

Course Objectives/Course Outline
Spokane Community College

Course Title: Critical Care II

Prefix and Course Number: RT 302

Course Learning Outcomes:

By the end of this course, a student should be able to:

- Apply disease Specific Mechanical Ventilation Strategies
- Evaluate strategies to Improve Ventilation and Oxygenation in the management of ARDS
- Describe Ventilator Induced Lung Injury and apply Lung Protective Ventilation Strategies
- Evaluate advanced Modes of Mechanical Ventilation
- Apply advanced Ventilator Graphic Assessment and Troubleshooting mechanical ventilators
- Apply advanced Troubleshooting and Problem-solving
- Evaluate bedside Pulmonary Ultrasound principles
- Apply Intra-aortic balloon pump and other forms of left and right ventricular assist devices
- Evaluate Cardiac Catheterization and Echocardiography
- Demonstrate Inter and Intra-Hospital Transports
- Apply advanced Assessment of the Mechanically Ventilated Patient (Hemodynamics)
- Describe Introduction to Neonatal and Pediatric Mechanical Ventilation
- State the indications, contraindications, hazards and gas laws that pertain to Hyperbaric oxygen therapy and tour a local facility

Course Outline:

- I. Mechanical Ventilation Strategies to improve Ventilation and Oxygenation
- II. Acute Respiratory Distress Syndrome and advanced Ventilator Graphics utilizing the P/V loop and Flow/V loop
- III. Lung Protective Ventilation Strategies – ECMO, iNO, PLV, HFV and surfactant replacement
- IV. Advanced Modes of Mechanical Ventilation – APRV, Volume Targeting with PC and PS options, PAV, Prone position and mobilizing the ventilator patient and Tracheal Gas Insufflation
- V. Thoracic Ultrasound principles and Echocardiography
- VI. Cardiac Catheterization Indications and procedures that may result in IABP and other options such as a right or left ventricular assist device – Heartmate II
- VII. Inter and Intra Hospital Transports, equipment, monitoring and patient safety
- VIII. Advanced Hemodynamic Monitoring
- IX. Introduction to Neonatal and Pediatric Mechanical Ventilation using pressure and volume targeting
- X. Hyperbaric Oxygen indications and contraindication and Wound Therapy