

**INSTRUCTOR CONTACT INFORMATION**

Instructor: Stacey Hall

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Office Location: Gateway - 107

Office Hours: See Starfish

**CREDIT**

3 Semester Credit Hours (2 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 1310, RSPT 1240, RSPT 1240, RSPT 1325, RSPT 1160

**COURSE DESCRIPTION**

Develops essential knowledge and skills of airway care and mechanical ventilation.

**COURSE OBJECTIVES**

Upon Completion of this course the student will be able to: Select, review, obtain, and interpret data related to lung expansion therapy, artificial airways, manual resuscitation devices, suctioning, pulse oximetry, bedside spirometry, arterial sampling techniques and blood gas analysis and interpretation in an intermediate respiratory care patient setting: select, assemble, and check equipment function, operation, and cleanliness: identify equipment malfunctions: maintain patient records: and apply therapeutic procedures.

Students will be able to:

- Select, assemble, check the function of equipment used in the following: lung inflation-Incentive Spirometry, pulmonary mechanics, Suctioning (inline and sterile), tracheostomy care, intubation, extubation, ABG sampling, and analysis, manual resuscitators.
- Review patient data /Collect and Evaluate Additional data/ recommend procedures to obtain additional data to select and or revise the appropriate Respiratory Therapy procedures to produce a desired patient outcome.
- Manipulate Equipment by order or protocol/ Troubleshoot problems with the interaction of the patient with various Respiratory Care equipment.

- Perform/demonstrate competency/maintain records/ communicate information/evaluate/ monitor/independently modify or recommend modifications to therapy (in the laboratory setting) for the following procedures: (artificial airway insertion)- NPA, OPA, intubation, (airway management) - securing endotracheal tubes, suctioning ( inline and sterile), Tracheostomy Care, (Artificial airway removal) –extubation, pulmonary mechanics, manual resuscitators, pulse oximetry, extubation, (arterial sampling techniques) – Puncture and Arterial Line,
- Troubleshoot equipment
- Maintain patient records
- Communicate relevant information to members of the health care team.
- Describe concepts of mechanical ventilation

## **REQUIRED TEXTBOOK AND MATERIALS**

1. Egans Fundamentals of Respiratory Care 12<sup>th</sup> Edition (ISBN # 978-0-323-51112-4)
2. Egans Fundamentals of Respiratory Care Workbook 12<sup>th</sup> Edition (ISBN 978-0-32355366-7)
3. Mosby's Respiratory Care Equipment 10<sup>th</sup> Edition (ISBN # 978-0-323-55313-1)
4. Trajecsyst<sup>®</sup> access
5. A package of #882 Scantrons and #2 pencils
6. Stethoscope
7. Watch (with a second hand and waterproof)
8. Kettering Modules (web-based learning)- 5 modules  
TMC- Airway care A, Airway Care B, Therapeutic procedures A, Therapeutic procedures B, Therapeutic procedures C

## **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 = a 10% reduction in final class grade, 4 absences = a 20% reduction in final class grade, etc. Deductions due to excessive absences will be applied to the student's final class grade at the end of the semester.

Your attendance is the biggest predictor of 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 instructor of 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 the first day that the student returns to class 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.

## 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 (Due on this Date)	ASSIGNMENTS (Due on this Date)
1	Pulmonary mechanics	Mosby Ch. 8 (pg. 238-242)	Jan. 21
2	Pulse-ox/Co-ox/Peak flow	Egans Fundamentals – Chapter 19 (pg. 377-380) Mosby Ch. 10 (pg. 312-316) Mosby's Ch. 8 (pg. 228) Eagan's Ch. 20 (pg. 398-400)	Jan. 26, Jan. 28

3	Capnography & Incentive Spirometry	Egans Fundamentals – Ch. 19 (pg. 381-388) Ch. 43 (pg. 933-936) Mosby Ch. 8 (pg. 248-256) Mosby Ch. 7 (pg. 206-207)	Feb. 2, Feb. 4
4	IPPB (effect of PPV on the body)	Egans Ch. 43 (pg. 936-944) Mosby Ch. 7 (pg.208-213)	Feb. 9, Feb. 11
5	IPPB (effect of PPV on the body)	Egans Ch. 43 (pg. 936-944) Mosby Ch. 7 (pg.208-213)	Feb. 16, Feb. 18
6	Bronchoscopy	Egans Ch. 22 (pg.444-454) Mosby Ch. 5 (pg. 130-131)	Feb. 23, Feb. 25
7	Bronchoscopy	Egans Ch. 22 (pg.444-454) Mosby Ch. 5 (pg. 130-131)	Mar. 2, Mar. 4
8	Suctioning & Manual Resuscitators	Egans Ch. 37 (pg. 742-747) Ch. 38 (pg. 795-798) Mosby Ch. 5 (pg. 140) & (pg.111-114)	Mar. 16, Mar.18
9	Suctioning & Manual Resuscitators	Egans Ch. 37 (pg. 742-747) Ch. 38 (pg. 795-798) Mosby Ch. 5 (pg. 140) & (pg.111-114)	Mar. 23, Mar.25
10	Artificial airways	Egans Fundamentals – Ch. 37 (pg. 748-752) Mosby Ch. 5 (pg. 114-124)	Mar. 30, Apr. 1
11	Intubation & complications	Egans Fundamentals – Ch. 37 (pg. 755-759) Mosby Ch. 5 (pg. 124-130)	Apr. 6, Apr. 8
12	Special Tubes/Cuffs/Extubation	Egans Ch. 37 (pg. 748-750) (pg. 769-771 & 774-775) (pg. 775-778) Mosby Ch. 5 (pg. 114-123) (pg. 125)	Apr. 13, Apr. 15
13	Tracheotomy	Egans Ch. 37 (pg. 749, 761-766) (pg. 772-774) Mosby Ch. 5 (pg. 138-140)	Apr. 20, Apr. 22
14	Arterial lines & Capillary Sampling	Egans Ch. 52 (pg. 1167-1171) Ch. 19 (pg. 366-368) Mosby Ch. 9 (pg. 285-296) (pg. 300-303)	Apr. 27, Apr. 29
15	Blood gas analysis & QC	Egans Ch. 19 (pg. 368-374) Mosby Ch. 10 (pg. 300-312)	May 4
16	Blood gas sampling, analysis and interpretation	Egans Ch. 19 (pg. 363-367) Mosby Ch. 10 (pg. 300-320)	May 6
Final Week	Final Exam		May 11

## LAB Schedule:

Week of	Topic	Required Reading
1	Pulmonary Bedside mechanics	Trajecsys
2	Pulmonary mechanics/Peak flow	Trajecsys
3	Peak Flow/Pulse Oximetry/LAB TEST #1	Trajecsys
4	Pulse oximetry/Capnography	Trajecsys
5	IS/IPPB/NIV	Trajecsys
6	Bronchoscopy/Manual Resuscitation	Trajecsys
7	Manual Resus./Suctioning	Trajecsys
8	Suctioning/Sputum Sampling	Trajecsys
9	Artificial airways (Types: NPA/OPA/LMA/ETT/Trach)	Trajecsys
10	Artificial airways (indications/contraindications/hazards)	Trajecsys
11	Artificial airways/ LAB TEST # 2	Trajecsys
12	Cuff Pressure/ Trach care	Trajecsys
13	Intubation	Trajecsys
14	Extubation	Trajecsys
15	Arterial puncture	Trajecsys
16	Arterial puncture	Trajecsys
Final week	Exam #7	Trajecsys

## COURSE EVALUATION

Final grades will be calculated according to the following criteria:

- 5 to 7 Exams 70%
- Lab 20%
- Quiz/homework/modules/assignments 10%
- Demonstrate Competency with the following procedures. (artificial airway insertion)- NPA, OPA, intubation, (airway management) - securing endotracheal tubes, suctioning (inline and sterile), Tracheostomy Care, (Artificial airway removal) – extubation, pulmonary mechanics, manual resuscitation, pulse oximetry, extubation, (arterial sampling techniques) – Puncture and Arterial Line. If you fail to demonstrate Competency with the above procedures, you will fail the class. (regardless of your grade). Competency evaluations are a pass/fail.

## GRADING SCALE

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

LIT does not use +/- grading scales

## Course Policies

1. No food or drink, or use of tobacco products in class
2. ALL cell phones, headphones, and other electronic devices must be turned off while in class
3. No children allowed in the classroom
4. No late assignments will be accepted
5. Abide by LIT policies
6. Abide by policies within the Respiratory Care Handbook
7. Abide by instructor specific policies; this will be distributed on the first-class day.
8. Exam dates will be distributed on the first-class day.
9. 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 an electronic device during an exam, you will receive a 0 for that exam.
10. Missed exam/Competency testing policy: If you must miss an exam, you are required to notify the instructor prior to missing the exam. A doctor's note must be provided for missing an exam. If the Instructor approves, the exam must be taken on the first-class day return, unless directed otherwise by the instructor.
11. No retakes are allowed for exams.
12. You are allowed to re-attempt a failed competency after remediation. You are only allowed one re-attempt.
13. Exam dates and course schedule may be adjusted to facilitate student learning. If you must miss an exam, you must notify your instructor prior to the test time. Documentation for the missed exam must be provided to the instructor for an opportunity to take the exam. Exam must be taken on the first day of return. You must call and provide documentation for the missed exam, otherwise you will not be allowed to take the exam.

## Course Outline

- I. Peak Flow
  - A. Indications
  - B. Contraindications
  - C. Hazards
  - D. Troubleshooting
  - E. Modify Procedure
  - F. Equipment
  - G. Procedure/ Patient instruction
  - H. Competency Evaluations
  - I. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patients' response
- II. IPPB/ Concepts of Mechanical ventilation
  - A. Indications
  - B. Contraindications
  - C. Hazards
  - D. Troubleshooting
  - E. Modify Procedure
  - F. Equipment

- G. Procedure/ Patient instruction
  - H. Competency Evaluations
  - I. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patients' response
- III. Manual resuscitator
  - A. Indications
  - B. Contraindications
  - C. Hazards
  - D. Troubleshooting
  - E. Modify Procedure
  - F. Equipment
  - G. Procedure
  - H. Competency Evaluations
  - I. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patients' response
- IV. Pulse oximetry
  - A. Indications
  - B. Contraindications
  - C. Hazards
  - D. Troubleshooting
  - E. Equipment
  - F. Procedure
  - G. Competency Evaluations
  - H. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patients' response
- V. Suctioning
  - A. Indications
  - B. Contraindications
  - C. Hazards
  - D. Troubleshooting
  - E. Modify Procedure
  - F. Equipment
  - G. Procedure (sterile/ Naso tracheal/ artificial airways /inline/oropharyngeal)/patient instruction
  - H. Competency Evaluations
  - I. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patients' response
- VI. Airways
  - A. Patency
  - B. Obstruction
  - C. Complications of obstruction
  - D. Equipment (Oral Airways, ET tubes, trachs)
  - E. Securing artificial airways

- F. Indications
  - G. Hazards
  - H. Mannequin Practice Intubation/Extubation
  - I. Troubleshooting
  - J. Modify Procedure
  - K. Competency evaluation
  - L. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patient's response
- VII. Arterial blood gas sampling
- A. Indications
  - B. Contraindications
  - C. Hazards
  - D. Equipment
  - E. Procedure/ patient instruction
  - F. Troubleshooting
  - G. Modify Procedure
  - H. Mannequin ABG practice
  - I. Competency Evaluations
  - J. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patient's response
- VIII. Arterial blood gas analysis
- A. Calibration
  - B. Equipment
  - C. Quality Control
  - D. Erroneous Results
  - E. Patient/Eternal Factors Affecting Values
  - F. Calibrated Values
  - G. Measured Values
  - H. Governing Bodies
- IX. Incentive spirometry
- A. Indications
  - B. Contraindications
  - C. Equipment
  - D. Troubleshooting
  - E. Patient instruction
  - F. Modify Procedure
  - G. Competency evaluations
  - H. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patient's response
- X. Bedside Spirometry (mechanics)
- A. Indications
  - B. Contraindications
  - C. Equipment
  - D. Cleaning equipment
  - E. Procedure/ patient instruction



- F. Troubleshooting
- G. Modify Procedure
- H. Competency Evaluations
- I. Evaluate/Monitor/ and modify (independently or recommend modifications) based on patient's response

## **Cell Phone Policy for all courses within the Respiratory Care Program classroom and clinical**

### **In the classroom setting:**

- 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 related to course content is prohibited and will result in your dismissal from the Respiratory Care Program.
  
- beepers, telephones, headphones, and other electronic devices must be turned off while in class
- No children allowed in the classroom
- No late assignments will be accepted

### **In the clinical setting:**

- Cell phone use is prohibited, except for clinical communications.
- Personal cell phone usage within patient care areas will result in dismissal from the Respiratory Care Program.
- Unapproved usage from your clinical instructor in "non -patient" care areas will result in disciplinary action according to the Respiratory Care Handbook.

## **Classroom Behavior**

- No eating, no drinking, no disruptive behavior, and no children allowed in class please!
- During exams, please put all your belongings, including 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. Any calculator usage cannot be from a cell phone type device, (a calculator in which its only function is to calculate) - no additional functions

## **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.

## **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 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](mailto:specialpopulations@lit.edu). You may also visit the online resource at [Special Populations - Lamar Institute of Technology \(lit.edu\)](http://SpecialPopulations-LamarInstituteofTechnology(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](http://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.