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<th>Course ID</th>
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| MEDI 90  | Medical Terminology                        | MO: Construct sentences using medical terms to diagnose medical conditions.  
MO: Determine word meaning by interpretation of prefixes, suffixes and/or word roots.  
MO: Differentiate between terms which sound similar and have similar spellings to translate them correctly.  
MO: Interpret medical terms for a broad range of body systems and medical conditions.  
Students will be able to define medical terms to identify pathological conditions in patients.  
Students will be able to distinguish correct from incorrect spelling of medical terms |
| RESD 50  | Theory and Principles of Respiratory Therapy| MO: Define key respiratory terms.  
MO: Demonstrate professional behavior.  
MO: Differentiate between scholarly journal articles and magazine articles.  
MO: Discuss the major historical events that have shaped modern respiratory care practice.  
MO: Evaluate various on-line sources of information pertaining to respiratory care.  
MO: Explain what constitutes an ethical dilemma and how they arise in health care.  
MO: Predict gas behavior under changing conditions using gas law calculations.  
MO: State the personal protective equipment required to control the spread of airborne infections.  
MO: Summarize the basic elements of the Health Insurance Portability and Accountability Act (HIPAA).  
SLO: Given a patient scenario, apply the appropriate personal protective equipment.  
SLO: The student will be able to state how Poiseuille’s Law determines airway resistance and the most significant factor that influences a patient’s ability to breathe through an endotracheal tube.  
Students will describe the gas laws and relate them to Respiratory Care.  
Students will discuss the properties of fluid dynamics and relate them to Respiratory Care. |
| RESD 51A | Respiratory Therapy Science                | MO: Calculate oxygen cylinder duration and total.  
MO: Compare and contrast effectiveness of various humidifiers to prevent humidity deficiency.  
MO: Describe how humidity is generated and depleted and effects on patients.  
MO: Describe the administration of aerosols via nebulizers.  
MO: Explain principles of aerosol production and deposition.  
MO: List the methods for storage, transport, and administration of medical gases.  
MO: State the indications, hazards, and goals of medical gas therapy.  
Student will state the indications, hazards, and goals of medical gas therapy according to the AARC Clinical Practice Guidelines for Administration of Oxygen in the Acute Care Hospital.  
The student will demonstrate, in the laboratory setting, the correct procedure for aerosolized medication delivery by metered dose inhaler, (MDI) and small volume nebulizer, (SVN). |
| RESD 51B | Respiratory Therapy Science                | MO - Correctly insert a nasopharyngeal and oropharyngeal airway into a mannequin.  
MO - Demonstrate effective manual ventilation techniques with a bag-valve mask resuscitator on a mannequin.  
MO - Determine the most appropriate mode of ventilation, settings, and alarm parameters. |
MO - Identify and correctly set alarms system for the Servo I and Puritan-Bennett 840 mechanical ventilators.
MO - Properly verify and document the function of a mechanical ventilator.
MO - Select and properly fit appropriate mask and initiate noninvasive ventilation on a mannequin.
MO - Select the appropriate oxygen delivery device.
MO - State the indications, hazards, and goals of oxygen administration.
MO - Describe the construction and function of a bag-valve resuscitator unit.
MO - Perform endotracheal suctioning on an intubated airway management trainer using proper technique.
MO - Select and properly fit appropriate mask and initiate noninvasive ventilation on a mannequin.
MO - Use proper aseptic donning of gloves and handling of the sterile contents of a suction kit.
SLO - Student will describe and correctly perform endotracheal suctioning.
The student will demonstrate, in the laboratory setting, the correct procedure for opening the patient's airway and providing Bag-Mask-Ventilation, (BVM).

RESD 52 Pulmonary Anatomy and Physiology
Correctly describe the mechanisms for oxygen and carbon dioxide transport to and from the heart and lungs and body cells.
List and describe the five lung volumes and four lung capacities.
M: Describe the structure and function of the heart.
MO: Describe how the cross-sectional area of the tracheobronchial tree changes from the trachea to the terminal bronchioles.
MO: Describe the structure and function of the pulmonary vascular system.
MO: Describe how oxygen and carbon dioxide normally diffuse across the alveolar-capillary membrane.
MO: Describe the structure and function of the pulmonary vascular system.
MO: Identify the functions of the nose, oral cavity, pharynx and larynx.

RESD 53 Cardiopulmonary Pathophysiology
MO: Distinguish and illustrate the anatomic alterations of the lungs of commonly encountered cardiopulmonary diseases.
MO: Evaluate and classify the clinical manifestations associated with commonly encountered cardiopulmonary diseases.
MO: Given a case study, create a respiratory assessment and plan for patients with commonly encountered cardiopulmonary diseases.
MO: State the general management of commonly encountered cardiopulmonary diseases.
MO: Summarize the etiologies of commonly encountered cardiopulmonary diseases.
Students will be able to evaluate and classify the clinical manifestations associated with commonly encountered cardiopulmonary diseases.
Students will be able to examine and illustrate general management of commonly encountered cardiopulmonary diseases.

RESD 55 Adult Respiratory Intensive Care
MO: Analyze hemodynamic values and waveforms.
MO: Analyze nutrition as related to mechanically-ventilated patients.
MO: Assess the effectiveness of ventilation and propose strategies to improve ventilation.
MO: Assess the effectiveness of oxygenation and propose strategies to improve oxygenation.
MO: Compare and contrast the different methods of weaning from mechanical ventilation and choose the best method for a given patient.
MO: Formulate a patient care plan utilizing principles of mechanical ventilation.
MO: Identify the pharmacologic agents used during mechanical ventilation.
MO: Interpret ventilator waveforms.

The student will compare and contrast the features and benefits of volume controlled mechanical ventilation, (VC), and pressure controlled ventilation, (PC).

The student will list and describe the methods used to wean a patient from mechanical ventilation.

**RESD 56A — Techniques of Respiratory Therapy**

MO: Apply basic forms of medical gas therapy to patients according to the policies of the clinical site you are assigned.
MO: Perform aerosolized bronchodilator treatments, bronchial hygiene treatments, lung expansion treatments, and non-invasive monitoring on patients in the clinical site you are assigned.
MO: Perform detailed respiratory assessment on patients in the clinical site you are assigned.
MO: Recognize and respond to patient emergencies including CPR and airway management in the clinical site you are assigned.

Student will perform a comprehensive bedside patient assessment on an Adult patient on the general care ward of a hospital.

The student will be able to demonstrate the correct procedure for administering an Incentive Spirometer treatment on a post-operative patient.

The student will be able to state the name, type of drug, dose, frequency, indication, contraindications, and complications of drugs commonly used in respiratory care.

**RESD 56B — Techniques of Respiratory Therapy**

MO: Demonstrate proper storage, transport, and administration of medical gases to the ICU patient.
MO: Perform advanced respiratory care treatments and procedures and perform basic respiratory care treatments to include mechanical ventilation, humidity therapy, aerosolized bronchodilator, bronchial hygiene, lung expansion, non-invasive monitoring.
MO: Perform mechanical ventilator care to include ventilator set up and initiation.
MO: Perform the elements of patient assessment on critically ill patients.
MO: Recognize and respond to patient emergencies to include CPR and airway management.

SLO: The student will perform a patient-ventilator system check in the hospital setting.

Students will be able to calculate static and dynamic compliance.

The student will be able to perform a comprehensive bedside patient assessment on an adult patient in the critical care unit of a hospital.

The student will evaluate weaning parameters and make recommendations for weaning a patient.

The student will perform a patient-ventilator system check in the hospital setting.

**RESD 56C — Techniques of Respiratory Therapy**

MO: Demonstrate proper storage, transport, and administration of medical gases to the intensive care unit.
MO: Perform mechanical ventilator care to include ventilator set up and initiation.
MO: Perform advanced respiratory care treatments and procedures to include mechanical ventilation, humidity therapy, aerosolized bronchodilator, bronchial hygiene, lung expansion, and non-invasive monitoring.
### RESD 56D  Techniques of Respiratory Therapy

MO: Perform the elements of patient assessment on critically ill patients.
MO: Recognize and respond to patient emergencies to include cardiopulmonary resuscitation and airway management.

The student will assess the overall condition of a mechanically ventilated patient requiring Positive End Expiratory Pressure (PEEP). Assessment will include HR, RR, BP, EKG, SpO2, and Cst.

The student will complete three patient assessments on mechanically ventilated patients.

The student will monitor a patient receiving Noninvasive Positive Pressure Ventilation (NIPPV), in the hospital.

The student will verbalize the difference between Pressure Control Ventilation versus Volume Control Ventilation.

### RESD 57B  Special Procedures for Respiratory Care

MO: Demonstrate proper storage, transport, and administration of medical gases to the Intensive Care Unit (ICU) and Neonatal Intensive Care Unit (NICU) patient.
MO: Perform advanced respiratory care treatments and procedures and perform basic respiratory care treatments to include mechanical ventilation, humidity therapy, aerosolized bronchodilator, bronchial hygiene, lung expansion, non-invasive monitoring.
MO: Perform detailed respiratory assessment on the adult, pediatric, and neonatal patients including computation of patient lung mechanics and analysis of patient clinical data leading to a treatment plan.
MO: Perform mechanical ventilator care to include ventilator initiation, circuit changes, and patient-system checks on the adult and NICU patient.
MO: Recognize and respond to patient emergencies to include CPR and airway management according to institutional policy.

The student will actively participate in the weaning process of an adult patient being weaned from mechanical ventilation in the hospital clinic setting.

The student will assess the ventilator waveforms of a patient receiving mechanical ventilation in the intensive care unit of a hospital.

### RESD 58  Neonatal Intensive Care

Students will analyze assessment findings and make recommendations for mechanical ventilation.

Students will be proficient in Neonatal Resuscitation.

### RESD 59  Respiratory Therapeutic Modalities

MO: Determine areas of strength and weakness through the use of practice examinations to develop a personalized study plan for the Certified Respiratory Therapist (CRT) and Registered Respiratory Therapist (RRT).
MO: Develop professional resumes.
### RESD 60  
**Comprehensive Pulmonary Assessment**
- MO: Evaluate patient data and make treatment recommendations.
- MO: Initiate and modify therapeutic procedures.
- MO: Select, assemble, use, troubleshoot, and clean respiratory therapy equipment.
- MO: State the credentialing process for the Respiratory Care profession.
- SLO: Given a patient scenario, the student will evaluate patient data and make recommendations for therapy.
- SLO: Given a patient scenario, the student will perform troubleshooting, quality control, and infection control of equipment.
- SLO: Given a patient scenario, the student will recommend to initiate or modify therapy as indicated by patient assessment data.
- Students will demonstrate that they are prepared for the resume and interviewing process.
- Students will evaluate patient data and make recommendations for therapy.
- Students will initiate and modify therapeutic interventions.
- Students will pass a clinical simulation exam.
- Students will recommend troubleshooting, quality control, and infection control of respiratory therapy equipment.
- Students will utilize evidence-based medicine principles.

### RESD 61  
**Current Issues in Respiratory Care**
- MO: Analyze patient data and determine the related pathophysiology.
- MO: Create a patient care plan.
- MO: Describe the causes and characteristics of common cardiopulmonary symptoms.
- MO: Interpret arterial blood gas data.
- MO: Locate the topographic position of thoracic landmarks on a diagram of the chest.
- MO: Select appropriate therapy based on patient assessment data.
- SLO: Given arterial blood gas data, the student will be able to determine the patient’s acid base status.
- SLO: Given patient assessment data, create an assessment statement and treatment plan.
- Students will be able to analyze and apply laboratory data and recommend appropriate care.
- Students will be able to interpret arterial blood gas results.
- Students will be able to interpret physical examination data relative to the cardiopulmonary system.

### RESD 62  
**Pharmacology for Respiratory Care**
- MO: Create a prescription for cardiopulmonary rehabilitation activities in an actual patient.
- MO: Evaluate and summarize research articles on evidence-based guidelines for respiratory therapy practices and procedures.
- MO: Apply principles of quality improvement.
- MO: Evaluate collected sleep study data and classify the type of sleep abnormality present.
- MO: Review, collate, and interpret data collected from Respiratory Therapy student surveys using quality assurance processes.
- Students will be able to examine quality improvement processes for determination of standards of performance.
- Students will be able to utilize evidence-based medicine and respiratory therapy principles.

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MO: Given a patient scenario, the student will determine appropriate drug therapy.
- MO: Apply drug therapy techniques.
- MO: Calculate drug dosages.
MO: Compare and contrast the parasympathetic and sympathetic branches of the nervous system.
MO: Define key terms pertaining to the principles of drug action.
MO: Describe the therapeutic purpose of each major aerosolized drug groups.
MO: State the indications for each of the major aerosolized drug groups.
The student will articulate the difference between the parasympathetic and sympathetic branches of the