Paramedic Program Student Learning Outcomes (SLOs)

(Updated January 2013)

Upon completion, the student will be able to demonstrate:

• The ability to comprehend, apply, and evaluate information relative to the role of an entry-level Paramedic.
• Technical proficiency in all of the skills necessary to fulfill the role of an entry-level Paramedic.
• Personal behaviors consistent with professional and employer expectations of an entry-level Paramedic.
• Preparedness to pass the National Registry Paramedic Level cognitive and psychomotor examinations.

INDIVIDUAL COURSE SLO’s:

EMT 104: Advanced Skills for EMS providers

Upon completion of this course a student will be able to:

A. Demonstrate basic airway and ventilatory techniques on adult and pediatric mannequins.
B. Demonstrate advanced airway techniques on adult and pediatric mannequin.
C. Explain the use of the advanced ventilatory methods and monitoring devices.
D. Demonstrate proper technique of cardiac monitoring skills using various monitor brands in a simulated scenario.
E. Demonstrate proper technique for pharmacologic interventions in a simulated setting and/or on a live volunteer, including injections, medication administration, intravenous access and intraosseous access.
F. Demonstrate proper technique of trauma skills including splinting, spinal immobilization, needle thoracostomy and advanced airway management.
G. Demonstrate the systematic method for assessing patients in simulated scenarios of critical and non-critical trauma and medical emergencies using the National Scope of Practice Model.
H. Integrate the learned skills into practice scenarios of simulated medical and trauma patients.

EMTP 120: Paramedic Theory: Human Systems and Patient Assessment

Upon completion of this course a student will be able to:

A. Define anatomy, physiology and pathophysiology.
B. Describe the structure and function of the human cell and organelles.
C. Apply knowledge of cellular physiology to clinical case studies.
D. Integrate anatomical and medical terminology into verbal and written communication with colleagues.
E. Apply knowledge of cellular physiology to the pathophysiology of shock in review of clinical case studies.
F. Demonstrate knowledge of the normal function of the organ systems, including: integumentary, skeletal, muscular, nervous, sensory, endocrine, cardiovascular, urinary, respiratory, immune, digestive and reproductive.
G. Apply knowledge of physiology of the organ systems to organ system dysfunction in review of clinical case studies.
H. Integrate knowledge of life span development into the practice of an EMS professional during simulated patient scenarios.
I. Demonstrate written and verbal communication skills used to report patient assessment findings relevant to the clinical situation during various simulated patient scenarios.

EMTP 121: Paramedic Theory: Introduction to EMS

Upon completion of this course a student will be able to:

A. Describe the major events that influenced the development of modern EMS systems in the United States.
B. Identify and compare the four levels of EMS providers.
C. Define the paramedic role in patient care situations as defined by the National Standards.
D. Identify the key elements of EMS research and its benefits to prehospital emergency care.
E. Define major medical legal issues in providing prehospital patient care, including: consent, confidentiality, advanced directives, negligence, transport and non-transport and medical direction.
F. Apply knowledge of medical legal and ethical principles to patient scenarios.

EMTP 122: Paramedic Theory: Pharmacology and Ventilatory Management

Upon completion of this course a student will be able to:

A. Identify the major classifications of drugs according to mechanism of action, organ system affected and clinical condition used to treat.
B. Define each element of a drug profile including names, mechanism of action, indications, contraindications, common side effects, dosages and precautions.
C. Demonstrate appropriate use of body substance isolation precautions while obtaining intravenous access and administering intramuscular and subcutaneous injections.
D. Demonstrate appropriate use of body substance isolation precautions while performing basic and advanced airway and ventilatory procedures.
E. Identify the six rights of medication administration.
F. Demonstrate proper technique for medication administration via the intravenous, intraosseous, intramuscular, subcutaneous, intranasal, transdermal, rectal, sublingual and inhaled routes.
G. Demonstrate proper technique for obtaining intravenous and intraosseous access.
H. Demonstrate proper technique for performing basic and advanced airway and ventilatory procedures.
I. Calculate the proper medication dosages for a patient by weight.
J. Calculate the volume to be administered of a medication for a given dosage and concentration..
K. Calculate the proper drip rate for a given volume of fluid to be administered over time.
L. Calculate the proper drip rate for a medication infusion.

**EMTP 123: Paramedic Theory: Trauma Emergencies**

Upon completion of this course a student will be able to:

A. Integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for an acutely injured patient.
B. Analyze injury patterns based upon epidemiology mechanism of injury, and patient risk factors,
C. Predict injury severity based upon clinical examination findings, mechanism of injury and organ system affected.
D. Perform a rapid trauma assessment on a simulated critical trauma patient and a focused history and physical examination on a simulated stable trauma patient consistent with the current national standards for paramedics.
E. Demonstrate proper basic and advanced life support management of critical and stable trauma patients within the scope of practice of a paramedic.
F. Apply knowledge of pathophysiology of hemorrhagic shock to simulated patient scenarios and the clinical condition of the patient.
G. Demonstrate foundational knowledge of the pathophysiology, differential clinical findings and treatment guidelines of various internal and external injuries to the head, face, neck, chest, abdomen, back and extremities.

**EMTP 124: Trauma Certification Course**

Upon completion of this course a student will be able to:

A. Describe the current trends in prehospital trauma care and the scientific support that drives these trends.
B. Describe the history of trauma care and certification for EMS providers.
C. Identify strategies that EMS providers can implement that will reduce the risk of traumatic injuries.
D. Integrate principles of kinematics of trauma and pathophysiology into patient assessment.
E. Describe appropriate steps to take to mitigate potential threats to safety.
F. Systematize the discrete steps involved in assessing and managing the trauma patient into an organized and rational process.
G. Recognize the need for rapid transport and early definitive management in various forms of shock.
H. Demonstrate proper technique for basic and advanced airway and ventilatory management, extrication, spinal immobilization and circulatory management in a simulated patient scenario.
I. Use critical thinking skills to determine the preferred method of treatment in a given trauma patient scenario for patients with head, neck and facial injuries and/or traumatic brain injury (TBI).
J. Use critical thinking skills to determine the preferred method of treatment in a given trauma patient scenario for patients with thoracic, abdominal, pelvic and extremity injuries.
K. Use critical thinking skills to determine the preferred method of treatment in a given trauma patient scenario for patients with burn injuries.

L. Discuss principles of EMS trauma care and assessment-based trauma management for adult, pediatric and geriatric patients.

M. Given a mass-casualty incident (MCI), integrate the use of a triage system into the management of the scene and make triage decisions based upon assessment findings.

N. Obtain a passing score on the written trauma certification examination.

EMTP 125: Paramedic Theory and Practice: Cardiovascular and Respiratory Emergencies

Upon completion of this course a student will be able to:

A. Interpret an ECG rhythm and identify dysrhythmias that originate from the sinus node, atria, AV junction and ventricles.

B. Interpret an ECG rhythm and identify disorders of conduction in the sinus node, AV node and bundle branches.

C. Correlate ECG changes to imbalances in electrolytes, body temperature and toxins.

D. Identify common home medications prescribed for patients with pulmonary and cardiovascular disease histories.

E. Identify the prehospital medications used to treat pulmonary and cardiovascular emergencies including indications, contraindications, mechanism of action, dosages, route/rate, and precautions.

F. Demonstrate proper basic and advanced life support management of critical and stable cardiorespiratory patients within the scope of practice of a paramedic.

G. Demonstrate the systematic patient assessment used for patients with respiratory distress, chest pain and other cardiorespiratory complaints.

H. Given a patient scenario, identify the most likely etiology using information obtained from patient history, clinical findings and foundational knowledge of pathophysiology.

I. Given a patient scenario, use critical thinking skills to determine the preferred method of treatment for patients with pulmonary and cardiovascular complaints.

J. Demonstrate proper technique when performing basic and advanced airway and ventilatory skills on live patients in the operating room rotation.

K. Demonstrate correct placement of the 12-Lead ECG on simulated patients in class and on live patients in hospital rotations.

L. Demonstrate accurate ECG rhythm identification on patient during hospital rotations.

M. Demonstrate safe and proper use of the portable ECG monitor/defibrillator when performing ECG interpretation, synchronized cardioversion, transcutaneous cardiac pacing and defibrillation on simulated patients in class and on live patients in hospital rotations.

EMTP 126: Paramedic Theory and Practice: Neuroendocrine Emergencies

Upon completion of this course a student will be able to:

A. Demonstrate the systematic patient assessment used for patients with altered mental status, seizures and other neuroendocrine emergencies.

B. Identify the elements of the comprehensive prehospital neurological examination.
C. Describe the pathophysiology and clinical findings associated with stroke, seizures, altered mental status, diabetic emergencies, thyroid dysfunction and adrenal dysfunction.

D. Given a patient scenario, identify the most likely etiology of the patient's condition using information obtained from patient history, clinical findings and foundational knowledge of pathophysiology.

E. Given a patient scenario, use critical thinking skills to determine the preferred method of treatment for patients with neuroendocrine emergencies.

F. Demonstrate proper basic and advanced life support management of critical and stable patients with neuroendocrine emergencies within the scope of practice of a paramedic.

EMTP 127: Paramedic Theory and Practice: Medical Emergencies

Upon completion of this course a student will be able to:

A. Demonstrate the systematic patient assessment used for patients with abdominal pain.
B. Describe the pathophysiology and clinical findings associated with allergic reactions, anaphylaxis, gastrointestinal hemorrhage, renal failure, and inflammatory conditions.
C. Describe the toxidromes and prehospital treatments of exposure to common toxins.
D. Identify common infectious diseases encountered in the field and the public health principles designed to protect the paramedic from exposure.
E. Given a patient scenario, identify the most likely etiology of the patient's condition using information obtained from the patient history, clinical findings and foundational knowledge of pathophysiology.
F. Given a patient scenario, use critical thinking skills to determine the preferred method of treatment for patients with allergic/anaphylactic, abdominal, urinary, environmental, hematologic and toxicologic emergencies.
G. Demonstrate proper basic and advanced life support management of critical and stable patients with various medical emergencies within the scope of practice of a paramedic.

EMTP 128: Paramedic Theory and Practice: OB/GYN and Pediatric Emergencies

Upon completion of this course a student will be able to:

A. Demonstrate the systematic patient assessment used for evaluating patients with gynecological and obstetric conditions and emergencies.
B. Demonstrate the systematic patient assessment used for evaluating pediatric patients of varying developmental stages.
C. Describe the pathophysiology and clinical findings associated with obstetric emergencies.
D. Describe the pathophysiology and clinical findings associated with pediatric respiratory distress, failure and arrest, pediatric seizures, shock, toxicologic conditions, and trauma.
E. Given a patient scenario, identify the most likely etiology of the patient's condition using information obtained from patient history, clinical findings and foundational knowledge of pathophysiology.
F. Given a patient scenario, use critical thinking skills to determine the preferred method of treatment for the obstetric patient, newborn patient, neonate and pediatric patient.
G. Demonstrate proper basic and advanced life support management of critical and stable patients with obstetric emergencies within the scope of practice of a paramedic.
H. Demonstrate proper basic and advanced life support management of critical and stable pediatric patients within the scope of practice of a paramedic.

EMTP 129: Paramedic Theory and Practice: Special Populations, EMS Operations

Upon completion of this course a student will be able to:

A. Integrate assessment findings with principles of epidemiology and pathophysiology to formulate a field impression and implement a treatment plan for an acutely ill or injured patient.
B. Demonstrate the systematic patient assessment used for patients with special challenges including geriatrics, chronically ill, technology-dependent, abused/neglected and dying patients.
C. Identify the differences in pharmacokinetics, physiology and psychosocial environment in between adult and geriatric patients.
D. Given a scenario, use critical thinking skills to determine the preferred method of treatment for geriatric patients with common and acute medical and trauma emergencies.
E. Demonstrate proper use of the medical incident command system when performing in any of the medical group officer roles (medical group supervisor, triage, treatment, staging, transport officers).
F. Describe the purpose and overall structure of the medical incident command system.
G. Demonstrate knowledge and practice of personnel safety issues, crime scene awareness, transport considerations and need for additional expert resources on simulated routine EMS incidents and multiple casualty incidents.

EMTP 130: Paramedic Practicum: Clinical and Field Internship

Upon completion of this course a student will be able to:

A. Demonstrate a comprehensive patient assessment on patients of various ages, including:
   a. Pediatric patient assessments (newborn to 17 years of age)
   b. Adult patient assessments
   c. Geriatric patient assessments (over 65 years of age)
B. Demonstrate a comprehensive patient assessment on patients with a variety of complaints, including:
   a. Obstetric patients
   b. Trauma patients
   c. Psychiatric patients
C. Demonstrate a comprehensive patient assessment and formulate and implements a treatment plan on patients with a variety of complaints, including:
   a. Patients complaining of chest pain
   b. Adult patients complaining of respiratory distress
   c. Pediatric patients complaining of respiratory distress
   d. Patients with syncope
   e. Patients with abdominal complaints
   f. Patients with an altered mental status
D. Demonstrate the ability to safely and properly administer medications at least 15 times to live patients.
E. Demonstrate the ability to safely and properly obtain venous access at least 25 times to live patients.
F. Demonstrate the ability to safely and properly perform advanced airway techniques at least 5 times on live patients.
G. Demonstrate the ability to safely and properly ventilate unintubated patients of all age groups on at least 20 live patients.
H. Demonstrate the ability to serve as a team leader in a variety of prehospital emergency situations for at least 40 prehospital emergency responses.