

MED 801: Emergency Response & Population Health (EMT)

Summer 2017

Mondays through Fridays – 6 weeks
8:00 a.m. to 12:00 p.m. & 1:00 to 5:00 p.m.
1001 Shadow Lane

Course Chairs:
Laura Culley, MD, MPH
Sam Parrish, MD

Course Description and Learning Objectives:

This course provides an orientation experience and all-inclusive introduction to the resources available, University policies, and expectations of a UNLV School of Medicine (UNLVSOM) student. Throughout the six (6) weeks of this course's duration, students are exposed to UNLVSOM's campus, educational program, and research opportunities, as well as obtain a national EMT 'basic' certification. Additionally, this course serves as the anchor for the longitudinal Nevada Community Service experiences that unfold throughout the four-year curriculum.

- Explanation and understanding of UNLVSOM's policies, procedures, and resources.
- Present a broad overview of the human body and its organ systems, all the while developing expertise and confidence with basic triage and management of emergency situations.
- Build competency for participation in basic emergency situations.
- Reflect upon and compare upstream and downstream factors in emergent medical situations.
- Assess the health status of populations utilizing public health surveillance data, vital statistics, registries and surveys, and use such health assessment tools to identify community risk and protective factors that impact individual and population health.
- Integrate epidemiologic, socioeconomic, behavioral, sociocultural and community factors into patient care.
- Begin to formulate clinical questions and apply evidence-based medicine to provide future, quality health care to individuals and populations.

Required and Recommended Textbooks:

Required

- Coughlin, C. (2012). *EMT (Emergency Medical Technician Crash Course + Online EMT Test Preparation*. 1st ed. Research & Education Association.
- Nevada EMS, EMT Licensing and Certification Requirements. (2016). *EMT Practice Exam Modules and National Registry Exam Bank for Preparation*.
Retrievable at: <http://www.emt-national-training.com/nevada-emt.php>

Recommended

To be determined at the onset and throughout the duration of the course to aid/facilitate learning objectives closely associated with weekly experiences and the EMT, National Registry Examination.

Course Schedule & Weekly Objectives:

The first five (5) weeks of this course devotes two to three hours on Mondays to new UNLVSOM student orientation; including, but not limited to: setting-up access to ID cards and lockers, campus information, library resources and services, as well as insight into various learning styles.

Following the initial (joint) orientation to EMT Certification and Population Health components of the course, EMT training and certification sessions are scheduled four days per week along with one day of population health exposure.

Week 1 – July 17-21, 2017 – Orientation & Introduction*Activities:*

Student Affairs: ID Cards, Parking, Security, Safety, Lockers & Equipment Overview (half-day)

EMT: Joint Introduction – EMT & Population Health (Upstream and Downstream factors)

Workplace Health, Mask-fitting & CPR

Documentation, Communication, Lift & Move, PPE, REM, Airway, vital signs and skill tests

Review of Anatomy & Physiology and Medical Terminology

In-Class Quiz: Friday, July 21st

Topics include:

- Access and review of ID cards, parking enforcement, campus/clinical safety, lockers, and required equipment.
- Collective introduction to EMT/Population Health and expectations. How the knowledge of downstream medical techniques is used to triage and manage medical emergencies, which contribute to upstream factors in the community that cause or facilitate the development of such emergencies.
- Identify basic concepts of workplace health, mask-fitting, and cardiopulmonary resuscitation (CPR).
- Practice necessary documentation of EMT activities, terminology, and procedures for communication; *i.e.* lifting & moving, PPE, REM, Airway, vital signs, and various skills tests.
- Review of basic anatomy and physiology of major organ systems, as well as medical terminology used in emergency situations.

Population Health: July 20th (AM) – Introduction to Community as Patient

July 20th (PM) – Small group meetings

Topics:

- Brief history and relevance of public health and medicine, *esp.* medical emergencies
- Importance of population health and its role in professional education and practice
- Describe the core values and ethical pillars of public health
- Effective medical or public health informatics questions and web search strategies
- Retrieve statistical and non-statistical information and question its veracity
- Identify community assets/tools purposed to maintain community health
- Introduction to community engagement, its relevance, and teams for community health assessment project

Assigned Readings & Review Materials:

- California Newsreel. (2008). Episode 5: “Place Matters.” *Unnatural Causes... is inequality making us sick?* [Seven-part Documentary Series]. Retrievable at: <http://www.unnaturalcauses.org/>
- Hofrichter, R., Bhatia, R. (2010). Chapter 1: “Tackling Health Inequities: A Framework for Public Health Practice, pp. 2-53. *Tackling Health Inequalities through Public Health Practice: Theory to action*. New York, NY: Oxford Press.

- *CDC Development of the Community Health Improvement Navigator Database of Interventions.* (2016). Please review: http://www.cdc.gov/mmwr/volumes/65/su/su6502a1.htm?s_cid=su6502a1_e
- *The Community Guide* at: <http://www.thecommunityguide.org/toolbox/index/html>
- *County Health Rankings and Roadmaps to Action* retrievable at: <http://www.countyhealthrankings.org/roadmaps/action-center>
- *The CDC Community Health Navigator* at: <http://www.cdc.gov/CHInav/database>
- Benjamin, G. C. (2015 May 19). Health Equity and Social Justice: A Health Improvement Tool. *Grant Makers in Health*. Retrievable at: http://www.gih.org/files/FileDownloads/Health_Equity_Social_Justice_APHA+May_2015.pdf

IN-CLASS QUIZ: Monday, July 24, 2017 – Pathophysiology

Week 2 – July 24-28, 2017

Activities:

Student Affairs: Review of the academic calendar and four-year curriculum (2.5 hours)

EMT: Lifespan, airway management, baseline vitals, history-taking, and Lift & Move skills
Scene Size-up, Patient Assessment, and Medical Trauma
Pharmacology, pharm cards, and pharm skills (lab)

In-Class Quiz: Friday, July 28th

Topics include:

- Review basic pathophysiology associated with emergency situations
- Practice basic history-taking, vital sign skills, and basic airway management
- Perform patient medical histories and assessments, scene size-up, and evaluation of medical trauma situations
- Assess and determine the pharmacological principles and medications utilized in medical trauma situations

Population Health: July 27th (AM) – Social Determinants of Health w/ Dr. Eze
July 27th (PM) – Windshield Field Survey

Topics:

- Understand Upstream and Downstream concepts that affect community health
- Explain how living environments influence the health of individuals and communities
- Use health indicators to identify population health problems and hypothesize possible risk/protective factors
- Identify community assets and stressors in high risk communities that affect health
- Discuss the impact of socioeconomic status, environment, ethnicity and other population determinants on the health status of individuals and populations using the Socioecological Model of Health and Illness

Assigned Readings & Review Materials:

- Braveman, P. & Gottlieb, L. (2014). Social Determinants of Health: It is time to Consider the Causes of the Causes. [Public Health Report]. *Nursing in 3D: Diversity, Disparities, and Social Determinants*, 129(2), pp. 19-31. Retrievable at: <http://www.publichealthreports.org/issueopen.cfm?articleID=3078>

Week 3 – July 31 – August 4, 2017

Activities:

Student Affairs: Health Center, counseling and library resources (2.5 hours)

EMT: Shock, resuscitation, respiratory emergencies and skills lab

Cardiovascular emergencies, altered mental status, stroke and headaches

Seizures, acute diabetic emergencies, anaphylactic emergencies, and review session

Toxicology, abdominal emergencies, environmental emergencies, and review session

In-Class Quiz: Friday, August 4th

Topics include:

- Recognize, evaluate, and manage cardiovascular and anaphylactic emergencies
- Present, evaluate, and manage model patients presenting with altered mental states in lab session; *e.g.* stroke, headache, and seizures
- Identify, evaluate, and manage acute diabetic emergencies
- Develop an awareness of potential emergency situations involving exposure to or ingestion of toxic substances and environmental hazards

Population Health: August 3rd (AM) – Key Informant Interview in the Field

August 3rd (PM) – Obesity small group sessions

Topics:

- Key principles of community engagement and the importance of community partnerships with public health issues
- Identify population health problems and indicators, and hypothesize about possible risk/protective factors

MIDTERM EXAM: Monday, August 7, 2017

Week 4 – August 7-11, 2017

Activities:

Student Affairs: Study, learning, and time management skills (1.5 day)

EMT: Midterm Exam: Monday, August 7th

Submersion, behavioral emergencies, and scenarios

Rewrite scenarios and review

Obstetrics, care of newborns, pediatrics and geriatrics

Trauma, bleeding, soft tissue injuries, burns, muscular skeletal trauma, and review

In-Class Quiz: Friday, August 11th

Topics include:

- Identification and development of study, learning, and time management skills
- Describe the physiology of submersion and drowning situations, and practice techniques to counteract the effects on respiratory function
- Practice techniques to counteract the effects of suppressed respiratory function
- Develop the awareness to readily identify and safely manage a variety of behavioral health emergency situations
- Practice the basics of obstetrical and newborn emergency care
- Recognize, evaluate, and stabilize both pediatric & geriatric patients' emergencies

Population Health: August 11th (AM) – Pediatrics & Geriatrics
August 11th (PM) – Small groups (Pedestrian case)

Topics:

- Delineate Healthy People Goals for 2020
- Clarify the role and responsibility of future healthcare professionals in addressing health inequities among community populations

Assigned Readings & Review Materials:

- United Nations Road Safety Collaboration. (2016). *Pedestrian Safety: A Road Safety Manual for Decision Makers and Practitioners*. The WHO Manual. Retrievable at: <http://www.who.int/roadsafety/projects/manuals/pedestrian/en/>
- Smart Growth America. (2014). *Dangerous by Design: A National Epidemic of Pedestrian Deaths*. Retrievable at: http://www.smartgrowthamerica.org/research_/dangerous-by-design/dba2014/national-overview

Week 5 – August 14-18, 2017

Activities:

Student Affairs: Financial Aid, Disabilities resources, careers in medicine (2.5 hours)

EMT: Head trauma, and the spinal column

Abdominal trauma, genitourinary gastric system, multi-systemic issues, special cases, eye, face, neck, and chest trauma

Ambulance and air med evacuation, gaining access skills, and review

Special Challenges, combat veterans, and review session

In-Class Quiz: Friday, August 18th

Topics include:

- Review of financial aid, disabilities resources, and careers in medicine
- Develop the ability to evaluate and stabilize patients experiencing a variety of trauma situations, *e.g.* head and spinal cord, abdominal and multi-systemic trauma, chest, and eye, face and neck traumas
- Build familiarity with basic ambulance and air-med evacuation operations.
- Identify Post Traumatic Stress Disorder (PTSD), and other syndromes common to combat veterans or those who have experience severe trauma, in emergency situations

IN-CLASS QUIZ: Friday, August 18, 2017

Population Health: August 17th (AM) – Poster Presentation Setup

August 17th (PM) – Poster Presentation

Topics:

- Appraise the quality of evidence presented in peer-reviewed medical journals and other public health literature, and its implications at the patient & population levels
- Reflect on best practices to maximize team effect in community engagement, the review and collection of data, and presentation of those findings

Assigned Readings & Review Materials:

- EMT Prep. (2016) *Practice Examinations*. Retrievable at: <http://emtprep.com/>

Week 6 – August 21-25, 2017*Activities:*

EMT: Review for Final Exam
National Registry Practice Exam & Written Exam
Mock Tests and Review Session
National Certification Testing & Written Exam
White Coat Ceremony: Friday, August 26th

Topics include:

- Reflect upon six weeks of group/team experiences that included studying, evaluation, practice, review, and performing of EMT activities.
- Prepare for the Emergency Medical Technician National Certification Test
- Schedule and commit to a minimum of two (2) EMT “ride along” experiences as a registered EMT three months following the completion of the course and passage on the National Registry Exam

WRITTEN EXAM: Emergency Medical Technician National Certification Test**Course Requirements & Evaluation:**

Six (6) formative quizzes will be administered throughout the duration of the course, in addition to peer and instructor evaluation of required physical maneuvers and exercises to assess weekly progress, identify content knowledge gaps, and procedural behaviors needing improvement. Active participation is an integral part of this course. Students must engage in individual, small group, class discussions, and EMT experiences in order to effectively contribute to all active learning activities; this includes offering and receiving constructive peer and professional feedback. Additionally, all students are expected to obtain a basic EMT certification and participate in two (2) “ride-along” experiences thereafter.

Weekly formative multiple choice quizzes, including formative performance assessments, and formal verbal assessments from preceptors are administered to gauge student development and progress. Students receive mid-course, verbal small group assessments during the Population Health component of this course.

Students are expected to arrive on time to all course sessions and prepared to participate actively and engage in all learning and small group activities. Additionally, students are expected to be respectful, take responsibility and accountability for their own choices, actions, and/or decision. This includes the demonstration of personal and professional integrity. Any student with a serious or multiple violations of professional behavior will be referred to the Medical Student Progress Committee (SPC) for review and potential action.

Grading:

A pass/fail (P/F) grade is based upon satisfactory participation in small group activities, EMT experiences, the timely completion of written assignments, reflections, and group exercises, including the successful passage of weekly in-class quizzes, a midterm examination, passage on the basic EMT certification exam (Emergency Medical Technician National Certification Test), and per satisfactory end-of-course summative, narrative assessments from mentors and preceptors.

Three (3) months following the completion of the course and passage on the EMT National Registry Exam, a minimum of two (2) EMT “ride along” experiences must be scheduled.

Dress Code:

Students represent not only themselves, but also the medical profession to those with whom they have contact. Appropriate and professional attire should be worn, especially when students are in patient care settings or when contact with patients is anticipated. Students should be aware that personal appearance may serve to inspire or hinder the establishment of the trust and confidence that are essential in the doctor-patient relationship. Jeans, sandals, and shorts (and other casual attire) are not considered professional dress. Scrubs are worn in the operating room, in the anatomy lab or in other clinical circumstances to protect the operator's clothing from soilage. Scrubs, in general, should not be worn outside of the lab or hospital, and scrubs worn in the operating room should not be worn outside of the operating room. *(Please refer to Section 6: Professionalism in the UNLV SOM Student Handbook for guidelines pertaining specifically to dress and deportment.)*

University Expectations and Resources:

Academic Misconduct – Academic integrity is a legitimate concern for every member of the campus community; all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility and professionalism. By choosing to join the UNLV community, students accept the expectations of the Academic Misconduct Policy and are encouraged when faced with choices to always take the ethical path. Students enrolling in UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's function as an educational institution. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of another, from the Internet or any source, without proper citation of the sources. See the Student Academic Misconduct Policy (approved December 9, 2005) located at: <http://studentconduct.unlv.edu/misconduct/policy.html>.

Copyright – The University requires all members of the University Community to familiarize themselves and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The university will neither protect nor defend you nor assume any responsibility for employee or student violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional information can be found at: <http://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC) – The UNLV Disability Resource Center (SSC-A 143, <http://drc.unlv.edu/>, 702-895-0866) provides resources for students with disabilities. If you feel that you have a disability, please make an appointment with UNLV SOM's Senior Associate Dean for Student Affairs, as well as a Disabilities Specialist at the DRC to discuss appropriate options.

If you are registered with the UNLV Disability Resource Center, please submit your Academic Accommodation Plan from the DRC to UNLV SOM's Office of Student Affairs to develop strategies for implementing an accommodations plan that meets both your needs and UNLV SOM requirements. Any information provided is private and confidential. To maintain confidentiality, please do not approach course chairs or instructors before or after class to discuss accommodation needs.

Religious Holidays Policy – Any student missing class quizzes, examinations, or any other class or

lab work because of observance of religious holidays shall be given an opportunity during that semester to make up missed work. The make-up will apply to the religious holiday absence only. It shall be the responsibility of the student to notify the instructor no later than the end of the first two weeks of classes, January 31, of his or her intention to participate in religious holidays which do not fall on state holidays or periods of class recess. This policy shall not apply in the event that administering the test or examination at an alternate time would impose an undue hardship on the instructor or the university that could not have reasonably been avoided. For additional information, please visit: <http://catalog.unlv.edu/content.php?catoid=6&navoid=531>.

Incomplete Grades – Course or clerkship/elective faculty share responsibility with individual students to monitor their performance in the curriculum. The Student Progress Committee (SPC) follows student performance throughout the curriculum, and is responsible for approving all remediation plans once students have been assigned an insufficient grade, such as an ‘Incomplete’ or ‘Fail.’

Remediation plans are developed by individual course directors, based upon individual student’s identified academic and professional deficits, and tailored by both the course director and the SPC. The SPC determines deadlines for the adequate remediation of the course and provides final approval of the remediation plan. Students have the option, upon request, to appear before the SPC when plans for remediation are being considered.

Please note: In Phase 3 of the curriculum, any remediation of elective or advanced clerkship deficits must be completed prior to April 1 to meet the School of Medicine’s graduation requirements. Students are not permitted to remediate more than two (2) course grades of ‘Incomplete’ during a single academic year. Students who receive more than two incomplete grades must be reviewed by the SPC. *(Please refer to Section 7: Academic Policies in the UNLVSOM Student Handbook for guidelines pertaining specifically to academic progress and actions.)*

Tutoring & Academic Resources – The Academic Skills Team (AST) provides academic assistance for all UNLVSOM students taking UNLVSOM courses. Students are encouraged to stop by the AST to utilize a variety of academic services, including test-tasking skills and strategies, coping with test anxiety, and improving self-study skills in preparation for USMLE and board exams.

UNLV E-mail – By policy, faculty and staff should e-mail students’ UNLV e-mail accounts only. All UNLV students receive a Rebelmail account after they have been admitted to the university. It is one of the primary ways students receive official university communication such as information about deadlines, major campus events, and announcements. Students’ e-mail prefixes are listed on class rosters, and the suffix is: @unlv.nevada.edu.