EMS A150L: EMERGENCY MEDICAL SERVICES LABORATORY

Item	Value
Curriculum Committee Approval Date	12/06/2023
Top Code	125000 - Emergency Medical Services
Units	1.5 Total Units
Hours	81 Total Hours (Lab Hours 81)
Total Outside of Class Hours	0
Course Credit Status	Credit: Degree Applicable (D)
Material Fee	Yes
Basic Skills	Not Basic Skills (N)
Repeatable	No
Open Entry/Open Exit	No
Grading Policy	Pass/No Pass (B)

Course Description

Practical application of the theories and skills required for an Emergency Medical Technician to perform assessments, and provide care, life-saving measures, and employ safe techniques while effectively engaged in patient interactions. Formerly known as EMT A150L. COREQUISITE: EMS A150 and EMS A151. Transfer Credit: CSU.

Course Level Student Learning Outcome(s)

1. Demonstrate in the correct sequence, an appropriate patient assessment for both a medical and traumatic prehospital emergency, including scene safety and vital signs; adapt to various patient care settings and patient ages; develop appropriate interventions; and communicating both verbally and in writing effectively with various healthcare professionals regarding patient presentation and care.
2. Successfully pass the seven elements of the National Registry of Emergency Medical Technicians' Skills Validation Testing at the completion of the course with a score of 70% or better.

Course Objectives

- 1. Demonstrate the basic concepts of medical-surgical asepsis to include OSHA guidelines for blood and airborne pathogens and standard precautions.
- 2. Demonstrate knowledge of basic concepts of anatomy and physiology of the body systems with a special emphasis on the cardiopulmonary system, and apply these concepts to assist in the assessment and treatment of the sick or injured patient.
- 3. Perform correct vital sign measurements on a minimum of twenty (20) students and peers in the class.
- 4. Demonstrate the use of correct body mechanics and its use in safe moving and lifting techniques.
- 5. Demonstrate the correct gurney operations and its integration with the ambulance.
- 6. Demonstrate the use of other moving and lifting devices commonly employed in the prehospital setting.
- 7. Demonstrate the steps and discuss the importance of the scene size-up process.
- 8. Perform methods for initial life-saving evaluations and the implementation of prescribed life-saving measures.
- 9. Perform appropriate physical examinations, taking patient histories, obtaining vital signs, and communicating with the patient, family and other healthcare workers.
- 10. Perform cardiopulmonary resuscitation and use of the AED following the most current American Heart Association Healthcare Provider guidelines.
- 11. Recognize and correct improper performance of cardiopulmonary resuscitation.
- 12. Correctly demonstrate the ability to properly immobilize a supine and seated patient to protect from potential cervical spine injuries.
- 13. Correctly demonstrate the procedure to splint bones of the extremities and pelvis.
- 14. Correctly apply appropriate bandages and indicate their intended use.
- 15. Demonstrate the ability to correctly manage the airway and breathing of an adult, child and infant.
- 16. Apply appropriate supplemental oxygen or positive pressure ventilation as required, and assist with endotracheal intubation.
- 17. Perform evaluations and treatment for other conditions requiring prehospital intervention following established emergency guidelines.
- 18. Recognize, define, explain and demonstrate the proper care for adequate and inadequate breathing.
- 19. Recognize and define the treatment for traumatic injuries to all areas of the body.
- 20. Recognize and define treatment for common medical emergencies.
- 21. Recognize and define the treatment for environmental emergencies.
- 22. Demonstrate the correct prehospital management of obstetrics? emergency.
- 23. Demonstrate appropriate assessment and care of the newborn.
- 24. Recognize and define concepts of techniques used for extrication of trapped persons and apply these concepts to different entrapment situations.
- 25. Explain and perform techniques for monitoring the patient?s condition during transport.
- 26. Explain and perform basic monitoring and maintenance of intravenous lines during transportation of patients.
- 27. Demonstrate the correct use of cardiac monitoring equipment and the application of 12-lead, 5-lead, and 3-lead ECG placement.
- 28. Explain the appropriate concepts of medication administration and compare and contrast indications and contraindications.
- 29. Demonstrate the administration of the following medications (non-pharmacological substitutes and trainers will be used): oxygen, oral glucose, nitroglycerine, aspirin, metered-dose inhaler, epinephrine auto-injector, duo-dote injector, activated charcoal.
- 30. Demonstrate how to obtain a serum blood sample and test the glucose level using an approved glucose meter.
- 31. Perform suctioning via an endotracheal tube and a tracheostomy tube.
- 32. Demonstrate tourniquet application for the management of uncontrolled bleeding on an extremity.
- 33. Demonstrate the ability to communicate effectively, appropriately, and professionally in both written and verbal communications throughout the class.

- 34. Perform routine safety checks and inventory on the ambulance.
- 35. Exhibit leadership capabilities during scenarios and the ability to control as scene and function as team leader and/or incident commander.
- 36. Demonstrate the ability to effectively apply the START triage principles.
- 37. Demonstrate through actions, participation, and completion of required assignments the ability to follow directions thoroughly and accurately.
- 38. Apply the objectives of the most recent and required new National EMS Scope of Practice Model to all material throughout the course.

Lecture Content

Not applicable; course is laboratory only.

Lab Content

1.Safe glove removal. 2.Handwashing techniques. 3.Review of standard precautions. 4.Discussion and demonstration of proper body mechanics. 5.Power lift. 6.Direct ground lift. 7.Extremity lift. 8.Direct carry. 9.Draw sheet method. 10.Log rolling patients with and without suspected spinal injury. 11.Establishing manual in-line stabilization. 12.Moving patients into and from a wheelchair. 13.Moving a patient on the Stair Chair. 14.Gurney operations. 15.Integration of gurney operations with the ambulance. 16.Obtaining vital signs; manual blood pressure, respirations, pulse, skin signs. 17.Capillary refill and pupil assessment. 18.Pulse oximetry use. 19.Orthostatic vital signs. 20.Mental status assessment (AVPU and Orientation). 21.Assisting with ambulation. 22.Scene characteristics. 23.Determining scene safety. 24.Manual airway techniques. 25.Nasal pharyngeal airway insertion. 26.Oral pharyngeal airway insertion. 27.Suctioning. 28.Suctioning into the ETT and tracheostomy tube. 29.Oxygen tank use and safety. 30.Applying oxygen devices. 31.Recognizing adequate and inadequate breathing. 32.Patient ventilation techniques. 33.Chest auscultation. 34.Primary/ Initial assessment. 35.Rapid Exam (head-to-toe). 36.D-C-A-P-B-T-L-S 37.Secondary exam medical 38.Secondary exam trauma 39.Focused exam 40.Detailed exam and reassessment. 41.Neurological exams; Los Angeles Stroke Screen, Glasgow Coma Scale, and CSM checks 42.Review of cardiopulmonary resuscitation per the most up-to-date American Heart Association Guidelines. 43.Using the semi automated AED. 44.CPR resuscitation and AED use team integration. 45.Use of cardiac monitoring devi ces. 46.12-lead, 3-lead, and 5-lead ECG placement. 47.Medication administration. 48.Administering nebulized medications. 49.Administering medication by a metered-does inhaler. 50.Assisting a patient with Nitroglycerine. 51.Administering aspirin for chest pain. 52.Administering an epinephrine auto injector. 53.Recognition of S-L-U-D-G-E-M response to organophosphate poisoning and chemical exposures. 54.Self administration of an emergency rescue agent such as the Duo-dote kit. 55.Administration of activated charcoal. 56.Administration of oral glucose. 57.Testing serum glucose levels with a glucose meter. 58.Managing assaultive behavior. 59.Restraining patients. 60.Methods of bleeding control. 61.Tourniquet application. 62.Controlling nosebleed. 63.Burn management techniques. 64.Bandaging techniques. 65.Special dressing and bandaging considerations. 66.Dressing and bandaging an abdominal evisceration. 67.Removing a foreign object in the upper eyelid. 68.Caring for injuries of the Face, eye, mouth, jaw, cheek, and chin. 69.Caring for injuries of the nose, ear, and neck. 70.Care of amputated body parts. 71.Stabilizing an impaled object. 72.Discussion and demonstration of the PASG. 73.General splinting techniques. 74.Applying bipolar and unipolar traction splints. 75.Applying air splints. 76.Applying rigid splints and improvised splints. 77.Splinting specific injuries and special situations. 78.Stabilizing a flail segment. 79.Stabilizing a suspected pelvic fracture. 80.Assessing neurological, motor, sensory, and perfusion function. 81.Cervical spine immobilization/extrication collars. 82.Sizing and placing extrication collars to seated and supine patients. 83.Use of variou s immobilization devices. 84.Moving a patient to a long board. 85.Seated immobilization techniques. 86.Immobilizing a supine patient to a long board. 87.Rapid extrication techniques. 88.Helmet removal. 89.Child seat extrication. 90.Special immobilization considerations and techniques. 91.Pediatric immobilization. 92.Childbirth: Delivery in the prehospital setting. 93.Neonatal resuscitation. 94.Assessment and care of the newborn. 95.Pediatric primary/initial assessment. 96.Pediatric rapid exam (Toe-to-head). 97.Elements of the daily ambulance vehicle inspection. 98.Multiple Casualty Incident triaging. 99.Incident command and team leading. 100.Assisting with advanced airway placement. 101.Ventilation techniques with advanced airway placement. 102.Nasogastric intubation. 103.Assisting with intravenous therapy administration. 104.Monitoring intravenous lines and intravenous sites. 105.Care of urinary catheters, gastrostomy tubes, central lines and other permanent and semi-permanent devices on patients.

Method(s) of Instruction

- Lab (04)
- DE Live Online Lab (04S)

Instructional Techniques

Demonstration of isolated skills with supervised practiced and return demonstration. Demonstration and discussion of focused assessments with supervised practiced and return demonstration. Demonstration and discussion of integrated assessments with supervised practice and return demonstration. Use of scenario-based drills to create critical thinking exercises that require application of multiple skills. Clinical preparation lecture.

Reading Assignments

Weekly Reading (1-2 hours) Students have a lab manual. Each lab is approximately 4-9 pages in length. Students should read it and complete the associated prelab. Students may have assigned reading from their text for specific labs.

Writing Assignments

Lab Self Reflections (1 hour or less) Maintenance of a skills notebook that reflects minimal proficiency of each isolated and integrated didactic skill demonstrated in lab will be kept by the student and submitted for grading and completeness several times throughout the semester and prior to the semester s end. Students will include paragraph summaries of what they have learned and how this applies to the content of the curriculum as the class progresses.

Out-of-class Assignments

Weekly Prelabs (1-2 Hours) After completing the weekly reading students have a 4-6 questio prelab demonstrating familiarity with the material to be covered in that days lab. Skills mastery Practice (1-2 hours) Students are expected to practice their lab skills on friends, family or classmates outside of class. For example, taking vital signs and practice patient histories.

Demonstration of Critical Thinking

Demonstration of isolated skills with supervised practiced and return demonstration. Demonstration and discussion of focused assessments

with supervised practiced and return demonstration. Demonstration and discussion of integrated assessments with supervised practice and return demonstration. Use of scenario-based drills to create critical thinking exercises that require application of multiple skills. Clinical preparation lecture.

Required Writing, Problem Solving, Skills Demonstration

Demonstration of isolated skills with supervised practiced and return demonstration. Demonstration and discussion of focused assessments with supervised practiced and return demonstration. Demonstration and discussion of integrated assessments with supervised practice and return demonstration. Use of scenario-based drills to create critical thinking exercises that require application of multiple skills. Clinical preparation lecture.

Eligible Disciplines

Emergency medical technologies: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience. Nursing: Master's degree in nursing OR bachelor's degree in nursing AND master's degree in health education or health science OR the equivalent OR the minimum qualifications as set by the Board of Registered Nursing, whichever is higher. Master's degree required. Nursing science/clinical practice: Any bachelor's degree and two years of professional experience, or any associate degree and six years of professional experience.

Textbooks Resources

1. Required Mistovich, J., Hafen, B. Karren, K.. Pre-Hospital Emergency Care, 11th ed. New Jersey: Pearson/Prentice, 2018

Other Resources

1. Basic Life Support the Health Care Provider. American Heart Association, 2016.