DATE OF LATE REVIEW: 02/2013

CIP CODE: 51.0812

SEMESTER: Departmental Syllabus

COURSE NAME: Technical Devices

COURSE NUMBER: RSCR0230

CREDIT HOURS: 2 CREDITS

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

EMAIL: KCKCC issued email accounts are the official means for electronically communication with our students

PREREQUISITES: Admission to Respiratory Therapy Program, Program Sequence

REQUIRED TEXT AND MATERIALS: Please check with the KCKCC bookstore, http://www.kckccbookstore.com, for the required texts for your particular class.

COURSE DESCRIPTION:
Technical devices used in respiratory care are covered in this lecture class. Students become familiar with equipment used to deliver high flow oxygen, positive pressure, and pulmonary hygiene. Operation of analyzers, manometers, and other respiratory measuring devices are included. Adult and pediatric applications are discussed.

METHOD OF INSTRUCTION:
A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, and panels, conferencing, learning experiences, and performances outside the classroom. Methodology will be selected to best meet student needs.

COURSE OUTLINE:

I. Neonatal Therapeutic Devices
   A. Oxyhoods
   B. Apnea monitors
   C. Pulse oximeters
   D. Croup tents
   E. Non rebreathing pressure relief resuscitation equipment with manometer
   F. Isolettes
   G. Warmers
H. Delee trap  
I. Suction regulators

II. Pediatric Therapeutic Devices
   A. Pediatric aerosol devices  
   B. Pediatric resuscitation bag/valve/mask devices  
   C. Percussion equipment  
   D. Pediatric oxygen delivery equipment

III. Hyperinflation Equipment
   A. IPPB therapy  
   B. CPAP/bipap/DPAP therapy  
   C. Inspiratory muscle trainers  
   D. Positive expiratory pressure devices

IV. Cardiopulmonary Diagnostics and Monitoring Equipment
   A. Electrocardiograph and telemetry equipment  
   B. Dynamaps  
   C. Screening spirometers  
   D. Negative inspiratory force manometers  
   E. Respirometers  
   F. Ergometers  
   G. Treadmills  
   H. Arterial blood gases analyzers  
   I. Electrolyte instruments  
   J. Bronchoscopy equipment

EXPECTED LEARNER OUTCOMES:

A. The student will be able to select appropriate therapeutic devices for the desired therapeutic effect.  
B. The student will be able to select appropriate medical technology for cardiopulmonary diagnostics and monitoring.  
C. The student will be able to explain the operation of medical equipment as therapeutic devices.  
D. The student will be able to explain mechanical ventilation equipment.

COURSE COMPETENCIES:

The student will be able to select appropriate therapeutic devices for the desired therapeutic effect.  
1. The student will be able to explain neonatal and pediatric applications of respiratory therapy equipment and monitors.  
2. The student will be able to differentiate various hyperinflation devices.

The student will be able to select appropriate medical technology for cardiopulmonary diagnostics and monitoring.  
3. The student will be able to differentiate various cardiographic diagnostic and monitoring devices.  
4. The student will be able to evaluate features of pulmonary laboratory equipment.  
5. The student will be able to evaluate blood gas laboratory equipment.

The student will be able to explain the operation of medical equipment as therapeutic devices.  
6. The student will be able to explain operation of aerosol enclosures.  
7. The student will be able to explain operation of pediatric resuscitation bag/mask/valve devices.  
8. The student will be able to explain operation of adult resuscitation bag/mask/valve devices.
9. The student will be able to explain operation of flow inflating resuscitation devices.
10. The student will be able to explain operation of flow inflating resuscitation devices.
11. The student will be able to explain operation of oxygen analyzers.

The student will be able to explain mechanical ventilation equipment.
12. The student will be able to classify mechanical ventilators.
13. The student will be able to identify power sources for mechanical ventilators.
14. The student will be able to describe mechanical ventilator triggers.
15. The student will be able to describe mechanical ventilator styles.
16. The student will be able to describe mechanical ventilator limbs.
17. The student will be able to describe mechanical ventilator controllers.
18. The student will be able to discuss mechanical ventilator modes.
19. The student will be able to explain mechanical ventilator alarms.

ASSESSMENT OF LEARNER OUTCOMES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

SPECIAL NOTES:
This syllabus is subject to change at the discretion of the instructor. Material included is intended to provide an outline of the course and rules that the instructor will adhere to in evaluating the student’s progress. However, this syllabus is not intended to be a legal contract. Questions regarding the syllabus are welcome any time.

Kansas City Kansas Community College is committed to an appreciation of diversity with respect for the differences among the diverse groups comprising our students, faculty, and staff that is free of bigotry and discrimination. Kansas City Kansas Community College is committed to providing a multicultural education and environment that reflects and respects diversity and that seeks to increase understanding.

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