SYLLABUS

DATE OF LAST REVIEW: 02/2013
CIP CODE: 51.0908
SEMESTER: Department Syllabus
COURSE TITLE: Introduction to Pulmonary Function Testing
COURSE NUMBER: RSCR0288
CREDIT HOURS: 3
INSTRUCTOR: Department Syllabus
OFFICE LOCATION: Department Syllabus
OFFICE HOURS: Department Syllabus
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EMAIL: Departmental Syllabus

KCKCC-issued email accounts are the official means for electronically communicating with our students.

PREREQUISITES: Respiratory Therapy student, or permission of the instructor

REQUIRED TEXT AND MATERIALS:

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

COURSE DESCRIPTION:

This course explores indications for pulmonary function testing, the core pulmonary function tests, the procedures for testing, and the evaluation of test results. The course is preparatory for respiratory therapy students who will screen, test, treat, and support clients with lung disorders.

METHOD OF INSTRUCTION:

A variety of instructional methods may be used depending on content area. These include but are not limited to: lecture, reading, research, multimedia, cooperative/collaborative learning, labs and demonstrations, projects and presentations, speeches, debates, discussions, panels, performances, conferences, and experiential contact outside of class. Methodology will be selected to best meet student needs.
COURSE OUTLINE:

I. Indications for pulmonary function tests are studied.
   A. Categories and classifications of pulmonary function tests are studied.
   B. Indications for spirometry are described.
   C. Indications for lung volumes are described.
   D. Indications for diffusing capacity are described.

II. Preparation of patients for pulmonary function tests is studied.
   A. Preparation of patients for spirometry is described.
   B. Preparation of patients for lung volumes is described.
   C. Preparation of patients for diffusing capacity is described.
   D. Physical assessment of patients undergoing pulmonary function tests is explained.

III. Preparation of pulmonary function testing equipment is studied.
   A. Assembly and quality control of spirometry equipment is explained.
   B. Assembly and quality control of lung volume equipment is explained.
   C. Assembly and quality control of diffusing capacity equipment is explained.

IV. Pulmonary function test procedures are studied.
   A. The performance and sequence of spirometry are described.
   B. The performance and sequence of lung volumes are described.
   C. The performance and sequence of diffusing capacity are described.
   D. Testing standards are defined and explained.

V. The evaluation of pulmonary function test results is studied.
   A. The evaluation of spirometry results is explained.
   B. The evaluation of lung volume results is explained.
   C. The evaluation of diffusing capacity results is explained.
   D. Normal pulmonary function test values and nomograms are defined.

VI. Cases of obstructive lung disease are studied.
   A. Obstructive lung disease function is defined.
   B. Obstructive lung disease is differentiated from normal lung function.
   C. Obstructive lung disease is differentiated from restrictive lung disease.
   D. Pathophysiology of obstructive lung disease is described.
   E. Respiratory therapy recommendations for obstructive lung disease are described.

VII. Cases of restrictive lung disease are studied.
   A. Restrictive lung disease function is defined.
   B. Restrictive lung disease is differentiated from normal lung function.
   C. Restrictive lung disease is differentiated from obstructive lung disease.
   D. Pathophysiology of restrictive lung disease is described.
   E. Respiratory therapy recommendations for restrictive lung disease are described.

EXPECTED LEARNER OUTCOMES:

A. The student will be able to interpret spirometry results.
B. The student will be able to interpret lung volume results.
C. The student will be able to interpret lung diffusion study results.
D. The student will be able to interpret metabolic study results.
E. The student will be able to interpret pulmonary mechanics.
COURSE COMPETENCIES:

The student will be able to interpret spirometry results.
1. The student will be able to identify indications for spirometry testing.
2. The student will be able to interpret FEV.
3. The student will be able to interpret FVC.
4. The student will be able to interpret FEV/FVC.
5. The student will be able to identify FEF 25-75%.
6. The student will be able to interpret PEF.
7. The student will be able to interpret vital capacity.

The student will be able to interpret lung volume results.
8. The student will be able to identify indications for lung volume testing.
9. The student will be able to interpret functional residual capacity.
10. The student will be able to interpret total lung capacity.
11. The student will be able to interpret inspiratory capacity.
12. The student will be able to interpret residual volume.
13. The student will be able to interpret tidal volume.
14. The student will be able to interpret expiratory residual volume.
15. The student will be able to interpret inspiratory reserve volume.

The student will be able to interpret lung diffusion study results.
16. The student will be able to identify indications for diffusion studies.
17. The student will identify abnormal lung diffusion results.

The student will be able to interpret metabolic study results.
18. The student will be able to identify indications for metabolic studies.
19. The student will be able to interpret VO2.
20. The student will be able to interpret VCO2.
21. The student will be able to interpret RER.
22. The student will be able to interpret RQ.
23. The student will be able to define anaerobic threshold.
24. The student will be able to determine a client’s target heart rate.
25. The student will be able to interpret arterial blood gases.
26. The student will be able to determine an exercise prescription.
27. The student will be able to differentiate causes of shortness of air.

The student will be able to interpret pulmonary mechanics.
28. The student will be able to identify indications for pulmonary mechanics testing.
29. The student will be able to interpret airway resistance values.
30. The student will be able to interpret compliance values.
ASSESSMENT OF LEARNER OUTCOMES:

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

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.

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