RSPT 1213

LAMAR INSTITUTE OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor: Stacey Hall

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Office Phone: 409-247-4838

Office Location: Gateway Room 107

Office Hours: Posted on Door

CREDIT

2 Semester Credit Hours (2 hours lecture, 1 hours lab)

MODE OF INSTRUCTION

Face to Face

PREREQUISITE/CO-REQUISITE:

Pre-requisites: BIOL 2301, BIOL 2101, BIOL 2302, BIOL 2102, MATH 1332
Co-requisites: RSPT 1201

COURSE DESCRIPTION

A study of basic pharmacological principles/practices of cardiopulmonary drugs. Emphasis on classification, routes of administration, dosages/calculations, and physiological interaction.

COURSE OBJECTIVES

Upon completion of this course, the student will be able to
Explain the mode of action, clinical indications, dosages, hazards, and side effects of cardiopulmonary drugs; calculate drug dosages; and select optimal drugs used in the practice of respiratory care.

The student will be able to:

1. Select appropriate medication and dosage to produce a desired patient outcome
2. Identify indications/ hazards/side effects for various cardiopulmonary medication
3. Calculate proper drug dosage for various cardiopulmonary medications
4. Identify/select/modify delivery device for various cardiopulmonary medications

Course Outline

Approved 11/2009 Updated 09/22

I. Pharmacologic Principles
   A. Basic terms
   B. Interpreting drug information
   C. Indications and usage
   D. Contraindications
   E. Drug interactions
   F. Drug reactions
   G. Dosage and administration
   H. Routes of administration
   I. Pharmacokinetics
   J. Pharmacokinetics
   K. Prescription orders

II. Metric system and drug dosage calculations
   A. Systems of measurements
   B. Drug dosage calculations

III. The Pharmacology of the Autonomic Nervous System
   A. Nervous system divisions
   B. Parasympathmimetics
   C. Parasympatholytics
   D. Sympathomimetics
   E. Sympatolytics

IV. Bronchodilators
   A. Bronchoconstriction/bronchospasms
   B. Neural control of smooth muscle
   C. Sympathetic nervous system
   D. Parasympathetic nervous system
   E. Mechanism of action
   F. Side effects
   G. Classification of drugs by action/ duration
   H. Sympathomimetics
      1. Generic and trade names
      2. Dosage and frequency
      3. Duration of action
   I. Parasympatholytics
      1. Generic and trade names
      2. Dosage and frequency
      3. Duration of action
   J. Xanthines
      1. Generic and trade names
      2. Dosage and frequency
      3. Duration of action
      4. Therapeutic levels

V. The Mucokinetic and Surfactants
   A. The mucociliary system
   B. Structure and composition
   C. Agents
      1. Bland aerosols
         a. Solution %

b. Response
2. Mucolytics
a. Generic and trade names
b. Dosage and frequency
c. Actions
3. Surface active agents
a. Function
b. Indications
c. Generic and trade names
d. Dosage and frequency
e. Delivery

VI. The Anti-inflammatory and antiasthmatic agents
A. Inflammatory process
B. Physiology
C. Routes of administration
D. Corticosteroids
1. Generic and trade names
2. Dosage and frequency
3. Actions
E. Antiasthmatics
1. Generic and trade names
2. Dosage and frequency
3. Actions
F. Leukotriene Modifers
1. Actions
2. Generic and trade names
3. Dosage and frequency
G. Upper airway edema
1. Drugs used to treat

VII. Infectious Respiratory Disease
A. Bacteriostatic vs. Bactericidal
B. Upper vs lower airway infections
C. Antivirals
1. Influenza
2. Respiratory Syncytial
D. Antibactrial
E. Antifungal
F. Antiprotozian

VIII. Cardiac agents
A. Drugs used to treat
1. Arrhythmias
2. Heart failure
3. Shock
4. Angina
5. Hypertension
6. Hypotension
7. Coagulation

IX. Neuromuscular agents

A. Nerve transmission
B. Blocking drugs
   1. Depolarizing
   2. Non depolarizing
C. Muscle relaxants
D. Sedatives
E. Stimulants
F. Analgesics

X. Medical gases
A. Uses of
B. Oxygen
C. Carbon dioxide
D. Helium
E. Nitric Oxide

REQUIRED TEXTBOOK AND MATERIALS

1. Egans Fundamentals of Respiratory Care 12th Ed (ISBN 978-0-323-51112-4)
2. "Colbert" Integrated Cardiopulmonary Pharmacology- by Colbert and Gonzalez- 7th Edition (ISBN# 978-1-5178-1657-5)
3. Web based: www.aarc.org
Clinical Practice guidelines:
Assessing Response to Bronchodilator Therapy at point of care
Selection of Device for Delivery of aerosol to the Lung Parenchyma
Delivery of Aerosol to upper airway
A package of #882 Scantrons and #2 pencil

ATTENDANCE POLICY

Attendance/Class policy:

It is the student's responsibility to familiarize his or herself with the LIT Student Handbook and the Respiratory Care program student handbook.

Violation of the policies listed in the LIT Student Handbook and/or the Respiratory Care program student handbook will result in appropriate action being taken.

Attendance: Attendance is expected. Students are allowed 2 absences per semester, with or without a Dr.'s excuse. Each absence in excess of the 2 allotted absences will result in a 10% reduction, per absence, in the student's final class grade. Example: 3 absences = 10% reduction in final class grade, 4 absences = 20% reduction in final class grade, etc. Deductions as a result of excessive absences, will be applied to the student's final class grade at the end of the semester.
Your attendance is the biggest predictor or your success. If you do not attend class, you are missing very valuable information. Attendance will be recorded both in the classroom and in the lab. Absences in lab will result in a grade of 0 for that lab day. Tests will include both textbook material and material presented in class.

If absences seriously interfere with performance, the instructor may recommend, to the Department Chair, that the student be dropped from the course.
Absences resulting from extenuating circumstances will be evaluated by the program Director and/or Director of Clinical Education on a case-by-case basis. Proper documentation will be required to demonstrate the nature of the extenuating circumstance.

Examples of extenuating circumstances, and documentation, include:
-Hospitalization of an immediate family member (Hospital/Physician documentation must be provided)

-Death of an immediate family member (Memorial Pamphlet must be provided)

Tardiness: Punctuality is expected. 3 tardies in a semester will be considered as a 1 day absence.

You must notify the instructor via phone call, prior to missing an exam. Failure to notify the instructor of an absence prior to the start of the exam will result in a grade of 0 will be assigned for the missed exam. There will be no makeup exams or lab assignments if you fail to notify the instructor prior to a missed exam.

Make-Up Exams: Make up exams will be taken on the first day that the student returns following an absence. Make-up exams will be administered immediately at the beginning of the class on the day of return.

Homework Assignments: Homework assignments will be due immediately at the start of class. Late work (work turned in after the start of class) will not be accepted. If you are absent on the day a homework assignment is due, it is your responsibility to ensure that your work is emailed to the instructor prior to the start of class on the day of your absence.

Pop Quizzes: Pop Quizzes will be administered at the start of class. Any student who arrives tardy to class, after the Pop Quiz has been distributed, will receive a 0 grade for that pop quiz.

Remediation – Refer to the Respiratory Care Student Handbook

Cellphone Policy

- Cell phones must be silenced or turned off during class time.
- Cell phones will be placed in the appointed cell phone pocket hanger.
- Attendance will be taken from the cell phone hanger with assigned names.
- Any cell phone use in class will result in your dismissal from class.
- If cell phones are used during an exam, you will be dismissed from the Respiratory Care Program.
- Computer usage not relating to course content is prohibited and will result in your dismissal from the Respiratory Care Program.

DROP POLICY

If you wish to drop a course, you are responsible for initiating and completing the drop process by the specified drop date as listed on the Academic Calendar. If you stop coming to class and fail to drop the course, you will earn an "F" in the course.

STUDENT EXPECTED TIME REQUIREMENT

For every hour in class (or unit of credit), students should expect to spend at least two to three hours per week studying and completing assignments. For a 3-credit-hour class, students should prepare to allocate approximately six to nine hours per week outside of class in a 16-week session OR approximately twelve to eighteen hours in an 8-week session. Online/Hybrid students should expect to spend at least as much time in this course as in the traditional, face-to-face class.

COURSE CALENDAR

DATE	TOPIC	READINGS (Due on this Date)	ASSIGNMENTS (Due on this Date)
Week1	Chap. 1	6/2	6/6
Week2	Chap. 2	6/9	6/13
Week3	Chap. 3	6/16	6/20
Week4	Chap. 4 & 5	6/23	6/27
Week5	Chap. 6	6/30	7/4
Week6	Chap. 7 & 8	7/7	7/11
Week7	Chap. 9 & 10	7/14	7/18
Week8	Chap. 11&12	7/21	7/25
Week9	Chap.13	7/28	8/1
Week10	Chap. 14	8/4	8/8
Week11	Chap. 15	8/11	8/15
EXAM 1	Chap. 1-3		6/17
EXAM 2	Chap. 4-5		7/3
EXAM 3	Chap. 6-8		7/17
EXAM 4	Chap.9-12		7/31
EXAM 5	Chap. 13-15		8/14

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

3-5 exams	80%
Homework	5%
Quizzes	15%

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GRADING SCALE

90 – 100	A
80 – 89	B
77 – 79	C
68 – 76	D
0 – 67	F

AI Statement

Lamar Institute of Technology (LIT) recognizes the recent advances in Artificial Intelligence (AI), such as ChatGPT, have changed the landscape of many career disciplines and will impact many students in and out of the classroom. To prepare students for their selected careers, LIT desires to guide students in the ethical use of these technologies and incorporate AI into classroom instruction and assignments appropriately. Appropriate use of these technologies is at the discretion of the instructor. Students are reminded that all submitted work must be their own original work unless otherwise specified. Students should contact their instructor with any questions as to the acceptable use of AI / ChatGPT in their courses

LIT does not use +/- grading scales

ACADEMIC DISHONESTY

Students found to be committing academic dishonesty (cheating, plagiarism, or collusion) may receive disciplinary action. Students need to familiarize themselves with the institution's Academic Dishonesty Policy available in the Student Catalog & Handbook at http://catalog.lit.edu/content.php?catoid=3&navoid=80#academic-dishonesty.

TECHNICAL REQUIREMENTS

The latest technical requirements, including hardware, compatible browsers, operating systems, etc. can be online at https://lit.edu/online-learning/online-learning-minimum-computer-requirements. A functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of 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 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)-951-5708 or email specialpopulations@lit.edu. 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. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.

STARFISH

LIT utilizes an early alert system called Starfish. Throughout the semester, you may receive emails from Starfish regarding your course grades, attendance, or academic performance. Faculty members record student attendance, raise flags and kudos to express concern or give praise, and you can make an appointment with faculty and staff all through the Starfish home page. You can also login to Blackboard or MyLIT and click on the Starfish link to view academic alerts and detailed information. It is the responsibility of the student to pay attention to these emails and information in Starfish and consider taking the recommended actions. Starfish is used to help you be a successful student at LIT.

ADDITIONAL COURSE POLICIES/INFORMATION

Late work will not be accepted.