RSPT 2230

LAMAR INSTITUTE OF TECHNOLOGY

INSTRUCTOR CONTACT INFORMATION

Instructor: Stacy Taylor

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Office Location: Gateway Room 106

Office Hours: By appointment

CREDIT

2 Semester Credit Hours (1 hours lecture, 4 hours lab)

MODE OF INSTRUCTION

Face to Face

PREREQUISITE/CO-REQUISITE:

BIOL 2301, BIOL 2101, BIOL 2302, BIOL 2102, Math 1332, RSPT 1201, RSPT 1213, RSPT 1329, RSPT 1207, RSPT 2210, RSPT 1325, RSPT 1331, RSPT 1335, RSPT 1360, RSPT 1461, RSPT 2414, RSPT 1141, RSPT 2255, RSPT 2361

COURSE DESCRIPTION

Comprehensive review to optimize respiratory credentialing exam success

COURSE OBJECTIVES

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

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

1. Evaluate Data in the Patient Records
2. Perform Clinical Assessment
3. Perform Procedures to Gather Clinical Information
4. Evaluate Procedure Results
5. Recommend Diagnostic Procedures
6. Assemble and Troubleshoot Devices
7. Ensure Infection Prevention
8. Perform Quality Control Procedures
9. Maintain a Patent Airway including the Care of Artificial Airways
10. Perform Airway Clearance and Lung Expansion Techniques
11. Support Oxygenation and Ventilation

12. Administer Medications and Specialty Gases
13. Ensure Modifications Are Made to the Respiratory Care Plan
14. Utilize Evidence-Based Principles
15. Provide Respiratory Care in High-Risk Situations
16. Assist a Physician/Provider in Performing Procedures
17. Initiate and Conduct Patient and Family Education
18. Preparing for the Clinical Simulation Exam
19. Taking the Clinical Simulation Exam
20. Clinical Simulation Exam Case Management Pearl

Course Outline

A. **Evaluate Data in the Patient Record**
   1. Patient History
   2. Physical examination relative to the cardiopulmonary system
   3. Lines, drains, and airways
   4. Laboratory results
   5. Blood gas analysis and hemoximetry results
   6. Pulmonary function testing results
   7. 6-minute walk
   8. Imaging study results
   9. Maternal and perinatal/neonatal history
   10. Sleep study results
   11. Trends in fluid balance, vital signs, intracranial pressure, ventilator liberation parameters, pulmonary mechanics, noninvasive measures of gas exchange and cardiac monitoring
   12. Determination of a patient's pathophysiologic state

B. **Perform Clinical Assessment**
   1. Interview patients to assess:
      a. Level of consciousness, pain, emotional state, and ability to cooperate
      b. Level of pain
      c. Breathing difficulties, exercise tolerance, and sputum production
      d. Smoking history and environmental exposures
      e. ADLs
      f. Learning needs
      g. Assess a patient's overall cardiopulmonary status by inspection, palpation, percussion, and auscultation
      h. Review and interpret chest and lateral neck radiographs

C. **Perform Procedures to Gather Clinical Information**
   1. 12 lead ECG
   2. Noninvasive monitoring (pulse oximeter, transcutaneous PO2/PCO2, capnography)
   3. Bedside measures of ventilation (VT, f, Ve, VC, MIP, MEP)
   4. Pulmonary function test
   5. Blood gas sampling collection
   6. Blood gas collection and analysis, including hemoximetry
   7. Exercise-related tests (6-minute walk, O2 titration with exercise, cardiopulmonary stress test
   8. Cardiopulmonary calculations
   9. Hemodynamic monitoring

10. Airway pressures, compliance, and resistance during mechanical ventilation
11. Auto-PEEP detection and measurement
12. Spontaneous breathing trials (SBT)
13. Apnea monitoring
14. Sleep-related studies (overnight pulse oximetry, CPAP/BIPAP titration)
15. Tracheal airway cuff management
16. Therapeutic bronchoscopy

D. **Evaluate Procedure Result**
1. 12-Lead ECG
2. Noninvasive monitoring (pulse oximetry, transcutaneous PO2/PCO2, capnography)
3. Bedside measures of ventilation (VT, f, VE, VC, MIP, MEP)
4. Blood gas analysis and hemoximetry
5. O2 titration with exercise
6. Cardiopulmonary calculations
7. Hemodynamic monitoring
8. Pulmonary Compliance and resistance during mechanical ventilation
9. Plateau pressure (Pplat) and auto-PEEP determination
10. Spontaneous breathing trials
11. Apnea monitoring
12. Apnea test (brain death determination)
13. Overnight pulse oximetry and CPAP/BIPAP titration during sleep
14. Tracheal tube cuff pressure measurement and management
15. Cardiopulmonary stress testing and the 6-minute walk
16. Pulmonary function test (peak flow, screening spirometry, full lab-based PFT exam)

E. **Recommend Diagnostic Procedures**
1. Testing for Tuberculosis
2. Laboratory tests
3. Imaging studies
4. Bronchoscopy (diagnostic and therapeutic)
5. Bronchoalveolar lavage (BAL)
6. Pulmonary function testing
7. Noninvasive monitoring
8. Blood gas and/or hemoximetry (CO-oximetry)
9. Electrocardiography (ECG)
10. Exhaled gas analysis
11. Hemodynamic monitoring
12. Sleep studies
13. Thoracentesis

F. **Assemble and Troubleshoot Devices**
1. Medical Gas Delivery interfaces
2. Long-term oxygen therapy
3. Medical gas delivery, metering, and clinical analyzing devices
4. CPAP/NPPV with patient interfaces
5. Humidifiers

6. Nebulizers
7. Meter-dose inhalers, spacers, and valved holding chambers
8. Dry-power inhalers (DPI)
9. Resuscitation equipment
10. Mechanical ventilators
11. Intubation equipment
12. Artificial airways
13. Suctioning equipment
14. Blood analyzers
15. Patient breathing circuits
16. Hyperinflation devices
17. Secretion clearance devices
18. Heliox delivery device
19. Portable spirometer
20. Testing equipment in a pulmonary function laboratory
21. Pleural drainage
22. Noninvasive monitoring
23. Bronchoscopes and light sources
24. Hemodynamic monitoring

G. **Ensure Infection Prevention**
   1. Adhere to infection prevention policies and procedures
   2. Adhere to disinfection policies and procedures
   3. Properly handle biohazardous material

H. **Perform Quality Control Procedures**
   1. Blood gas analyzers and hemoximeters
   2. Point-of-care analyzers
   3. Oxygen and specialty gas analyzers
   4. Pulmonary function equipment for testing
   5. Mechanical ventilators
   6. Noninvasive monitors

I. **Maintain a Patent Airway including the Care of Artificial Airways**
   1. Proper position a patient
   2. Recognize a difficult airway
   3. Establish and manage a patient's airway using:
      a. Nasopharyngeal and oropharyngeal airways
      b. Esophageal-tracheal tubes and supraglottic airways (King, LMA)
      c. Endotracheal tubes
      d. Tracheostomy tubes
      e. Laryngectomy tubes
      f. Speaking valves
      g. Devices to assist with intubation
   4. Perform tracheostomy care
   5. Exchange artificial airways
   6. Maintain adequate humidification
   7. Initiate protocols to prevent ventilator-associated infections

8. Perform extubations

J. **Perform Airway Clearance and Lung Expansion Techniques**
1. Perform postural drainage, percussion, and vibration
2. Clear secretions via nasotracheal and oropharyngeal suctioning
3. Perform airway clearance using mechanical devices
4. Ensure that patients can properly perform assisted cough techniques
5. Administer hyperinflation therapy to prevent or treat atelectasis
6. Ensure appropriate inspiratory muscle training techniques

K. **Support Oxygenation and Ventilation**
1. Initiate and adjust oxygen therapy
2. Minimize hypoxemia
3. Initiate and adjust mask or nasal CPAP
4. Initiate and adjust mechanical ventilation settings
5. Recognize and correct patient-ventilator dysynchrony
6. Utilize ventilator graphics
7. Perform lung recruitment maneuvers
8. Liberate patient from mechanical ventilation

L. **Administer Medications and Specialty Gases**
1. Select among and recommend various aerosolized drug preparations.
2. Apply selected inhaled drug category characteristics to optimize their administration
3. Select and use or teach the use of various aerosol drug delivery systems
4. Administer heliox and inhaled nitric oxide (NO)

M. **Ensure Modifications Are Made to the Respiratory Care Plan**
1. Treatment termination and discontinuation based on patient response
2. Recommendations on:
    a. Starting treatment based on patient response
    b. Treatment of pneumothorax
    c. Adjustment of fluid balance and electrolyte therapy
    d. Insertion or change of artificial airway
    e. Extubation and liberation from mechanical ventilation
    f. Consultation from a physician specialist
3. Recommendations for changes on
    a. Patient position
    b. Oxygen and humidification therapy
    c. Airway clearance and hyperinflation
    d. Mechanical ventilation parameters and settings
4. Recommendations for pharmacologic interventions
    a. Bronchodilators, anti-inflammatory drugs, and mucolytics and proteolytics
    b. Aerosolized antibiotics and antimicrobials
    c. Inhaled pulmonary vasodilators
    d. Cardiovascular drugs
    e. Aerosolized antibiotics and antimicrobials
    f. Sedatives and hypnotics, narcotic antagonists, analgesics, and neuromuscular blocking agents

g. Diuretics and surfactants
h. Changes to drug, dosage, frequency or concentration

N. **Utilize Evidence-Based Principles**
1. ARDS Network (ARDSNet)
2. National Asthma Education and Prevention Program (NAEPP)
3. Global Initiative for Chronic Obstructive Lung Disease (GOLD)
4. The American Association for Respiratory Care (AARC) Clinical Practice Guidelines and other related guidelines available from the AARC

O. **Provide Respiratory Care in High-Risk Situations**
1. Cardiopulmonary emergencies
2. Lost or obstructed airways
3. Treating a tension pneumothorax
4. Disaster management
5. Medical emergency terms
6. Interprofessional communications
7. Patient transport
   a. Intra-hospital patient transport
   b. External Transport

P. **Assist a Physician/Provider in Performing Procedures**
1. Intubation
2. Bronchoscopy (including specialized types)
3. Thoracentesis
4. Tracheostomy
5. Chest tube insertion
6. Cardioversion
7. Moderate (conscious) sedation
8. Insertion of venous or arterial catheters
9. Withdrawal of life support

Q. **Initiate and Conduct Patient and Family Education**
1. Safety and infection control
2. Home care and related equipment
3. Lifestyle changes
   a. Smoking cessation
   b. Exercise
4. Pulmonary rehabilitation
5. Disease/condition management
   a. Asthma
   b. Chronic obstructive pulmonary disease (COPD)
   c. Cystic fibrosis
   d. Tracheostomy care
   e. Ventilator dependency
   f. Sleep disorders

- **Preparing for Clinical Simulation Exam**
- **Taking the Clinical Simulation Exam**
- **Clinical Simulation Exam Case Management**

REQUIRED TEXTBOOK AND MATERIALS

1. *Comprehensive Respiratory Therapist Exam, 4th Edition, Albert J. Heuer and Narciso E. Rodriguez*
2. *Lindsey Jones Review – free to students in the media lab*
3. *One Vision access*

ATTENDANCE POLICY

1. **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. There will be a sign in and sign out sheet for each class.
2. **Homework Assignments**. Please turn in homework assignments at the start of the next class meeting. NO LATE WORK ACCEPTED!!!! If you have an excused absence you may e-mail your work to me before the class starts. If the absence is not excused you will receive a zero.
3. **Absences**. Attendance is expected. Students are allowed **2 absences per semester**, with or without a Dr.'s excuse. Each absence in excess of the 2 allowable absences will result in a 10% reduction, per absence, in the student's final class grade. Example: 3 total absences (2 allowed + 1 excessive) = 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. If absences (whether approved or not) seriously interfere with student performance, the instructor may recommend to the Department Chair that the student be dropped from the course.

   Students are to follow the absenteeism policy for each course. If the policy is not followed the student may be cited with a Level I or Level II offense, as defined in the Code of Conduct and Disciplinary Policy. Absences in lab will result in a grade of 0 for that lab day.
4. **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. YOU MUST CALL IN PRIOR TO THE EXAM. IF YOU DO NOT CALL IN PRIOR TO EXAM YOU WILL RECEIVE A 0 FOR YOUR EXAM GRADE.
5. **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 addressed.
6. **No eating, no drinking, turn off beepers, turn off cell phones, no texting, no disruptive behavior, and No children allowed in class.**
7. **During exams please put all of your belongings that include electronic devices against a wall in the classroom. If you have an electronic device out, then you will receive a zero on that exam. If you are caught cheating, then this can result in being dismissed from the program.**
8. **Remediation –** Refer to Respiratory Care Student Handbook.
9. **Cell phone 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

Week	TOPIC	READINGS	ASSIGNMENTS (Due on this Date)
1-3	Heuer Chapter 1-2 Practice Test	Chapter 1-2	02/05/2026
1-3	Heuer Chapter 3-4 Practice Test	Chapter 3-4	02/05/2026
4	Heuer Chapter 5-6 Practice Test	Chapter 5-6	02/12/2026
4	Heuer Chapter 1-6 Practice Test		02/12/2026
4	Lindsey Jones TMC Random Exam		02/12/2026
4	Lindsey Jones CSE TS113		02/12/2026
4	Lindsey Jones CSE TS115		02/12/2026
4	Clinical SIM on NBRC free Assessment		2/12/2026
5	Heuer Chapter 7-8 Practice Test	Chapters 7-8	02/19/2026
5	Heuer Assessment Test		02/19/2026

5	Heuer Clinical Simulation 1-2		02/19/2026
5	Lindsey Jones TMC Random Exam		02/19/2026
6	Heuer Chapter 9-10 Practice Test	Chapters 9-10	02/26/2026
6	Heuer Clinical Simulation 2-3		02/26/2026
6	Lindsey Jones TMC Form E		02/26/2026
6	Lindsey Jones CSE TS125		02/26/2026
6	Lindsey Jones CSE TS127		02/26/2026
7	Lindsey Jones TMC Form G		03/05/2026
7	Heuer Chapter 11-12 Practice Test	Chapters 11-12	03/05/2026
7	Lindsey Jones CSE TS107		03/05/2026
7	Lindsey Jones CSE TS123		03/05/2026
8	Lindsey Jones TMC Form K		03/19/2026
8	Heuer Chapter 13-14 Practice Test	Chapters 13-14	03/19/2026
8	Lindsey Jones CSE TS129		03/19/2026
8	Lindsey Jones CSE TS105		03/19/2026
9	Heuer Chapter 15-16 Practice Test	Chapters 15-16	03/26/2026
9	Heuer Assessment Test		03/26/2026
9	Heuer Clinical Simulation 4-8		03/26/2026
10	Heuer Chapter 17-18 Practice Test	Chapters 17-18	04/02/2026
10	Heuer Clinical Simulation 8-11		04/02/2026
10	Lindsey Jones CSE TS136		04/02/2026
10	Lindsey Jones CSE TS137		04/02/2026
11	Heuer Chapter 19-20 Practice Test	Chapters 19-20	04/09/2026
11	Heuer Assessment Test		04/09/2026
11	Heuer Clinical Simulation 12-16		04/09/2026
11	Lindsey Jones CSE TS126		04/09/2026
11	Lindsey Jones CSE TS139		04/09/2026

12	Heuer Clinical Simulation 17-20		04/16/2026
12	Lindsey Jones TMC Form A		04/16/2026
12	Lindsey Jones CSE TS134		04/16/2026
13	Optional early test date SECURED TMC		04/23/2026
14	SECURED CSE		04/28/2026

COURSE EVALUATION

Final grades will be calculated according to the following criteria:

1.	Two NBRC practice Exams	5%
2.	NBRC TMC Comprehensive SAE	25%
3.	NBRC CSE Comprehensive SAE	25%
4.	Lab - Clinical simulations/Homework	20%
5.	Quizzes/One Vision	15%
6.	TMC/CSE Feedback exam	10%
	Total	100%

Course Requirements

1. Must pass the NBRC Comprehensive TMC SAE Exam with a score of 65% or (92 correct answers out of 140) **OR** the CSE SAE exam with 73% to pass the course, and to exit the Respiratory Care Program. You have a total of 3 chances.
2. Attend the One Vision Exam Review Seminar
3. Homework assignments
4. Quizzes over required reading assignment
5. Lindsey Jones practice exams
6. NBRC practice exams
7. Clinical simulations from Heuer, Persing, and Lindsey Jones
8. One Vision

GRADING SCALE

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

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.

ARTIFICIAL INTELLIGENCE 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.

ADDITIONAL COURSE POLICIES/INFORMATION

Late work will not be accepted.