Cardiopulmonary Testing RSPT 2325

LAMAR INSTITUTE OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor:	Stacee Rashall
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Office Phone:	409-247-5143
Office Location:	Gateway
Office Hours:	Posted on door

CREDIT

3 Semester Credit Hours (3 hours lecture, 1 hours lab)

MODE OF INSTRUCTION

Face to Face

PREREQUISITE/CO-REQUISITE:

RSPT 1329, RSPT 1207, RSPT 2210, RSPT 1113, RSPT 1325/RSPT 1331, RSPT 1360

COURSE DESCRIPTION

A study of pulmonary functions and cardiac dysrhythmias interpretation

COURSE OBJECTIVES

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

- Explain/identify both normal and abnormal heart conduction.
- Explain/ identify both normal and abnormal pulmonary function values.
- Determine indications, describe methods, standards and purpose of monitoring cardiac function and pulmonary function within patient scenarios.
- Interpret both cardiac rhythm strips and pulmonary function studies.
- Determine appropriate response to different patient scenarios involving pulmonary functions studies and cardiac monitoring.

REQUIRED TEXTBOOK AND MATERIALS

- Egans Fundamentals of Respiratory Care 12th Edition (ISBN # 978-0-323-51112-4)

1. Egans Fundamentals of Respiratory Care Workbook 12th Edition (ISBN 978-0-32355366-7)
2. Mosby's Respiratory Care Equipment 10th Edition (ISBN # 978-0-323-55313-1)
3. Trajecsys access

4. Cardiopulmonary Anatomy and Physiology- DesJarden (ISBN # 978-1-4180-4278-3)
5. EKG Plain and Simple – 3rd edition- Ellis (ISBN # 978-0-13-237729-4)
6. PFT Notes- Gary White (ISBN#978-0-8036-2249-4)
7. A package of #882 Scantrons and #2 pencils
8. Stethoscope
9. #2 Pencils
10. Package of # 882 scantrons
11. Calculator
12. Ruler
13. Watch (with a second hand and waterproof)
14. Kettering Modules (web-based learning)- 6 modules
    TMC- Pulmonary Diagnostic A, Pulmonary Diagnostic B, Pulmonary Diagnostic C, Special procedures A, Special procedures B, Special procedures C, Special procedures D
15. Web based reading information: www.AARC.org
    Clinical practice guidelines:
    Body Plethysmography 2001 – revision and update
    Capnography/ Capnometry during mechanical ventilation 2003 revision and update
    Exercise for evaluation of hypoxemia and desaturation 2001 revision and update
    Methacholine Challenge Testing 2001 revision and update
    Spirometry 1996 revision and update
    Single breath carbon monoxide diffusion capacity 1999 revision and update
    Pulmonary function testing- ATS/ERS standardization
    ATS statement guidelines for the Six-minute walk test

ATTENDANCE POLICY

Attendance – If you do not attend class you are missing some very valuable information. Test will include both textbook material and anything mentioned in class.

Absences – According to LIT policy students with approved absences shall be allowed to make up examinations and written assignments without penalty. This privilege does not extend to unapproved absences. The determination of whether an absence is excused or approved is the responsibility of the instructor, except in the case of approved absence for an Institute-sponsored activity. If absences seriously interfere with performance the instructor may recommend to the Department Chair that the student be dropped from the course. You will be asked to present documentation to the instructor as to why the absence was necessary for the next class meeting that you attend, (i.e. doctor excuse, funeral pamphlet, note from child's doctor, etc.).

Make-up Exam - You may make-up an exam only if the absence is excused by the instructor. The make-up exam will be taken on the next class day that you return.

Class Roll – will be taken on the first- and fourth-class days. If your name is not on the class roster on the fourth-class day, you will be asked to leave class until this matter is taken care of.

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

Week	TOPIC LAB/LECTURE	READINGS (LECTURE)	READINGS (LAB)
Week 1	• Spirometry • Performing bedside spirometry, Pulmonary mechanics	PFT notes page 15-49 Egans Chapter 20	
Week 2	• Spirometry • Height and weight nomogram (getting predicted values)	DesJardin Chapter 12 Egans Chapter 20 PFT notes page 15-49	DesJardin Chapter 14
Week 3	• Lung volume Egans Chapter 20 • Water seal spirometer, pneumotach	DesJardin Chapter 12 Egans Chapter 20 PFT notes page 50-74	DesJardin Chapter 14
Week 4	• Lung volume, diffusion • Calculations of Tangents, Hand calculations of FVC, FEV1, FEF 25-75%	DesJardin Chapter 12 Egans Chapter 20 PFT notes page 50-74	DesJardin Chapter 13
Week 5	• Exam #1 • MethacholineBPT/Interpretation of PFT	DesJardin Chapter 12 Egans Chapter 23 PFT notes page 94-131	DesJardin Chapter 4
Week 6	• Metabolic Studies, Indirect calorimetry, End tidal Co2 • End- tidal Co2 monitoring	DesJardin Chapter 18 Egans Chapter 23 PFT notes page 130-131	
Week 7	• Stress testing/6-minute walk • Counting rates, regular vs irregular rhythm, measuring voltage	DesJardin Chapter 18 Egans Chapter 20	DesJardin Chapter 12, 13 EKG- Plain and simple Chapter 1-6
Week 8	• Review		EKG- Plain and simple Chapter 1-6

	• Counting rates, regular vs irregular rhythm, measuring voltage		
Week 9	• Exam #2, Basics of EKG, electrical flow and muscle movement • 12 lead viewing, V1- V6, AVR, AVF, AVL, I, II, III	DesJardin Chapter 12, 13 EKG- Plain and simple Chapter 1-6 Egans Chapter 18	EKG- Plain and simple Chapter 7
Week 10	• Hemodynamics/ Atrial Rhythms • 12 lead viewing, V1- V6, AVR, AVF, AVL, I, II, III	EKG- Plain and simple Chapter 7 Egans Chapter 18	Egan Chapter 17, DesJardin Chapter 13
Week 11	• Junctional rhythms • Interpretation of atrial disturbances	DesJardin Chapter 13 EKG- Plain and simple Chapter 9 Egans Chapter 18	EKG- Plain and simple Chapter 9
Week 12	• Ventricular rhythms • Interpretation of atrial disturbances	DesJardin Chapter 14 EKG- Plain and simple Chapter 10 Egans Chapter 18	DesJardin Chapter 14, EKG Chapter 9
Week 13	• EKG review/ Exam #3 • Interpretation of ventricular disturbances	DesJardin Chapter 14 EKG- Plain and simple Chapter 13 Egans Chapter 18	DesJardin Chapter 14
Week 14	• Blocks • Interpretation of ventricular disturbances	DesJardin Chapter 14 EKG- Plain and simple Chapter 11 Egans Chapter 18	DesJardin Chapter 14
Week 15	• Cardiac disorders/ balloon pumps, angioplasty • Interpretation of WPW, LGL, Hypertrophy and enlargement	DesJardin Chapter 12 EKG- Plain and simple Chapter 1 Egans Chapter 18	EKG- Plain and simple Chapter 10
Week 16	• Exam #4 • Putting it all together	DesJardin Chapter 4 Final	

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- 4-6 Exams = 90%
- Homework/Modules/Quiz = 10%

GRADING SCALE

90 – 100	A
80-89	B
77 –79	C
70 – 76	D
0 – 69	F

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

- No food or drink, or use of tobacco products in class
- Beepers, telephones, headphones, and other electronic devices must be turned off while in class
- On days of test, you will place personal items at the front of the classroom, no electronic devices may be used during an exam. If you have a electronic device during an exam you will receive a 0 for that exam.
- No children allowed in the classroom
- No late assignments will be accepted
- Pop quiz will not be able to be made up.
- Comply with LIT policies and policies in the Respiratory Care Handbook
- Comply with course and/or instructor policies, distributed on the first-class day