

# ILLINOIS VALLEY COMMUNITY COLLEGE



## COURSE OUTLINE

**DIVISION: Health Professions**

**COURSE: EMS 2200-01 Emergency Medical Responder**

Date: Fall, 2015 Mondays & Wednesdays, 3:30 pm to 5:20 pm

Credit Hours: 4

**Instructor:**

Andy Borkowski, BA EMT-P  
815-224-0485 Division Office  
815-712-8255 Cell Phone

Prerequisite(s): The applicant must be at least sixteen (16) years of age

It is recommended that the applicant possess a high school diploma or equivalent. **(Copies are required)**

Students under 18 years of age need to show proof of being enrolled in high school with evidence that they will have enough credits to graduate.

**It is preferable if the applicant possesses a valid AHA or American Red Cross Healthcare Provider CPR card prior to the start of the First Responder/EMR program.**

Delivery Method:

<input checked="" type="checkbox"/> Lecture	4 Contact Hours (1 contact = 1 credit hour)
<input type="checkbox"/> Seminar	0 Contact Hours (1 contact = 1 credit hour)
<input type="checkbox"/> Lab	0 Contact Hours (2 contact = 1 credit hour)
<input type="checkbox"/> Clinical	0 Contact Hours (3 contact = 1 credit hour)
<input type="checkbox"/> Online	
<input type="checkbox"/> Blended	

Offered:  Fall  Spring  Summer

IAI Equivalent –**Only for Transfer Courses**–go to <http://www.itransfer.org>.

## GENERAL EDUCATION GOALS ADDRESSED

*[See the last page of this form for more information.]*

### Upon completion of the course, the student will be able:

*[Choose those goals that apply to this course.]*

- To apply analytical and problem solving skills to personal, social and professional issues and situations.
- To communicate orally and in writing, socially and interpersonally.
- To develop an awareness of the contributions made to civilization by the diverse cultures of the world.
- To understand and use contemporary technology effectively and to understand its impact on the individual and society.
- To work and study effectively both individually and in collaboration with others.
- To understand what it means to act ethically and responsibly as an individual in one's career and as a member of society.
- To develop and maintain a healthy lifestyle physically, mentally, and spiritually.
- To appreciate the ongoing values of learning, self-improvement, and career planning.

### EXPECTED LEARNING OUTCOMES AND RELATED COMPETENCIES:

*[Outcomes related to course specific goals.]*

#### Chapter 1 Introduction to EMS Systems

- Explain the role of the National Highway Traffic Safety Administration (NHTSA) and its relationship to EMS.
- Explain the role that the National EMS Education Standards and the National Scope of Practice Model play in shaping EMS around the country.
- Differentiate the various EMS models in practice around the United States.
- Differentiate the various attributes of an EMS system and describe the function of each.
- Explain the role that state and local EMS offices, medical oversight, and local credentialing play in an EMS system.
- Differentiate the four nationally recognized levels of EMS provider.
- Explain the various types of medical direction and how the Emergency Medical Responder might interact with each.
- Differentiate the roles and responsibilities of the Emergency Medical Responder from other EMS providers.
- Describe the characteristics of professionalism as they relate to the Emergency Medical Responder.
- Explain the role of the Emergency Medical Responder with regard to continuous quality improvement.
- Explain how state and local statutes and regulations affect how an Emergency Medical Responder might function.
- Explain the role of public health systems and their relationship to EMS, disease surveillance, and injury prevention.

- Explain the role that Disaster Medical Assistance Teams play and how they integrate with EMS systems.
- Explain the role that research plays in EMS and the ways that an Emergency Medical Responder might seek out and support research.

## **Chapter 2                      Legal and Ethical Principles of Emergency Care**

- Explain the concepts of duty and breach of duty as they relate to the Emergency Medical Responder.
- Explain the term ethics and how it relates to the Emergency Medical Responder.
- Explain the term Good Samaritan law and how these laws relate to the Emergency Medical Responder.
- Explain the term mandated reporter and how it relates to the Emergency Medical Responder.
- Differentiate the terms scope of practice and standard of care.
- Differentiate the various types of consent used by the Emergency Medical Responder.
- Explain the role of the Emergency Medical Responder for patients who refuse care.
- Differentiate civil versus criminal litigation.
- Explain the common elements of an advance directive.
- Explain the role of the Emergency Medical Responder with regard to patient confidentiality.
- Explain the role of the Emergency Medical Responder with respect to evidence preservation when working in or around an actual or potential crime scene.

## **Chapter 3                      Safety and Wellness**

- Explain the importance of a baseline health assessment for new EMS providers.
- Describe the various immunizations recommended for health care providers.
- Explain the term standard precautions as it relates to the Emergency Medical Responder.
- Explain what body substance isolation precautions are and when they should be used.
- Identify the four routes by which pathogens enter the body.
- List examples of personal protective equipment and the purpose of each.
- Explain the procedure the Emergency Medical Responder should follow after a possible pathogen exposure.
- Describe common hazards at the scene of an emergency.
- Explain the steps the Emergency Medical Responder should take to mitigate common scene hazards.
- Explain the terms stress and stressor as they relate to the Emergency Medical Responder.
- Describe several sources of stress commonly encountered by the Emergency Medical Responder.
- Describe common physical, emotional, psychological responses to stress.
- Describe common responses to death and dying and strategies to assist oneself and others in coping with death.

- Describe strategies for minimizing the effects of stress on the Emergency Medical Responder.
- Describe the key components of critical incident stress management.
- Differentiate between cleaning and disinfection, and state when each should be performed.

#### **Chapter 4 Introduction to Medical Terminology, Human Anatomy, and Lifespan Development**

- Apply knowledge of basic medical terminology to interpret common medical terms.
- Describe the standard anatomical position and its purpose.
- Identify the four major body cavities.
- Describe the anatomy contained in each of the body cavities.
- Describe the anatomy and function of the respiratory system.
- Describe the anatomy and function of the circulatory system.
- Describe the anatomy and function of the musculoskeletal system.
- Describe the anatomy and function of the nervous system.
- Describe the anatomy and function of the digestive system.
- Describe the anatomy and function of the reproductive system.
- Describe the anatomy and function of the urinary system.
- Describe the anatomy and function of the skin.
- Describe the anatomy and function of the endocrine system.
- Describe the major phases of the lifespan development.

#### **Chapter 5 Introduction to Pathophysiology**

- Explain the importance of understanding basic pathophysiology.
- Differentiate between the processes of aerobic and anaerobic cellular metabolism.
- Explain the concept of perfusion, including the components necessary to maintain perfusion.
- Describe the composition of ambient air.
- Explain how changes in respiratory system function can affect ventilation.
- Describe the transport of oxygen and carbon dioxide in the blood.
- Discuss factors that affect cardiac output.
- Describe the two ways the heart can fail resulting in decreased cardiac output.
- List the responses by the body when the sympathetic nervous system is stimulated.

#### **Chapter 6 Principles of Lifting, Moving, and Positioning of Patients**

- Describe the characteristics of proper body mechanics.
- Explain the importance of using proper body mechanics.
- Explain the hazards of not using proper body mechanics when lifting and moving patients.
- Explain the importance of active communication during patient lifts and moves.
- Differentiate between a standard move and an emergent move, and state when it should be used.

- Identify the common devices used for transporting patients.
- Explain the purpose of the “recovery position,” and state when it should be used.
- Describe the following patient positions, and state when each should be used:  
Fowler’s, semi- Fowler’s, and shock.
- Explain the criteria for using patient restraint.
- Identify various types of patient restraints.
- Explain the technique for the proper restraint of a patient.
- Explain the complications associated with restraining a patient.

## **Chapter 7 Principles of Effective Communication**

- State the four types of communication.
- Describe the components of effective communication.
- Describe common barriers to effective communication.
- Describe the strategies for effective communication.
- Describe the characteristics of therapeutic communication.
- Describe the elements of an appropriate verbal transfer of care.
- Describe strategies for successful interviewing.
- Describe strategies for successful communication specific to pediatric and geriatric populations.
- Identify common communication devices used in EMS.
- Describe the proper technique for communicating via radio.

## **Chapter 8 Principles of Effective Documentation**

- Explain the purpose(s) of the patient care report.
- Describe the elements of a typical patient care report.
- Describe the minimum data set required for the documentation of patient care.
- Explain the procedure for correcting errors made during documentation.
- List various tools used to document patient care in the field setting.

## **Chapter 9 Principles of Airway Management and Ventilation**

- State the oxygen concentration of room air.
- Describe the common causes of respiratory compromise.
- Differentiate between clinical and biological death.
- Describe the signs of a patent airway.
- Differentiate the signs and symptoms of adequate and inadequate breathing.
- Explain the appropriate steps for rescue breathing with a barrier device.
- Describe common causes of airway obstruction.
- Differentiate the signs and symptoms of a partial and complete airway obstruction.
- Describe the care for a patient with a partial and complete airway obstruction.
- Describe the management of a patient’s airway when there is a suspected spine injury.
- Explain the indications and contraindications for the insertion of an oropharyngeal airway.

- Explain the indications and contraindications for the insertion of a nasopharyngeal airway.
- Explain the benefits, indications, and contraindications of positive pressure ventilation.
- Differentiate the signs of adequate versus inadequate ventilations.
- Explain the indications for oral and nasal suctioning.
- Differentiate between manual, electric, and oxygen powered suction devices.
- Differentiate the airway management of pediatric, adult, and geriatric patients.

## **Chapter 10 Principles of Oxygen Therapy**

- Explain the benefits of supplemental oxygen.
- Explain the indications of supplemental oxygen.
- Describe the potential hazards of working with high-pressure cylinders.
- Explain the safe practices when working with high-pressure cylinders.
- Differentiate among the common sizes of oxygen cylinders used in EMS.
- Describe the purpose and functions of an oxygen regulator.
- Explain the indications for the use of a nasal cannula.
- Explain the indications for the use of a nonrebreather mask.

## **Chapter 11 Principles of Resuscitation**

- Explain the most common causes of cardiac arrest for adult and pediatric patients.
- Explain the components of the adult “chain of survival.”
- Describe the signs of cardiac arrest.
- Explain the steps for performing single-rescuer CPR on an adult, child, and infant.
- Explain the steps for performing two-rescuer CPR on an adult, child, and infant.
- Explain the purpose of an automated external defibrillator.
- Describe the indications and contraindications for the use of an AED.
- Explain the importance of minimizing interruptions during CPR.

## **Chapter 12 Obtaining a Medical History and Vital Signs**

- Explain the importance of a thorough medical history.
- Differentiate between a sign and a symptom.
- Describe the components of the SAMPLE history tool.
- Describe the components of the OPQRST assessment tool.
- Explain the role that monitoring vital signs plays in the overall assessment and care of the patient.
- State the characteristics that are obtained and measured when assessing respirations, pulse, blood pressure, skin signs, and pupils.
- Describe the methods used to assess a pulse in an infant, child, and adult patient.
- Differentiate normal and abnormal vital sign values for the infant, child, and adult patients.

## **Chapter 13**

### **Principles of Patient Assessment**

- Explain the importance that safety plays at the scene of an emergency.
- Describe hazards commonly found at emergency scenes (medical and trauma).
- Explain the role the Emergency Medical Responder plays in ensuring the safety of all people at the scene of an emergency.
- Describe the components of an appropriate scene size-up and the importance of each component.
- Differentiate between mechanism of injury and nature of illness.
- Differentiate between a significant and nonsignificant mechanism of injury.
- Explain the purpose of the primary assessment.
- Describe the components of a primary assessment.
- Describe patients who are high and low priority for transport.
- Explain the purpose of the secondary assessment.
- Describe the components of the secondary assessment.
- Describe the components of the SAMPLE history tool.
- Describe the components of the BP-DOC assessment tool.
- Explain the purpose of the reassessment.
- Describe the unique assessment methods used for pediatric and geriatric patients.

## **Chapter 14**

### **Caring for Cardiac Emergencies**

- Describe the normal flow of blood through the heart.
- Explain common causes of cardiac compromise.
- Describe the signs and symptoms of a patient experiencing cardiac compromise.
- Differentiate and explain the pathophysiology of angina, myocardial infarction, and heart failure.
- Explain the appropriate assessment and care for a patient experiencing cardiac compromise.

## **Chapter 15**

### **Caring for Respiratory Emergencies**

- Explain common causes of respiratory compromise.
- Describe the signs and symptoms of a patient experiencing respiratory compromise.
- Explain the pathophysiology of respiratory compromise.
- Describe the appropriate assessment and care for a patient experiencing respiratory compromise.

## **Chapter 16**

### **Caring for Common Medical Emergencies**

- Explain the common causes of altered mental status.
- Describe the signs and symptoms of a patient with an altered mental status.
- Explain the appropriate assessment and care for a patient with an altered mental status.

- Describe the signs and symptoms of a patient experiencing a generalized seizure.
- Explain the appropriate assessment and care for a patient experiencing a generalized seizure.
- Describe the signs and symptoms of a patient experiencing a stroke.
- Explain the appropriate assessment and care for a patient experiencing a stroke.
- Describe the signs and symptoms of a patient experiencing a diabetic emergency.
- Differentiate between the signs and symptoms of hyperglycemia and hypoglycemia.
- Explain the appropriate assessment and care for a patient experiencing a diabetic emergency.
- Describe the signs and symptoms of a patient experiencing an overdose or poisoning.
- State when it is most appropriate to contact the poison control center.
- Describe the signs and symptoms of a patient experiencing an emergency related to renal failure.
- Explain the special considerations that apply to caring for a hemodialysis patient.
- Describe the signs and symptoms of a patient experiencing a generalized infection (sepsis).
- Explain the appropriate assessment and care for a patient experiencing a generalized infection (sepsis).
- Describe the signs and symptoms of an allergic reaction.
- Explain the appropriate assessment and care for a patient experiencing a severe allergic reaction.
- Describe the signs and symptoms of a patient experiencing a suspected behavioral emergency.
- Explain the appropriate assessment and care for a patient experiencing a suspected behavioral emergency.

## **Chapter 17                      Caring for Environmental Emergencies**

- Explain the four ways the body loses excess heat.
- Describe the signs and symptoms of a patient experiencing a heat-related emergency.
- Explain the appropriate assessment and care for a patient experiencing a heat-related emergency.
- Differentiate the signs and symptoms of heat stroke and heat exhaustion.
- Describe the signs and symptoms of a cold-related emergency.
- Explain the appropriate assessment and care for a patient experiencing a cold-related emergency.
- Describe the signs and symptoms of emergencies related to bites and stings.
- Explain the appropriate assessment and care for a patient experiencing an emergency related to a bite or sting.
- Describe common factors leading to submersion injuries.
- Describe common methods used for water-related rescue.
- Explain the hazards related to water rescue.
- Describe the signs and symptoms of a submersion injury.
- Explain the appropriate care for a victim of a submersion injury.



## **Chapter 18**

### **Caring for Soft-Tissue Injuries and Bleeding**

- Explain the importance of using appropriate body substance isolation precautions when caring for a patient with external bleeding.
- Identify the characteristics of multisystem trauma.
- Differentiate the characteristics of arterial, venous, and capillary bleeding.
- Explain the proper care for a patient with active external bleeding.
- Describe the signs and symptoms of internal bleeding.
- Explain the proper care of a patient with suspected internal bleeding.
- Describe common types of external soft-tissue injuries.
- Explain the proper care for a patient with an impaled object.
- Explain the proper care for an amputation injury.
- Explain the proper care for nosebleed.
- Explain the proper care for an injury to the eye.
- Differentiate superficial, partial-thickness, and full-thickness burns.
- Differentiate the care for electrical, chemical, and thermal burns.
- Explain the purpose of a dressing.
- Explain the purpose of a bandage.

## **Chapter 19**

### **Recognition and Care of Shock**

- Explain the pathophysiology of shock.
- Describe the four categories of shock.
- List the seven main types of shock and their causes.
- Describe the signs and symptoms of shock.
- Explain the proper care of a patient presenting with signs and symptoms of shock.

## **Chapter 20**

### **Caring for Muscle and Bone Injuries**

- Describe the components that make up the musculoskeletal system.
- Explain the functions of the musculoskeletal system.
- Describe the major bones of the skeletal system.
- Describe the signs and symptoms of a musculoskeletal injury.
- Differentiate between a strain, sprain, fracture, and dislocation.
- Differentiate between an open and closed skeletal injury.
- Explain the appropriate care for a patient with a musculoskeletal injury.
- Explain the importance of an appropriate assessment of the distal extremity.
- Differentiate between direct and indirect forces and the injuries they cause.
- Explain the criteria for placing an angulated extremity injury into an anatomical position.
- Explain the purpose and methods for manual stabilization of a skeletal injury.
- Explain the priority of care for a patient with a suspected open skeletal injury.
- Explain the priority of care for a patient with multisystem trauma.

## **Chapter 21**

### **Caring for Head and Spine Injuries**

- Describe the major components of the spinal column.
- Describe the major components of the nervous system.
- Describe the major components of the cranium.
- Explain the relationship of mechanism of injury to the potential for spine injury.
- Describe the signs and symptoms of a head injury.
- Differentiate between an open and closed head injury.
- Explain the appropriate assessment and care for a patient with a head injury.
- Describe the signs and symptoms of a spine injury.
- Explain the appropriate assessment and care for a patient with a suspected spine injury.
- Explain the special considerations of airway management for a patient with suspected cervical-spine injury.

## **Chapter 22**

### **Caring for Chest and Abdominal Emergencies**

- Describe the major structures of the thoracic cavity.
- Explain the relationship between chest injury and perfusion.
- Differentiate between an open and closed chest injury.
- Describe the signs and symptoms of a closed chest injury.
- Explain the appropriate assessment of a patient with a chest injury.
- Explain the appropriate care of a patient with a closed chest injury.
- Explain the appropriate care of a patient with an open chest injury.
- Describe the major structures of the abdominal and pelvic cavities.
- Describe the signs and symptoms of internal bleeding.
- Explain the appropriate assessment and care of a patient with abdominal pain.
- Explain the appropriate assessment and care of a patient with an open abdominal injury.

## **Chapter 23**

### **Care During Pregnancy and Childbirth**

- Describe the function of the following anatomy related to childbirth: amniotic sac, birth canal, cervix, placenta, umbilical cord, and uterus.
- Describe the three stages of labor and when each begins and ends.
- Describe the signs of an imminent delivery.
- Explain the steps for preparing for a field delivery.
- Explain the steps for assisting with a field delivery.
- Explain the purpose of each of the items in a typical field obstetrics kit.
- Explain the priorities of care for the newborn following a field delivery.
- Explain the priorities of care for the mother following field delivery.
- Explain the common causes of vaginal bleeding during the first trimester.
- Explain the common causes of vaginal bleeding during the third trimester.
- Explain the appropriate care for a pregnant patient with vaginal bleeding.
- Describe the signs and symptoms of supine hypotensive syndrome.

- Explain the appropriate care for a patient with signs and symptoms of supine hypotension syndrome.
- Explain the appropriate care for a patient with signs and symptoms of preeclampsia.
- Explain the common complications related to a field delivery and how to properly care for each.

## **Chapter 24                    Caring for Infants and Children**

- Explain various techniques that can be employed to maximize successful assessment of the pediatric patient.
- Explain the components of the pediatric assessment triangle.
- State the most common cause of cardiac arrest in the pediatric patient.
- Describe the signs and symptoms of sudden infant death syndrome.
- Explain the appropriate steps for management of a suspected SIDS death.
- Describe the common signs and symptoms of abuse and neglect.
- Explain the role of the Emergency Medical Responder in cases of suspected abuse and/or neglect.
- Explain the assessment and management of the following emergencies and pediatric patients: (a) upper airway obstruction, (b) lower reactive airway disease, (c) seizures, and (d) shock.

## **Chapter 25                    Special Considerations for the Geriatric Patient**

- Describe the general characteristics commonly associated with geriatric patients.
- Describe some of the most common age-related physical changes found in geriatric patients.
- Describe the common medical problems of geriatric patients.
- Explain the unique challenges that can arise when assessing and caring for the geriatric patient.
- Describe changes in the approach to care when caring for geriatric patients.
- Describe the common signs and symptoms of abuse and neglect.
- Explain the role of the Emergency Medical Responder in cases of suspected abuse and/or neglect.

## **Chapter 26                    Introduction to EMS Operations and Hazardous Response**

- Describe the common equipment necessary to appropriately respond to an emergency.
- Describe common devices used at the scene of an emergency to keep personnel and the scene safe.
- Explain the importance of keeping all equipment serviceable and ready at all times.
- Describe the phases of an emergency call.
- Explain the appropriate use of all lights and sirens when responding to or from an emergency scene.
- Explain the concept of due regard when responding in an emergency vehicle.
- Explain the role of the Emergency Medical Responder during extrication operations.

- Describe common hazards during vehicle extrication operations.
- Differentiate various methods for gaining access to an entrapped patient.
- Differentiate simple vs. complex access as it pertains to patient extrication.
- Explain the role of the Emergency Medical Responder at a hazardous materials incident.
- Describe the common signs of a potential hazardous material incident.
- Differentiate the purpose of the cold, warm, and hot zones at a hazardous materials incident.

## **Chapter 27                      Introduction to Multiple-Casualty Incidents, the Incident Command System, and Triage**

- Explain the criteria that defines a multiple casualty incident.
- Describe common causes of multiple-casualty incidents.
- Explain the role of the Emergency Medical Responder in the multiple-casualty situation.
- Explain the key principles and structure of an incident command system.
- Explain the key principles of triage at a multiple-casualty incident.
- Differentiate patient priorities related to triage.
- Explain the assessment criteria of the START triage system.
- Differentiate primary and secondary triage.

### **Upon completion of the course, the student will be able to:**

- Assess patients
- Safely lift and move patients
- Complete vital signs
- CPR
- Splint
- Bandage
- Oxygen Therapy
- Effective communicating with higher level EMS Providers

### **INSTRUCTIONAL METHODS:**

- Lecture
- Assigned Readings
- Audio-Visual Materials
- Case Studies
- Computer Aided Instruction
- Simulations
- Clinicals

### **INSTRUCTIONAL MATERIALS:**

Le Baudour & Bergeron (2015). *Emergency Medical Responder*, 10<sup>th</sup> edition. Pearson. (Workbook included)

**STUDENT REQUIREMENTS AND METHODS OF EVALUATION:**

Students will maintain an 80% classroom average and satisfactory rating on all practicals. This course is a combination of lecture and practical skill application. Practical skills will be graded on a PASS/ FAIL system. Section examinations and quizzes are graded as follows:

A=	100- 94
B=	93.9- 86
C=	85.9- 80
F=	79.9

All students shall receive and sign of a copy of the IVCC EMS Handbook. Students shall abide by all rules set forth in the handbook.

Students may be eligible for academic accommodations if a documented physical, psychiatric or cognitive disability can be provided. If you have a disability and need information regarding possible accommodations, please contact Tina Hardy at 224-0284.

**OTHER REFERENCES**

Please refer to the IVCC EMS Handbook regarding matters such as Disability Services, Attendance Policy, Code of Student Conduct, Student Initiated Withdrawals, Emergency closings, Dress Code, Clinical Experience Policies, Clinical Location Phone Numbers, Confidentiality, Social Media Policy, Accident and/or Injury, Physical Requirements Form, etc.

# Course Competency/Assessment Methods Matrix

Course Prefix, Number and Name		Assessment Options																																		
For each competency/outcome place an "X" below the method of assessment to be used.	Assessment of Student Learning	Article Review	Case Studies	Group Projects	Lab Work	Oral Presentations	Pre-Post Tests	Quizzes	Written Exams	Artifact Self Reflection of Growth	Capstone Projects	Comprehensive Written Exit Exam	Course Embedded Questions	Multi-Media Projects	Observation	Writing Samples	Portfolio Evaluation	Real World Projects	Reflective Journals	Applied Application (skills) Test	Oral Exit Interviews	Accreditation Reviews/Reports	Advisory Council Feedback	Employer Surveys	Graduate Surveys	Internship/Practicum /Site Supervisor Evaluation	Licensing Exam	In Class Feedback	Simulation	Interview	Written Report	Assignment				
	Direct/ Indirect	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	I	I	I	I	D	D										
	Assessment Measures – Are direct or indirect as indicated. List competencies/outcomes below.																																			