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AHRC 243.01: Perinatal and Pediatric Respiratory Care

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“I was cesarean born. You can't really tell, although whenever I leave a house, I go out through a window.”

Steven Wright

CLASS MEETS:
- Monday 0900 – 1150 in 112
- Tuesday 1100 – 1350 in 112

FACULTY:
- Paul J. Crockford, BSRC, RRT
  paul.crockford@umontana.edu
  Office: 316 Phone: 243-7918
  Office Hours: By appointment

COURSE DESCRIPTION: This course provides in-depth coverage of the concepts of neonatal and pediatric respiratory care. Emphasis is placed on neonatal and pediatric assessment, prenatal development, pathophysiology, and on the special therapeutic needs of neonates and children. Topics covered include emergency and traumatic injury, acute and chronic disease conditions; also, resuscitation and mechanical ventilation of neonatal and pediatric patients are studied. The theory behind NRP is presented without certification; and a PEARS certification course will be offered. Upon completion, students will demonstrate competence in these concepts through written evaluations.

PREREQUISITES: RES 260, 265

CREDITS: 3

REQUIRED TEXTS:

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<thead>
<tr>
<th>Title</th>
<th>Author/Publisher</th>
<th>ISBN</th>
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<thead>
<tr>
<th>Title</th>
<th>Author/Publisher</th>
<th>Readings</th>
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<tbody>
<tr>
<td>Clinical Assessment in Respiratory Care, 6th edition</td>
<td>Wilkins, et al/Mosby</td>
<td>Chapter 12, Neonatal &amp; Pediatric Assessment</td>
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<tbody>
<tr>
<td>Egan’s Fundamentals of Respiratory Care, 11th ed.</td>
<td>Wilkins, et al</td>
<td>Chapter 48; Neonatal &amp; Pediatric Respiratory Care</td>
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COURSE REQUIREMENTS:

Attendance: In order to increase your understanding of, and in order to be fully engaged with the course content, you are expected to attend every class unless you are in a clinical rotation. Missing a class substantially affects your understanding of the subject and your ability to be successful in the course. Those missing class for any reason are encouraged to meet with a classmate to review the material and copy notes.

Quizzes & Worksheets/Case Studies: Quizzes may be given at the beginning or end of any class period. There is no make-up for missed quizzes. Case Studies, if assigned, will be due prior to the Unit IV exam. Worksheets pertaining to various readings are available online. If a student experiences technical issues with Moodle, he or she should consult the instructor or contact UM’s Moodle Help Desk at 243-4999. If a student cannot submit online documents from his home computer, he should plan to use the Missoula College library computers.

Semester Grades will be determined by:

- Seven Unit Exams of 100 points each approx. 60%
- Assignments/Worksheets and Pop Quizzes approx. 30%  **Missed Pop Quizzes cannot be made up
- Attendance and participation approx. 10%

Exams: Four unit exams constitute about 60% of the final grade. There is no cumulative final exam.

GRADING SCALE:

- A = 4.0  95-100%  C = 2.00  74-76.9%
- A- = 3.67  90-94.9%  C- = 1.67  70-73.9%
- B+ = 3.33  87-89.9%  D+ = 1.33  67-69.9%
- B = 3.00  84-86.9%  D = 1.00  64-66.9%
- B- = 2.67  80-83.9%  D- = .67  60-63.9%
- C+ = 2.33  77-79.9%  F = 0.00  <60%

Students in the Respiratory Care Program must have a “B-” (80% or greater) final grade in order to progress within the program or to matriculate.

COURSE POLICIES:

Professional Behavior: I expect each student to show professional academic behavior during class time: be on time, be prepared; be awake and attentive; participate in demonstrations and discussions. Above all, I expect each student to be respectful to classmates and to me as the instructor. If you behave in an unprofessional manner during class, I will ask you to meet with me individually. Also, during this course, we discuss what Professionalism means in the medical field. This class, and its co-requisites are good opportunities for students to practice all aspects of academic and medical professionalism.

Academic Honesty & Integrity: As students of higher education, there is an expectation of high academic integrity. Students are expected to perform to the utmost of their ability in an honest and ethical manner. Academic misconduct is subject to an academic penalty by the instructor and/or a disciplinary sanction by The University of Montana. Please refer to the Student Conduct Code in the Respiratory Care Program Student Handbook, along with the University’s Student Conduct Code at http://life.umt.edu/vpsa/student_conduct.php.

Recording of Classes: Video or audio recording of lectures is not allowed without prior consent of the instructor. Photographing of any part of the course is not allowed either. Any recorded lectures, even if made with instructor’s consent, are not allowed to be re-broadcast in any way. Any material discussed in face-to-face classes or in on-line discussion groups is considered confidential. If a student breaks this policy, it is considered academic misconduct.

Disability Accommodation: Eligible students with disabilities will receive appropriate accommodations in this course if requested in a timely manner. I require documentation of any disabling condition prior to providing substantive accommodations (those that involve changes in deadlines, activities, or products) in this course. Students are responsible to arrange for such accommodations with Disability Services for Students (DSS). Please refer to the Disability Services website at http://life.umt.edu/dss. Please note that the instructor reserves the right to modify syllabi and assignments as needed based on faculty, student, and/or environmental circumstances.
**Cell Phones & Electronic Devices:** Electronic devices (such as cell phones, iPods, mp3s, pagers, etc.) must be turned off and put away before class. The use of and the noises from such devices are disruptive to the learning environment. However, if your cell phone or pager must be on due to a business or an emergency issue, please inform the instructor prior to class and set it to vibrate. If you must leave class, please do so quietly. If a student is seen breaking the above rules with an electronic device, the device will be taken away until the end of class. During exams, all electronic devices must be off and put away.

**Make-up of Quizzes, Worksheets and Tests:** There is no make-up for missed quizzes. If the student is planning an absence (e.g. a clinical rotation day) when a worksheet is due, the student should plan to submit the assignment online on or before the due date. Late worksheets earn a maximum of half-credit. Make-up exams will be allowed only under extreme circumstances that must be approved by the instructor. Make-up exams must be completed online within one week of the original test date. Failure to do so will result in a zero grade for that test.

**Internet Access:** The student should have internet access and is expected to check emails daily. Course material is posted on Moodle (http://umonline.umt.edu). You must have access to this site to complete the requirements of this course. Computers are available in the library if needed. Students are expected to log-on daily to check for email updates, view Moodle assignments, and check supplementary material for the course.

**FOR FURTHER POLICIES & PROCEDURES, PLEASE REFER TO THE RESPIRATORY CARE PROGRAM STUDENT HANDBOOK AND THE UNIVERSITY OF MONTANA STUDENT CONDUCT CODE ONLINE AT:** http://life.umt.edu/vpsa/student_conduct.php.

**COURSE OBJECTIVES:**

- Assessment of fetal growth and development
- Examine and evaluate labor, delivery, and physiological changes after birth
- Apply techniques of neonatal resuscitation and stabilization
- Assessment of the neonatal and pediatric patient
- Discuss pharmacology used in neonatal and pediatric respiratory therapy
- Identify neonatal and pediatric diseases and other problems of prematurity
- Apply theories and concepts of neonatal and pediatric ventilatory support
- Operate and manage commonly used neonatal and pediatric ventilators
AHRC 243 COURSE OUTLINE:

There will be four major unit exams, no final exam, and a number of quiz/worksheets during the course. Specific dates of exams will depend upon our progress through the course material and will be announced well in advance. Each day’s lecture will cover one or two chapters, and will follow the chapter order in the text. Course and exam content will be as follows:

1. Embryologic Development of the Cardiopulmonary System
2. Assessment of Fetal Growth and Development
3. Labor, Delivery, and Physiologic Changes after Birth

UNIT ONE EXAM – DATES TBA

4. Techniques of Resuscitation and Stabilization of the Neonatal Patient
5. Assessment of the Neonatal and Infant Patient
6. Continuing Care of the Neonate

UNIT TWO EXAM – DATES TBA

7. Perinatal Lung Disease and Other Problems of Prematurity
8. Causes of Persistent Perinatal Illness
9. Techniques of Pediatric Resuscitation and Stabilization

UNIT THREE EXAM – DATES TBA

10. Assessment of the Pediatric Patient
11. Continuing Care of the Pediatric Patient
12. Pediatric Diseases Requiring Respiratory Care

UNIT FOUR EXAM – DATES TBA

13. Respiratory Care Procedures
14. Pharmacology
15. Assessment of Oxygenation and Ventilation

UNIT FIVE EXAM – DATES TBA

16. Interpretation of Chest X-Rays
17. Concepts of Mechanical Ventilation
18. Management of the Patient-Ventilator System

UNIT SIX EXAM – DATES TBA

19. Common Infant and Pediatric Ventilators
20. Special Procedures and Non-Conventional Ventilatory Techniques
21. Perinatal Transport

UNIT SEVEN EXAM – DATES TBA