

NorthWest Arkansas Community College
Respiratory Therapy Program
Course Syllabus
Revised 8-12-2004

COURSE: **RESP 2414 MECHANICAL VENTILATION I**

PREREQUISITES: All previous RESP, AHSC 1011, AHSC 1111, and MBIO 2014 classes with at least a grade of 'C'.

OFFICE HOURS: See schedule posted on Tom Mattmann's office door.

COURSE DESCRIPTION: This course provides an in-depth study of the application of mechanical ventilation. Emphasis is placed on initiation of mechanical ventilation, mechanical ventilation in the critical care setting, and special ventilatory techniques.

RESOURCE MATERIAL: The following items are required for the course:

1. **Egan's Fundamentals of Respiratory Care**
 Scanlan; 7th Edition, 1999
 C.V. Mosby

2. **Mechanical Ventilation Physiological and Clinical Applications**
 Pilbeam, 3rd Edition, 1998, C.V. Mosby

INSTRUCTIONAL METHODS: Lecture, group discussions and video conferences are the primary methods incorporated for instruction. Students will complete special presentations as assigned. Demonstrations, return demonstrations, lab practice and case based problem solving are also used.

COURSE OBJECTIVES: By the end of this course the student will be able to:

1. Demonstrate the ability to initiate and maintain mechanical ventilation and maintain a patent airway using a variety of methods. [NBRC Combined Examination Matrix(CEM III-B5,6,7-D2b,2c,2d,2e,4a,4b,6-E6,7,8,9,10,11-F2g2,2g3,2g4,2g5,2i1,2i2,2i3,2i4,2i5,2i6, 2i7,2i9,2i10-G1f,3a,3b,3c,3d,3e,3f,3g,3i,3k-I2,3)]

2. Demonstrate a basic knowledge of trouble shooting, quality control, and infection control procedures for mechanical ventilation. (CEM II-A6,11a, 11c,11d,22,28-B-C4)

3. Demonstrate a basic knowledge of special techniques used in mechanical ventilation.

4. Review existing patient data and information for evaluation and the need to collect additional data for redommendation of additional therapies.
(CEM I-A1,2,3,4,5,6,7-B1a,1b,2,3a,6b,7b,7c,7e,7f,7g,7j,7k,7l,8b,8c,8i-C)

**TOPICAL
OUTLINE:**

- Module 1: History of Mechanical Ventilation
- Module 2: Basic Concepts or Mechanical Ventilation
- Module 3: Physical Aspects of Mechanical Ventilators
- Module 4: PR-2 and Bird Mark 7
- Module 5: MA-1, Bear
- Module 6: PB-7200
- Module 7: Servo 900C, Servo 300
- Module 8: Effects of Positive Pressure Ventilation
- Module 9: Hemodynamics
- Module 10: Ventilator Graphics
- Module 11: Formulas
- Module 12: The Need for Mechanical Ventilation
- Module 13: Initiation and Modes of Ventilation
- Module 14: Basic Patient Assessment
- Module 15: Improving Oxygenation
- Module 16: Airways and Circuits
- Module 17: Troubleshooting
- Module 18: Non-Invasive Mechanical Ventilation

GRADING SCALE	A = 93% - 100%
	B = 85% - 92%
	C = 76% - 84%
	D = 70% - 75%
	F = Below 70%

GRADING: Grades for each exam, as well as the final class average, are based upon total points possible and attendance. The final grade will be calculated as follows:

Final percentage grade =

$$40\%: \frac{\text{Exam and Final Points Received}}{\text{Total Points Possible}} \times 100$$

40 % Lab tests and participation

20%: Quizzes and Homework points

Scores below 76% are unacceptable. THE STUDENT MUST COMPLETE THE COURSE WITH A CUMULATIVE AVERAGE OF NO LESS THAN 76% TO PASS THE COURSE.

DROP DATE: The final date to drop this course with a "W" is 4:00pm on November 5, 2004.

GENERAL REMARKS This course will follow policies as specified in the College Catalog, Respiratory Therapy Program Handbook, Allied Health Student Handbook and the Respiratory Therapy Clinical Manual. Students who wish to review or discuss their progress are encouraged to schedule an appointment with the instructor. All exams, scores and evaluations are confidential, but are kept on file for the student to review.

STUDENTS WITH DISABILITIES: If you are a student with a disability, and if you will be requesting accommodations, it is your responsibility to contact the Counseling Office at 636-9222. The Counseling Office will recommend appropriate accommodations to your instructor. The instructor will identify for you which accommodations will be arranged.