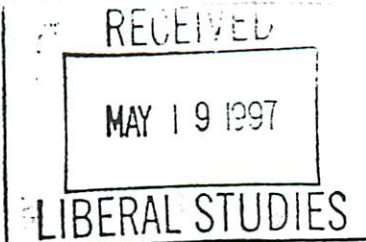


LSC Use Only
Number: _____
Submission Date: _____
Action Date: _____



UWUCC USE Only
Number: _____
Submission Date: _____
Action Date: _____

33

97-28e

App. 2/17/98
Senate app. 3/3/98

CURRICULUM PROPOSAL COVER SHEET
University-Wide Undergraduate Curriculum Committee

I. CONTACT

Contact Person Rebecca L. Hartman, EdD, Coordinator Phone 357-3257
Department Nursing and Allied Health Professions

II. PROPOSAL TYPE (Check All Appropriate Lines)

☒ **COURSE**

RT 329 Resp Care Equipment

Suggested 20 character title

☐ **New Course***

Course Number and Full Title

☒ **Course Revision**

RT 329 Respiratory Care Equipment

Course Number and Full Title

☐ **Liberal Studies Approval +**
for new or existing course

Course Number and Full Title

☐ **Course Deletion**

Course Number and Full Title

☒ **Number and/or Title Change**

RT 329 Respiratory Therapy Instrumentation

Old Number and/or Full Old Title

RT 329 Respiratory Care Equipment

New Number and/or Full New Title

☒ **Course or Catalog Description Change**

RT 329 Respiratory Care Equipment

Course Number and Full Title

☒ **PROGRAM:**

☒ **Major**

☐ **Minor**

☐ **Track**

☐ **New Program***

Program Name

☒ **Program Revision***

Respiratory Care

Program Name

☐ **Program Deletion***

Program Name

☐ **Title Change**

Old Program Name

New Program Name

III. Approvals (signatures and date)

Rebecca L. Hartman
Department Curriculum Committee

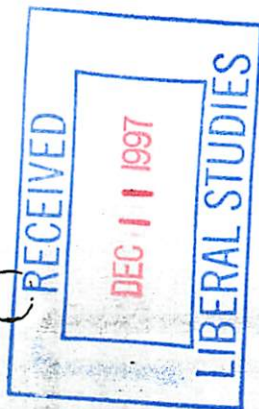
Glenn L. ... 4-10-97
Department Chair

Mary E. ... 5/7/97
College Curriculum Committee

David C. ...
College Dean

+ Director of Liberal Studies (where applicable)

* Provost (where applicable)



I. Catalog Description**RT 329 Respiratory Care Equipment****(4c-01-4sh)****Prerequisites: None**

Introduction to respiratory therapy equipment, related procedures and principles, techniques and theory of mechanical ventilation. Special emphasis will be given to oxygen delivery systems and the rationale for their use.

I. Catalog Description

RT 329 Respiratory Care Equipment

4 credits
4 lecture hours
0 lab hour
(4c-0l-4sh)

Prerequisites: None

Introduction to respiratory therapy equipment, related procedures and principles, techniques and theory of mechanical ventilation. Special emphasis will be given to oxygen delivery systems and the rationale for their use.

II. Course Objectives

Upon completion of this course the student will be able to:

1. Operate a variety of gas cylinders, regulators and flowmeters.
2. Evaluate the need for implementation of therapy for lung hyperinflation.
3. Select the appropriate oxygen delivery system and provide proper humidification when given a specific clinical scenario.
4. State the relationship between pressure and flow with various medical gases.
5. Solve mathematical computations for humidity and oxygen delivery, without the use of a calculator, for utilization in the clinical setting.
6. Identify the function of selected components of various ventilators.
7. Perform a systematic circuit change on a ventilator within a given time period.
8. Use equipment and problem solving techniques during maintenance of respiratory care equipment.

III. Course Outline

A. Cylinders, Regulators, Flowmeters, Safety Systems	2 lecture hours
B. Spontaneous Hyperinflation Devices	2 lecture hours
C. Gas Laws	1 lecture hour
D. Humidification and Humidifiers	3 lecture hours
E. Aerosolization and Nebulizers	4 lecture hours
F. Oxygen Therapy and Associated Equipment	8 lecture hours
G. Bird Type Ventilators and Associated Therapy	6 lecture hours
H. Intermittent Positive Pressure Breathing Therapy	3 lecture hours
I. Pressure-Flow Relationships	3 lecture hours
J. Introduction to Homecare Equipment	3 lecture hours

K. Introduction to Mechanical Ventilation	8 lecture hours
L. Equipment Troubleshooting	3 lecture hours
Exam hours (not including Final Exam or Quizzes)	10 hours
TOTAL HOURS	56 hours

IV. Evaluation Methods

The final grade for the course will be determined as follows:

Percentage of Course Grade

Exams (5)	55%
Comprehensive Final	15%
Unannounced Quizzes	10%
Problems	10%
Independent Studies	10%

Evaluations will be based upon classroom lectures, reading assignments, handouts and performance evaluations. Attendance at the respiratory care equipment center is required of all students in order to practice equipment skills.

Letter Grades will be assigned according to the following scale:

A =	≥ 90 %
B =	89 - 80%
C =	79 - 70%
D =	69 - 65%
F =	< 65%

Attendance

Students are responsible for classroom and lab material they miss, such as notes, assignments, handouts, etc. An *unexcused absence* for an exam, unannounced quiz or assignment will result in forfeiture of all points for that exam, quiz or assignment.

V. Required textbooks, supplemental books and readings

Required:

Persing, G. (1994). Advanced Practitioner Respiratory Care Review. W.B. Saunders Company, Philadelphia, Pennsylvania.

Sibberson, R. (1996). Practical Math for Respiratory Care. Mosby-Yearbook, Inc., St. Louis, Missouri.

White, G.C. (1996). Equipment Theory for Respiratory Care, Delmar Publishers, Albany, New York.

Wilkins, R.L. (1995). Clinical Assessment in Respiratory Care. Mosby-Yearbook, Inc., St. Louis, Missouri.

Supplemental:

Shapiro, B.A. (1991). Clinical Application of Respiratory Care. 4th edition. Mosby-Year Book, Inc., St. Louis, MO.

VI. Special resource requirements

None

VII. Bibliography

Branson, R.D., Davis, K. Jr. (1996). Evaluation of 21 passive humidifiers according to ISO 9360 standard: moisture output, dead space, and flow resistance. Respiratory Care, 41(8), 736-743.

Calianno, C. (1995). Oxygen therapy. Nursing 95. 33-35.

Eubanks, D.H. (1994). Principles and Applications of Cardiorespiratory Care Equipment. Mosby-Year Book, Inc., St. Louis, Missouri.

Gonzales, S.C. (1986). Efficacy of the oxymizer pendant in reducing oxygen requirements of hypoxemic patients. Respiratory Care, 31(8), 681-687.

Hess, D. (1991). The AARC clinical practice guidelines. Respiratory Care, 36(12), 1398-1426.

Lloyd, G.M. (1991). Filtration and humidification. Problems in Respiratory Care, 4(4). Lippincott, Philadelphia, Pennsylvania.

Luce, J.M. (1996). Reducing the use of mechanical ventilation. New England Journal of Medicine, 335(25), 1916-1917.

McPherson, S.P. (1995). Respiratory Care Equipment. 5th edition. Mosby-Yearbook, Inc., St. Louis, Missouri.

O'Donohue, W.J. (1987). Oxygen conserving devices. Respiratory Care, 32(1), 37-41.

Scanlon, C.L. (1995). Egan's Fundamentals of Respiratory Care. 6th edition. Mosby-Yearbook, Inc., St. Louis, Missouri.

Tiep, B.L. (1989). Oxygen-conserving devices: efficiency and cost advantages. Respiratory Management, 21(5), 114-118.

Transtacheal Systems, Greenwood Village, Colorado, Product Literature. SCOOP - Transtracheal Oxygen Therapy Clinician Guide. 1990.

Van Hooser, D.T. (1992). The role of the RCP in transtracheal oxygen therapy: looking beyond the nasal cannula. Horizons, 18(5), 1-3.

Wesmler, S.W. (1989). Understanding transtracheal oxygen delivery.
Nursing 89.

2. A summary of the proposed revisions.

The changes in this course include:

- a. Name Change
Old - Respiratory Therapy Instrumentation
New - Respiratory Care Equipment
- b. Credit increase from 3sh to 4sh
- c. Objectives added to reflect new content
- d. Course outline to reflect new content

3. Justification/rationale for the revision

RT 329 Respiratory Care Equipment name change was done to better reflect the content of the course. It was necessary to revise RT 329 Respiratory Care Equipment to include essential components of the deleted RT 331 Introduction to Ventilator Management (one credit). Content of RT 329 Respiratory Care Equipment was not compromised as a result of this inclusion. Credit was added to Respiratory Care Equipment to adequately cover the additional topic of ventilator management. This was a result of advances in technology. Objectives and course outline content changes reflect the new content.

4. Old Syllabus of Record

I. Course Description

RT 329 Respiratory Therapy Instrumentation

4 credits

This course is designed to introduce the student to basic respiratory therapy equipment and related procedures. Properties of medical gases, safety systems, and pressure-flow relationships will be studied. Special emphasis will be placed upon the rationale and measurement and monitoring of oxygen concentrations will also be studied. The course will also provide insight into the various techniques of lung hyperinflation.

II. Course Outline

1. Cylinder Introduction, Regulators and Flowmeters
2. Humidification and Humidifiers
3. Aerosolization and Nebulizers
4. Oxygen Therapy and Associated Equipment
5. Physical properties of gases
6. Compressed gas containers and Bulk O₂
7. Oxygen Analyzers
8. Spontaneous hyperinflation devices
9. Pressure-Flow Relationships
10. Bird Respirators
11. IPPB Therapy
12. Second Generation Bird Respirators

Lab Sessions

1. Flowmetering Devices
2. Cylinder Handling and Regulators
3. Nebulizers
4. O₂ Delivery Devices
5. O₂ Modality Evaluation
6. Lab Practical (oral)
7. O₂ Analyzers and Cylinder I.D.
8. Spontaneous Hyperinflation Devices
9. Flow Sensing Devices
10. IPPB Circuitry and Mark 7
11. Mark 7
12. IPPB, Calibration, Home Units
13. Lab Practical (oral) - cumulative

III. Evaluation Methods

- A. Quizzes: 5-6 (20 points each)
 Will be announced
 Can drop lowest quiz score
 No make-ups

B. Exams: 3 exams plus final (cumulative)
 If a student is unable to sit for an exam, the instructor must be notified prior to the examination. Failure to notify the instructor will result in failure of the examination. All make-up examinations will be scheduled prior to the meeting of the next class unless extended illness is present. A make-up examination will automatically be reduced by five percent.

C. Lab Practicals: 2 oral exams
 Mid-term - 30 points
 Final Oral - 70 points (cumulative)

D. Final Course Grade
 Will be determined by the percentage of accumulated points out of the total points possible:

100 - 92	= A
91 - 83	= B
82 - 75	= C
74 - 70	= D

IV. Required Textbook

McPherson, R.T., Equipment, 3rd edition.

Recommended Textbook

Shapiro, Clinical Application of Respiratory Care, 3rd edition.

5. Liberal Studies course approval form and checklist.

Not appropriate.

III. Letters of Support

Letters are not necessary.