

Midland College
Syllabus
RSPT 2255
Critical Care Monitoring
Lecture/Lab
(1-3-0)

x

**Course
Description:**

The student will be introduced to monitoring techniques used clinically to assess a patient in the critical care setting. These will include but will not be limited to: patient assessment, invasive vs. non-invasive monitoring, hemodynamic monitoring, lung compliance, airway resistance, and ventilator mechanics/graphics.

**Text,
References,
and Supplies:**

Textbooks (**Required textbooks are in bold print**)

Chang, Clinical Application of Mechanical Ventilation. 2nd Edition. Delmar. 2001.

Merenstein, Handbook of Neonatal Intensive Care. 4th Edition. Mosby. 1998.

Kacmarek, The Essentials of Respiratory Care, 4th Edition. Mosby. 2005.

Scanlan, Egan's Fundamentals of Respiratory Care. 8th Edition. Mosby. 2003.

Heuer, Wilkins' Clinical Assessment in Respiratory Care. 8th Edition. Elsevier. 2018.

Kacmarek, Egan's Fundamentals of Respiratory Care. 11th Edition. Elsevier. 2017

Wojciechowski, Entry Level Exam Review for Respiratory Care. Delmar. 1995.

**Course Goals/
Objectives:**

The following list of course goals will be addressed in the course. These goals are directly related to the performance objectives (Addendum A).

1. Explain advanced ventilator care techniques
2. Perform bedside patient/ventilatory assessment
3. Analyze patient/ventilatory system
4. Identify ventilator waveforms
5. Analyze ventilator waveforms
6. Perform cardiopulmonary assessment (including history, physical exam, Neuro assessment, labs, ABGs, PFTs, EKGs)
7. Demonstrate weaning techniques
8. Prepare any or all of the following ventilators: Bird Mark 7 ventilator, PB PR2, PB MA1, Hamilton G5, Draeger (Evita or XL), Siemens Servo 900C, Maquet Servo i, PB 840, Respirationics BiPAP ST/D, Sechrist IV 100B
9. Explain mechanical ventilation modes
10. Calculate A-aDO₂
11. Calculate flow
12. Calculate I:E ratio
13. Calculate shunt
14. Calculate V_D/V_T
15. Calculate CO₂ change
16. Calculate FiO₂
17. Explain X-ray generation

18. Identify chest X-ray landmarks
19. Identify chest X-ray pathology
20. Describe ventilation/lung scan
21. Describe perfusion scan
22. Interpret lung/perfusion scan
23. Describe principles of intracranial pressure monitoring
24. Describe principles of chest tube drainage
25. Describe principles of counter pulsation
26. Describe principles of hemodynamics
27. Discuss techniques involved with intracranial pressure monitoring
28. Discuss techniques involved with chest tube drainage
29. Discuss techniques involved with counter pulsation
30. Discuss techniques involved with hemodynamics
31. Discuss diagnostic and therapeutic bronchoscopy
32. Discuss the nutritional assessment of a cardiopulmonary patient

Student Contributions and

Each student will spend at least 4 hours per week preparing for class. Attendance is critical in this class. The college attendance policy will be followed.

Class Policies:

All classroom performance and behavior will be considered academic.

Evaluation of Students:

A minimum of four (4) tests will be given including a comprehensive final (unless otherwise designated by the instructor). The final exam will carry the same weight as other exams (not quizzes). Weekly quizzes will be averaged and will equal one exam. Test questions will come from lecture, reading assignments and homework assignments. Most tests will be objective in nature.

1.	Tests (minimum of four)	400 points
2.	Quiz average	100 points
3.	Attendance	50 points
4.	Homework	100 points
	Total	650 points

A = 582+ points

B= 517+ points

C= 452+ points

Course Schedule:

The class meets for 2 lecture/2 lab hours per week on Wednesday morning 10:00-11:50 and 13:00-14:50 Wednesday afternoon.

Licensure Eligibility Notification

Completion of Midland College degrees and/or certificates does not guarantee eligibility to take a certification/registry/licensure examination. The eligibility of each person is determined on an individual basis by the regulatory body of the specific discipline. If you have a conviction of a crime other than a minor traffic violation, physical or mental disability/illness, hospitalization/treatment for chemical dependency within the past five years, current intemperate use of drugs or alcohol or a previous denial of a licensure or action by a licensing authority, you will need to contact the specific regulatory body for an individual ruling. Some programs require a criminal background check and urine and drug screen.

AMERICANS WITH DISABILITIES ACT (ADA):

The Americans With Disabilities Act (ADA) and Section 504 of the Rehabilitation Act require that no otherwise qualified person with a disability be denied access to, or the benefits of, or be subjected to discrimination of any program or activity provided by an institution or entity receiving federal financial assistance. It is this Section 504 mandate that has promoted the development of disability support service programs in colleges and universities across the country. Sub-part E of Section 504 deals specifically with this mandate for institutions of higher education.

While it does not require development of special educational programming, for students with disabilities, it does require that an institution (public or private) be prepared to make appropriate academic adjustments and reasonable accommodations to allow the full participation of students with disabilities in the same programs and activities available to non-disabled students. Disabilities may include things such as physical/mobility problems such as paralysis or academic problems like learning disabilities. Some examples of accommodations are extra time for tests, testing in a quiet location, and providing architectural access to buildings.

Midland College provides services for students with disabilities through Student Services. In order to receive accommodations, students must place documentation on file with the Counselor/Disability Specialist. Students with disabilities should notify Midland College prior to the beginning of each semester. Student Services will provide each student with a letter outlining any reasonable accommodations. The student must present the letter to the instructor at the beginning of the semester.

Non Discrimination Statement: Midland College does not discriminate on the basis of race, color, national origin, sex, disability or age in its programs and activities. The following individuals have been designated to handle inquiries regarding the non-discrimination policies:

Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu;

Natasha Morgan, Director Human Resources/Payroll, 3600 N. Garfield, PAD 104, Midland, TX 79705, (432) 685-4534, nmorgan@midland.edu. For further information on notice of non-discrimination, visit <http://wdcrobcop01.ed.gov/CFAPPS/OCR/contactus.cfm> or call 1 (800) 421-3481.

Spanish

Midland College no discrimina por motivos de raza, color, nacionalidad, sexo, discapacidad, o edad en

sus programas o actividades. Las siguientes personas han sido designadas para responder a cualquier pregunta o duda sobre estas políticas no discriminatorias:

Tana Baker, Title IX Coordinator/Compliance Officer, 3600 N. Garfield, SSC 242, Midland, TX 79705, (432) 685-4781, tbaker@midland.edu;

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Division Information

Division Dean: Dr. Carmen Edwards, DNP, MSN, RN
Division Secretary: Karen Harris, CPS
Division Office Location: 208 DFHS
Division Telephone: 685-4799 or 685-4600
Program Chair: Bob Weidmann, M.Ed., RRT, RPFT, RRT-NPS, RCP
Program Office Location: AMS A34
Program Office Telephone: 432/685-5549

Students are encouraged to contact the instructor at any time; however, making an appointment will guarantee the instructor's availability at a specific time.