SYLLABUS

DATE OF LAST REVIEW: 02/2013

CIP CODE: 51.0812, 51.0908

SEMESTER: Departmental Syllabus

COURSE TITLE: Technical Intervention IV

COURSE NUMBER: RSCR0275

CREDIT HOURS: 1

INSTRUCTOR: Departmental Syllabus

OFFICE LOCATION: Departmental Syllabus

OFFICE HOURS: Departmental Syllabus

TELEPHONE: Departmental Syllabus

PREREQUISITES: Admission to the 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:
In this applications oriented class, students pull together competencies and content to monitor and treat acute and critical cardiopulmonary conditions. Students become familiar with cardiopulmonary diseases and diagnostic symptoms. Mechanical ventilation and critical care are key areas of emphasis.

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. Comprehensive Application of Respiratory Care at the CRT Level
   A. Patient data evaluation and recommendations
   B. Equipment manipulation, infection control, and quality control
   C. Initiation and modification of therapeutic procedures

II. Management of Mechanical Ventilation
   A. Strategies to Improve Ventilation
B. Strategies to Improve Oxygenation  
C. Troubleshooting Ventilator Alarms  
D. Care of the Ventilator Circuit  
E. Care of the Artificial Airway  
F. Fluid Balance  
G. Electrolyte Balance  
H. Nutrition  
I. Hemodynamic monitoring

III. Procedures Related to Mechanical Ventilation  
A. Assisting with Intubation  
B. Chest Tube and Drainage  
C. Assisting with Fiberoptic Bronchoscopy  
D. Assisting with Cardioversion  
E. Transport of Mechanically Ventilated Patients

IV. Weaning From Mechanical Ventilation  
A. Weaning Criteria  
B. Combined Weaning Indices  
C. Weaning Procedures  
D. Signs of Weaning Failure  
E. Causes of Weaning Failure  
F. Terminal Weaning

V. Case Studies/Disease Management  
A. Physical Examination  
B. Initial Assessment and Treatment  
C. Respiratory Therapy Diagnosis  
D. Respiratory Therapy Care Plan  
E. Monitoring Patient Responses to Interventions  
F. Modifying the Care Plan

EXPECTED LEARNER OUTCOMES:  
A. The student will be able to make a comprehensive application of respiratory care at the CRT Level.  
B. The student will be able to manage a patient receiving mechanical ventilation.  
C. The student will be able to perform procedures related to mechanical ventilation.  
D. The student will be able to select appropriate mechanical ventilation weaning strategies.  
E. The student will be able to manage critically ill patient cases.  
F. The student will be able to recommend home care.

COURSE COMPETENCIES:  
*The student will be able to make a comprehensive application of respiratory care at the CRT Level.*

1. The student will score $\geq 75\%$ on a comprehensive, standardized NBRC CRT Secure Self Assessment Exam.
The student will be able to manage a patient receiving mechanical ventilation.

2. The student will be able to review patient medical history.
3. The student will be able to interpret physical examination results, e.g. lung sounds, and heart sounds, JVD, pulsus paradoxus.
4. The student will be able to recommend and interpret hemodynamics, e.g. blood pressure, CVP, PAP, cardiac output/index.
5. The student will be able to recommend and interpret capnography monitoring.
6. The student will be able to recommend and interpret ventilator graphics and waveforms.
7. The student will be able to recommend and interpret metabolic data, e.g. RQ, RER, REE, TEE.
8. The student will be able to interpret laboratory results for acute care patients, e.g. complete blood counts, electrolytes, microbiology, liver enzymes, cardiac markers.
9. The student will be able to recommend advanced airway procedures.
10. The student will be able to recommend ventilator circuits.
11. The student will be able to recommend ventilator modes.
12. The student will be able recommend disease-specific ventilator protocols, e.g. ARDS-Net.
13. The student will be able to recommend and explain fiberoptic bronchoscopy procedures, i.e. biopsies, washings, BAL.
14. The student will be able to recommend chest tube care and drainage.
15. The student will be able to recommend cardioversion and defibrillation procedures.
16. The student will be able to recommend care plans for mechanically ventilated patients.

The student will be able to select appropriate mechanical ventilation weaning strategies.

17. The student will be able to manage weaning a patient from mechanical ventilation.
18. The student will be able evaluate weaning criteria.

The student will be able to manage critically ill patient cases.

19. The student will be able to recommend clinical evaluation for critically ill patients.
20. The student will be able to recommend pharmacotherapy for critically ill patients, e.g. sedation, analgesics, paralytics, diuretics.
21. The student will be able to recommend care plans for critically ill patients.

The student will be able to recommend home care.

22. The student will be able to recommend airway care for home.
23. The student will be able to recommend CPAP and Bi-level airway pressure for home.
24. The student will be able to recommend ventilator care for home.

ASSESSMENT OF LEARNER OUTCOMES:
Student progress is evaluated by means that include, but are not limited to, exams, written assignments, and class participation.

Students take a comprehensive, standardized NBRC CRT Secure Self Assessment Exam in this course. Students must score \( \geq 75\% \) on the NBRC CRT Secure Self Assessment Exam to be eligible to earn a grade of C or better in this course. Only students who are earning a grade of C or better in all other course work may be allowed to retake the standardized NBRC CRT Secure Self Assessment Exam one (1) time. No course grade higher than a C may be earned by students.
requiring a retake of the NBRC CRT Secure Self Assessment Exam.

Grading Scale beyond the standardized NBRC CRT Secure Self Assessment Exam is as follows.

<table>
<thead>
<tr>
<th>Score Range</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>100-93</td>
<td>A</td>
</tr>
<tr>
<td>92-84</td>
<td>B</td>
</tr>
<tr>
<td>83-75</td>
<td>C</td>
</tr>
<tr>
<td>74-60</td>
<td>D</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>F</td>
</tr>
</tbody>
</table>

**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.

Kansas City Kansas Community College offers equal educational opportunity to all students as well as serving as an equal opportunity employer for all personnel. Various laws, including Title IX of the Educational Amendments of 1972, require the college’s policy on non-discrimination be administered without regard to race, color, age, sex, religion, national origin, physical handicap, or veteran status and that such policy be made known.

Kansas City Kansas Community College complies with the Americans with Disabilities Act. If you need accommodations due to a documented disability, please contact Director of the Academic Resource Center at 913-288-7670.