min.	
Public Health	Uses simple knowledge of the principles of the role of EMS during public health emergencies. (P. 15)	New information at this level; related to <i>EMS Agenda for the Future</i> issues	I. Basic Principles of Public Health (P. 23)	Total for Section E = 0 min. S = 5 min.	
Pharmacology	Applies to patient assessment and management fundamental knowledge of the medications carried by AEMTs that may be administered to a patient during an emergency. (P. 15)		(P. 25)	Total for Section E = 0 min. S = 25 min.	
<ul style="list-style-type: none"> Principles of Pharmacology 	Fundamental depth, foundation breadth <ul style="list-style-type: none"> Medication safety Medication legislation Naming Classifications Storage and security Autonomic pharmacology Metabolism and excretion Mechanism of action Medication response relationships Medication interactions Toxicity (P. 15) 	New information at this level	I. Medication Safety II. Medication Legislation III. Naming IV. Classifications V. Storage and Security VI. Drug Terminology VII. Pharmacological Concepts (P. 25)	10 min.	Supplemental
<ul style="list-style-type: none"> Medication Administration 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> Routes of administration Within the scope of practice of the AEMT, administer medications to a patient (P. 16) 	Added the five rights of medication administration; more detailed information	II. Administration of Medication to a Patient A. The "Rights" of Drug Administration (P.30)	5 min.	Supplemental
<ul style="list-style-type: none"> Emergency Medications 	Fundamental depth, foundational breadth Within the scope of practice of the AEMT <ul style="list-style-type: none"> Names Actions Indications Contraindications Complications Routes of administration Side effects Interactions Dosages for the medications 	Specific list of medications	I. Specific Medications II. Special Considerations in Pediatrics and Geriatrics (P. 32)	10 min.	Supplemental

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
	administered (P. 16)				
Airway Management, Respiration, and Artificial Ventilation	Applies knowledge (fundamental depth, foundational breadth) of general anatomy and physiology to patient assessment and management in order to assure a patent airway, adequate mechanical ventilation, and respiration for patients of all ages. (P. 17)		(PP. 33-41)	Total for Section E = 60 min. S = 35 min.	
<ul style="list-style-type: none"> Anatomy and Physiology 	Fundamental depth, simple breadth <ul style="list-style-type: none"> Anatomy of the respiratory system (P. 17)	Much more detailed than in the previous EMT-I curriculum	I. Airway Anatomy II. Airway Assessment (P. 33)	30 min.	Essential
<ul style="list-style-type: none"> Airway Management 	Fundamental depth, foundational breadth Within the scope of practice of the AEMT <ul style="list-style-type: none"> Airway anatomy Airway assessment Techniques of assuring a patent airway (P. 17)	Much more detailed than in the previous EMT-I curriculum	III. Techniques of Assuring a Patent Airway IV. Consider Age-Related Variations in Pediatric and Geriatric Patients (P.33)	30 min.	Essential
<ul style="list-style-type: none"> Respiration 	(See also Anatomy and Physiology) Complex depth, foundational breadth <ul style="list-style-type: none"> Anatomy of the respiratory system Fundamental depth, comprehensive breadth <ul style="list-style-type: none"> Physiology and pathophysiology of respiration <ul style="list-style-type: none"> Pulmonary ventilation Oxygenation Respiration <ul style="list-style-type: none"> External Internal Cellular Assessment and management of adequate and inadequate respiration Supplemental oxygen therapy (P. 18)	Much more detailed minimal new content added to this level in the previous EMT-I curriculum	I. Anatomy of the Respiratory System II. Physiology of Respiration III. Pathophysiology of Respiration IV. Assessment of Adequate and Inadequate Respiration V. Management of Adequate and Inadequate Respiration VI. Supplemental Oxygen Therapy VII. Age-Related Variations in Pediatric and Geriatric Patients (P. 36)	15 min.	Supplemental

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
<ul style="list-style-type: none"> Artificial Ventilation 	Complex depth, foundational breadth Assessment and management of adequate and inadequate ventilation <ul style="list-style-type: none"> Artificial ventilation Minute ventilation Alveolar ventilation Effect of artificial ventilation on cardiac output (P. 18) 	Much more detailed than in the previous EMT-I curriculum	I. Comprehensive Ventilation Assessment II. The Management of Inadequate Ventilation III. The Differences Between Normal and Positive Pressure Ventilation IV. Consider Age-Related Variations in Pediatric and Geriatric Patients (P.39)	20 min.	Supplemental
Patient Assessment	Applies scene information and patient assessment findings (scene size up, primary and secondary assessment, patient history, and reassessment) to guide emergency management. (P. 19)		(P. 43)	Total for Section E = 90 min. S = 5 min.	
<ul style="list-style-type: none"> Scene Size Up 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> Scene management Multiple patient situations (P. 19) 	No new information here but a re-emphasis on the need for scene safety for everyone present	(P. 42)	5 min.	Essential
<ul style="list-style-type: none"> Primary Assessment 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> Primary assessment for all patient situations <ul style="list-style-type: none"> Initial general impression Level of consciousness ABCs Identifying life threats Assessment of vital functions Integration of treatment/procedures needed to preserve life (P. 20) 	New terminology that more closely mimics other health care professionals	I. Primary Survey/Primary Assessment II. Integration of Treatment/Procedures Needed to Preserve Life III. Evaluating Priority of Patient Care and Transport Refer also to EMT Level Guidelines (P 63 in EMT IGs) (P. 43)	10 min.	Essential
<ul style="list-style-type: none"> History-Taking 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> Investigation of the chief complaint Mechanism of injury/nature of illness Past medical history Associated signs and symptoms Pertinent negatives (P. 20) 	New terminology that more closely mimics other health care professionals	Refer to EMT Level Guidelines re: Chief Complaint, History of Present Illness, Approaches to History Taking (P. 66 in EMT IGs)	5 min.	Essential
<ul style="list-style-type: none"> Secondary Assessment 	Complex depth, foundational breadth Assessment of <ul style="list-style-type: none"> Lung sounds (P. 20) 	New terminology that more closely mimics other health care professionals; more thorough than in the previous curriculum	Refer to EMT Level Guidelines (P 71 in EMT IGs) PLUS I. Assessment of Lung Sounds II. Special Considerations for Pediatric and Geriatric Patients (P. 46 in AEMT IG)	10 min.	Essential
<ul style="list-style-type: none"> Monitoring Devices 	Simple depth, simple breadth Within the scope of practice of the AEMT <ul style="list-style-type: none"> Obtaining and using information from patient monitoring devices including (but not limited to) <ul style="list-style-type: none"> Pulse oximetry Non-invasive blood pressure Blood glucose determination 	Blood glucose monitoring and blood chemistry analysis added to this level	I. Blood Glucose Determination II. Other Monitoring Devices (P. 47)	30 min.	Essential

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
	(P. 21)				
• Reassessment	Fundamental depth, foundational breadth • how and when to perform a reassessment for all patient situations (P. 21)		(P. 48)	5 min.	Supplemental
Medicine	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely ill patient. (P. 22)		(PP. 49-86)	Total for Section E = 190 min. S = 40 min.	
• Medical Overview	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of a medical complaints to include • Transport mode • Destination decisions (P. 22)	Re-use of the new assessment terminology	I (P. 49)	0	
• Neurology	Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Seizure (P. 23)	More detailed information on stroke assessment and management.	(P. 53)	15 min.	Essential
• Abdominal and Gastrointestinal Disorders	Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Acute and chronic gastrointestinal hemorrhage Simple depth, simple breadth • Peritonitis • Ulcerative diseases (P. 24)	Minimal new content added to this level	(P. 56)	0	
• Immunology	Complex depth, comprehensive breadth Anatomy, physiology, pathophysiology, assessment, and management of hypersensitivity disorders and/or emergencies • Allergic and anaphylactic reactions (P. 25)	All new information	I. Introduction II. Basic Immune System's Response to Allergens III. Pathophysiology IV. Assessment V. Managing Anaphylaxis VI. Age Related (P. 59)	20 min.	Essential
• Infectious Diseases	Fundamental depth, foundational breadth Assessment and management of • A patient who may be infected with a bloodborne pathogen o HIV o Hepatitis B • Antibiotic resistant infections • Current infectious diseases prevalent in the community	This section should include updated infectious disease information, for Example methicillin-resistant Staphylococcus aureus, hepatitis, and Acquired Immune Deficiency Syndrome update; should include a discussion on cleaning and sterilizing equipment and decontaminating the ambulance	II. Standard Precautions, Personal Protective Equipment, and Cleaning and Disposing of Equipment and Supplies III. Specific Diseases and Conditions (P.60)	20 min.	Essential

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
	(P. 26)				
• Endocrine Disorders	Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Acute diabetic emergencies (P. 27)	Increased emphasis on pathophysiology and acknowledgement of the increasing prevalence and incidence of diabetes in the community	(P. 63)	10 min.	Essential
• Psychiatric	Simple depth, simple breadth • Basic principles of the mental health system Fundamental depth, foundational breadth Assessment and management of • Acute psychosis • Suicidal/risk • Agitated delirium (P. 28)	Includes new material on agitated delirium	V. Psychiatric Emergencies (P.65)	15 min.	Essential
• Cardiovascular	Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Acute coronary syndrome o Angina pectoris o Myocardial infarction Fundamental depth, simple breadth • Heart failure • Hypertensive emergencies (P. 29)	Increased emphasis on anatomy, physiology and pathophysiology; increased emphasis on specific cardiovascular emergencies	I. Anatomy of the Cardiovascular System II. Physiology III. Angina Pectoris/Acute Coronary Syndrome IV. Acute Myocardial Infarction (P. 68)	60 min.	Essential
• Toxicology	Fundamental depth, foundational breadth • Opiate toxidrome (P. 30)	All new information	X. Toxic Syndromes (P. 75)	15 min.	Supplemental
• Respiratory	Complex depth, foundational breadth Anatomy, physiology, pathophysiology, assessment, and management of • Asthma • Obstructive/restrictive disease • Pneumonia (P. 31)	More in-depth evaluation of a patient with respiratory problems	I. Anatomy and Physiology II. Pathophysiology III. Assessment IV. Treatment (P. 77)	45 min.	Essential
• Hematology	Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of • Sickle cell crisis (P. 32)	Brief discussion in sickle cell disease	II. Sickle Cell Disease (P. 80)	5 min.	Essential

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
<ul style="list-style-type: none"> Genitourinary/Renal 	Fundamental depth, simple breadth Anatomy, physiology, pathophysiology, assessment, and management of <ul style="list-style-type: none"> Complications related to renal dialysis Kidney stones (P. 33)	More detailed discussion of this organ system	I. Anatomy and Physiology (P. 82)	15 min.	Supplemental
<ul style="list-style-type: none"> Gynecology 	Fundamental depth, foundational breadth Anatomy, physiology, assessment findings, and management of <ul style="list-style-type: none"> Vaginal bleeding Sexual assault (to include appropriate emotional support) Simple depth, simple breadth <ul style="list-style-type: none"> Infections (P. 34)	Includes brief discussion of sexually transmitted diseases and pelvic inflammatory disease	Refer to EMT Level Guidelines (P. 112) IV. Specific Gynecological Emergencies—Definition, Causes, Risk Factors, Assessment Findings, Management	5 min.	Supplemental
<ul style="list-style-type: none"> Non-traumatic Musculoskeletal Disorders 	Fundamental depth, foundational breadth Anatomy, physiology, pathophysiology, assessment and management of <ul style="list-style-type: none"> Non-traumatic fractures (P. 34)	New information at this level	Refer to EMT Level Guidelines (P. 113) I. Anatomy and physiology review A. Bones B. Muscles II. Pathophysiology A. Non-Traumatic Fractures (i.e. cancer or osteoporosis)	5 min.	Supplemental
<ul style="list-style-type: none"> Diseases of the Eyes, Ears, Nose, and Throat 	Simple depth, simple breadth Recognition and management of <ul style="list-style-type: none"> Nose bleed (P. 35)	All material at this level represents the same depth and breadth as at the EMT level		0	
Shock and Resuscitation	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for a patient in shock, respiratory failure or arrest, cardiac failure or arrest, and post resuscitation management. (P. 35)		(P. 87)	Content integrated into Trauma and Medicine	
Trauma	Applies fundamental knowledge to provide basic and selected advanced emergency care and transportation based on assessment findings for an acutely injured patient. (P. 35)			Total for Section E =205 min. S = 10 min.	

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
<ul style="list-style-type: none"> Trauma Overview 	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of the trauma patient <ul style="list-style-type: none"> Trauma scoring Rapid transport and destination issues Transport mode (P. 35)	All material at this level represents the same depth and breadth as at the EMT level	I. Identification and Categorization of Trauma Patients (P. 94)	15 min.	Essential
<ul style="list-style-type: none"> Bleeding 	Complex depth, comprehensive breadth <ul style="list-style-type: none"> Fluid resuscitation (P. 35)	More detailed discussion	I. Fluid Resuscitation in Bleeding and Shock II. Special Considerations in Fluid Resuscitation (P. 95)	30 min.	Essential
<ul style="list-style-type: none"> Chest Trauma 	Fundamental depth, foundational breadth Pathophysiology, assessment and management of <ul style="list-style-type: none"> Traumatic aortic disruption Pulmonary contusion Blunt cardiac injury Hemothorax Pneumothorax <ul style="list-style-type: none"> Open Simple Tension Cardiac tamponade Rib fractures Flail chest Commotio cordis Traumatic asphyxia (P. 37)	More detailed discussion	(P. 98)	30 min.	Essential
<ul style="list-style-type: none"> Abdominal and Genitourinary Trauma 	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of <ul style="list-style-type: none"> Vascular injury Solid and hollow organs injuries Blunt versus penetrating mechanisms Evisceration Retroperitoneal injuries Injuries to the external genitalia Vaginal bleeding due to trauma Sexual assault (P. 38)	More detailed discussion	(P. 104)	15 min.	Essential
<ul style="list-style-type: none"> Orthopedic Trauma 	Simple depth, simple breadth Pathophysiology, assessment, and management of <ul style="list-style-type: none"> Compartment syndrome Complex depth, foundational breadth <ul style="list-style-type: none"> Pelvic fractures Amputations/replantation (P. 39)	More detailed discussion	(P. 108)	10 min.	Supplemental
<ul style="list-style-type: none"> Soft Tissue Trauma 	Fundamental depth, simple breadth <ul style="list-style-type: none"> Crush syndrome 		(P. 110)	0 min.	

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
	(P. 40)				
• Head, Facial, Neck and Spine Trauma	Complex depth, foundational breadth Pathophysiology, assessment, and management of • Facial fractures • Laryngeotracheal injuries (P. 41)	More detail about neck eye, oral and brain injuries; emphasizes the harm of over ventilation in most situations	(P. 115)	10 min.	Essential
• Nervous System Trauma	Complex depth, foundational breadth Pathophysiology, assessment, and management of • Traumatic brain injury (P. 42)	More detail on brain anatomy; emphasizes the harm of hyperventilation; references the Brain Trauma Foundation; increased emphasis on neurological assessment	(P. 118)	45 min.	Essential
• Special Considerations in Trauma	Complex depth, foundational breadth Pathophysiology, assessment, and management of trauma in the • Pregnant patient • Pediatric patient • Geriatric patient • Cognitively impaired patient (P. 42)	All section new or increased emphasis	I. Trauma in Pregnancy II. Pediatric Trauma III. Geriatric Trauma IV. Cognitively Impaired Patient Trauma (P. 121)	45 min.	Essential
• Environmental Trauma	Fundamental depth, foundational breadth Pathophysiology, assessment, and management of • Near drowning • Temperature-related illness • Bites and envenomations • Dysbarism o High-altitude o Diving injuries • Electrical injury • Radiation exposure (P. 43)	All material at this level represents the same depth and breadth as at the EMT level	(p. 127)	0	
• Multi-System Trauma	Complex depth, foundational breadth Pathophysiology, assessment and management of • Multi-system trauma (P. 43)	New material at this level; includes discussion of kinematics and blast injury	(P. 128)	15 min	Essential
Special Patient Populations	Applies a fundamental knowledge of growth, development, and aging and assessment findings to provide basic and selected advanced emergency care and transportation for a patient with special needs. (P. 44)		(P. 132)	Total for Section E = 25 min S = 30 min.	
• Obstetrics	Fundamental depth, foundational breadth • Anatomy and physiology of normal pregnancy • Pathophysiology of complications of pregnancy • Assessment of the pregnant patient • Management of o Normal delivery o Abnormal delivery <input type="checkbox"/> Nuchal cord	More detailed discussion on complications of pregnancy; uses the terms preeclampsia, eclampsia and premature rupture of membranes which do not require a lengthy presentation	(P. 132)	10 min.	Essential

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
	<ul style="list-style-type: none"> <input type="checkbox"/> Prolapsed cord <input type="checkbox"/> Breech delivery o Third trimester bleeding <input type="checkbox"/> Placenta previa <input type="checkbox"/> Abruptio placenta o Spontaneous abortion/miscarriage o Ectopic pregnancy o Preeclampsia/Eclampsia (P. 44)				
<ul style="list-style-type: none"> • Neonatal Care 	Fundamental depth, foundational breadth Assessment and management <ul style="list-style-type: none"> • Newborn • Neonatal resuscitation (P. 45)		(P. 133)	0	
<ul style="list-style-type: none"> • Pediatrics 	Fundamental depth, foundational breadth Age-related assessment findings, age-related, and developmental stage related assessment and treatment modifications for pediatric specific major diseases and/or emergencies <ul style="list-style-type: none"> • Upper airway obstruction • Lower airway reactive disease • Respiratory distress/failure/arrest • Shock • Seizures • Sudden Infant Death Syndrome • Gastrointestinal disease (P. 46)	This section is much more detailed than in the previous version	Review EMT content (PP. 178-188)	15 min.	Supplemental
<ul style="list-style-type: none"> • Geriatrics 	Complex depth, foundational breadth <ul style="list-style-type: none"> • Fluid resuscitation in the elderly (P. 47)	All new section for this level	Review EMT content (PP. 189-196) I. Fluid Resuscitation in the Elderly (P. 135)	15 min.	Supplemental
<ul style="list-style-type: none"> • Patients With Special Challenges 	Fundamental depth, foundational breadth Healthcare implications of <ul style="list-style-type: none"> • Abuse • Neglect • Homelessness • Poverty • Bariatrics • Technology dependent • Hospice/ terminally ill • Tracheostomy care/dysfunction • Homecare • Sensory deficit/loss • Developmental disability (P. 48)	Elder abuse, homelessness, poverty, bariatric, more technology dependent, hospice, sensory deficit, homecare, and developmental disabilities added	I. Abuse and Neglect II. Homelessness/Poverty III. Bariatric Patients IV. Technology Assisted/Dependent V. Hospice Care and Terminally Ill VII. Sensory Deficits VIII. Homecare IX. Patient With Developmental Disability (P. 136)	15 min.	Essential

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
EMS Operations	Knowledge of operational roles and responsibilities to ensure safe patient, public, and personnel safety(P. 48)		(P. 139)	Total for Section E = 40* min. S = 10 min.	Does not include time for NIMS or HAZWOPER requirements
<ul style="list-style-type: none"> Principles of Safely Operating a Ground Ambulance 	Simple depth, foundational breadth <ul style="list-style-type: none"> Risks and responsibilities of transport (P. 48) 	All material at this level represents the same depth and breadth as at the EMT level	Refer to EMT Level Guidelines (P. 200) I. Risks and Responsibilities of Emergency Response A. Safety Issues During Transport	10 min.	Essential
<ul style="list-style-type: none"> Incident Management 	Fundamental depth, foundational breadth <ul style="list-style-type: none"> Establish and work within the incident management system (P. 49) 	All material at this level represents the same depth and breadth as at the EMT level	I. Establish and Work Within the Incident Management System A. Entry-Level Students Need to Be Certified in 1. ICS-100: Introduction to ICS, or equivalent 2. FEMA IS-700: NIMS, An Introduction (P. 140)	This Can Be Done as a Co requisite or Prerequisite or as Part of the Entry-Level Course	Essential
<ul style="list-style-type: none"> Multiple Casualty Incidents 	Simple depth, foundational breadth <ul style="list-style-type: none"> Triage Performing Re-Triage Destination Decisions Post Traumatic and Cumulative Stress (P. 49) 	All material at this level represents the same depth and breadth as at the EMT level	Refer to EMT Level Guidelines (P. 203) II. Triage	10 min.	Essential
<ul style="list-style-type: none"> Air Medical 	Simple depth, simple breadth <ul style="list-style-type: none"> Safe air medical operations Criteria for utilizing air medical response (P. 49) 	All material at this level represents the same depth and breadth as at the EMT level	I. Safe Air Medical Operations II. Criteria for Utilizing Air Medical Response (P. 142)	10 min.	Supplemental
<ul style="list-style-type: none"> Vehicle Extrication 	Simple depth, simple breadth <ul style="list-style-type: none"> Safe vehicle extrication Use of simple hand tools (P. 49) 	All material at this level represents the same depth and breadth as at the EMT level	(P. 144)	0	
<ul style="list-style-type: none"> Hazardous Materials Awareness 	Simple depth, simple breadth <ul style="list-style-type: none"> Risks and responsibilities of operating in a cold zone at a hazardous material or other special incident (P. 49) 	All material at this level represents the same depth and breadth as at the EMT level	A. Entry-Level Students Need to Be Certified in: 1. Hazardous Waste Operations and Emergency Response (HAZWOPER) standard, 29 CFR 1910.120 (q)(6)(i) -First Responder Awareness Level (P. 147)	This can be done as a Co requisite or Prerequisite or as Part of the Entry-Level Course	Essential
<ul style="list-style-type: none"> Mass Casualty Incidents Due to Terrorism and 	Simple depth, simple breadth <ul style="list-style-type: none"> Risks and responsibilities of operating on the scene of a natural or man-made disaster 	All material at this level represents the same depth and breadth as at the EMT level	I. Risks and Responsibilities of Operating in a Cold Zone at a Hazardous Material or Other Special Incident	20 min.	Essential

Section Title	EMS Education Standard	Gap Analysis of NSC to Education Standards	AEMT Instructional Guidelines	Declarative E = Essential S = Supplemental	Essential Content
Disaster	(P. 50)		(P. 148)		

For a current EMT-Basic (based on 1994 EMT-B National Standard Curriculum) transitioning to 2009 Emergency Medical Technician (EMT), the following skills are **no longer taught**:

- Insertion of esophageal airways

The following restraint technique has been determined to be harmful and is no longer permitted: forceful restraint in a prone position, with wrists & ankles tightly tied together ("hobbled") behind the back.

Skill Considerations: Insertion of supraglottic airways; airways not intended for insertion into the trachea, use of oxygen humidifiers, use of tracheostomy mask, tracheobronchial suctioning (already intubated patient), use of mechanical CPR devices (requires additional specialty training and device approval), application of mechanical patient restraint (not new skill, but new information), insertion of intraosseous infusion in children, administration of aerosolized or nebulized beta agonists (I-85s could previously only assist a patient with his or her own prescription medication and now they administer as an EMS medication), allow self-administered nitrous oxide, administer intramuscular epinephrine and glucagon, administration of intranasal naloxone, administer intravenous naloxone or 50% dextrose, administration of subcutaneous epinephrine, and blood glucose monitoring.

Summary of proposed time for planning purposes: Essential content = 13 hrs. Supplemental = 3.3 hrs.
 These projections do not include a time allotment for NIMS and HAZWOPER requirements or performance of clinical skills.