Course Description:

This course provides students with essential knowledge of airway care and mechanical ventilation. Airway care includes indications, techniques, equipment, hazards and complications. Mechanical ventilation includes indications, initiation, modes, clinical application, management, complications and weaning. Prerequisites: RSPT 1410.

Text, References and Supplies:

Kacmarek, Stoller and Heuer, Egan’s *Fundamentals of Respiratory Care*, 10th edit., St. Louis, Missouri; Mosby, 2013.


Student Learning Outcomes:

Upon successful completion of the course the student will:

1. Describe and perform techniques of physical examination.
2. List the rationale, indications, contraindications and hazards of intubation/extubation and tracheostomy procedures.
3. List the equipment needed to successfully perform an endotracheal intubation/extubation or tracheostomy procedure.
4. Describe the different endotracheal and tracheostomy tubes used in hospitals today.
5. Describe and perform endotracheal intubation/extubation procedure on patient with 100% accuracy.
6. Describe the tracheostomy procedure.
7. Explain and perform proper tube care to include aspiration technique.
8. Define basic terms and concepts of mechanical ventilation.
9. Explain physical aspects of mechanical ventilation.
10. Demonstrate technique for setting up, monitoring and maintaining the ventilators listed below.
11. Demonstrate all modalities available on modern ventilators
12. Simulate management and stabilization of an ICU patient receiving ventilator care using the TTL.
13. List indications, contraindications and side effects for IMV, PEEP, and CPAP.
14. Describe techniques used to improve oxygenation.
15. Describe discontinuation of and weaning from mechanical ventilation.
16. Troubleshoot problems in equipment.
17. Calculate Cdyn, Cstat, Raw, Vt, VD, VA and compliance factor on equipment used in lab.
18. Perform basic interpretation of blood gasses, chest x-ray and ECG.
19. Other topics as provided in lecture.
20. Ventilators used in lab: Bird Mark 7 or 8, Bennett PR-1 or PR-2, Sechrist IV 100B, Hamilton G5, Puritan Bennett 840, Siemens Servo i

Student Contributions, Responsibilities and Class Policies:

The student agrees to devote time, study and work toward the mission of the course.
1. Three (3) consecutive hours of unexcused absences or a total of six (6) hours unexcused absences may result in a student receiving an “F” in the course.

2. For an absence to qualify as an excused absence, it is the obligation of the student to notify the instructor as soon as practical in advance of that class period. If the instructor is not available, leave a message with the Health Science Division Secretary at 432-685-4600 between 8:00 am – 5:00 pm.

3. All classroom performance and behavior will be considered academic.

Curriculum and course advisement from the respiratory care staff will be provided during registration and posted office hours in that instructor’s office. Student will receive continuing advisement throughout the course by the instructor as needed or required.

Evaluation of Students:

A minimum of four (4) tests will be given including a comprehensive final (unless otherwise designated by the instructor). You will be expected to complete any and all assignments given throughout the semester. Tests questions will come from lecture, reading assignments and homework assignments. No make-up work is allowed. If an exam is not completed at the discussed time the option for extra credit is lost. You may opt to replace an exam grade with the grade you make on the final exam. All personal communication devices are to be placed on silence/vibrate during class time. If you must answer your device please leave the immediate area. Absolutely no personal communication devices are allowed in testing areas.

Assessments are made of the student by the instructor in the form of testing. The student is also asked to assess his/her progress as well as the evaluation of the instructor, objectives of the program, learning strategies and the general competencies identifiable for the course.

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Course Schedule:

Monday and Wednesday from 0900 to 1150.

Americans with Disabilities Act (ADA):

Any student who, because of a disabling condition, may require some special arrangements in order to meet course requirements should contact the Shep Grinnan as soon as possible. Mr. Grinnan’s office is located in the Scharbauer Student Center Building. These conditions may include documented physical or educational disabilities. Please be aware that services or accommodations are not automatic. Each student must request them and secure the proper authorizations/documentation.

Division Information:  Health Sciences

Division Dean: Carmen Edwards, DNP, MSN, RN  DFHS Bldg. RM 234  432-686-4822
Program Chair: Bob Weidmann, BS, RPFT, RRT-NPS, RCP  AMS Bldg. RM A 34  432-685-5549
Division Secretary: Kay Floyd  DFHS Bldg. RM 206  432-685-4600