



Emergency Pharmacology (EMSP 2206) Lecture

Credit: 2 semester credit hours (1 hours lecture, 0 hours lab)

Prerequisite:

Texas DSHS EMT Certificate and/or NREMT EMT Certificate

Co-requisite:

- EMSP 1171
- EMSP 1338
- EMSP 1355
- EMSP 1356
- EMSP 2260

Course Description

A study of drug classifications, actions, therapeutic uses, adverse effects, routes of administration, and calculation of dosages.

Required Textbook and Materials

1. *Emergency Care in the Streets* by Nancy Caroline, 8th edition. Jones & Bartlett Learning.
 - a. ISBN number is 13:9781284137187.
2. EMS Program Student Handbook

Course Objectives

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

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1. Explain how pharmacology relates to paramedic clinical practice.
2. Describe the regulatory measures affecting medications administered in the prehospital setting.
3. Describe how drugs are classified.
4. List the components of a medication profile.
5. Discuss requirements for medication storage.
6. Describe the pharmacokinetic and pharmacodynamics properties of medications in general.
7. Identify situations in which medication effects will be altered by the age, sex, weight, and other characteristics of a particular patient.
8. Present steps to reduce the incidence of medication errors and limit the severity of harmful effects associated with medication administration.
9. Discuss the prevention, recognition, and management of adverse medication reactions.
10. Select the optimal medication and method of medication administration for patients with a particular clinical condition or situation.
11. Describe specific medications used by paramedics in the prehospital setting.
12. Describe the use of standard precautions related to medication administration.
13. List commonly used intravenous (IV) fluid compositions and types of IV solutions.
14. Discuss the techniques for performing IV therapy.
15. Discuss the techniques for performing medication administration via differing routes.
16. Explain the principles of drug dose calculations, including desired dose, concentration on hand, volume on hand, volume to administer, and IV drip rate.

Course Outline

- | | |
|---|---|
| A. Principles of Pharmacology: | 6. Cellular Fluid Composition and Status |
| 1. Historical Perspective on Medication Administration | 7. IV Fluid Composition |
| 2. Medication and Drug Regulation | 8. IV Techniques and Administration |
| 3. Medication Management for Paramedics | 9. Factors affecting IV Flow Rates |
| 4. The Physiology of Pharmacology | 10. Potential Complications of IV Therapy |
| 5. Reducing Medication Errors | 11. Obtaining Blood Samples |
| 6. Drugs That Act on the Sympathetic Nervous System | 12. Blood Transfusions |
| 7. Important Medications in the Prehospital Setting | 13. Intraosseous Infusion |
| B. Medication Administration | 14. Medication Administration |
| 1. Medical Direction | 15. Calculating Fluid Infusion Rates |
| 2. Ensuring Correct and Safe Medication Administration | 16. Calculating the Dose and Rate for a Medication Infusion |
| 3. Local Drug Distribution System | 17. Pediatric Drug Doses |
| 4. Medical Asepsis | 18. Enteral Medication Administration |
| 5. Standard Precautions and Contaminated Equipment Disposal | 19. Parenteral Medication Administration |
| | 20. Rates of Medication Absorption |

Grade Scale

90 – 100	A
84 – 89	B
75 – 83	C
70 – 74	D
0 – 69	F

Course Evaluation

Final grades will be calculated according to the following criteria:

1. Chapter Quiz/Test	20%
2. Discussion	15%
3. Mid-Term Exam	25%
4. Final Exam	30%
5. Affective Evaluation	10%

Course Policies

1. No food, drinks, or use of tobacco products in class.
2. Computers, telephones, headphones, and any other electronic devices must be turned off while in class or used only with permission of the instructor.
3. Do not bring children to class.
4. No late assignments will be accepted.
5. Tests. Students that miss a test are not allowed to make up the test. Students that miss a test will receive a grade of '0'.
6. Attendance Policy. Three absences are allowed. If a student is tardy to class or departs early three (2) times, it will be equal to one (1) absence. Each absence beyond three absences will result in a 5 point deduction from your final grade.
7. If you wish to drop a course, the student is responsible for initiating and completing the drop process. If you stop coming to class and fail to drop the course, you will earn an 'F' in the course.
8. Additional class policies as defined by EMS Program Student Handbook.

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-](https://help.blackboard.com/en-us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy)

[us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy](https://help.blackboard.com/en-us/Learn/9.1_2014_04/Student/015_Browser_Support/015_Browser_Support_Policy) A

functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1990 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. LIT provides reasonable accommodations

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as defined in the Rehabilitation Act of 1973, Section 504 and the Americans with Disabilities Act of 1990, to students with a diagnosed disability. The Special Populations Office is located in the Eagles' Nest Room 129 and helps foster a supportive and inclusive educational environment by maintaining partnerships with faculty and staff, as well as promoting awareness among all members of the Lamar Institute of Technology community. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409)839-2018. You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](#)

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document

ADDENDUM Summer 2022

Attendance Policy. If a student is tardy to class or departs early two (2) times, it will be equal to one (1) absence. Each absence will result in a 5-point deduction from your final exam grade

TUESDAY			THURSDAY		SUNDAY	
		SKILLS		Discussion		Quizzes
7-Jun	Pg 651-653; 660-672; 660-662; Classes of drugs	Intravenous Therapy pg 695; 698	9-Jun	Cardio	12-Jun	1&2
14-Jun	Pg 622-624; Table 13-4 pg 627-634	Bolus, Piggy back infusion	16-Jun	Respiratory	19-Jun	3&4
21-Jun	663-667; 670 Medication that alter blood performance 672; 673-678	IO pg 713; 750, IM, SQ	23-Jun	Urinary	26-Jun	4&5
28-Jun	Pg 647-650	Intranasal	30-Jun	Gastro	3-Jul	6&7
5-Jul	MID TERM	SKILLS	7-Jul	Seizure	10-Jul	No quiz due
12-Jul	720-729	SKILLS	14-Jul	Respiratory	17-Jul	8
19-Jul	705-709; 732-733	SKILLS	21-Jul	TBD	24-Jul	9&10
26-Jul	737-739; 710-712	SKILLS	28-Jul	TBD	31-Jul	11&12
2-Aug	691-694; 754-762	SKILLS	4-Aug	TBD	7-Aug	13
9-Aug	FINAL					