

# Emergency Medical Services (EMS)

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## **EMS 1101. \*PILOT\* EMT Preparatory and Patient Assessment. 1.5 Hour.**

This course introduces concepts in Emergency Medical Services: illness and injury prevention; medical-legal issues; anatomy and physiology; pathophysiology, and incident management for the Emergency Medical Technician (EMT) and Advanced EMT. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Identify anatomic structures of the human body and describe basic concepts of physiology. 2. Outline a basic patient assessment, organize findings into an appropriate treatment plan, and properly document. 3. Diagram the Incident Command Structure (ICS) and describe the EMTs role within the framework. Corequisites: EMS 1125, EMS 1201, EMS 1225, EMS 1301, EMS 1325, EMS 1401, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

## **EMS 1110. Emergency Medical Technician-Intro to Emergency Medical Services. 5 Hours.**

Presents instruction in the theory and practice of first aid, providing students with knowledge and skills necessary to meet common emergencies associated with injury and illness. Topics include CPR, well-being, roles and responsibilities, medical/legal, ethics, lifting & moving, Pt assessment, Airway management, Packaging, bandage/splint, Hazardous Materials, Triage & Terrorism, Mass Casualty Incidents, and disaster management. All co-requisite courses must be completed in the same semester. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful completion of this course, students will be able to: 1. Differentiate effective time management abilities in providing patient care. 2. Illustrate reasonable critical thinking skills in treating mock patients. 3. Devise a leadership/management plan for scene management and patient care. 4. Illustrate proper communication techniques in patient care, including a diverse patient grouping. 5. Survey constructive feedback for areas of personal improvement. Corequisites: EMS 1120, EMS 1140, EMS 1145. FA, SP.

## **EMS 1120. Emergency Medical Technician Practicum. 1.5 Hour.**

Two 12 hour clinical rotation shifts are required at a contracted clinical site. Hours can be completed in the Hospital Emergency Department or an Ambulance service. The clinical rotation provides hands-on education with an assigned preceptor in a real life situation. All co-requisite courses must be completed in the same semester. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate mastery of basic life support, knowledge of Emergency Medical Technician protocols, vital signs interpretation, skills and affective abilities. 2. Integrate EMT protocols and skills into effective patient care. 3. Produce proof of understanding and use of skills performed by the emergency medical technician. 4. Apply evidence based practice under EMT scope. Corequisites: EMS 1110, EMS 1140, EMS 1145. FA, SP.

## **EMS 1125. \*PILOT\* EMT Preparatory and Patient Assessment Lab. 1 Hour.**

This course applies concepts through scenarios and hands-on practice related to Emergency Medical Services: illness and injury prevention, medical-legal issues, anatomy, physiology, pathophysiology, and incident management for the Emergency Medical Technician (EMT) and Advanced EMT. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Identify anatomic structures of the human body and describe basic concepts of physiology during patient assessments. 2. Demonstrate a basic patient assessment, organize findings into an appropriate treatment plan, and properly document. 3. Simulate Incident Command Structure (ICS) and describe the EMTs role within the framework. Corequisites: EMS 1101, EMS 1201, EMS 1225, EMS 1301, EMS 1325, EMS 1401, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

## **EMS 1140. Emergency Medical Technician Patient Management. 5 Hours.**

Includes basic knowledge and skills necessary to provide basic patient management and transportation. Topics include Cardiac emergency management, respiratory emergencies, endocrine emergencies, allergies & anaphylaxis, bone and joint injuries, dressings and bandages, sudden illness, and emergency childbirth. Successful completion and recommendation from program coordinator and medical director will provide eligibility for testing and certification at the National Registry of Emergency Medical Technician (NREMT) EMT level. Upon successful completion of the NREMT certification, students are eligible for licensure from the Utah Bureau of Emergency Medical Services at the EMT level. All co-requisite courses must be completed in the same semester. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Differentiate effective time management abilities in providing patient care. 2. Illustrate reasonable critical thinking skills in treating mock patients. 3. Devise a leadership/management plan for scene management and patient care. 4. Illustrate proper communication techniques in patient care, including a diverse patient grouping. 5. Survey constructive feedback for areas of personal improvement. Corequisites: EMS 1110, EMS 1120, EMS 1145. FA, SP.

**EMS 1145. Emergency Medical Technician Lab. 2.5 Hours.**

Emergency Medical Technician lab will provide practical learn of skills and National Registry competencies. These competencies include patient assessment, patient history taking, basic airway adjuncts, airway management, insertion of Nasopharyngeal Airway/Oropharyngeal airway (NPA/OPA), basic vital signs, patient assisted medications, suctioning, bandaging, splinting, lifting and moving patients, extraction of patients from cars, home, office, and other various locations. Students are required to complete an 8 station practical exam. Upon successful completion, students may be recommended for testing and licensure at the Emergency Medical Technician (EMT) level. All co-requisite courses must be completed in the same semester. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate effective mastery and application of EMT competencies including patient assessment, patient history taking, basic airway adjuncts, airway management, insertion of Nasopharyngeal Airway/Oropharyngeal airway (NPA/OPA), basic vital signs, patient assisted medications, suctioning, bandaging, splinting, lifting and moving patients, extraction of patients from cars, home, office, and other various locations. 2. Illustrate reasonable critical thinking skills in treating mock patients. 3. Prepare and implement a leadership/management plan for scene management and patient care. 4. Illustrate proper communication techniques in patient care, including a diverse patient grouping. 5. Survey constructive feedback for areas of personal improvement. Corequisites: EMS 1110, EMS 1120, EMS 1140. FA, SP.

**EMS 1201. \*PILOT\* Respiratory and Traumatic Emergencies. 1.5 Hour.**

This course introduces concepts in respiratory distress and resuscitation and trauma management; including mechanism of injury, multi-system trauma, and chest and abdominal trauma. Identifies key patient assessment and management tools specific to these emergencies within the Emergency Medical Technician and Advanced EMT's (AEMT) scope of practice. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Explain pertinent concepts of respiratory pathophysiology for the EMT/AEMT. 2. Compare critical and non-life threatening patient presentations to determine treatment priorities. 3. Identify patient presentations that require advanced life support interventions. Corequisites: EMS 1101, EMS 1125, EMS 1225, EMS 1301, EMS 1325, EMS 1401, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 1210. Introduction to Advanced Emergency Medical Technician (AEMT). 5 Hours.**

Includes basic knowledge and skills necessary to provide basic and limited advanced patient care and transportation. Includes interventions with basic and advanced equipment typically found in an ambulance, IV insertion, medication administration, advanced airway management, and advanced cardiac resuscitation procedures with the goal of producing competent entry level AEMTs to serve in career and volunteer positions within the EMS system. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Differentiate effective time management abilities in providing patient care appropriate to the AEMT. 2. Illustrate reasonable appropriate AEMT critical thinking skills in treating mock patients. 3. Devise a leadership/management plan for scene management and patient care. 4. Illustrate proper communication techniques in patient care, including a diverse patient grouping. 5. Survey constructive feedback for areas of personal improvement. Course fee required. Prerequisites: Current EMT Certification or EMS 1110 and EMS 1120 and EMS 1140 and EMS 1145 (All grade C or higher). Corequisites: EMS 1220, EMS 1240 and EMS 1245. FA.

**EMS 1220. Advanced Emergency Medical Technician Practicum. 2 Hours.**

Open to students who have a current EMT certification. Two A 12 hour clinical rotation shifts are shift is required at a contracted clinical site. Hours can be completed in the Hospital Emergency Department or an Ambulance service. The clinical rotation provides hands-on education with an assigned preceptor in a real life situation. All co-requisite courses must be completed in the same semester. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Complete a minimum of 24 hours in an approved ambulance agency or Hospital Emergency Department. 2. Demonstrate mastery of basic life support, knowledge of Emergency Medical Technician protocols, vital signs interpretation, skills and affective abilities. 3. Integrate AEMT protocols and skills into effective patient care. 4. Demonstrate understanding and application of skills performed by the advanced emergency medical technician. 5. Apply evidence-based practice under AEMT scope. Course fee required. Prerequisites: Current EMT Certification or EMS 1110 and EMS 1120 and EMS 1140 and EMS 1145 (All grade C or higher). Corequisites: EMS 1210, EMS 1240 and EMS 1245. FA, SP.

**EMS 1225. \*PILOT\* Respiratory and Traumatic Emergencies Lab. 1 Hour.**

This course provides the student with the opportunity to apply previously learned concepts in respiratory distress and resuscitation, and trauma management through patient assessment practice and case studies. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate knowledge of pertinent concepts of respiratory pathophysiology for the Emergency Medical Technician and Advanced EMT (AEMT). 2. Compare critical and non-life threatening patient presentations to determine treatment priorities. 3. Identify patient presentations that require advanced life support intervention. Corequisites: EMS 1101, EMS 1125, EMS 1201, EMS 1301, EMS 1325, EMS 1401, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 1240. Advanced Patient Management. 5 Hours.**

Includes advanced knowledge and skills necessary to provide advanced patient management and transportation. Topics include advanced skill in Cardiac emergency management, respiratory emergencies, endocrine emergencies, allergies & anaphylaxis, bone and joint injuries, dressings and bandages, sudden illness, and emergency childbirth. Successful completion and recommendation from program coordinator and medical director will provide eligibility for testing and certification at the National Registry of Emergency Medical Technician (NREMT) AEMT level. Upon successful completion of the NREMT certification, students are eligible for licensure from the Utah Bureau of Emergency Medical Services at the AEMT level. All co-requisite courses must be completed in the same semester. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Differentiate effective time management abilities in providing advanced patient care. 2. Illustrate reasonable critical thinking skills in treating mock patients as appropriate for the AEMT. 3. Devise a leadership/management plan for scene management and patient care appropriate for the AEMT. 4. Illustrate proper communication techniques in patient care, including a diverse patient grouping. 5. Survey constructive feedback for areas of personal improvement. Course fee required. Prerequisites: Current EMT Certification or EMS 1110 and EMS 1120 and EMS 1140 and EMS 1145 (All grade C or higher). Corequisites: EMS 1210, EMS 1220, EMS 1245. FA.

**EMS 1245. Advance Emergency Medical Technician Lab. 2.5 Hours.**

Open to students who have a current EMT certification and admitted to AEMT certificate program. Course includes laboratory training in but not limited to advance cardiac life support, advance airway management, intravenous insertion and maintenance, intraosseous insertion, advanced trauma life support and medication administration. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate effective mastery and application of AEMT competencies including patient assessment, patient history taking, advance cardiac life support, advance airway management, intravenous insertion and maintenance, intraosseous insertion, advanced trauma life support and medication administration. 2. Illustrate AEMT appropriate critical thinking skills in treating mock patients. 3. Prepare and implement a leadership/management plan for scene management and patient care. 4. Illustrate AEMT appropriate communication techniques in patient care, including a diverse patient grouping. 5. Survey constructive feedback for areas of personal improvement. Course fee required. Prerequisites: Current EMT Certification or EMS 1110 and EMS 1120 and EMS 1140 and EMS 1145 (All grade C or higher). Corequisites: EMS 1210, EMS 1220, and EMS 1240. FA.

**EMS 1301. \*PILOT\* Cardiac and Medical Emergencies; Patients in Special Populations. 1.5 Hour.**

This course introduces cardiovascular, respiratory, and pediatric emergencies, and emergencies related to special patient populations. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Explain pertinent concepts of cardiac pathophysiology. 2. Identify key assessment findings and develop a management plan for pediatric emergencies and other special patient populations. 3. Determine when assessment findings necessitate advanced life support interventions. Corequisite: EMS 1101, EMS 1125, EMS 1201, EMS 1225, EMS 1325, EMS 1401, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 1325. \*PILOT\* Cardiac and Medical Emergencies; Patients in Special Populations Lab. 1 Hour.**

This course applies concepts in cardiovascular, respiratory, and pediatric emergencies, and emergencies related to special patient populations. Students practice patient assessment and management skills related to these conditions. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Determine treatment priorities of cardiac patients through patient assessment and knowledge of cardiac pathophysiology. 2. Distinguish key assessment findings and develop a management plan for pediatric emergencies and other special patient populations. 3. Demonstrate when assessment findings necessitate advanced life support interventions. 4. Develop a management plan for pediatric emergencies and other special patient populations. Corequisites: EMS 1101, EMS 1125, EMS 1201, EMS 1225, EMS 1301, EMS 1401, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 1401. \*PILOT\* Advanced Patient Management. 1.5 Hour.**

This course reinforces concepts learned in earlier courses. Introduces Advanced Emergency Medical Technician (AEMT) concepts including advanced patient assessment and airway management, vascular access, and pharmacological interventions as they apply to the AEMT. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Analyze advanced patient assessment findings and formulate management of these emergencies within the AEMT's scope of practice. 2. Evaluate the characteristics of acute versus chronic illnesses in the medical patient. 3. Integrate the pathophysiology, assessment, and management of the trauma patient. 4. Identify proper intravenous and medication administration procedures. Corequisites: EMS 1101, EMS 1125, EMS 1201, EMS 1225, EMS 1301, EMS 1325, EMS 1425, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 1425. \*PILOT\* Advanced Patient Management Lab. 1 Hour.**

This course provides the student with the opportunity to apply concepts learned in earlier courses, particularly those related to advanced patient assessment and airway management, vascular access, and pharmacological interventions as they apply to the Advanced Emergency Medical Technician (AEMT). **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Perform advanced patient assessments and formulate management of these emergencies within the AEMT's scope of practice. 2. Evaluate the characteristics of acute versus chronic illnesses in the medical patient through patient assessment. 3. Integrate the pathophysiology, assessment, and management of the trauma patient. 4. Demonstrate proper intravenous and medication administration techniques. Corequisites: EMS 1101, EMS 1125, EMS 1201, EMS 1225, EMS 1301, EMS 1325, EMS 1401, and EMS 1450. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 1450. \*PILOT\* AEMT Internship. 3 Hours.**

This course provides opportunity to practice as an Advanced Emergency Medical Technician (AEMT) providing Emergency Department and pre-hospital care for emergent and non-emergent patients. Integrates knowledge, behavior, and skills from previous courses and labs. Prepares students for the National Registry certification exam. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Integrate self confidence, communication, time management, teamwork and diplomacy into careful delivery of service. 2. Perform basic and advanced interventions as part of an overall treatment plan within the AEMT's scope of practice. 3. Evaluate the effectiveness of interventions and modify treatment plan accordingly. 4. Prepare and document assessment findings and interventions. 5. Facilitate all aspects of patient care as a team lead on 5 calls with a minimum average rating of eighty percent or higher. Corequisites: EMS 1101, EMS 1125, EMS 1201, EMS 1225, EMS 1301, EMS 1325, EMS 1401, and EMS 1425. Prerequisites: BIOL 2320 Human Anatomy, BIOL 2325 Human Anatomy Lab, BIOL 2420 Human Physiology, and BIOL 2425 Human Physiology Lab (Grade C or higher). FA.

**EMS 2201. Paramedic: Communications; Cardiovascular, Respiratory, and Pediatric Emergencies. 3 Hours.**

Emphasizes concepts and critical decision making skills transitioning from EMT/AEMT to Paramedic. Reinforces concepts in interdisciplinary communications and documentation. Focuses on advanced cardiovascular, respiratory, and pediatric emergencies, and airway management. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Distinguish patient assessment findings to determine whether basic or advanced life support intervention(s) is/are indicated. 2. Apply various communication skills with patients, families, and interdisciplinary professionals. 3. Demonstrate a cardiovascular, respiratory, and pediatric patient assessment and properly document findings. 4. Integrate evidenced-based practices and critical decision making skills in cardiovascular, respiratory, and pediatric concepts. 5. Construct an assessment-based management plan for pediatric, cardiovascular, and respiratory emergencies. Course fee required. Prerequisites: Admission to the Utah Tech Paramedic Program. Corequisites: EMS 2101, EMS 2301, EMS 2401, EMS 2420, AND EMS 2450. FA.

**EMS 2301. Pharmacology and ACLS/PEPP Certification Courses. 3 Hours.**

Provides advanced concepts of pharmacology including pharmacodynamics and pharmacokinetics for paramedics. Emphasis is placed on assessment-based findings, therapeutic communication, critical decision making skills relating to appropriate pharmacological interventions. A focus on safety, accountability, and evidence-based practices for diverse patients in various clinical settings. Certifications for Advanced Cardiac Life Support (ACLS) and Pediatric Education for the Prehospital Professional (PEPP) are included in this course. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Utilize critical decision making skills in incorporating the mechanism of action, indications, contraindications and cautions, common adverse effects, and clinically important drug-drug interactions using evidence-based practices while administering medications. 2. Demonstrate a patient assessment, organize findings, for assessment-based management to provide appropriate pharmacological interventions. 3. Identify proper IV site administration, correct aseptic technique, and appropriate documentation. 4. Evaluate effects of medication administration, anticipate needs for further pharmacological intervention, and provide appropriate documentation. 5. Test and successfully certify as an ACLS and PEPP Provider. Course fee required. Prerequisites: Admission to the Utah Tech Paramedics program. Corequisites: EMS 2101, EMS 2201, EMS 2401, EMS 2420, and EMS 2450. FA.

**EMS 2310. Paramedic I: Pharmacology; Cardiovascular, Respiratory, and Pediatric Emergencies. 3 Hours.**

Emphasizes concepts and critical decision making skills transitioning from EMT/AEMT to Paramedic. Focuses on advanced cardiovascular, respiratory, and pediatric emergencies, and airway management. Provides advanced concepts of pharmacology including pharmacodynamics and pharmacokinetics for paramedics. Emphasis is placed on assessment-based findings, therapeutic communication, critical decision making skills relating to appropriate pharmacological interventions. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Analyze patient assessment findings to determine whether basic or advanced life support intervention(s) is/are indicated. 2. Develop a cardiovascular, respiratory, and pediatric patient assessment and properly document findings. 3. Integrate evidenced-based practices and critical decision making skills in cardiovascular, respiratory, and pediatric concepts. 4. Utilize critical decision making skills in evaluating the mechanism of action, indications, contraindications and cautions, common adverse effects, and clinically important drug-drug interactions. 5. Devise evidence-based practices to determine appropriate treatment. Prerequisites: Admission to the Utah Tech Paramedic Program. Corequisites: EMS 2325, EMS 2410, EMS 2425, EMS 2420, and EMS 2450. FA.

**EMS 2325. Paramedic I Lab: Pharmacology; Cardiovascular, Respiratory, and Pediatric Emerg.. 3 Hours.**

Focuses on advanced assessment and treatment skills in cardiovascular, respiratory, and pediatric emergencies, and airway management. Provides practice with advanced concepts of pharmacology including pharmacodynamics and pharmacokinetics for paramedics. Emphasis is placed on assessment-based findings and critical decision making skills relating to appropriate pharmacological interventions. Lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate appropriate patient assessment based on patient presentation and chief complaint. 2. Develop a cardiovascular, respiratory, and pediatric patient assessment and properly document findings. 3. Integrate evidenced-based practices and critical decision making skills in cardiovascular, respiratory, and pediatric treatment plans. 4. Implement critical decision making skills in evaluating the mechanism of action, indications, contraindications and cautions, common adverse effects, and clinically important drug-drug interactions. 5. Weigh evidence-based practices to determine appropriate pharmacologic treatment. Prerequisites: Admission to the Utah Tech Paramedic Program. Corequisites: EMS 2310, EMS 2410, EMS 2425, EMS 2420, AND EMS 2450. FA.

**EMS 2401. Trauma Assessment and Management. 3 Hours.**

Emphasizes concepts in trauma and critical decision making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in Trauma Management, including mechanism of injury, multi-system trauma, chest and abdominal trauma. Identifies advanced patient assessment and management of these emergencies. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Illustrate how multisystem trauma and Mechanism of Injury (MOI) relate to patient assessment and scene management. 2. Differentiate the pathophysiology, assessment and management of lung injuries, myocardial injuries, vascular injuries, and other chest related injuries. 3. Integrate the pathophysiology, assessment, and management of abdominal trauma. 4. Analyze advanced patient assessment findings and formulate management of these emergencies within the paramedic scope of practice. Course fee required. Prerequisites: Admission to the Utah Tech Paramedics program. Corequisites: EMS 2101, EMS 2201, EMS 2301, EMS 2420, and EMS 2450. FA.

**EMS 2410. Paramedic II: Trauma Assessment and Management; ACLS/PEPP Certification Courses. 3 Hours.**

Introduces advanced concepts in Trauma Management, including mechanism of injury, multi-system trauma, chest and abdominal trauma. Identifies advanced patient assessment and management of these emergencies. Certifications for Advanced Cardiac Life Support (ACLS) and Pediatric Education for the Prehospital Professional (PEPP) are included in this course. Lecture course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Illustrate how multisystem trauma and Mechanism of Injury (MOI) relate to patient assessment and scene management. 2. Differentiate the pathophysiology, assessment and management of lung injuries, myocardial injuries, vascular injuries, and other chest related injuries. 3. Integrate the pathophysiology, assessment, and management of abdominal trauma. 4. Analyze advanced patient assessment findings and formulate management of these emergencies within the paramedic scope of practice. 5. Test and successfully certify as an ACLS and PEPP Provider. Prerequisites: Admission to the Utah Tech Paramedic Program. Corequisites: EMS 2310, EMS 2325, EMS 2420, EMS 2425, AND EMS 2450. FA.

**EMS 2420. Paramedic Clinical I. 1 Hour.**

Provides the student with the opportunity to perform previously learned skills and apply knowledge of paramedic practice, supervised in a clinical setting. Includes, but is not limited to, areas in acute neurology and cardiac care. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Differentiate assessment findings of neurologic patients with those found in normal human physiology. 2. Compare neurological assessment details in acute versus chronic pathophysiology. 3. Administer 12 lead EKG's to patients in the acute setting. Course fee required. Prerequisites: Admission to the Utah Tech Paramedics program. Corequisites: EMS 2101, EMS 2201, EMS 2301, EMS 2401, and EMS 2450. FA.

**EMS 2425. Paramedic II Lab: Trauma Assessment and Management Lab; ACLS/PEPP Certification Skills. 3 Hours.**

Emphasizes concepts in trauma and critical decision-making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in Trauma Management, including mechanism of injury, multi-system trauma, chest and abdominal trauma. Identifies advanced patient assessment and management of these emergencies. Certifications for Advanced Cardiac Life Support (ACLS) and Pediatric Education for the Prehospital Professional (PEPP) are included in this course. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Illustrate how multisystem trauma and Mechanism of Injury (MOI) relate to patient assessment and scene management. 2. Differentiate the pathophysiology, assessment and management of lung injuries, myocardial injuries, vascular injuries, and other chest related injuries. 3. Integrate the pathophysiology, assessment, and management of abdominal trauma. 4. Analyze advanced patient assessment findings and formulate management of these emergencies within the paramedic scope of practice. 5. Test and successfully certify as an ACLS and PEPP Provider. Prerequisites: Admission to the Utah Tech Paramedic Program. Corequisites: EMS 2310, EMS 2325, EMS 2410, EMS 2420, AND EMS 2450. FA.

**EMS 2450. Paramedic Field I. 3 Hours.**

Provides the student with the opportunity to perform skills and apply knowledge of paramedic practice including: patient assessment, pharmacology airway and respiratory emergencies, trauma and cardiovascular management. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate a comprehensive patient assessment including detailed physical exam and patient history. 2. Devise a patient care plan based on assessment findings. 3. Distinguish the need for basic versus advanced airway interventions. 4. Recommend specific basic and advanced life support interventions in the trauma patient. 5. Order appropriate pharmacologic interventions based on patient presentation and assessment findings. Course fee required. Prerequisites: Admission to the Utah Tech Paramedics program. Corequisites: EMS 2101, EMS 2201, EMS 2301, EMS 2401, and EMS 2420. FA.

**EMS 2500. Paramedic Training IV. 8 Hours.**

This course is designated as an Active Learning Professional Practice (ALPP) course. This course allows students to explore and apply content learned in the course in a professional experience away from the classroom. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. Prerequisite: Admission to the Utah Tech University Paramedic Certificate program. SU.

**EMS 2501. Medical Emergencies. 3 Hours.**

Emphasizes concepts in medical emergencies; and critical decision making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in toxicologic, hematologic, and immunologic emergencies. Identifies characteristics of chronic and acute or emergent endocrine abnormalities. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Integrate the pathophysiology, assessment, and the use of critical decision-making skills in the management of abdominal emergencies. 2. Determine the immune system dysfunction during an allergic reaction or anaphylaxis and using assessment-based management identify the appropriate interventions. 3. Differentiate the characteristics and treatment of acute versus chronic endocrine emergencies. 4. Assess signs, symptoms, and the related management of a toxicologic, hematologic, and immunologic emergencies. 5. Discriminate between chronic and acute neurologic emergencies, and formulate a treatment plan based on evidence-based practice. Course fee required. Prerequisites: EMS 2101, EMS 2201, 2301, 2401, 2420, and 2450 (All grade B or higher). Corequisites: EMS 2601, EMS 2701, EMS 2720, and EMS 2750. SP.

**EMS 2600. Paramedic Training V. 12 Hours.**

This course is designated as an Active Learning Professional Practice (ALPP) course. This course allows students to explore and apply content learned in the course in a professional experience away from the classroom. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. Course fee required. Prerequisite: Admission to the Utah Tech University Paramedic Certificate program. FA.

**EMS 2601. Special Populations in Paramedicine and AMLS and PHTLS Certification. 3 Hours.**

Emphasizes concepts in obstetrics and gynecology and critical decision making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in neonatal care, including airway, respiratory, and circulatory considerations. Identifies evidence-based practices in managing these emergencies. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Compare the management of normal deliveries versus high-risk pregnancy and/or related gynecological emergencies. 2. Evaluate the pathophysiology and management of infants including neonates and newborns. 3. Demonstrate a patient assessment of an obstetric patient and organize findings for assessment-based management to provide appropriate pharmacological interventions. 4. Integrate the pathophysiology, assessment, and critical decision-making skills indicated for patients in special populations. 5. Test and successfully certify as an ACLS and PEPP Provider. Course fee required. Prerequisites: EMS 2201, EMS 2201, EMS 2301, EMS 2401, EMS 2420, and EMS 2450 (All grade B or higher). Corequisites: EMS 2501, EMS 2701, EMS 2720, and EMS 2750. SP.

**EMS 2610. Paramedic III: Medical Emergencies; Special Populations in Paramedicine. 3 Hours.**

Emphasizes concepts in medical emergencies; and critical decision-making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in toxicologic, hematologic, and immunologic emergencies. Identifies characteristics of chronic and acute or emergent endocrine abnormalities. Emphasizes concepts in obstetrics and gynecology and critical decision-making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in neonatal care; including airway, respiratory, and circulatory considerations. Identifies evidence-based practices in managing these emergencies. Lecture course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: At the successful conclusion of this course, students will be able to: 1. Integrate the pathophysiology, assessment, and the use of critical decision-making skills in the management of abdominal emergencies. 2. Differentiate the characteristics and treatment of acute versus chronic endocrine emergencies. 3. Compare the management of normal deliveries versus high-risk pregnancy and/or related gynecological emergencies. 4. Evaluate the pathophysiology and management of infants including neonates and newborns. 5. Test and successfully certify as an ACLS and PEPP Provider. Prerequisites: Admission to the Utah Tech Paramedic program. SP.

**EMS 2625. Paramedic III: Medical Emergencies; Special Populations in Paramedicine Lab. 4.5 Hours.**

Emphasizes concepts in medical emergencies; and critical decision-making skills transitioning from EMT/AEMT to Paramedic. Identifies characteristics of chronic and acute or emergent endocrine abnormalities. Emphasizes practical application of concepts in obstetrics and gynecology and critical decision-making skills transitioning from EMT/AEMT to Paramedic. Introduces advanced concepts in neonatal care, including airway, respiratory, and circulatory considerations during instructor-led scenarios. Identifies evidence-based practices in managing these emergencies. Lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Integrate the pathophysiology, assessment, and the use of critical decision-making skills in the management of complex medical emergencies. 2. Differentiate the characteristics and treatment of acute versus chronic endocrine emergencies during detailed physical exam. 3. Demonstrate the management of both normal deliveries and high-risk pregnancy and/or related gynecological emergencies. 4. Organize the assessment and management of infants including neonates and newborns. 5. Discriminate between chronic and acute neurologic emergencies through a formulated a treatment plan based on evidence-based practice. Prerequisites: Admission to the Utah Tech Paramedic program. SP.

**EMS 2701. EMS Research and Professional Development. 3 Hours.**

Emphasizes concepts in career development specific to the fire service, EMS, and related healthcare fields. Introduces concepts in research with emphasis on evidence-based practices in prehospital care. Lecture and lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate interview skills specific to fire service, EMS, and healthcare settings. 2. Create a resume/CV suitable for employment in fire service, EMS, and healthcare settings. 3. Summarize research on an emerging topic in EMS. 4. Evaluate current EMS research through literature review and write a research paper on findings. 5. Design a poster displaying research findings. Course fee required. Prerequisites: EMS 2201, EMS 2201, EMS 2301, EMS 2401, EMS 2420, and EMS 2450 (All grade B or higher). Corequisites: EMS 2501, EMS 2601, EMS 2720, and EMS 2750. SU.

**EMS 2710. Paramedic IV: EMS Research and Professional Development; AMLS and PHTLS Certification Courses. 3 Hours.**

Emphasizes concepts in career development specific to the fire service, EMS, and related healthcare fields. Introduces concepts in research with emphasis on evidence-based practices in prehospital care. Certification for Prehospital Trauma Life support (PHTLS) and Advanced Medical Life Support (AMLS) are included in this course. Lecture course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Evaluate interview skills specific to fire service, EMS, and healthcare settings. 2. Create a resume/CV suitable for employment in fire service, EMS, and healthcare settings. 3. Summarize research on an emerging topic in EMS. 4. Evaluate current EMS research through literature review and write a research paper on findings. 5. Test and successfully certify in PHTLS and AMLS. Prerequisites: EMS 2201, EMS 2301, EMS 2401, EMS 2420, and EMS 2450 (All grade B or higher). Corequisites: EMS 2610, EMS 2625, EMS 2710, EMS 2725, EMS 2720, and EMS 2750. SP.

**EMS 2720. Paramedic Clinical II. 2 Hours.**

Provides the student with the opportunity to perform previously learned skills and apply knowledge of paramedic practice. Includes, but is not limited to rotations in the Pediatric Emergency Department, Adult Emergency Department, and at home visits with "high-tech kids". This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful completion of this course, students will be able to: 1. Differentiate assessment findings of critical and stable pediatric patients. 2. Distinguish between normal physiology children and pathophysiology in children with special healthcare needs. 3. Integrate basic and advanced interventions in respiratory emergencies. 4. Assess the characteristics and treatment of patients with various abdominal complaints. 5. Evaluate signs, symptoms, and the related management of neurologic emergencies. Course fee required. Prerequisites: EMS 2101, EMS 2201, EMS 2301, EMS 2401, EMS 2420, and EMS 2450 (Grade B or higher). Corequisites: EMS 2501, EMS 2601, EMS 2701 and EMS 2750. SP.

**EMS 2725. Paramedic IV Lab: EMS Research and Professional Development; AMLS and PHTLS Certification Courses. 4.5 Hours.**

Emphasizes concepts in career development specific to the fire service, EMS, and related healthcare fields. Introduces concepts in research with emphasis on evidence-based practices in prehospital care. Certification for Prehospital Trauma Life support (PHTLS) and Advanced Medical Life Support (AMLS) are included in this course. Lab course. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: At the successful conclusion of this course, students will be able to: 1. Demonstrate interview skills specific to fire service, EMS, and healthcare settings. 2. Create a resume/CV suitable for employment in fire service, EMS, and healthcare settings. 3. Summarize research on an emerging topic in EMS. 4. Evaluate current EMS research through literature review and write a research paper on findings. 5. Test and successfully certify as an PHTLS and AMLS Provider. Prerequisites: EMS 2201, EMS 2301, EMS 2401, EMS 2420, and EMS 2450 (All grade B or higher). Corequisites: EMS 2610, EMS 2625, EMS 2710, EMS 2720, and EMS 2750. SP.

**EMS 2750. Paramedic Field II. 3 Hours.**

Provides the student with the opportunity to perform various skills and apply knowledge of paramedic practice including: respiratory, cardiac, neurologic, trauma, obstetric and gynecologic emergencies. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful completion of this course, students will be able to: 1. Demonstrate a comprehensive patient assessment including detailed physical exam and patient history. 2. Devise a patient care plan for trauma patients based on assessment findings. 3. Distinguish the need for basic versus advanced interventions in trauma patients. 4. Recommend specific basic and advanced life support interventions in the medical patient. 5. Order appropriate pharmacologic interventions based on patient presentation and assessment findings. Course fee required. Prerequisites: EMS 2101, EMS 2201, EMS 2301, EMS 2401, EMS 2420, and EMS 2450 (Grade B or higher). Corequisites: EMS 2501, EMS 2601, EMS 2701, and EMS 2720. SP (odd).

**EMS 2801. National Registry Preparation and Testing. 3 Hours.**

Provides scenario-based instruction and practical activities to reinforce previously learned skills and knowledge. Reinforces assessment-based management and evidence-based practice for medical and trauma patients across the lifespan. Preparation for psychomotor National Registry certification exam and testing included. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Differentiate assessment findings of critical and stable trauma patients across the lifespan. 2. Distinguish between the need for basic and advanced life support and use assessment-based management in making transport decisions. 3. Integrate critical decision-making skills with the patient's holistic needs in determining appropriate interventions. 4. Justify treatment decisions using evidence-based practice. 5. Modify treatment plans based on changes in patient's condition. Course fee required. Prerequisites: EMS 2501, EMS 2601, EMS 2701, EMS 2720, and EMS 2750 (All grade B or higher). Corequisites: EMS 2820, EMS 2850, and EMS 2950. SU.

**EMS 2820. Paramedic Clinical III. 4 Hours.**

Provides the student with the opportunity to perform previously learned skills and apply knowledge of paramedic practice. Includes, but is not limited to rotations in the Emergency Department, Trauma Center, Labor and Delivery, Operating Room, and Cath Lab. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Differentiate assessment findings of critical and stable trauma patients. 2. Distinguish between normal physiology during pregnancy and pathophysiology in abnormal pregnancy. 3. Integrate basic and advanced airway interventions in the operating room and emergency department settings. 4. Assess the characteristics and treatment of patients with various stages of heart disease. 5. Evaluate signs, symptoms, and the related management of airway emergencies. Course fee required. Prerequisites: EMS 2501, EMS 2601, EMS 2701, EMS 2720, and EMS 2750 (All grade B or higher). Corequisites: EMS 2801, EMS 2850, and EMS 2950. SU.

**EMS 2850. Paramedic Field III. 3 Hours.**

Provides the student with the opportunity to perform various skills and apply knowledge of paramedic practice including: advanced patient assessment, basic and advanced airway management, and assessment-based pharmacological interventions. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Facilitate a comprehensive patient assessment including detailed physical exam and patient history. 2. Formulate a patient care plan for trauma patients based on assessment findings. 3. Distinguish the need for basic versus advanced interventions in trauma patients. 4. Discriminate the need for basic and/or advanced life support interventions in the medical patient applying critical decision-making skills. 5. Order appropriate pharmacologic interventions based on patient presentation and assessment findings. Course fee required. Prerequisites: EMS 2501, EMS 2601, EMS 2701, EMS 2720, and EMS 2750 (All grade B or higher). Corequisites: EMS 2801, EMS 2820, and EMS 2950. SU.

**EMS 2950. Paramedic Capstone. 3 Hours.**

Provides students with the opportunity to practice as an entry-level paramedic in the role as team lead while demonstrating mastery in various skills including patient assessment, airway management, advance cardiac life support, pharmacology, and assessment-based patient management across the lifespan, in the pre-hospital setting. Prepares students for National Registry certification exam. This course requires a Differential Tuition Rate which is an additional fee of \$80 charged per credit hour. **\*\*COURSE LEARNING OUTCOMES (CLOs)** At the successful conclusion of this course, students will be able to: 1. Demonstrate exemplary professional behavior including: but not limited to., integrity, empathy, self-motivation, appearance/personal hygiene, self confidence, communication, time management, teamwork/diplomacy, respect, patient advocacy, and careful delivery of service. 2. Perform basic and advanced interventions as as part of a treatment plan intended to mitigate emergency, provide symptom relief, and improve the overall health of the patient. 3. Evaluate the effectiveness of interventions and modify treatment plan accordingly. 4. Prepare and document assessment findings and interventions to be used for research purposes. 5. Facilitate all aspects of patient care as a team lead on 20 calls with a minimum average rating of 80% or higher on FISDAP and no more than two failures in a row. Course fee required. Prerequisites: EMS 2501, EMS 2601, EMS 2701, EMS 2720, and EMS 2750 (All grade B or higher). Corequisites: EMS 2801, EMS 2820, and EMS 2850. SU.