Cardiopulmonary Testing RSPT 2325

INSTRUCTOR CONTACT INFORMATION
Instructor: Stacee Rashall
Email: sgrashall@lit.edu
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
3. Trajecsys access
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**

<table>
<thead>
<tr>
<th>Week</th>
<th>TOPIC LAB/LECTURE</th>
<th>READINGS (LECTURE)</th>
<th>READINGS (LAB)</th>
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</table>
| 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 | DesJardin Chapter 12, 13  
EKG- Plain and simple Chapter 1-6 |
| 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 |
<p>| Week 8 | • Review | | EKG- Plain and simple Chapter 1-6 |</p>
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<thead>
<tr>
<th>Week</th>
<th>Topics</th>
<th>Reading Material</th>
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</table>
| 9    | Counting rates, regular vs irregular rhythm, measuring voltage | DesJardin Chapter 12, 13  
EKG- Plain and simple Chapter 7  
Egans Chapter 18 |
| 10   | Exam #2, Basics of EKG, electrical flow and muscle movement  
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 |
| 11   | Hemodynamics/ Atrial Rhythms  
12 lead viewing, V1- V6, AVR, AVF, AVL, I, II, III | EKG- Plain and simple Chapter 7  
Egans Chapter 18  
DesJardin Chapter 13  
Ega Chapter 17, DesJardin Chapter 13 |
| 12   | Junctional rhythms  
Interpretation of atrial disturbances | DesJardin Chapter 13  
EKG- Plain and simple Chapter 7  
Egans Chapter 18  
DesJardin Chapter 14, EKG Chapter 9 |
| 13   | Ventricular rhythms  
Interpretation of atrial disturbances | DesJardin Chapter 14  
EKG- Plain and simple Chapter 13  
Egans Chapter 18 |
| 14   | EKG review/ Exam #3  
Interpretation of ventricular disturbances | DesJardin Chapter 14  
EKG- Plain and simple Chapter 13  
Egans Chapter 18  
DesJardin Chapter 14 |
| 15   | Blocks  
Interpretation of ventricular disturbances | DesJardin Chapter 14  
EKG- Plain and simple Chapter 13  
Egans Chapter 18  
DesJardin Chapter 14 |
| 16   | Cardiac disorders/ balloon pumps, angioplasty  
Interpretation of WPW, LGL, Hypertrophy and enlargement | DesJardin Chapter 12  
EKG- Plain and simple Chapter 13  
Egans Chapter 18  
DesJardin Chapter 14  
EKG- Plain and simple Chapter 10 |
| 17   | 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**

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<tr>
<th>Grade</th>
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<tbody>
<tr>
<td>90 – 100</td>
<td>A</td>
<td></td>
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<tr>
<td>80-89</td>
<td>B</td>
<td></td>
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<tr>
<td>77 –79</td>
<td>C</td>
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<tr>
<td>70 – 76</td>
<td>D</td>
<td></td>
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<tr>
<td>0 – 69</td>
<td>F</td>
<td></td>
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</tbody>
</table>
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