SANTA MONICA COLLEGE
ACADEMIC
SENATE
1900 Pico Boulevard Santa Monica, CA 90405
310.434.4611

Curriculum Committee Agenda

Wednesday, March 31, 2021, 3:00 p.m.

Zoom Meeting:

Join from PC, Mac, Linux, iOS or Android: https://cccconfer.zoom.us/j/99308527516

Or iPhone one-tap (US Toll): +16699006833,99308527516# or +12532158782,99308527516#

Or Telephone:
Dial:
+1 669 900 6833 (US Toll)
+1 253 215 8782 (US Toll)
+1 346 248 7799 (US Toll)
+1 646 876 9923 (US Toll)
+1 301 715 8592 (US Toll)
+1 312 626 6799 (US Toll)
Meeting ID: 993 0852 7516
International numbers available: https://cccconfer.zoom.us/u/aoAHYzdTj

Or Skype for Business (Lync):
SIP:99308527516@lync.zoom.us

Members:

Dana Nasser, *Chair*	Aurélie Chevant-Aksoy	Jacqueline Monge	Briana Simmons
Jason Beardsley, *Vice Chair*	Sheila Cordova	Estela Narrie	Lydia Strong
Brenda Antrim	Guido Davis Del Piccolo	Yvonne Ortega	Esau Tovar
Heather Bennett	Sharlene Joachim	Quyen Phung	Audra Wells
Fariba Bolandhemat	Emin Menachekanian	Patricia Ramos	Kelsey Molle (A.S.)
Susan Caggiano	Jennifer Merlic	Scott Silverman	

Interested Parties:

Stephanie Amerian	Rachel Demski	Maral Hyeler	Estela Ruezga
Maria Bonin	Kiersten Elliott	Laura Manson	Tammara Whitaker
Dione Carter	Tracie Hunter	Stacy Neal	A.S. President

Ex-Officio Members:
Nathaniel Donahue

(Information items are listed numerically; action items are listed alphabetically)

I. Call to Order and Approval of Agenda
II. Public Comments *(Two minutes is allotted to any member of the public who wishes to address the Committee.)*
III. Announcements
IV. Approval of Minutes 4
V. Chair's Report

VI. Information Items

1. Redesign of the Student Experience

(Non-Substantial Changes)
2. AUTO 40 Automotive Maintenance and Operation
3. AUTO 45 Automotive Braking Systems
4. AUTO 47 Suspension and Steering
5. CIS 64 Illustrator
6. PHILOS 6 Philosophy Of Science

(Consent Agenda: Program Maps)
7. Architecture Transfer Map 30

VII. Action Items

(Courses: New)
a. RC 1 Fundamentals of Respiratory Care (Prerequisite: Formal Admission to the Respiratory Care Program; ANATMY 1 and CHEM 19 or HEALTH 61 and MCRBIO 1 and PHYS 3 and CHEM 10) 31
b. RC 1L Applied Fundamentals of Respiratory Care (Prerequisite: Formal Admission to the Respiratory Care Program; Corequisite: RC 1) 46
c. RC 2 Integrated Respiratory Physiology and Pathophysiology I (Prerequisite: Formal Admission to the Respiratory Care Program, RC 1; Corequisite: RC 2L) 50
d. RC 2L Applied Integrated Respiratory Physiology and Pathophysiology I (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 2) 56
e. RC 3 Respiratory Care Therapeutics (Prerequisite: Formal Admission to Respiratory Care Program, RC 2; Corequisite: RC 3L, RC 4) 60
f. RC 3L Applied Respiratory Care Therapeutics (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 3) 67
g. RC 4 Physician Interaction I (Prerequisite: Formal Admission to Respiratory Care Program, RC 2; Corequisite: RC 3) 71
h. RC 5 Integrated Respiratory Physiology and Pathophysiology II (Prerequisite: Formal Admission to Respiratory Care Program, RC 4; Corequisite: RC 5L) 76
i. RC 5L Applied Integrated Respiratory Physiology and Pathophysiology II (Corequisite: RC 5) 82
j. RC 6 Airway Management (Prerequisite: Formal Admission to Respiratory Care Program, RC 5; Corequisite: RC 6L, RC 7, RC 8) 86
k. RC 6L Applied Airway Management (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 6) 94
l. RC 7 Introduction to Mechanical Ventilation (Prerequisite: Formal Admission to Respiratory Care Program, RC 5; Corequisite: RC 6, RC 7L, RC 8) 98
m. RC 7L Applied Introduction to Mechanical Ventilation (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 7) 106
n. RC 8 Physician Interaction II (Prerequisite: Formal Admission to Respiratory Care Program, RC 5; Corequisite: RC 6, RC 7) 110
o. RC 9 Intermediate Mechanical Ventilation (Prerequisite: Formal Admission to Respiratory Care Program, RC 6, RC 7, RC 8; Corequisite: RC 9L) 116
p. RC 9L Applied Intermediate Mechanical Ventilation (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 9) 126
q. RC 10 Advanced Life Support and ICU Monitoring (Prerequisite: Formal Admission to Respiratory Care Program, RC 9; Corequisite: RC 10L, RC 11, RC 12) 130
r. RC 10L Applied Advanced Life Support and ICU Monitoring (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 10) 138
s. RC 11 Advanced Mechanical Ventilation (Prerequisite: Formal Admission to Respiratory Care Program, RC 9; Corequisite: RC 10, RC 11L, RC 12) 142
t. RC 11L Applied Advanced Mechanical Ventilation (Prerequisite: Formal Admission to Respiratory Care Program; Corequisite: RC 11) 150
u. RC 12 Physician Interaction III (Prerequisite: Formal Admission to Respiratory Care Program, RC 9; Corequisite: RC 10, RC 11) 154
v. RC 13 Neonatal and Pediatric Respiratory Care (Prerequisite: Formal Admission to Respiratory Care

VIII. New Business

IX. Old Business

X. Adjournment

Please notify Dana Nasser or Jason Beardsley by email if you are unable to attend this meeting.

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1900 Pico Boulevard Santa Monica, CA 90405
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Curriculum Committee Minutes

Wednesday, March 17, 2021, 3:00 p.m.
Zoom Meeting

Members Present:

Dana Nasser, *Chair*	Sheila Cordova	Jacqueline Monge	Brandon Reilly
Jason Beardsley, *Vice Chair*	Guido Davis Del Piccolo	Estela Narrie	Scott Silverman
Brenda Antrim	Sharlene Joachim	Yvonne Ortega	Briana Simmons
Fariba Bolandhemat	Emin Menachekanian	Quyen Phung	Esau Tovar
Susan Caggiano	Jennifer Merlic	Patricia Ramos	Audra Wells
Aurélie Chevant-Aksoy			

Members Absent:
Lydia Strong Kelsey Molle (A.S.)

Others Present:

Rachel Demski	Howard Stahl	Laura Manson	Caden Gicking (A.S.)
Elisa Meyer	Nathaniel Donahue	Sal Veas	Lisa Collins
Lin-San Chou			

(Information items are listed numerically; action items are listed alphabetically)

I. Call to Order and Approval of Agenda
The meeting was called to order at 3:04 pm. Motion to approve the agenda with no revisions.
Motion made by: Jason Beardsley; **Seconded by:** Fariba Bolandhemat
The motion passed unanimously.

II. Public Comments
None

III. Announcements
Brandon Reilly will be going on leave; Heather Bennett will be taking over the Curriculum Member seat for History. We thank him for his service to the committee.

IV. Approval of Minutes
Motion to approve the minutes of March 3 with no revisions.
Motion made by: Susan Caggiano; **Seconded by:** Sheila Cordova
The motion passed unanimously.

V. Chair's Report
The Chair explained that the Guided Pathway (old business item) would be for discussion only today. We would not decide on nor vote on the proposal at this time.

VI. Information Items

1. Redesign of the Student Experience

(Non-Substantial Changes)

2. CS 43 Windows Network Administration
3. OFTECH 23 Medical Billing (Medisoft)
4. ENGL 10 Race and Ethnicity in Literature of the U.S.
5. MUSIC 36 History of Rock Music
6. PSYCH 11 Child Growth and Development

(Technical Corrections in META)

7. ART E00 Survey of Art
8. ART E06 Artistic Expression through Gardening
9. ART E15 Drawing
10. ART E16 Life Drawing Studio
11. ART E19 Painting
12. ART E20 Drawing and Painting
13. ART E21 Painting/Drawing, Oil and Acrylic
14. ART E22 Watercolor
15. ART E24 Calligraphy II
16. ART E30 Watercolor Studio
17. ART E55 Sculpture
18. ART E80 Jewelry Making
19. BILING E01 Literature in Spanish
20. BILING E02 French Literature
21. BILING E03 Literature from Around the World
22. CT E00 The Fix-It Class - Repair Almost Anything
23. ENGL E20 Literature: The Novel
24. ENGL E22 Short Story
25. ENGL E23 Shakespeare
26. ENGL E24 Bible as Literature
27. ENGL E25 Literature: The American Novel
28. ENGL E27 Poetry and Fiction
29. ENGL E29 Greek Literature
30. ENGL E30 Creative Writing
31. ENGL E33 Autobiography
32. ENGL E34 Writing for Publication
33. ENGL E37 Writing Seminar
34. ESL 902 English as a Second Language Level 2
35. ESL 903 English as a Second Language Level 3
36. ESL 904 English as a Second Language Level 4
37. ESL 905 English as a Second Language Level 5
38. ESL 906 English as a Second Language Level 6
39. ESL 911 Beginning Listening and Speaking
40. ESL 913 Intermediate Listening and Speaking
41. ESL 915 Advanced Listening and Speaking
42. ESL 961 Beginning Reading and Writing
43. ESL 963 Intermediate Reading and Writing
44. ESL 965 Advanced Reading and Writing
45. ESL 971 Beginning ESL Vocabulary
46. ESL 973 Intermediate ESL Vocabulary
47. ESL 975 Advanced ESL Vocabulary
48. ESL 980 ESL US Citizenship Test Preparation
49. ESL 994 ESL for College and Career Pathways-Introduction
50. ESL 995 ESL for College and Career Pathways-Effective Communication
51. HEALTH E21 Yoga Health and Safety Principles and Practices for Older Adults
52. HEALTH E22 Chi Gong Principles and Practices for Older Adults
53. HEALTH E23 T'ai Chi Principles and Practices for Older Adults
54. HEALTH E24 Physical Fitness Principles and Practices for Older Adults
55. HEALTH E25 Strength and Stamina Training Principles and Practices for Older Adults
56. HEALTH E30 Personal Safety - Fall Prevention

57. HEALTH E34 Stress Reduction for Older Adults
58. HEALTH E38 Joint Health and Mobility For Older Adults
59. HEALTH E80 Introduction to SMC Fitness Center
60. HEALTH E63 Body Conditioning After a Stroke
61. HME EC E01 Sewing Lab
62. HME EC E52 Restaurant Critic - Dining Wisely: Healthy Eating Choices for Older Adults
63. HME EC E71 Needlecrafts II
64. HUMDEV E06 Enjoy Life - Understanding Our Mind, Body, and Brain for Senior Adults
65. HUMDEV E15 Theater - History of Comedy
66. HUMDEV E17 Senior Seminar - Luisa R.G. Kot Concert Series
67. HUMDEV E22 Senior Seminar: Through a Jewish Lens - Art, Culture & Entertainment
68. HUMDEV E24 Bereavement Support
69. HUMDEV E25 Dealing with Hearing Impairment
70. HUMDEV E27 Exercising the Brain
71. HUMDEV E28 Communication After a Stroke (Computer Based)
72. HUMDEV E50 Communication After a Stroke
73. MUSIC E00 Concert Band
74. MUSIC E02 Guitar for Older Adults
75. MUSIC E03 "The Merits" - Vocal Ensemble
76. MUSIC E04 Voice Training
77. MUSIC E06 Gospel Community Chorus
78. MUSIC E10 Spanish Folk Singing
79. MUSIC E30 Opera Appreciation
80. MUSIC E32 Music Appreciation
81. MUSIC E34 Lyric Chorus
82. MUSIC E51 Piano and Music Theory for Older Adults
83. OCC E00 Basic Computer Training
84. OCC E01 Word Processing
85. OCC E10 Using Data Files
86. OCC E20 Using the Internet Safely
87. PHOTO E00 Digital Photography I
88. PHOTO E10 Digital Photography II
89. POL SC E00 Current Events
90. PSYCH E33 Living as a Single Person
91. TH ART E01 Principles of Acting
92. TH ART E02 Theater Arts Appreciation
93. TH ART E05 Reader's Theater
94. TH ART E30 Dramatic Interpretation Through Movies

VII. Action Items

(Courses: New)

a. ECE 921 Parenting: Together in Nature
Motion to approve ECE 921 with no revisions.
Motion made by: Audra Wells; **Seconded by:** Jennifer Merlic
The motion passed unanimously.

b. MUSIC 27/ECE 81 Music for Early Childhood Education
Motion to approve MUSIC 27/ECE 81 with revision to start date of Spring 2022 and updates to course content language to "20% Preparation and instruction of music activities" and "20% Preparation of music activity lesson plans, including multiple elements such as songs, rhythms, movements, listening, and tonal patterns"
Motion made by: Scott Silverman; **Seconded by:** Susan Caggiano
The motion passed unanimously.

(Courses: Substantial Changes)

c. CIS 40 InDesign (Change to Skills Advisory: from “CIS 4, ENGL 1 or BUS 31”; to “CIS 1”)

Motion to approve change to skills advisory for CIS 40 with no additional revisions.
Motion made by: Jason Beardsley; **Seconded by:** Susan Caggiano
The motion passed unanimously.

(Courses: Distance Education)

d. ECE 921 Parenting: Together in Nature (Hybrid and AODECO)
Motion to approve distance education for ECE 921 with revision to language in "Instructor's Technical Qualifications" from "training" to "be familiar with."
Motion made by: Fariba Bolandhemat; **Seconded by:** Jason Beardsley
The motion passed unanimously.

e. GEOL 32 Introduction to Physical Oceanography with Lab
Motion to approve distance education for GEOL 32 with revision to change any wording of "Canvas" to "LMS"
Motion made by: Jason Beardsley; **Seconded by:** Brandon Reilly
The motion passed unanimously.

(Courses: Approved for Online Delivery in Emergency Contexts Only)

f. VAR PE 54W Varsity Tennis for Women
Motion to approve emergency distance education for VAR PE 54W (VII. f.), VARP PE 56V (VII. g.), VAR PE 56W (VII. h.), VAR PE 57V (VII. i.), VAR PE 57W (VII. j.), and VAR PE 59W (VII. k.) as a block with revision to change any wording of "Canvas" to "LMS."
Motion made by: Audra Wells; **Seconded by:** Sheila Cordova
The motion passed unanimously.

g. VAR PE 56V Varsity Track and Field for Men
Passed as a block with VAR PE 54W (VII. f.)

h. VAR PE 56W Varsity Track and Field for Women
Passed as a block with VAR PE 54W (VII. f.)

i. VAR PE 57V Varsity Volleyball for Men
Passed as a block with VAR PE 54W (VII. f.)

j. VAR PE 57W Varsity Volleyball for Women
Passed as a block with VAR PE 54W (VII. f.)

k. VAR PE 59W Varsity Beach Volleyball for Women
Passed as a block with VAR PE 54W (VII. f.)

(Programs: Revisions)

l. Changes to degrees and certificates as a result of courses considered on this agenda
Motion to approve changes to degrees and certificates as a result of courses considered on this agenda.
Motion made by: Audra Wells; **Seconded by:** Aurélie Chevant-Aksoy
The motion passed unanimously.

VIII. New Business

None

IX. Old Business

- Guided Pathways Discussion
Guido presented "A Brief Refresher on Redesigning the Student Experience: A Guided Pathways Framework". Not everyone was able to participate in the original mapping days, so this is a brief refresher, or introduction to program mapping
(see pages 6-27 for the full presentation)

Following the presentation was a discussion and Q&A about the process:

- Does Administrative Regulation (5000) need to be updated to include language about maps?

- The Redesign team clarified that this is for discussion only, and it will be brought for discussion at various levels – Department Chairs, Academic Senate, etc. to gather feedback from all parties, and ensure that there is buy-in at all levels before it would be brought for a vote.

- The original maps have already been approved, the key is ensuring the maps stay updated. In the current format, the Redesign team learns about new courses and new and revised programs once they're on the Curriculum agenda; currently there are two processes taking place separately, the proposal is to bring them together in a simultaneous, aligned process.

- Maps aren't ready to be shared campus-wide just yet, as they are not in a "presentable" format (excel spreadsheets), and could cause confusion/issues for students. META is working on integrating a mapping system, so we're not entering information manually into multiple systems. The goal is to have the website communicate directly with META to have the maps fully integrated into the website, with "live" updates.

    - Concerns were raised about potentially requiring simultaneous approval of the map and new course/new programs at the Curriculum Committee. Such a process would require a map to be prepared before the corresponding revised course or program receives approval from the Curriculum Committee, Senate, and Board of Trustees.

X. Adjournment

Motion to adjourn the meeting at 5:05 pm.
Motion made by: Esau Tovar; **Seconded by:** Aurélie Chevant-Aksoy
The motion passed unanimously.

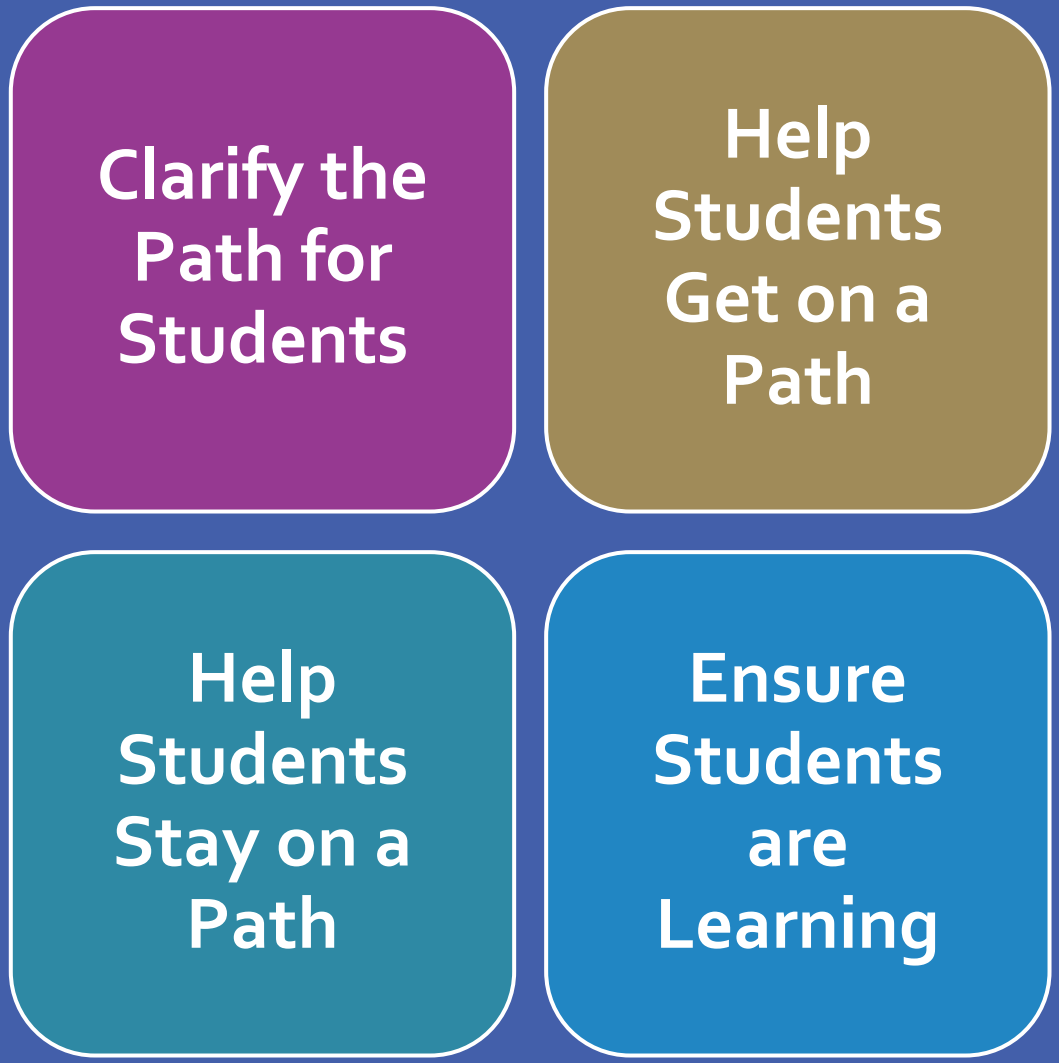
REDESIGNING THE STUDENT EXPERIENCE: A GUIDED PATHWAYS FRAMEWORK

A BRIEF "REFRESHER"

(OR INTRODUCTION)

TO PROGRAM MAPPING

GUIDED PATHWAYS FRAMEWORK: 4 PILLARS



GUIDED PATHWAYS FRAMEWORK

Clarify the Path for Students

All programs are mapped (with the students' goal in mind) to transfer and career and include these features:

- **Course sequences, gateway and critical (English & Math) courses, contextualized or complementary general education courses, embedded (stackable) awards, and progress milestones**
- **Mathematics and other core coursework are aligned to each program of study**
- **Detailed information on target career and transfer outcomes**

PROGRAM MAPPING AND EQUITY

Program Maps:

A default course sequence for a program (Academic and Career Path) that is **thoughtfully constructed** for maximum **efficiency and effectiveness** to reach the minimum required for a student's next step.

PROGRAM MAPPING AND EQUITY

What does **"THOUGHTFULLY CONSTRUCTED"** MEAN?

- the most efficient and effective way to master the learning outcomes which prepare students for their next step

- designed to recognize in-progress milestones and achievements that may have value in the labor market

- facilitate complementary course combinations and avoid what might be "toxic combinations of courses"

PROGRAM MAPPING AND EQUITY

What does **"THOUGHTFULLY CONSTRUCTED"** MEAN?

For Phase 2+:

- *includes built-in practices and strategies which support students (including those underprepared) to successfully complete their goal in the shortest amount of time*

- *acknowledges and remedies some of the structural inequities students face as they try to reach their goal*

- *Help students can answer the question: "What can I do with a degree in XX?"*

PROGRAM MAPPING AND EQUITY

Thoughtfully constructed maps are a significant step toward

- **"leveling the playing field"** between first-generation students and others.

First generation students are the most likely group of students to significantly benefit from program maps.

PROGRAM MAPPING AND EQUITY

The “Easy Way (Phase 1)” vs. the “Right Way (Phase 2+)”

- The “easy way (phase 1)” is placing our existing courses in a sequence.
- The “right way (phase 2+)” invites a critical review of our
    - PLOs (and SLOs),
    - pedagogy,
    - outcomes,
    - course formats / structure / assessments
    - anti-racism / decolonizing efforts,
    - …

FRAMEWORK FOR PROGRAM MAPPING

Phase 1:

- placed required courses (including Counseling, English, and Math) in sequence and placed "unspecified placeholders" for GEs and Electives in the most desirable place in the sequence;
- identified gateway courses for the program;
- identified courses appropriate for intersessions;
- *reviewed PLOs and began to map SLOs to PLOs;*
- *began to think critically about curricular revisions and embedded supports;*
- *began to identify possible career options (both short term and long term)*

FRAMEWORK FOR PROGRAM MAPPING

Phase 2+ (coming soon):

- critical examination of and recommendations for curricular changes in programs and courses in the interest of equity, required outcomes, efficiency, …;
- integration of culturally relevant and anti-racist pedagogy and learning, project-based learning, collaborative learning, and applied learning opportunities;
- integration of labor market data, income, true cost (& benefit) information;
- *perhaps developing list of recommended GE courses;*
- *perhaps developing a list of recommended Elective courses*

FRAMEWORK FOR PROGRAM MAPPING

Mapping Teams:

- discipline faculty of the program
- counseling faculty
- curriculum committee representative
- student

Each offered different expertise & experiences.

WHAT ARE PROGRAM MAPS?

- Give students a framework for a specific course of study if they are unsure where to begin or if they have not yet begun their studies and are exploring options.
- Allow students to compare different programs and have a transparent understanding of requirements.
- Outline the sequence of courses that a student should take (including general education and/or transfer major requirements).
- Provide the student valuable information with which to begin a conversation with a counselor.

GUIDING PRINCIPLES OF MAPS

- Maps are not educational plans (which are tailored to individual student goals, needs and unique circumstances).

  NOTE: there may be a better path for a particular student, thus creating a customized educational plan with a counselor.

- General Education (GE) courses and Restricted Electives (RE) have remained "wide open" in most cases to allow for choice.
- 6-8 units per semester (usually GE courses) are noted as being "appropriate for intersession".
- Usually, programs that offer both an Associate degree and CoA are included on the same map and the CoA is prioritized in the first 2-3 semesters.
- Official advisories and pre-requisites are included on all maps.
- The PR's and RE's are sequenced in EACH semester to prioritize which courses should be taken if a student must complete at a part-time pace.
- Gateway courses (that introduce the field of study for students who are deciding on their major) are noted on each map and are in the first year for each program.

MAPPING DAY AND BEYOND

- 6 Mapping Days resulted in about 100 program maps.
- Maps reviewed by a team of 2 Counselors assigned to the map's Area of Interest.
- Maps reviewed again (under the leadership of Audra Wells) to ensure consistency across all maps.
- Maps sent to the program faculty for final approval.
- Maps approved by the Curriculum Committee.

- 111 maps have now been approved.

MAPPING DAY AND BEYOND

- 111 Maps Approved thus far!
  - This is AWESOME!
    At this moment we are “up-to-date”!
    But … it is only a snapshot in time …
    - Any new program created will need a map
    - Any program revised will need a map
    - Any new course that is a Program Requirement (PR) or Restricted Elective (RE) will need to revised map
    - …
    - And we don’t intend to hold any more Mapping Days! :)

SIMULTANEOUS CONSIDERATIONS

- To keep ourselves honest and “up-to-date”, we recommend SIMULTANEOUS mapping as part of the curriculum consideration process.
- In a nutshell:
  - Program faculty of proposed new and substantially changed curriculum (both programs and courses) work with the Counseling Department Curriculum Committee Representative (*currently Audra*) to produce new or revised maps.

SIMULTANEOUS CONSIDERATIONS

- An embedded process is necessary going forward to ensure proposed program maps for new and revised programs are created and vetted PRIOR to the program and/or new courses coming to the Curriculum Committee for vote.
- Alignment of the curriculum approval process for new and revised maps and programs will ensure that program maps remain current and accurate, and that the program map (and, thus, the student perspective) be considered at the time of curriculum development.
- Ideally, the new or revised program map accompanies new courses or programs when they go to the Curriculum Committee for approval.

SIMULTANEOUS CONSIDERATIONS

Proposed Process:

Counseling Department Curriculum Committee Representative will be notified via META upon "Launch" of a new proposal in the following Approval Workflows:

- Course: NEW or Reinstate
- Course: SUBSTANTIAL Change
- Program: New Degree/Certificate
- Program: NON-Substantial Change
- Program: SUBSTANTIAL Change

SIMULTANEOUS CONSIDERATIONS

The Counseling Department Curriculum Rep will work with the Originator and Sponsoring Department(s) Curriculum Rep(s) and Chair(s) as follows:

For New Courses:

- Does this new course replace any "Program Requirement (PR)" or "Restricted Elective (RE)" currently on any program map?
- Does this new course need to be added as a PR or RE to any program map?
    - If yes to either question:
      program map revisions are created in consultation with the Counseling Department Curriculum Representative and are considered for approval simultaneously with the new course.

For Substantial Course Revisions (units, hours, requisite):

- Does this substantial revision impact any program map?
    - If yes, program map revisions are created and are considered for approval simultaneously with the course revision.

SIMULTANEOUS CONSIDERATIONS

- **For New Programs and Program Revisions (16+ units or requires multiple semesters):**
  - A revised program map is created in consultation with the Counseling Department Curriculum Representative

New or Revised Course and Program proposals should be considered for Curriculum Committee's approval simultaneously with any impacted or new program map(s)

QUESTIONS / CLARIFICATIONS / THOUGHTS / CONCERNS?

	Architecture Transfer						IGETC (partial)				
	Official Course Prefix and # (if RE: identify only the "category"; If GE, or EL: indicate as such)	Priority order of PR or RE course(s) within each semester (used to develop a part-time student ed plan)	Type of course PR: Program Requirement RE: Restricted Elective of Program GE: General Education EL: Elective (not in program) PREREQ ADVISORY	Satisfies GE Area and/or GC (specify area)	"Gateway" course? (based on definition)	# of Units	TOTAL weekly hours (full semester)	Course Advisory (must be in map prior); do NOT include "eligibility for English 1"	Course Prerequisites (P), Corequisite (C) (must be included in proper sequence)	Intersession Option? - YES -- (MAX of 8 units)	REVIEWER COMMENTS/NOTES: Also include HERE any recommendations made by mapping team for RE, GE, or EL identified in the original map OVERALL COMMENTS CAN BE MADE IN TEXT BOX AT BOTTOM OF SPREADSHEET
SEMESTER 1	MATH 2		GE	2		5	15				MATH 2 Recommended for transfer
	ENGL 1		GE	1A		3	9				
	ARC 10	1	PR		YES	3	10				
	ARC 11	2	PR		YES	3	9			YES	
	COUNS 12		EL			1	3			YES	
	TOTAL Semester 1					**15**	**46**				
SEMESTER 2	COM ST		GE	1C		3	9			YES	COM ST 11, 12, 16 or 21 for CSU req'mt
	GE		GE	B1 or B2 w/lab		4	12				Recommended PHYSCS 6 for transfer options
	ARC 20	1	PR			3	10	ARC 10 / ARC 11			
	ARC 21	2	PR			3	9			YES	
	AHIS 21	3	PR / GE / GC	3A		3	9				
	TOTAL Semester 2					**16**	**49**				
SEMESTER 3	AHIS 22	3	PR / GE	3A		3	9				
	ENGL 2		GE	1B		3	9				
	ARC 30	1	PR			3	10	ARC 20 / ARC 21			
	ARC 31	2	PR			3	9				
	ARC 35	4	PR			3	9	ARC 11		YES	
	ARC 70	5	PR			1	3	ARC 20 or 31		YES	
	TOTAL Semester 3					**16**	**49**				
SEMESTER 4	GE		GE	3B		3	9				Recommended US HIST for CSU grad req'mt & AS degree
	GE		GE	4		3	9			YES	Recommended POL SC 1 for CSU grad req'mt & AS degree
	ARC 40	1	PR			3	9	ARC 30 / ARC 31			
	GE		GE	4		3	9			YES	
	EL		EL			3	9				Dept recommends ARC 41 for transfer
	TOTAL Semester 4					**15**	**45**				

OVERALL COMMENTS

Short two courses for full IGETC completion - can utilize intersessions or receive partial certification prior to transfer.
Student can earn AS degree by following recommendations.
Note: After completion of this Architecture program, California students have the option to pursue a license in architecture through the NCARB internship process.
Transfer students, in addition to meeting academic requirements for admittance into a university, Architecture Programs also require prospective students to submit a portfolio for review to determine admittance into the program. It is recommended that students make an appointment with counselors at the institution of their choice to inquire about requirements. It is critical that students meet with an SMC Counselor for individual educational planning.

This course sequence (program map) is for COUNSELOR USE ONLY. It is meant to assist in the preparation of student educational plans. Do NOT distribute this document to students.

New Course: RESPIRATORY CARE 1, Fundamentals of Respiratory Care

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Prerequisite(s):	ANATMY 1 and CHEM 19 or HEALTH 61 and MCRBIO 1 and PHYS 3 and CHEM 10 or
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associate Degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associates degree.

I. **Catalog Description**
This course introduces students to the fundamentals of respiratory care practice, including credential mechanisms, organization of respiratory care services, theory of modalities performed by respiratory care practitioners (RCPs) in various settings, and the various patient populations RCPs work with. Basics of patient assessment and evidence-based practice protocols are introduced.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
2. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F. , Elsevier-Mosby © 2012
3. Mosby's Respiratory Care Equipment , JM Cairo, Elsevier-Mosby © 2018

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Explain the legal and practical obligations involved in record keeping, advantages and disadvantages of the electronic medical record.
2. Describe the process of obtaining medical, surgical, and family history, social, behavioral, and occupational history, and other historical information incident to the purpose of the current complaint.
3. Describe the function of the respiratory care practitioner, their role on the health care team, and an overview of the scope of practice of respiratory care today.
4. Explain modalities performed by respiratory care practitioners in floor care and Intensive care units with emphasis on evidence-based medicine.
5. Describe the SOAP assessment, and compare it to the problem, intervention, and plan method for documentation of patient assessment data.
6. Describe the systematic examination of the chest and lungs including, lung and chest topography, inspection, palpation, percussion and auscultation. Differentiate between dyspnea and breathlessness.
7. List abnormal extremity findings, including altered skin color, presence or absence of (digital clubbing, pedal edema, distended neck veins).
8. Describe why infection control is important in respiratory care, factors associated with increased risk of a patient acquiring a nosocomial infection and strategies to help control spread of infection in the hospital

9. Describe equipment handling procedures to help prevent the spread of pathogens and how to select and apply chemical disinfectants for processing respiratory care equipment.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
10.000%	Overview of the SMC RC program, the scope of practice of respiratory care services, credentialing, educational options, evidence-based practice.
25.000%	Introduction to respiratory care modalities based on AARC clinical practice guidelines in the floor care and ICU setting.
25.000%	Patient Assessment
15.000%	Medical Records
15.000%	Infection Control
10.000%	Vital signs
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Quizzes: Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
40%	Exams/Tests: Two Midterms, each worth 20%. Midterms exams will include multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
30%	Final exam
10%	Written assignments: Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
100%	Total

VII. **Sample Assignments:**
Journal Presentation: Journal presentations: Read a recently published journal article based on assigned topic related to lung expansion therapy and airway clearance techniques. Compose a PowerPoint or Prezi presentation and deliver to class.

Written Assignment: Create a table and list of indications and absolute contraindications for each of the following modalities: oxygen therapy, hyperinflation therapy, bronchial hygiene therapy. Use the AARC clinical practice guidelines as a resource.

VIII. **Student Learning Outcomes:**
1. Describe the organization of respiratory care services and scope of practice of the respiratory care practitioner today.
2. Discuss the components of a basic medical chart.
3. Describe the modalities performed by RCPs and how the functions are dictated by the AARC clinical practice guidelines.
4. Describe the basics of the physical assessment as it relates to the scope of practice of respiratory care practitioner.
5. Describe the principles of infection control and processing required of a respiratory care practitioner.

Corequisite Checklist and Worksheet: RC 1- Fundamentals of Respiratory Care

Corequisite: RC 1L- Applied Fundamentals of Respiratory Care
Prerequisite Anatomy 1 - Human Anatomy
Prerequisite Chemistry 19 - Fundamentals of General, Organic, and Biological Chemistry
Prerequisite Chemistry 10 - Introductory General Chemistry
Prerequisite Microbiology 1 - Fundamentals of Microbiology
Prerequisite Physiology 3 -Human Physiology
Prerequisite Health 61 – Medical Terminology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 1L is the corequisite to RC 1. RC 1 fundamentals for respiratory care practice, credential mechanisms, organization of respiratory care services, theory of modalities performed by respiratory care practitioners (RCPs) in various settings and the various patient populations RCPs work with. Basics of patient assessments and evidence-based practice protocols are introduced. RC 1L is the course where the students practice the knowledge learned in RC 1, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Prerequisite Checklist and Worksheet: RC 1, Essentials of Respiratory Care

Prerequisite: Anatomy 1: Human Anatomy
Other prerequisites, corequisites, and advisories also required for this course: Corequisite RC 1L; Applied Essentials of Respiratory Care Prerequisite Health 61; Medical Terminology Prerequisite Microbiology 1; Fundamentals of Microbiology Prerequisite Chemistry 10 - Introductory General Chemistry Prerequisite Physiology 3; Human Physiology Chemistry 19; Fundamentals of General, Organic, and Biological Chemistry

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

Type 4: Program prerequisites

x **Prerequisite must be required for at least one of the courses in the program. Explain: Students require this course in order to be successful in understanding the concepts taught in the nursing program.**

ENTRANCE SKILLS FOR **RC 1**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Clearly focus on materials of a variety of sizes, thicknesses, and densities under a microscope.
B)	Identify tissues, organs, and body structures of the human body at a detailed level in actual specimens as well as in models and other representations.
C)	Describe the structures, interrelationships and general functions of major structures, organs, and organ systems of the human body.
D)	Demonstrate skills in observation, investigation and discovery using biological materials.
E)	Correlate concepts of microscopic structure, macroscopic structure, and functions

	to the whole human body.
F)	Exhibit manual dexterity in dissection and prepare clear dissections.
G)	Use surface features of the human body as landmarks to identify and evaluate underlying structures.

EXIT SKILLS (objectives) FOR **Anatomy 1**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Clearly focus on materials of a variety of sizes, thicknesses, and densities under a microscope.
2.	Identify tissues, organs, and body structures of the human body at a detailed level in actual specimens as well as in models and other representations.
3.	Describe the structures, interrelationships and general functions of major structures, organs, and organ systems of the human body.
4.	Demonstrate skills in observation, investigation and discovery using biological materials.
5.	Correlate concepts of microscopic structure, macroscopic structure, and functions to the whole human body.
6.	Exhibit manual dexterity in dissection and prepare clear dissections.
7.	Use surface features of the human body as landmarks to identify and evaluate underlying structures.

	ENTRANCE SKILLS FOR RC 1								
EXIT SKILLS FOR ANATOMY 1		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								

Prerequisite Checklist and Worksheet: RC 1- Fundamentals of Respiratory Care

Prerequisite: Chemistry 10- Introductory General Chemistry
Other prerequisites, corequisites, and advisories also required for this course: Corequisite RC 1L; Applied Fundamentals of Respiratory Care Chemistry 19; Fundamentals of General, Organic, and Biological Chemistry Prerequisite Anatomy 1; Human Anatomy Prerequisite Microbiology 1; Fundamentals of Microbiology Prerequisite Physiology 3; Human Physiology Prerequisite Health 61; Medical Terminology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	x	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	x	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	x	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	x	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	x	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	x	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	x	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	x	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	x	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

x Type 4: Program prerequisites

Prerequisite must be required for at least one of the courses in the program. Explain: Students require this course to be successful in communication in the clinical setting.

ENTRANCE SKILLS FOR **RC 1**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Write the names and formulas for acids, bases, salts and binary covalent compounds using the Stock and Classical systems.
B)	Demonstrate knowledge of the behavior of gases, liquids and solids
C)	Use the metric system and SI units.
D)	Use dimensional analysis to solve word problems involving unit conversions.

E)	Apply Le Châtelier's principle to simple chemical equilibria.
F)	Demonstrate knowledge of acidity and basicity, and pH calculations.
G)	Use significant figures in measurements and calculations.
H)	Demonstrate a basic understanding of the "scientific method."

EXIT SKILLS (objectives) FOR **Chemistry 10**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Write the names and formulas for acids, bases, salts and binary covalent compounds using the Stock and Classical systems.
2.	Demonstrate knowledge of the behavior of gases, liquids and solids
3.	Use the metric system and SI units.
4.	Use dimensional analysis to solve word problems involving unit conversions.
5.	Apply Le Châtelier's principle to simple chemical equilibria.
6.	Demonstrate knowledge of acidity and basicity, and pH calculations.
7.	Use significant figures in measurements and calculations.
8.	Demonstrate a basic understanding of the "scientific method."

		ENTRANCE SKILLS FOR RC 1							
		A	B	C	D	E	F	G	H
EXIT SKILLS FOR CHEM 10	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	x
	8								

Prerequisite Checklist and Worksheet: RC 1- Fundamentals of Respiratory Care

Prerequisite: Chemistry 19; Fundamentals of General, Organic, and Biological Chemistry
Other prerequisites, corequisites, and advisories also required for this course: Corequisite RC 1L; Applied Fundamentals of Respiratory Care Prerequisite Anatomy 1; Human Anatomy Prerequisite Microbiology 1; Fundamentals of Microbiology Prerequisite Chemistry 10 - Introductory General Chemistry Prerequisite Physiology 3; Human Physiology Prerequisite Health 61; Medical Terminology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

x Type 4: Program prerequisites
Prerequisite must be required for at least one of the courses in the program. Explain: Students require this course to be successful in communication in the clinical setting.

ENTRANCE SKILLS FOR **RC 1**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Describe the three states of matter, distinguish different forms of energy and express numerical values in scientific notation and units of measurement in the metric system.
B)	Quantitatively show the relationship between the parameters that govern the behavior of gases such as: Volume vs. Pressure, Volume vs. Temperature, Volume vs. Mole amount, The Ideal Gas Law, Dalton's Law for Mixtures of Gases, Henry's Law for Dissolved Gases.
C)	Quantitatively express the concentration of a solute in a solution in % (mass/volume) as well as molarity and calculate changes in concentration upon the dilution of a solution.
D)	Classify strong vs. weak acids and bases, calculate the pH of a solution of strong acid or strong base, and describe how the components of a buffer resist change in pH.

E)	Read, write out and interpret balanced chemical equations. Apply Le Chatelier's Principle to predict the direction of a reaction.
F)	Define the term "mole" and calculate the molar mass for an atom or compound.
G)	Use the IUPAC system for naming some organic compounds and discriminate between structural isomers and stereoisomers of those compounds.
H)	Predict the products of oxidation-reduction, esterification, amidation, hydrolysis, hydration, and dehydration reactions of organic compounds.

EXIT SKILLS (objectives) FOR **Chemistry 19**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Describe the three states of matter, distinguish different forms of energy and express numerical values in scientific notation and units of measurement in the metric system.
2.	Quantitatively show the relationship between the parameters that govern the behavior of gases such as: Volume vs. Pressure, Volume vs. Temperature, Volume vs. Mole amount, The Ideal Gas Law, Dalton's Law for Mixtures of Gases, Henry's Law for Dissolved Gases.
3.	Quantitatively express the concentration of a solute in a solution in % (mass/volume) as well as molarity and calculate changes in concentration upon the dilution of a solution.
4.	Classify strong vs. weak acids and bases, calculate the pH of a solution of strong acid or strong base, and describe how the components of a buffer resist change in pH.
5.	Read, write out and interpret balanced chemical equations. Apply Le Chatelier's Principle to predict the direction of a reaction.
6.	Define the term "mole" and calculate the molar mass for an atom or compound.
7.	Use the IUPAC system for naming some organic compounds and discriminate between structural isomers and stereoisomers of those compounds.
8.	Predict the products of oxidation-reduction, esterification, amidation, hydrolysis, hydration, and dehydration reactions of organic compounds.

	ENTRANCE SKILLS FOR RC 1								
EXIT SKILLS FOR CHEM 19		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								

Prerequisite Checklist and Worksheet: RC 1, Fundamentals of Respiratory Care

Prerequisite: Health 61; Medical Terminology
Other prerequisites, corequisites, and advisories also required for this course: Corequisite RC 1L; Applied Fundamentals of Respiratory Care Prerequisite Anatomy 1; Human Anatomy Prerequisite Chemistry 19; Fundamentals of General, Organic, and Biological Chemistry Prerequisite Chemistry 10 - Introductory General Chemistry Prerequisite Microbiology 1; Fundamentals of Microbiology Prerequisite Physiology 3; Human Physiology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

x Type 4: Program prerequisites

Prerequisite must be required for at least one of the courses in the program. Explain: Students require this course to be successful in communication in the clinical setting.

ENTRANCE SKILLS FOR **RC 1**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Evaluate medical words to determine their meanings. Structurally analyze medical terms by dividing words into their component parts. Pronounce and spell common medical words.
B)	Given the description of a body structure, disease, procedure, treatment, prognosis, or test correctly define and explain the medical terms.

C)	Identify the separate body systems, their parts, physiology, pathophysiology, common tests, procedures, pharmacology, abbreviations and medical jargon related to them.
D)	Read, compose or listen to medical reports or case studies and discuss the meanings and definitions of the terms. Interpret and explain a sample medical record.

EXIT SKILLS (objectives) FOR **Health 61**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Evaluate medical words to determine their meanings. Structurally analyze medical terms by dividing words into their component parts. Pronounce and spell common medical words.
2.	Given the description of a body structure, disease, procedure, treatment, prognosis, or test correctly define and explain the medical terms.
3.	Identify the separate body systems, their parts, physiology, pathophysiology, common tests, procedures, pharmacology, abbreviations and medical jargon related to them.
4.	Read, compose or listen to medical reports or case studies and discuss the meanings and definitions of the terms. Interpret and explain a sample medical record.

	ENTRANCE SKILLS FOR RC 1								
EXIT SKILLS FOR HEALTH 61		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5								
	6								
	7								
	8								

Prerequisite Checklist and Worksheet: RC 1, Fundamentals of Respiratory Care

Prerequisite: Microbiology 1; Fundamentals of Microbiology

Other prerequisites, corequisites, and advisories also required for this course:
Corequisite RC 1L; Applied Fundamentals of Respiratory Care
Prerequisite Anatomy 1; Human Anatomy
Chemistry 19; Fundamentals of General, Organic, and Biological Chemistry
Prerequisite Chemistry 10 - Introductory General Chemistry
Prerequisite Health 61; Medical Terminology
Prerequisite Physiology 3; Human Physiology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 4: Program prerequisites

Prerequisite must be required for at least one of the courses in the program. Explain: Students require this course in order to understand the concepts taught in the nursing program.

ENTRANCE SKILLS FOR **RC 1**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Apply techniques of cultivating, staining, and safely manipulating cultures of bacteria.
B)	Identify bacterial cultures using morphological and physiological tests and literature, including Bergey's Manuals.
C)	Demonstrate aseptic transfer techniques, pure culture techniques, and describe physical and

	chemical methods of control as related to clinical and environmental applications.
D)	Describe microbial genetics in terms of both history and current applications to general and clinical microbiology.
E)	Demonstrate an understanding and application of procedures in biotechnology such as PCR methodology and DNA sequencing.
F)	Apply the knowledge of microbial metabolism to the understanding of microbial biology, physiology, immunology, and pathogenesis, as well as treatment and control of microbes.
G)	Demonstrate an understanding of the basic principles of immunology and the basis for serological tests and their applications.
H)	Demonstrate knowledge of infectious diseases and their impact on mankind in relation to history, environmental sources, mode of transmission, etiology, diagnosis, and organ systems involved.

EXIT SKILLS (objectives) FOR **Microbiology 1**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Apply techniques of cultivating, staining, and safely manipulating cultures of bacteria.
2.	Identify bacterial cultures using morphological and physiological tests and literature, including Bergey's Manuals.
3.	Demonstrate aseptic transfer techniques, pure culture techniques, and describe physical and chemical methods of control as related to clinical and environmental applications.
4.	Describe microbial genetics in terms of both history and current applications to general and clinical microbiology.
5.	Demonstrate an understanding and application of procedures in biotechnology such as PCR methodology and DNA sequencing.
6.	Apply the knowledge of microbial metabolism to the understanding of microbial biology, physiology, immunology, and pathogenesis, as well as treatment and control of microbes.
7.	Demonstrate an understanding of the basic principles of immunology and the basis for serological tests and their applications.
8.	Demonstrate knowledge of infectious diseases and their impact on mankind in relation to history, environmental sources, mode of transmission, etiology, diagnosis, and organ systems involved.

	ENTRANCE SKILLS FOR RC 1								
EXIT SKILLS FOR MICROBIOLOGY 1		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

Prerequisite Checklist and Worksheet: RC 1, Fundamentals of Respiratory Care

Prerequisite: Physiology 3; Human Physiology

Other prerequisites, corequisites, and advisories also required for this course:

Corequisite RC 1L; Applied Fundamentals of Respiratory Care
Prerequisite Anatomy 1; Human Anatomy
Prerequisite Chemistry 19; Fundamentals of General, Organic, and Biological Chemistry
Prerequisite Chemistry 10 - Introductory General Chemistry
Prerequisite Microbiology 1; Fundamentals of Microbiology
Prerequisite Health 61; Medical Terminology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	x	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	x	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	x	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	x	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	x	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	x	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	x	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	x	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	x	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

x Type 4: Program prerequisites
Prerequisite must be required for at least one of the courses in the program. Explain: Students require this course in order to understand the concepts taught in the nursing program.

ENTRANCE SKILLS FOR **RC 1**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Explain the major concepts of the cell including structure, function, and processes, including molecular interactions such as ligand-binding site relationships.
B)	Explain the major concepts of cell and membrane physiology including membrane transport and cell communication.
C)	Explain the functional interrelationships of tissues, organs and organ systems of the human body within the framework of homeostasis.
D)	Apply physiological concepts to issues of human health and common pathologies.
E)	Effectively use and apply lab techniques, methods and equipment related to the fields of physiology.

F)	Understand and apply principles of the scientific process to physiological problems.
G)	Conduct experiments and record and display data appropriately.
H)	Analyze experimental data while demonstrating logical and critical thinking skills.

EXIT SKILLS (objectives) FOR **PHYSIOLOGY 3**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1	Explain the major concepts of the cell including structure, function, and processes, including molecular interactions such as ligand-binding site relationships.
2	Explain the major concepts of cell and membrane physiology including membrane transport and cell communication.
3	Explain the functional interrelationships of tissues, organs and organ systems of the human body within the framework of homeostasis.
4	Apply physiological concepts to issues of human health and common pathologies.
5	Effectively use and apply lab techniques, methods and equipment related to the fields of physiology.
6	Understand and apply principles of the scientific process to physiological problems.
7	Conduct experiments and record and display data appropriately.
8	Analyze experimental data while demonstrating logical and critical thinking skills.

		ENTRANCE SKILLS FOR RC 1							
EXIT SKILLS FOR PHYSIOLOGY 3		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 1L, Applied Fundamentals of Respiratory Care

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 1
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	No
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
Course part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course provides hands-on practice of the fundamentals of patient assessment, medical records, and infection control. The basic application of respiratory care modalities performed by respiratory care practitioners are introduced. Patient assessment skills and monitoring are applied to the delivery of floor care modalities. Ethics, Respiratory Care tracking software, HIPAA computer modules and hospital medical requirements are completed to prepare the student for entry to clinical experience.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012
2. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmare, Elsevier-Mosby © 2017
3. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F. , Elsevier-Mosby © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Describe the function of the respiratory care practitioner and the services provided by the respiratory care department and the role of the RCP in an acute care hospital.
2. Accurately take vitals and report it to another member of the health care team.
3. Deliver and monitor floor care therapies, performed at novice level.
4. Demonstrate professional behavior and communication skills.
5. Perform basic life support under the supervision of the respiratory therapist in a simulated setting.
6. Demonstrate how to read a medical chart and explain how each component is relevant to the practice of respiratory care.
7. Demonstrate how to document using the SOAP assessment in a respiratory progress note.
8. Demonstrate how to systematically perform a lung and chest assessment, including inspection, palpation, percussion and auscultation.
9. Demonstrate how to perform proper handwashing technique.

10. Demonstrate how to properly don and doff personal protective equipment in various isolation precautions settings (contact isolation, droplet isolation and airborne isolation)
11. Demonstrate how to properly remove and dispose of contaminated respiratory care equipment from a patient's room.
12. Demonstrate professional behavior and communication skills when communicate with a physician using the SBAR method.

IV. **Methods of Presentation:**
Field Experience, Lab, Projects, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
20.000%	Patient assessment
25.000%	Hyperinflation therapy, humidity and aerosol therapy
5.000%	Online modules for CSRC or AARC ethics course, HIPAA, Fire class, BLS certification, respiratory care tracking software system.
5.000%	CPR in code blue simulation
13.000%	Medical record review and record keeping patient interview techniques, verbal and written reporting of patient information
12.000%	Infection control and equipment processing
20.000%	Oxygen therapy and bronchial hygiene
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
15%	Exams/Tests
30%	Simulation
15%	Lab Reports
20%	Performance Aerosol Therapy Competency
10%	Performance Oxygen Therapy competency
10%	Performance Humidity Therapy Competency
100%	Total

VII. **Sample Assignments:**
Laboratory Assignment:
Complete clinical/laboratory competencies on floor care modalities by peer-to-peer evaluations. Once evaluation by the peer is complete, the faculty will perform the final evaluation. Evaluation performance should occur at novice level, in the Dreyfus model of skills acquisition, to the satisfaction of the evaluating faculty.

AARC clinical practice guidelines:
Go to the AARC.org, download the most current clinical practice guidelines that pertain to this class, write a

summary of how those compare to what is found in your textbook. Be clear and concise. Come to class prepared to defend your position.

VIII. **Student Learning Outcomes:**

1. Perform floor care therapeutic modalities (oxygen therapy, hyperinflation therapy, bronchial hygiene), monitor and evaluate effectiveness of therapy at the novice level, to the satisfaction of the faculty.
2. Demonstrate professional behavior and communication skills required by a member of a health care.
3. Perform lung and chest assessment including, inspection, palpation, percussion and auscultation.
4. Demonstrate basic asepsis technique and removal of contaminated equipment when caring for a patient in a clinical setting.

Corequisite Checklist and Worksheet

RC 1L- Applied Fundamentals of Respiratory Care
Corequisite: RC 1- Fundamentals of Respiratory Care
Prerequisite Anatomy 1 - Human Anatomy
Prerequisite Chemistry 19 - Fundamentals of General, Organic, and Biological Chemistry
Prerequisite Chemistry 10 - Introductory General Chemistry
Prerequisite Microbiology 1 - Fundamentals of Microbiology
Prerequisite Physiology 3 -Human Physiology
Prerequisite Health 61 – Medical Terminology

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 1L is the corequisite to RC 1. RC 1 fundamentals for respiratory care practice, credential mechanisms, organization of respiratory care services, theory of modalities performed by respiratory care practitioners (RCPs) in various settings and the various patient populations RCPs work with. Basics of patient assessments and evidence-based practice protocols are introduced. RC 1L is the course where the students practice the knowledge learned in RC 1, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 2, Integrated Respiratory Physiology and Pathophysiology I

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 2L
Prerequisite(s):	RC 1
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associates degree.

I. **Catalog Description**
This course focuses on the physiology of the cardiopulmonary system from a clinical perspective, including basic anatomy, pulmonary ventilation, diffusion of gases, blood gas transport and acid-base status.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Respiratory Care Anatomy and Physiology, 4th, Will Beachey, Elsevier © 2018, ISBN: 9780323416375
2. Clinical Manifestations and Assessment of Respiratory Disease, Des Jardinds, Burton, Elsevier © 2016
3. Rau's Respiratory Care pharmacology, Douglas S. Gardenhire, ELSEVIER-MOSBY © 2019
4. Egan's Fundamentals of Respiratory, Wilkins, Stoller, Kacmarek, ELSEVIER-MOSBY © 2017
5. Beachey, Hughes, Sperle. Respiratory Care Anatomy and Physiology, elsevier

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate static lung volumes and capacities and explain how various FRC measurement techniques are used to determine patients affected with obstructive or restricted lung disease.
2. Assess ventilation to perfusion ratios to evaluate degree of V/Q mismatch and apply it dead space fraction.
3. Differentiate pulmonary disorders commonly characterized by high and low DLCO and DLCO/VA ratio by applying principles of gas diffusion rates.
4. Evaluate physical exam, signs and symptoms of obstructive lung diseases (asthma, emphysema, chronic bronchitis, bronchiectasis and cystic fibrosis), atelectasis, pulmonary embolism, pneumonia, and interstitial lung disease.
5. Interpret the expected arterial blood gas results (acid-base balance and gas exchange) of pulmonary and related disorders and calculate alveolar-air equation, A-a gradient, a/A ratio and rule of seven to assess impairments in oxygen gas exchange.
6. Review chest radiograph changes typically found in select pulmonary diseases.

7. List and describe the expected laboratory findings and pulmonary function test results of patients with select pulmonary disorders.
8. Given patient data in case scenario infer diagnosis and develop management (treatment) of patients with COPD pulmonary disorders.
9. Describe the etiology, pathophysiology of obstructive lung diseases, CILD.
10. Predict pharmacologic agents' effects on organ systems within the scope of practice of respiratory care practitioner.
11. Differentiate among various routes of drug administration and recommend the most appropriate route based on patient's condition.
12. Distinguish among therapeutic purpose for each of the major aerosolized drug groups and consider appropriate aerosol medication nebulizer on the basis of particle size distribution and deposition in the lungs.
13. Interpret pharmacology nomenclature, analyze the three phases that constitute the course of drug action from dose to effect.
14. Compare mode of action, indications, and adverse effects that characterize the major class of aerosolized drug.
15. Compare available aerosol formulations, brand names, dosages for each specific drug class used with asthma, COPD, cystic fibrosis, and bronchiectasis.
16. Evaluate use of adrenergic, anticholinergic, mucolytic, and antimicrobials and calculate drug doses using proportions and percentage-strength solutions to treat patients with asthma, COPD, cystic fibrosis, and bronchiectasis.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
30.000%	Obstructive lung diseases A. Asthma B. Emphysema C. Chronic bronchitis D. Bronchiectasis E. Cystic fibrosis
5.000%	Cardiovascular disease (pulmonary embolism)
20.000%	pneumonia, atelectasis and interstitial lung disease
10.000%	Gas diffusion, oxygen, carbon dioxide, DLCO
20.000%	Blood gas transport: assessment of hypoxemia vs. hypoxia
15.000%	Lung structure and function, large vs. small airways, microanatomy of gas exchange. , Lung volume and capacities, Ventilation and dead space (anatomical, alveolar, physiological and mechanical)
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
20%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
30%	Final exam
20%	Exams/Tests

	Midterm # 1 (multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination).
20%	Exams/Tests Midterm # 1 (multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination).
100%	Total

VII. **Sample Assignments:**

COPD treatment plan:

Develop a treatment plan for a patient diagnosed with COPD . The plan should include an action plan to monitor of therapeutic intervention by establishing patient collaboration, empowerment and engage patient. Include best practice methods to assess and modify therapy and environment when necessary.

Journal presentation:

Journal presentations, read a recent published journal article based on assigned topic related to cardiopulmonary physiology or pathophysiology. Compose a power point or Prezi presentation and present to class.

VIII. **Student Learning Outcomes:**

1. The student will be able to apply principle of respiratory care anatomy and physiology to respiratory procedures.
2. The student will be able to differentiate between a patient afflicted with ventilation vs. oxygenation problem from data provided.
3. Within the scope of practice of a respiratory care practitioner; differentiate the anatomical alterations, pathophysiological mechanisms, clinical manifestations and treatments for obstructive lung diseases (Asthma, emphysema, chronic bronchitis, bronchiectasis, cystic fibrosis).
4. Within the scope of practice of a respiratory care practitioner; differentiate the anatomical alterations, pathophysiological mechanisms, clinical manifestations and treatments for a patient diagnosed with pneumonia, experiencing respiratory distress.
5. Apply principle of respiratory pharmacology to administer aerosolized drugs to treat the respiratory system.
6. State indications, adverse effects, doses and physiologic action for aerosolized bronchodilators, corticosteroids, and mucolytics.

Corequisite Checklist and Worksheet

RC 2- Integrated Respiratory Physiology and Pathophysiology I
Corequisite: RC 2L- Applied Integrated Respiratory Physiology and Pathophysiology
Prerequisite RC 1 – Fundamentals of Respiratory Care

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 2L is the corequisite to RC 2. RC 2 covers the physiology of the cardiopulmonary system from a clinical perspective, including basic anatomy, pulmonary ventilation, diffusion of gases, blood gas transport and acid-base status. RC 2L is the course where the students practice the knowledge learned in RC 2, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Prerequisite Checklist and Worksheet: RC 2 – Integrated Respiratory Physiology and Pathophysiology I

Prerequisite: RC 1 – Fundamentals of Respiratory Care
Corequisite is RC 2L – Applied Integrated Respiratory Physiology and Pathophysiology I

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

x Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 2**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Describe the function of the respiratory care practitioner, their role on the health care team, and an overview of the scope of practice of respiratory care today.
B)	Explain modalities performed by respiratory care practitioners in floor care and Intensive care units with emphasis on evidence-based medicine.
C)	Describe the SOAP assessment, and compare it to the problem, intervention, and plan method for documentation of patient assessment data.
D)	Explain the assessment, plan, implementation, and evaluation method and the problem, intervention, and plan method for documentation of patient assessment data.
E)	Describe the systematic examination of the chest and lungs including, lung and chest topography, inspection, palpation, percussion and auscultation. Differentiate between dyspnea and breathlessness and breathing.
F)	Describe equipment handling procedures to help prevent the spread of pathogens and how to select and apply chemical disinfectants for processing respiratory care equipment.
G)	Describe why infection control is important in respiratory care, factors associated with increased risk of a patient acquiring a nosocomial infection and strategies to help control spread of infection in the hospital.
H)	List abnormal extremity findings, including altered skin color, presence or absence of (digital clubbing, pedal edema, distended neck veins).

EXIT SKILLS (objectives) FOR **RC 1**
(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Describe the function of the respiratory care practitioner, their role on the health care team, and an overview of the scope of practice of respiratory care today.
2.	Explain modalities performed by respiratory care practitioners in floor care and Intensive care units with emphasis on evidence-based medicine.
3.	Describe the SOAP assessment, and compare it to the problem, intervention, and plan method for documentation of patient assessment data.
4.	Explain the assessment, plan, implementation, and evaluation method and the problem, intervention, and plan method for documentation of patient assessment data.
5.	Describe the systematic examination of the chest and lungs including, lung and chest topography, inspection, palpation, percussion and auscultation. Differentiate between dyspnea and breathlessness and breathing.
6.	Describe equipment handling procedures to help prevent the spread of pathogens and how to select and apply chemical disinfectants for processing respiratory care equipment.
7.	Describe why infection control is important in respiratory care, factors associated with increased risk of a patient acquiring a nosocomial infection and strategies to help control spread of infection in the hospital.
8.	List abnormal extremity findings, including altered skin color, presence or absence of (digital clubbing, pedal edema, distended neck veins).

	ENTRANCE SKILLS FOR (RC 2)								
EXIT SKILLS FOR (RC 1)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 2L, Applied Integrated Respiratory Physiology and Pathophysiology I

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 2
Proposed Start:	Fall 2020
TOP/SAM Code:	121000 - Respiratory Care/Therapy / D - Possibly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associates degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associates degree.

I. **Catalog Description**
This course presents the applied physiology, etiology, pathophysiology, diagnosis and treatment of cardiopulmonary diseases such as asthma, chronic obstructive pulmonary disease, pulmonary embolism, pneumonia, atelectasis, interstitial lung disease, etc.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Workbook for Respiratory Care Anatomy and Physiology: Foundations for Clinical Practice, 3rd, Beachey, Hughes, Sperle, Elsevier © 2013
2. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach , 5th, White, Gary , Elsevier © 2012
3. Clinical Manifestations and Assessment of Respiratory Disease, Des Jardinds, Burton, Elsevier © 2016
4. Case Studies to Accompany Clinical Manifestation and Assessment of Respiratory Disease, Des Jardinds, Burton, Elsevier © 2019

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate patient data and correlate it to physiological factors that influence alveolar ventilation and how to optimize it.
2. Interpret pulmonary function results, assess lung volumes and capacities and correlate it to disease process such by obstructive or restricted lung diseases.
3. Evaluate patient data and correlate it to ventilation-perfusion relationships (dead space, V/Q mismatch, intrapulmonary shunting) and recognize various degrees of hypoxemia.
4. Anticipate changes to pH, PaCO2, PvCO2, PaO2, arterial and venous bicarbonate, respiratory rate as patient's ventilation is simulated and inspired oxygen concentration are changed.
5. Accurately and professionally report patient's blood gas results to a nurse and/or physician.
6. Given case scenario assess patterns of obstructive lung disease such as (asthma, emphysema, chronic bronchitis, cystic fibrosis and bronchiectasis), Select the appropriate drug class drug and nebulizer.
7. Evaluate patient data and plan treatment for patient with atelectasis.

8. Demonstrate how to assess patterns of obstructive lung disease such of those found in asthma, emphysema, chronic bronchitis, cystic fibrosis and bronchiectasis.
9. Model professional behavior and communication skills to collaborate, and coordinate with a physician to develop treatment plan for patient with obstructive or restrictive lung disease.
10. Calculate dose for continuous bronchodilator therapy to treat a status asthmaticus patient and demonstrate how to recognize adverse effects while administering a breathing treat, stop treatment and inform the nurse and call the physician.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources, Lecture and Discussion, Work Experience (internship), Discussion

V. **Course Content**

% of Course	Topic
35.000%	Obstructive lung diseases A. Asthma B. Emphysema C. Chronic bronchitis D. Bronchiectasis E. Cystic fibrosis
35.000%	pulmonary ventilation, diffusion of gases, blood gas transport and acid-base status.
30.000%	Pulmonary embolism, atelectasis, pneumonia, interstitial lung disease.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
30%	Simulation
10%	Lab Reports
10%	Oral Presentation
20%	Performance Assessment and treatment of COPD/asthma/CF patients
10%	Exams/Tests
20%	Performance Assessment and treatment of patient with pulmonary embolism
100%	Total

VII. **Sample Assignments:**
Treatment Plan:
Develop a treatment plan for an asthmatic or COPD patient that includes, nutrition and exercise wellness. The plan should include an action plan to monitor of therapeutic intervention by establishing patient collaboration, empowerment and engage patient. Include best practice methods to assess and modify therapy and environment when necessary.

Case study:
Use textbook readings, research articles, class notes to complete case studies for Asthma, COPD, pulmonary embolism, atelectasis and emphysema. Use SOAP format to document patient's condition.

VIII. **Student Learning Outcomes:**
1. Student will be able to: 1. Adjust ventilator parameters to correct oxygenation and/or ventilation problems to correct arterial blood gas parameters.

2. Student will be able to: 2. Using lung volumes and capacities and DLCO data determine whether patient is afflicted with a restrictive or obstructive lung disease. This competency will be assessed at novice to advanced beginner level, in the Dreyfus model of skill acquisition.
3. Student will be able to: Within the scope of practice of a respiratory care practitioner develop a treatment plan for a patient with obstructive lung disease, atelectasis, pneumonia or interstitial lung disease.
4. Student will be able to: Exhibit professional behavior and excellent verbal communication skills with a member of the health care team (RN or MD) when reporting the status of a patient with a cardiopulmonary condition.
5. Select appropriate drug class, route of administration and modality to treat patients with respiratory conditions.
6. Identify and communicate adverse effects of drugs administered via aerosolized form.

Corequisite Checklist and Worksheet

RC 2L- Applied Integrated Respiratory Physiology and Pathophysiology I

Corequisite: RC 2- Integrated Respiratory Physiology and Pathophysiology I

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 2L is the corequisite to RC 2. RC 2 covers the physiology of the cardiopulmonary system from a clinical perspective, including basic anatomy, pulmonary ventilation, diffusion of gases, blood gas transport and acid-base status. RC 2L is the course where the students practice the knowledge learned in RC 2, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 3, Respiratory Care Therapeutics

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 3L RC 4
Prerequisite(s):	RC 2
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree.

Rationale
Course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course presents the basic concepts and principles in oxygen supply systems and administration, humidity and aerosol therapy, lung expansion therapy and airway clearance techniques.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Mosby's Respiratory Care Equipment, Cairo, Pilbeam, ELSEVIER-MOSBY © 2018
2. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, ELSEVIER-MOSBY © 2017
3. Workbook to Accompany Egan's Fundamentals of Respiratory Care , Wehrman, Stephen F., ELSEVIER-MOSBY © 2012
4. Dataarc. www.dataarc.ws, 2 ed.
   Software allow the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Differentiate between different forms of energy and states of matter, and gas laws pertinent to medical gas therapy.
2. Compare operational principles of cylinder valves. Calculate gas volume and liquid oxygen supply and estimate the duration of gas flow based on the cylinder's gauge pressure. Identify and list various types of medical gas cylinders and colors.
3. Evaluate gas cylinders, regulators, flow meters, concentrators (stationary and portable) and oxygen conserving devices (stationary and portable).
4. Compare the operational theory of a membrane oxygenator with molecular sieve oxygenator and evaluate application of oxygen blenders, hyperbaric oxygen systems and specialty gases (NO and Heliox)

5. Compare and contrast low-flow and high-flow oxygen delivery systems, including oxygen blenders and evaluate O2 delivery system appropriate for the respiratory care plan, modify or recommend modification of O2 therapy.
6. Interpret level of hypoxemia via pulse oximetry and arterial blood gas and assess the need for O2 therapy, identify precautions, complications associated with O2 therapy.
7. Evaluate indications, contraindications, and hazards that pertain to humidification during mechanical ventilation, identify and resolve common problems with humidification systems (HME vs. heated humidifiers).
8. Assess indications for bland aerosol therapy and sputum induction, select appropriate solutions (hypotonic, isotonic, hypertonic), delivery such as large device, and examine common problems with aerosol delivery systems and how to correct them.
9. Assess indications, best delivery device (MDI, LVN, SVN, DPI, vibrating mesh) and optimal technique, patient response and hazards associated with aerosol drug therapy.
10. Assess indications for lung expansion therapy, appropriate therapeutic intervention (IS, IPPB, EZPAP), hazards, and contraindications and positive response to therapy.
11. Assess indications for bronchial hygiene therapy, appropriate therapeutic intervention, hazards, and contraindications and positive response to therapy.
12. Describe the proper technique and potential benefit of each of the following: • Chest physical therapy • Directed coughing and related expulsion techniques • High-frequency positive airway pressure devices • High-frequency compression/oscillation methods • Mechanical insufflation-exufflation • Mobilization and exercise.
13. Evaluate appropriateness of order and need for physician intervention related to aerosol therapy, lung expansion therapy and bronchial hygiene.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
30.000%	Medical gas therapy (including oxygen therapy)
40.000%	Lung Expansion and Airway Clearance Techniques
30.000%	Humidity and Aerosol Therapy.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Exams/Tests Midterm #1 (multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination).
30%	Final exam Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes
5%	Oral Presentation Journal presentation

20%	Exams/Tests Midterm #2 (multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination).
100%	Total

VII. **Sample Assignments:**

Journal Presentation:

Journal presentations, read a recent published journal article based on assigned topic related to oxygen therapy, humidity and aerosol therapy, lung expansion therapy and/or airway clearance techniques. Compose a power point or prezi presentation and deliver to class.

Research :

Visit the AARC.org website, review the clinical practice guidelines for oxygen therapy, humidity and aerosol, and airway clearance techniques. What is the difference between expert panel clinical practice guidelines and evidenced-based clinical practice guidelines. Which in better and why? Read this article and summarize its findings. - https://www.aarc.org/wp-content/uploads/2014/08/pharm_cpg.pdf

VIII. **Student Learning Outcomes:**

1. Explain relevant applications, principles of operation, indications, limitations, and hazards associated with medical gas therapy.
2. Explain relevant applications, principles of operation, indications, limitations, and hazards associated with humidity and therapy.
3. Explain relevant applications, principles of operation, indications, limitations, and hazards associated with lung expansion therapy and airway clearance techniques.
4. Demonstrate how to assess patient, select and assemble proper equipment to treat and evaluate response to treatment when administering respiratory care therapeutics.
5. 2. Demonstrate professional behavior and communication skills when interacting with patient, patient family and members of the health care team.

Corequisite Checklist and Worksheet

RC 3- Respiratory Care Therapeutics

Corequisite: RC 3L- Applied Respiratory Care Therapeutics

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 3L is a corequisite to RC 3. RC 3 provides basic concepts and principles in oxygen supply systems and administration, humidity and aerosol therapy, lung expansion therapy and airway clearance techniques. RC 3L is the course where the students practice the knowledge learned in RC 3, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 3- Respiratory Care Therapeutics
Corequisite: RC 4- Physician Interaction I
Prerequisite RC 2 – Integrated Respiratory Physiology
Corequisite is RC 3L – Applied Respiratory Care Therapeutics

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 4 is a corequisite to RC 3. RC 3 provides basic concepts and principles in oxygen supply systems and administration, humidity and aerosol therapy, lung expansion therapy and airway clearance techniques. RC 4 is the course where the students interact with a physician and apply critical thinking to concepts learned in RC 3 from a physician's perspective. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 3 – Respiratory Care Therapeutics

Prerequisite: RC 2 – Integrated Respiratory Physiology and Pathophysiology I
Corequisite is RC 4 – Physician Interaction I
Corequisite is RC 3L – Applied Respiratory Care Therapeutics

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

x Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 3**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Evaluate physical exam, signs and symptoms of obstructive lung diseases (asthma, emphysema, chronic bronchitis, bronchiectasis and cystic fibrosis), atelectasis, pulmonary embolism, pneumonia, and interstitial lung disease.
B)	List and describe the expected laboratory findings and pulmonary function test results of patients with select pulmonary disorders.
C)	Predict pharmacologic agents' effects on organ systems within the scope of practice of respiratory care practitioner.
D)	Differentiate among various routes of drug administration and recommend the most appropriate route based on patient's condition.

E)	Compare mode of action, indications, and adverse effects that characterize the major class of aerosolized drug.
F)	Compare available aerosol formulations, brand names, dosages for each specific drug class used with asthma, COPD, cystic fibrosis, and bronchiectasis.
G)	Evaluate use of adrenergic, anticholinergic, mucolytic, and antimicrobials and calculate drug doses using proportions and percentage-strength solutions to treat patients with asthma, COPD, cystic fibrosis, and bronchiectasis.
H)	Interpret the expected arterial blood gas results (acid-base balance and gas exchange) of pulmonary and related disorders.

EXIT SKILLS (objectives) FOR **RC 2**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Evaluate physical exam, signs and symptoms of obstructive lung diseases (asthma, emphysema, chronic bronchitis, bronchiectasis and cystic fibrosis), atelectasis, pulmonary embolism, pneumonia, and interstitial lung disease.
2.	List and describe the expected laboratory findings and pulmonary function test results of patients with select pulmonary disorders.
3.	Predict pharmacologic agents' effects on organ systems within the scope of practice of respiratory care practitioner.
4.	Differentiate among various routes of drug administration and recommend the most appropriate route based on patient's condition.
5.	Compare mode of action, indications, and adverse effects that characterize the major class of aerosolized drug.
6.	Compare available aerosol formulations, brand names, dosages for each specific drug class used with asthma, COPD, cystic fibrosis, and bronchiectasis.
7.	Evaluate use of adrenergic, anticholinergic, mucolytic, and antimicrobials and calculate drug doses using proportions and percentage-strength solutions to treat patients with asthma, COPD, cystic fibrosis, and bronchiectasis.
8.	Interpret the expected arterial blood gas results (acid-base balance and gas exchange) of pulmonary and related disorders.

	ENTRANCE SKILLS FOR (RC 3)								
EXIT SKILLS FOR (RC 2)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 3L, Applied Respiratory Care Therapeutics

Units:	3.00
Total Instructional Hours (usually 18 per unit):	162.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	9.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 3
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associates degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associates degree

I. **Catalog Description**
This course provides hands-on practice and supervised clinical experience at local area hospitals with the purpose of practicing the assessment of need, administration, monitoring and reevaluation of respiratory care therapeutics (oxygen therapy, lung expansion therapy, aerosol therapy, lung expansion therapy, airway clearance modalities, and humidity therapy). Technical skills, knowledge and attitude are practiced. The student is assessed in competency of therapeutic delivery, assessment of need, assessment outcome, monitoring and evaluation of therapy.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Mosby's Respiratory Care Equipment, Cairo, Pilbeam, Elsevier- Mosby © 2018
2. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach , Gary C. White, Cengage © 2012
3. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
4. White Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach , Gary C. White, Cengage © 2012
5. Dataarc. dataarc.ws, 2 ed.
   Software allow the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Assess the need for O2 therapy, select most appropriate device based on patient's condition (low flow vs. high flow), evaluate appropriateness and effectiveness of O2 delivery system. Troubleshoot and make recommendations to therapy. Document oxygen therapy.
2. Appraise the need for humidity therapy, aerosol therapy, lung expansion therapy and bronchial hygiene by reviewing order, or implemented protocol, patient history, laboratory results, imaging data, interview and conduct physical assessment of patient.

3. Apply evidence-based medicine to select most appropriate modality of therapy. Assemble selected equipment. Administer humidity and aerosol therapy. Monitor patients' response to humidity and aerosol therapy. Instruct patient on proper technique when needed. Recognize and rectify equipment malfunction (troubleshooting). Follow standard precaution for infection control.
4. Evaluate proper selection of lung expansion therapy and noninvasive clearance therapeutic modalities. Recognize complications and respond to side effects. Recommend therapy modifications, assess therapy effectiveness. Document therapy.
5. Evaluate proper selection of humidity and aerosol therapy. Recognize complications and respond to side effects. Recommend therapy modifications, assess therapy effectiveness. Document therapy.
6. Apply evidence-based medicine to select most appropriate modality of therapy. Assemble selected equipment. Administer lung expansion therapy and noninvasive clearance therapeutic modalities. Monitor patients' response to humidity and aerosol therapy. Instruct patient on proper technique when needed. Recognize and rectify equipment malfunction (troubleshooting). Follow standard precaution for infection control.
7. Model professional behavior and communication skills to collaborate, and coordinate with a physician to develop treatment plan for requiring humidity and aerosol therapy, lung expansion therapy and noninvasive clearance therapeutic modalities.
8. Recognize adverse effects while administering a breathing treat, stop treatment and inform the nurse and call the physician.
9. Evaluate need for physician intervention when delivering humidity and aerosol therapy, lung expansion and airway clearance modality.
10. Practice documentation of respiratory therapeutic modalities.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Service Learning, Online instructor-provided resources, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
20.000%	Medical gas therapy
20.000%	Humidity and Aerosol Therapy
20.000%	Airway Clearance Techniques and lung expansion therapy.
40.000%	Clinical experience in delivery of respiratory care therapeutics (patient assessment, oxygen therapy, aerosol and humidity therapy, hyperinflation therapy, bronchial hygiene therapy)
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Performance Practicum competencies of lung expansion therapy and airway clearance modalities
20%	Simulation clinical simulation
20%	Other Verbal and written communication skills required for optimal delivery of therapy.
20%	Final Performance Assessment of competency in administration of oxygen, aerosol, humidity therapy at the novice level.
20%	Final Performance Assessment of competency in administration of bronchial hygiene, hyperinflation therapy at the novice level.

100%	Total

VII. **Sample Assignments:**

Journal Entry:

Keep a daily journal log of activities observed, performed with assistance and performed without assistance related to respiratory care therapeutics. In addition, summarize each clinical day and reflect on your learning experience by comparing and contrasting clinical experience with didactic knowledge.

Lab Activity:

Complete your clinic competencies, first as observed by your peer. Your instructor will then perform final evaluation for appropriate selection of lung expansion and noninvasive clearance modalities depending on the patient's condition. Recognize responsiveness and side effects to lung expansion and/or airway clearance modalities. Verbal and written communication with physician. You will be evaluated at advanced beginner level according to Dreyfus model of skill acquisition, satisfactorily performed as deemed by the faculty.

VIII. **Student Learning Outcomes:**

1. Select and assemble proper equipment to treat patients with respiratory conditions causing hypoxemia. And identify and communicate responsiveness to therapy, and/or make changes modality.
2. Select appropriate select and assemble proper equipment to treat patients with respiratory conditions requiring humidity and aerosol therapy. And identify and communicate responsiveness to therapy, and/or make changes modality.
3. Select and assemble the proper equipment to treat patients with respiratory conditions requiring lung expansion therapy and/or noninvasive clearance modalities. And identify and communicate responsiveness to therapy, and/or make changes modality.
4. Demonstrate how to assess patient, select and assemble proper equipment to treat and evaluate response to treatment when administering respiratory care therapeutics.
5. Demonstrate professional behavior and communication skills when interacting with patient, patient family and members of the health care team.

Corequisite Checklist and Worksheet

RC 3L- Applied Respiratory Care Therapeutics
Corequisite: RC 3- Respiratory Care Therapeutics

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 3L is a corequisite to RC 3. RC 3 provides basic concepts and principles in oxygen supply systems and administration, humidity and aerosol therapy, lung expansion therapy and airway clearance techniques. RC 3L is the course where the students practice the knowledge learned in RC 3, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 4, Physician Interaction I

Units:	1.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	3.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 3
Prerequisite(s):	RC 2
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMD degree or Masters degree in Respiratory Care, Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associate Degree.

I. **Catalog Description**
This course provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will focus on the ability to present patient respiratory assessments, SBAR and assessment of need, assessment of outcome, recognize adverse effects and make recommendations of respiratory care therapeutics to a physician.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate critical thinking skills required by respiratory care practitioners to function in a hospital setting and interact with a physician.
2. Evaluate the medical records (H&P, labs, progress notes, chest x-ray) of patient with obstructive lung disease to prioritize care- from a physician's perspective.
3. Evaluate key components of the physical exam to prioritize care and anticipate impending respiratory compromise, from a physician's perspective.
4. Appraise the value of the SBAR method of communication from a physician's perspective.
5. Evaluate clinical situation as non-critical, rapidly deteriorating or critical; if critical or rapidly deteriorating, effectively communicate with physician using SBAR method of communication. Focus CBABE patients.
6. Support and defend indications for respiratory therapeutics (oxygen therapy, humidity and aerosol therapy, hyperinflation therapy, bronchial hygiene) by reviewing physician orders, or implemented protocol, patient history, laboratory results, imaging data and/or physical assessment of the patient and make recommendation to the physician..
7. Anticipate, prevent, and recognize side effects to therapy or medications. Coherently and effectively and recommend therapy modifications to physician..

8. Present a patient profile of a with obstructive lung disease or restrictive lung disease to physician in a coherent and effective manner.
9. Model professional behavior and communication skills to collaborate, and coordinate with a physician to develop treatment plan for requiring respiratory therapeutic orders.

IV. **Methods of Presentation:**
Lab, Field Experience, Observation and Demonstration, Critique, Visiting Lecturers, Online instructor-provided resources, Group Work, Lecture and Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
20.000%	Critical thinking skills
20.000%	Reviewing medical records
20.000%	Physician communication techniques
20.000%	Application of respiratory therapeutics
20.000%	Case study presentation
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Oral Presentation Case studies Presentation
25%	Simulation Clinical simulations
30%	Final exam
20%	Group Projects
100%	Total

VII. **Sample Assignments:**
Patient Profile:
Select a patient with obstructive lung disease, write a patient profile or case study report, present it to physician in class setting or clinical setting.

written assignment:
Write a script to communicate with physician regarding a critical situation of a patient rapidly deteriorating. Use SBAR method to coherently and effectively communicate a respiratory assessment to a physician. Use critical thinking skills such as formulate, anticipate, prioritize, analyze, infer, interpret, negotiate, trouble-shoot and decision making (recommend).

VIII. **Student Learning Outcomes:**
1. Demonstrate coherent and efficient verbal communication skills to present a patient respiratory assessment to a physician.
2. Demonstrate how to anticipate, prioritize, prevent and recognize causes of deterioration in patients with obstructive lung disease.

Corequisite Checklist and Worksheet

RC 4- Physician Interaction I
Corequisite: RC 3- Respiratory Care Therapeutics
Prerequisite RC 2 – Integrated Respiratory Physiology and Pathophysiology I

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 4 is a corequisite to RC 3. RC 3 provides basic concepts and principles in oxygen supply systems and administration, humidity and aerosol therapy, lung expansion therapy and airway clearance techniques. RC 4 is the course where the students interact with a physician and apply critical thinking to concepts learned in RC 3 from a physician's perspective. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 4 – Physician Interaction I

Prerequisite: RC 2 – Integrated Respiratory Physiology and Pathophysiology I
Corequisite is RC 3 –Respiratory Care Therapeutics

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

x Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 4**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Evaluate physical exam, signs and symptoms of obstructive lung diseases (asthma, emphysema, chronic bronchitis, bronchiectasis and cystic fibrosis), atelectasis, pulmonary embolism, pneumonia, and interstitial lung disease.
B)	List and describe the expected laboratory findings and pulmonary function test results of patients with select pulmonary disorders.
C)	Review chest radiograph changes typically found in select pulmonary diseases
D)	Differentiate among various routes of drug administration and recommend the most appropriate route based on patient's condition.
E)	Compare mode of action, indications, and adverse effects that characterize the major class of aerosolized drug.

F)	Evaluate use of adrenergic, anticholinergic, mucolytic, and antimicrobials and calculate drug doses using proportions and percentage-strength solutions to treat patients with asthma, COPD, cystic fibrosis, and bronchiectasis.
G)	Interpret the expected arterial blood gas results (acid-base balance and gas exchange) of pulmonary and related disorders.
H)	

EXIT SKILLS (objectives) FOR **RC 2**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Evaluate physical exam, signs and symptoms of obstructive lung diseases (asthma, emphysema, chronic bronchitis, bronchiectasis and cystic fibrosis), atelectasis, pulmonary embolism, pneumonia, and interstitial lung disease.
2.	List and describe the expected laboratory findings and pulmonary function test results of patients with select pulmonary disorders.
3.	Review chest radiograph changes typically found in select pulmonary diseases
4.	Differentiate among various routes of drug administration and recommend the most appropriate route based on patient's condition.
5.	Compare mode of action, indications, and adverse effects that characterize the major class of aerosolized drug.
6.	Evaluate use of adrenergic, anticholinergic, mucolytic, and antimicrobials and calculate drug doses using proportions and percentage-strength solutions to treat patients with asthma, COPD, cystic fibrosis, and bronchiectasis.
7.	Interpret the expected arterial blood gas results (acid-base balance and gas exchange) of pulmonary and related disorders.
8.	

	ENTRANCE SKILLS FOR (RC 4)								
EXIT SKILLS FOR (RC 2)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								

New Course: RESPIRATORY CARE 5, Integrated Respiratory Physiology and Pathophysiology II

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 5L
Prerequisite(s):	RC 4
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associate Degree

Rationale
part of comprehensive curriculum for respiratory care AS degree.

I. **Catalog Description**
This course presents the integrated physiology, pathophysiology, diagnosis and treatment of cardiopulmonary diseases and injuries such as adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, and sleep apnea.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Respiratory Care Anatomy and Physiology, Will Beachey, Elsevier-Mosby © 2018
2. Clinical Manifestations and Assessment of Respiratory Disease, Des Jardinds, Burton, Elsevier-Mosby © 2016
3. Rau's Respiratory Care pharmacology, Douglas S. Gardenhire, Elsevier-Mosby © 2019
4. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Describe blood flow in the lungs and relate it to ventilation/perfusion relationships and apply it apply various disease processes. Evaluate results from classic shunt equation and five different shunts indicators to determine degree of intrapulmonary shunting.
2. Compare and contrast pulmonary and systemic vascular resistance and perform calculations and techniques used to measure or calculate cardiac output.
3. Utilize Laplace's, Hooke's and Poiseuille's law, dynamic vs. static compliance to describe pulmonary mechanics and perform calculations related to those laws and relate results to disease states.
4. Evaluate surfactant values to predict lung maturity and effects on lung compliance.
5. Organize the neuronal control of ventilation and use it to explain different breathing patterns, respiratory/metabolic compensation and the so-called "hypoxic drive."
6. Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan.

7. Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
8. Describe the disease process of Adult respiratory distress syndrome (ARDS), justify the use of proning and protective lung strategies to improve outcomes.
9. Compare and contrast disease process and treatment for obstructive and central sleep apnea.
10. Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
11. Describe disease process and treatment of communicable diseases such as TB and their adverse consequences in immunocompromised individuals.
12. Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
13. Describe the disease process and treatment of smoke inhalation, thermal injuries and near-drowning.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
10.000%	Pulmonary blood flow, systemic and vascular resistance
10.000%	Ventilation perfusion relationships, shunt vs. dead space.
15.000%	Breathing mechanics, lung compliance and airway resistance
5.000%	Neural control of ventilation, breathing patterns, respiratory centers
10.000%	Clinical Assessment of Acid-Base and Oxygenation status
15.000%	Adult respiratory distress syndrome (ARDS), heart failure, pulmonary edema
10.000%	Neuromuscular Disease (Myasthenia Gravis, Guillain Barre syndrome, Amyotrophic lateral sclerosis)
7.000%	Immunocompromised, shock
10.000%	Chest trauma, flail chest, pneumothorax
8.000%	Sleep apnea, communicable diseases (Tuberculosis)
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
20%	Exams/Tests Midterms #1 multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
30%	Final exam
20%	Exams/Tests Midterms #2 multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination

100%	Total

VII. **Sample Assignments:**

Written Assignment:

For a patient diagnosed with sleep apnea, develop a treatment plan that includes nutrition and exercise wellness. Your work should include an action plan to monitor therapeutic intervention by establishing patient collaboration, engagement, and empowerment. Include best practice methods to assess and modify therapy and environment when necessary.

Journal Presentation:

Journal presentations: Read a recently published journal article based on assigned topic related to cardiopulmonary physiology or pathophysiology. Compose a Power Point or Prezi presentation and present to class.

VIII. **Student Learning Outcomes:**

1. Apply principles of respiratory care anatomy and physiology to respiratory procedures.
2. Differentiate between a patient afflicted with ventilation vs. oxygenation problems from data provided.
3. Within the scope of practice of a respiratory care practitioner, differentiate the anatomical alterations, pathophysiological mechanisms, clinical manifestations and treatments for conditions including but not limited to neuromuscular diseases, adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, sleep apnea, heart failure, shock, immunocompromise.
4. Within the scope of practice of a respiratory care practitioner, develop a care plan for a patient diagnosed with ARDS, pulmonary edema, or sleep apnea.

Corequisite Checklist and Worksheet

RC 5- Integrated Respiratory Physiology and Pathophysiology II
Corequisite: RC 5L- Applied Integrated Respiratory Physiology and Pathophysiology II
Prerequisite RC 4 – Physician Interaction I

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 5L is a corequisite to RC 5. RC5 provides the integrated physiology, pathophysiology, diagnosis, and treatment of cardiopulmonary diseases such adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, sleep apnea, etc. RC 5L is the course where the students practice the knowledge learned in RC 5, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Prerequisite Checklist and Worksheet: RC 5 – Integrated Respiratory Physiology and Pathophysiology II

Prerequisite: RC 4 – Physician Interaction I
Corequisite is RC 5L – Applied Integrated Respiratory Physiology and Pathophysiology II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types, and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 5**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Anticipate, prevent, and recognize side effects to therapy or medications. Coherently and effectively and recommend therapy modifications to physician.
B)	Evaluate clinical situations as non-critical, rapidly deteriorating, or critical; if critical or rapidly deteriorating, effectively communicate with physician using SBAR method of communication. Focus CBABE patients.
C)	Support and defend indications for respiratory therapeutics (oxygen therapy, humidity and aerosol therapy, hyperinflation therapy, bronchial hygiene) by reviewing physician orders, or implemented protocol, patient history, laboratory results, imaging data and/or physical assessment of the patient and make recommendation to the physician.
D)	Evaluate the medical records (H&P, labs, progress notes, chest x-ray) of patient with obstructive lung disease to prioritize care- from a physician's perspective.
E)	Present a patient profile of a patient with obstructive lung disease or restrictive lung disease to physician in a coherent and effective manner.
F)	Demonstrate professional behavior and communication skills to collaborate, and

	coordinate with a physician to develop treatment plan for requiring respiratory therapeutic orders
G)	Evaluate critical thinking skills required by respiratory care practitioners to function in a hospital setting and interact with a physician.

EXIT SKILLS (objectives) FOR **RC 4**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Anticipate, prevent, and recognize side effects to therapy or medications. Coherently and effectively and recommend therapy modifications to physician.
2.	Evaluate clinical situations as non-critical, rapidly deteriorating, or critical; if critical or rapidly deteriorating, effectively communicate with physician using SBAR method of communication. Focus CBABE patients.
3.	Support and defend indications for respiratory therapeutics (oxygen therapy, humidity and aerosol therapy, hyperinflation therapy, bronchial hygiene) by reviewing physician orders, or implemented protocol, patient history, laboratory results, imaging data and/or physical assessment of the patient and make recommendation to the physician.
4.	Evaluate the medical records (H&P, labs, progress notes, chest x-ray) of patient with obstructive lung disease to prioritize care- from a physician's perspective.
5.	Present a patient profile of a patient with obstructive lung disease or restrictive lung disease to physician in a coherent and effective manner.
6.	Demonstrate professional behavior and communication skills to collaborate, and coordinate with a physician to develop treatment plan for requiring respiratory therapeutic orders
7.	Evaluate critical thinking skills required by respiratory care practitioners to function in a hospital setting and interact with a physician.

	ENTRANCE SKILLS FOR (RC 5)								
EXIT SKILLS FOR (RC 4)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								

New Course: RESPIRATORY CARE 5L, Applied Integrated Respiratory Physiology and Pathophysiology II

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 5
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
Course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course presents the applied physiology, etiology, pathophysiology, diagnosis, and treatment of cardiopulmonary diseases such as adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, sleep apnea, etc.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, White, Gary , Cengage © 2012
2. Clinical Manifestations and Assessment of Respiratory Disease, Des Jardins, Burton, Elsevier- Mosby © 2016
3. Rau's Respiratory Care pharmacology, Douglas S. Gardenhire, Elsevier © 2019
4. Respiratory Care Anatomy and Physiology, Will Beachey, Elsevier © 2018

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Using a high-fidelity manikin predict blood flow in the lungs and relate it to ventilation/perfusion relationships and assess degree of intrapulmonary shunting.
2. Apply evidence-based medicine and protocols to treat patients with neuromuscular diseases, adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, sleep apnea, heart failure, shock, immunocompromised, etc
3. Evaluate pharmacologic agents effect an organ systems within the scope of practice of respiratory care practitioner
4. Perform differential diagnosis to treat patients with neuromuscular diseases, adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, heart failure, shock,etc.
5. Model professional behavior and communication skills to collaborate, and coordinate with a physician to develop treatment plan

6. Recognize problems with lung compliance and airway resistance, correlate it to potential problems and how to correct them.
7. Assess acid-base and oxygenation status of a simulated patient and recommend treatment.
8. Recognize various breathing patterns such as apneustic, Cheyne Stokes, Kussmaul's, Biots, etc., and correlate to disease processes.
9. Coherently and efficiently communicate the degree of intrapulmonary shunting of a patient based on calculated shunt predictors, like the, A-a gradient, a/A ration, P/F ratio, or classic shunt equation.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
15.000%	Pulmonary blood flow, systemic and vascular resistance
10.000%	Neural control of ventilation and breathing patterns.
20.000%	Clinical Assessment of Acid-Base and Oxygenation status, Ventilation perfusion relationships, shunt vs. dead space.
15.000%	Adult respiratory distress syndrome (ARDS), heart failure, pulmonary edema
15.000%	Neuromuscular Disease (Myasthenia Gravis, Guillain Barre syndrome, Amyotrophic lateral sclerosis)
15.000%	Chest trauma, flail chest, pneumothorax
10.000%	Immunocompromised, shock, TB
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
10%	Lab Reports
10%	Oral Presentation
20%	Performance Assess and treat patients with pulmonary edema
30%	Simulation
10%	Written assignments
20%	Final Performance Assess and treat patients based oxygenation and acid-base status.
100%	Total

VII. **Sample Assignments:**
Develop treatment plan:
Develop a treatment plan for a myasthenia gravis patient suffering an acute exacerbation. Include a nutrition and exercise wellness plan. Be sure to specify an action plan to monitor of therapeutic intervention by establishing patient collaboration, engagement, and empowerment. Include best-practice methods to assess and modify therapy and the environment when necessary.

Case study:
Complete assigned cases studies using textbook readings, research articles, and or class notes. Respiratory care treatment modalities should be cross-referenced to the AARC clinical practice guidelines when applicable.

VIII. **Student Learning Outcomes:**

1. Use clinical data such as acid-base and oxygenation results to treat a patient with ventilation-perfusion mismatch or intrapulmonary shunt.
2. Using breathing mechanics data, perform a differential diagnosis to distinguish static compliance from dynamic compliance problems.
3. Exhibit professional behavior and excellent verbal communication skills with a member of the health care team (RN or MD) when reporting status of a patient with cardiopulmonary condition.
4. Student will be able to: Within the scope of practice of a respiratory care practitioner, develop a care plan for a patient diagnosed with ARDS, pulmonary edema, or sleep apnea.

Corequisite Checklist and Worksheet

RC 5L- Applied Integrated Respiratory and Physiology II

Corequisite: RC 5- Integrated Respiratory and Physiology II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 5L is the corequisite to RC 5. RC 5 provides the integrated physiology, pathophysiology, diagnosis, and treatment of cardiopulmonary diseases such adult respiratory distress syndrome (ARDS), pulmonary edema, chest trauma, smoke inhalation, thermal injuries, communicable diseases, sleep apnea, etc. RC 5L is the course where the students practice the knowledge learned in RC 5, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 6, Airway Management

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 6L RC 7 RC 8
Prerequisite(s):	RC 5
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course covers the essentials of routine artificial airway care in the acute care setting. Conditions that lead to airway damage are discussed as well as techniques used to prevent them. Emphasis is placed on maintaining and troubleshooting artificial airways and preventing ventilator associated events.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Mosby's Respiratory Care Equipment, JM Cairo, Elsevier-Mosby © 2018
2. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
3. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F. , Elsevier-Mosby © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate characteristics in the airway anatomy that may contribute to difficult mask ventilation or intubation.
2. Conduct a complete airway examination using the LEMON technique.
3. Evaluate the need and use of oral and nasopharyngeal airways and complications associated with improper placement.
4. Evaluate indications, hazards and complications associated with supraglottic airways, such laryngeal mask airway, King airway, and the Combitube.
5. Evaluate use of various types of manual resuscitators and discuss the common hazards associated with use of these devices.
6. Compare and contrast prioritization of airway management and chest compressions during basic and advanced cardiac life support.
7. Select, assemble, and operate equipment required for orotracheal and nasotracheal intubation of an adult, assess and confirm proper endotracheal tube placement.
8. Evaluate rationale to perform tracheotomy and hazards and complications associated with procedure, and discuss alternate techniques (surgical and percutaneous).

9. Evaluate the readiness to wean off and remove tracheostomy tube and the use of a "trach button" or speaking valve during the weaning process.
10. Compare and contrast various ways used to secure an artificial airway, endotracheal and tracheal airway.
11. Assess indications to perform nasotracheal, endotracheal, tracheal suction, recognize complications associated with airway suction procedures and how to minimize them.
12. Evaluate methods to prevent ventilator-associated events such as, head of bed elevation between 30 and 45 degree, use of subglottic secretion drainage, maintenance of cuff pressure (manometer, MOV, MLT) and appropriate airway humidity.
13. Compare and contrast various types of tracheostomy tubes and tracheostomy cannulas and describe their clinical application: • Single cannula tracheostomy tube • Single cannula tracheostomy tube with a disposable inner cannula • Single cannula fenestrated tracheostomy tube • Silver Hollinger or Jackson tracheostomy tube • Bivona foam cuff
14. Compare and contrast among various techniques for measuring and adjusting tracheal tube cuff pressures.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
20.000%	Airway assessment, establish an open airway
20.000%	Oral and nasal endotracheal tubes and tracheostomy tubes.
10.000%	Advanced artificial airways (LMA, Combitube, King Tube, Bougie)
10.000%	Bag-valve mask resuscitators
20.000%	Airway suction, nasotracheal and endotracheal (closed and open)
10.000%	Measuring airway tracheal cuff, securing airway
10.000%	Tracheostomy appliances, including "button" or speaking valves
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
20%	Exams/Tests Midterm #1 - multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
30%	Final exam
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
5%	Oral Presentation Journal presentation
20%	Exams/Tests Midterm #2 - multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.

100%	Total

VII. **Sample Assignments:**

Journal Presentation:

Journal presentations: Read a recently published journal article based on assigned topic related to maintenance of artificial airways in the intensive care unit. Compose a PowerPoint or Prezi presentation and deliver to class.

Written:

Read Part 7: Adult advanced Cardiovacular support. Write a summary of the evidence to confirm placement of endotracheal intubation. State shortcomings of coliremetric devices.
https://www.ahajournals.org/doi/10.1161/CIR.0000000000000261

VIII. **Student Learning Outcomes:**

1. Explain how to establish a patent airway and the various artificial airway devices associated with endotracheal or tracheostomy procedures.
2. Describe the indications for nasotracheal suction and endotracheal suction; list the sequence of steps required for to perform it.
3. Compare and contrast various types of tracheostomy tubes and appliances to specific clinical situations.

Corequisite Checklist and Worksheet

RC 6- Airway Management
Corequisite: RC 6L- Applied Airway Management
Prerequisite RC 5 –Integrated Respiratory Physiology and Pathophysiology II
Corequisite RC 7 – Introduction to Mechanical Ventilation
Corequisite RC 8 – Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 6L is the corequisite to RC 6. RC 6 provides the essentials of routine artificial airway care in the acute care setting. Emphasis is placed on maintaining and troubleshooting artificial airways and preventing ventilator associated events. RC 6L is the course where the students practice the knowledge learned in RC 6, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 6- Airway Management
Corequisite: RC 7- Introduction to Mechanical Ventilation
Prerequisite RC 5 –Integrated Respiratory Physiology and Pathophysiology II
Corequisite- RC 6L- Applied Airway management
Corequisite- RC 8- Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 7 is a corequisite to RC 6. RC 6 provides the essentials of routine artificial airway care in the acute care setting. Emphasis is placed on maintaining and troubleshooting artificial airways and preventing ventilator associated events. RC 6 information is essential to initiate, monitor and assessment of outcome for patients requiring noninvasive and invasive mechanical ventilation. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 6- Airway Management
Corequisite: RC 8- Physician Interaction II
Prerequisite RC 5 –Integrated Respiratory Physiology and Pathophysiology II
Corequisite- RC 6L- Applied Airway management
Corequisite- RC 7- Introduction to Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 8 is a corequisite to RC 6. RC 8 provides direct physician interaction and student involvement in the clinical and nonclinical settings to material covered in RC 6. The course will focus on the ability to present case studies in a coherently and efficiently to a physician. The topics covered are initiation of noninvasive and invasive mechanical ventilation, airway management and ability to review chest x-ray. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 6 – Airway Management

Prerequisite: RC 5 – Integrated Respiratory Physiology and Pathophysiology II
Corequisite is RC 6L – Applied Airway Management
Prerequisite is RC 7 – Introduction to Mechanical Ventilation
Corequisite RC 8 – Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 6**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Utilize Laplace's, Hooke's and Poiseuille's law, dynamic vs. static compliance to describe pulmonary mechanics and perform calculations related to those laws and relate results to disease states.
B)	Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
C)	Describe disease process and treatment of communicable diseases such as TB and their adverse consequences in immunocompromised individuals.

D)	Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
E)	Categorize causes of pulmonary edema and apply evidence-based medicine to treat it according to cause
F)	Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
G)	Describe the disease process and treatment of smoke inhalation, thermal injuries and near-drowning.
H)	Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan

EXIT SKILLS (objectives) FOR **RC 5**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Utilize Laplace's, Hooke's and Poiseuille's law, dynamic vs. static compliance to describe pulmonary mechanics and perform calculations related to those laws and relate results to disease states.
2.	Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
3.	Describe disease process and treatment of communicable diseases such as TB and their adverse consequences in immunocompromised individuals.
4.	Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
5.	Categorize causes of pulmonary edema and apply evidence-based medicine to treat it according to cause
6.	Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
7.	Describe the disease process and treatment of smoke inhalation, thermal injuries, and near-drowning.
8.	Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch, and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan

	ENTRANCE SKILLS FOR (RC 6)								
EXIT SKILLS FOR (RC 5)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 6L, Applied Airway Management

Units:	3.00
Total Instructional Hours (usually 18 per unit):	162.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	9.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 6
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH, Or BSRT or BS degree llfe sciences AND at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This is course part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course provides hands-on skills in a lab setting and supervised clinical experience at local area hospitals with the purpose of gaining experience in establishing and maintaining a patent airway. Technical skills, knowledge and attitudes on emergency airway and airway management are practiced. The student is assessed in competencies assisting with endotracheal intubation and surgical and percutaneous tracheostomy procedures, securing and maintaining a patent airway.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. Whit, Cengage © 2012
2. Wilkins, Stoller, Kacmarek, Egan's Fundamentals of Respiratory Care, Elsevier-Mosby © 2017
3. Dataarc. www.dataarc.ws, 2.0 ed.
   Software allow the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate the need to establish an artificial airway by inspecting medical records such as, medical history, laboratory results, imaging data, and use Mallampati class and Comark-Lahane grade to determine difficult airways.
2. Conduct a complete airway assessment, evaluate the need for patent airway, compare and contrast between the head-tilt chin-lift airway-opening maneuver and jaw lift without head extension maneuver, when needed select between OPA and NPA, and choose correct size and demonstrate how to place it.
3. Evaluate among various bag-valve-mask resuscitators, select proper size, and demonstrate proper use and troubleshoot technique or equipment.
4. Evaluate the need for advanced airways such as LMA, Combitube, King Tube, Bougie. Select the correct size and demonstrate placement.

5. Evaluate the need for endotracheal intubation, prepare to assist a physician with intubation and determine correct placement the airway.
6. Evaluate the need for tracheostomy tube and prepare to assist a physician in placing surgical or percutaneous tracheostomy tube and determine correct placement the airway.
7. Model professional behavior and communication skills to collaborate, and coordinate with a physician to when assisting with intubation or tracheostomy procedure.
8. Differentiate among various ways to secure airway, cloth tape around the neck, ear to ear and other commercially available securing devices such Anchor Fast. Recognize adverse effects to/when securing the airway.
9. Appraise evidenced-based medicine to determine best approach to seal airway and assess tracheal cuff pressures, cufflator, aneroid pressure manometer using three-way stopcock, applying the minimal leak technique and/or minimum occlusive volume.
10. Assess the need for tracheal suction, select, assemble, operate equipment, perform nasotracheal suction using sterile technique and endotracheal suction using the open suction and closed suction technique. Recognize adverse effects to airway suction.
11. Evaluate need to and place head of bed at 30 and 45 degree, perform subglottic suction.
12. Assess the ability to wean off from tracheostomy, indication for speaking valve, demonstrate professional behavior and communication skills to collaborate, and coordinate with a physician, nurse and/or speech therapist when a patient is ready for its use. Recognize adverse effects to speaking valve.
13. Document items related to type, and size of artificial airway, cuff pressure, suctioning the airway and side effects if any.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Online instructor-provided resources, Service Learning, Lecture and Discussion, Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
10.000%	Airway assessment, establish an open airway
10.000%	Endotracheal intubation procedure
5.000%	Endotracheal tubes and tracheostomy tubes
5.000%	Manual resuscitators, advanced airways
5.000%	Endotracheal open and closed suction techniques
5.000%	Change of tracheostomy inner cannula and cleaning
5.000%	Measure tracheal cuff pressure and MOV and MLT
5.000%	Nasotracheal suction technique
5.000%	Tracheostomy appliances (speaking valve)
20.000%	Clinical experience in emergency airways and airway management (manual resuscitation, opening-airway maneuvers, intubation procedure and tracheostomy placement procedure)
15.000%	Assessment of competency in administration of respiratory care therapeutics.
5.000%	Tracheostomy procedure
5.000%	Securing airway techniques
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic

15%	Performance Prepare and perform endotracheal and nasotracheal suction competency
30%	Simulation clinical simulation
20%	Other Verbal and written communication skills required when establishing emergency airways.
20%	Final Performance Prepare equipment and assist with endotracheal intubation competency.
15%	Performance Prepare and perform securing ETT
100%	Total

VII. **Sample Assignments:**

Written assignment:

Written assignment includes journaling daily logs of activities observed, performed with assistance and perform without assistance related to respiratory care therapeutics. In addition, summarize clinical day and reflect on learning experience by comparing and contrasting clinical experience with didactic knowledge.

lab activity:

Complete clinic competencies, 1st evaluated by peer-to-peer. The faculty will then perform final evaluation for appropriate selection the proper equipment to establish and maintain an open airway. Demonstrate how to determine if the endotracheal tube and/or tracheostomy tube have been correctly place into airway. Demonstrate verbal and written communication with physician when assisting with endotracheal intubation or tracheostomy procedures. Student will be evaluated at advanced beginner level according to Dreyfus model of skill acquisition, satisfactorily performed as deemed by the faculty.

VIII. **Student Learning Outcomes:**

1. Asses the need to establish an airway and select appropriate equipment required for intubation and/or tracheostomy.
2. Recognize the endotracheal and/or tracheostomy tube has been correctly placed into the airway and let the health care team know.
3. Asses the need for artificial airway suction and perform the suction procedure.
4. Evaluate a when a patient is ready to use speaking valve and communicate it to the physician.
5. Demonstrate how to determine the need for an emergency airway, select appropriate equipment required for intubation or tracheostomy procedure, how to secure the artificial airway and check the tracheal cuff pressure. In addition, determine if the endotracheal and/or tracheostomy tube has been correctly placed into the airway. Document procedure.
6. Demonstrate the need for airway suction and how to perform the open and closed suction technique on patient who is intubated or trached. And be able to recognize adverse reactions to procedure. Document procedure.

Corequisite Checklist and Worksheet

RC 6L- Applied Airway Management

Corequisite: RC 6- Airway Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 6L is a corequisite to RC 6. RC 6 provides the essentials of routine artificial airway care in the acute care setting. Emphasis is placed on maintaining and troubleshooting artificial airways and preventing ventilator associated events. RC 6L is the course where the students practice the knowledge learned in RC 6, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 7, Introduction to Mechanical Ventilation

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 6 RC 8 RC 7L
Prerequisite(s):	RC 5
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course covers the assessment of need, initiation, monitoring and assessment of outcome for patients requiring noninvasive and invasive mechanical ventilation. Evidence-based research is used to guide the selection of the correct interface and mode of ventilation for a particular condition requiring NIV. Basic modes of mechanical ventilation are introduced.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Mosby's Respiratory Care Equipment, Cairo, Pilbeam, Elsevier- Mosby © 2018
2. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek , Elsevier- Mosby © 2017
3. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F., Elsevier-Mosby © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate indications, exclusion criteria, complications, goals and benefits of noninvasive ventilation (NIV).
2. Compare and contrast types of patient interfaces available for NIV and how to choose an appropriate interface for a patient and evaluate advantages and disadvantages of nasal and full-face masks as the patient-ventilator interface.
3. Determine most appropriate mode of NIV (CPAP, BiPAP, AVAPS) based on patient's condition.
4. Assesses ventilator data, patient data, imaging data, to determine positive response to NIV and recommend changed as needed.
5. Monitor ongoing ventilator management of NIV in the acute care setting and make recommendations to therapy as needed.
6. Define respiratory failure, differentiate between hypoxemic respiratory failure (type I) and hypercapnic respiratory failure (type II) and discuss general management for each type.
7. Using medical records and patient assessment differentiate between chronic respiratory failure and acute-on-chronic respiratory failure.

8. Describe the operating characteristics of mechanical ventilators used along the continuum of care (positive pressure and negative mechanical ventilators).
9. Describe the 10 maxims used to develop a standardized ventilator taxonomy.
10. Interpret monitored ventilator data, waveforms, pulmonary mechanics to determine if the three main goals of mechanical ventilator support are met.
11. Differentiate between various mechanical ventilation modes, CMV, IMV, or CSV pattern of ventilation.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
15.000%	Indications for NIV, Modes of NIV, Interfaces utilized with NIV
10.000%	Floor to ICU management of NIV
10.000%	Assessment and monitoring of NIV patient and recognize complications and hazards of NIV.
15.000%	Types of respiratory failure
10.000%	Complications of respiratory failure
15.000%	Management of respiratory failure
15.000%	Maxims of ventilator taxonomy
10.000%	Goals of mechanical ventilation support
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Exams/Tests Midterm #1 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
5%	Oral Presentation Journal Presentation
30%	Final exam
20%	Exams/Tests Midterm #2 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
100%	Total

VII. **Sample Assignments:**

Journal Presentation:
Journal presentation: Read a recently published journal article based on assigned topic related the uses of mechanical ventilation or noninvasive ventilation. Compose a PowerPoint or Prezi presentation and deliver to class.

Workbook:
Complete the workbook questions on mechanical ventilation. In your own words, explain how the 10 maxims of mechanical ventilation help you understand the principles of mechanical ventilation.

VIII. **Student Learning Outcomes:**

1. Explain the assessment of need, monitor and assessment of outcome for NIV.
2. Describe the best interface that will allow the most patient comfort and compliance with NIV device.
3. List indications for the initiation of mechanical ventilation.
4. Describe modes of ventilation based on maxims of mechanical ventilation described Chatburn.

Corequisite Checklist and Worksheet

RC 7- Introduction to Mechanical Ventilation
Corequisite: RC 6- Airway Management
Prerequisite- RC 5- Integrated Respiratory Physiology and Pathophysiology II
Corequisite- RC 7L- Applied Introduction to Mechanical Ventilation
Prerequisite- RC 8- Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 6 is a corequisite to RC 7. RC 6 provides the essentials of routine artificial airway care in the acute care setting. Emphasis is placed on maintaining and troubleshooting artificial airways and preventing ventilator associated events. RC 6 information is essential to initiate, monitor and assessment of outcome for patients requiring noninvasive and invasive mechanical ventilation, information learned in RC7. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 7- Introduction to Mechanical Ventilation
Corequisite: RC 7L- Applied Introduction to Mechanical Ventilation
Corequisite- RC 5- Integrated Respiratory Physiology and Pathophysiology II
Corequisite- RC 6- Airway Management
Corequisite RC 8 – Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 7L is the corequisite to RC 7. RC 7 covers the assessment of need, initiation, monitoring and assessment of outcome for patients requiring noninvasive and invasive mechanical ventilation. Evidence-based research is used to guide the selection of the correct interface and mode of ventilation for a particular condition requiring NIV. RC 7L is the course where the students practice the knowledge learned in RC 7, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 7- Introduction to Mechanical Ventilation
Corequisite: RC 8- Physician Interaction II
Corequisite- RC 6- Airway Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 8 is a corequisite to RC 7. RC 8 provides direct physician interaction and student involvement in the clinical and nonclinical settings to material covered in RC 7. The course will focus on the ability to present case studies in a coherently and efficiently to a physician. The topics covered are initiation of noninvasive and invasive mechanical ventilation, airway management and ability to review chest x-ray. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 7 – Introduction to Mechanical Ventilation

Prerequisite: RC 5 – Integrated Respiratory Physiology and Pathophysiology II
Corequisite is RC 7L – Applied Introduction to Mechanical Ventilation
Corequisite is RC 8 – Physician Interaction II
Corequisite is RC 6 – Airway Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 7**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Utilize Laplace's, Hooke's and Poiseuille's law, dynamic vs. static compliance to describe pulmonary mechanics and perform calculations related to those laws and relate results to disease states.
B)	Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
C)	Describe the disease process of Adult respiratory distress syndrome (ARDS), justify the use of proning and protective lung strategies to improve outcomes.

D)	Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
E)	Categorize causes of pulmonary edema and apply evidence-based medicine to treat it according to cause
F)	Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
G)	Compare and contrast disease process and treatment for obstructive and central sleep apnea.
H)	Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan

EXIT SKILLS (objectives) FOR **RC 5**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Utilize Laplace's, Hooke's and Poiseuille's law, dynamic vs. static compliance to describe pulmonary mechanics and perform calculations related to those laws and relate results to disease states.
2.	Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
3.	Describe the disease process of Adult respiratory distress syndrome (ARDS), justify the use of proning and protective lung strategies to improve outcomes.
4.	Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
5.	Categorize causes of pulmonary edema and apply evidence-based medicine to treat it according to cause
6.	Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
7.	Compare and contrast disease process and treatment for obstructive and central sleep apnea.
8.	Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch, and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan

	ENTRANCE SKILLS FOR (RC 7)								
EXIT SKILLS FOR (RC 5)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 7L, Applied Introduction to Mechanical Ventilation

Units:	4.00
Total Instructional Hours (usually 18 per unit):	216.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	12.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 7
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course provides supervised clinical experience at local area hospitals with the purpose of gaining experience in the application of noninvasive and invasive mechanical ventilation in the acute care setting. This introductory course in mechanical ventilation provides practice in technical skills of mechanical ventilation such as the initiation, ventilator set-up and monitoring and noninvasive ventilation.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White , Cengage © 2012
2. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, Elsevier-Mosbry © 2017
3. Dataarc. www.dataarc.ws, 2.0 ed.
   Software allow the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Assess indications for NIV, assemble equipment, evaluate proper interface, fit of mask, nasal, oro-nasal mask, full-face mask, and nasal pillows.
2. Setup NIV ventilator, perform verification of operation, select the correct mode and parameters, initiate NIV and adjust alarms as needed.
3. Make adjustments to NIV mode, settings, and FiO2 based on changes to compliance, resistance and/or patient comfort.
4. Assess tolerance, patient leak, and patient response to NIV, troubleshoot when necessary.
5. Monitor patient-ventilator interactions, ventilator data, hemodynamic data, waveform, imaging studies to recognize adverse effects of noninvasive and invasive mechanical ventilation.
6. Evaluate need to initiate mechanical ventilation based on type of respiratory failure.

7. Set up mechanical ventilator, assemble correct circuit, HME or heated humidifier, suction Ballard, perform operational verification procedure or ventilator self-test and initiate mechanical ventilation, select settings, correct mode and parameters.
8. Make adjustments to mechanical ventilation mode(s), settings (Vt, f, peak inspiratory flow, PEEP), and FiO2 based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, oxygenation, ventilation and hemodynamic data.
9. Differentiate between various mechanical ventilation modes using the 10 maxims of mechanical ventilation taxonomy to classify CMV, IMV, or CSV pattern of ventilation, A/C, SIMV, PC, PC-IRV and CPAP/PSV.
10. Evaluate and manipulate various interdependent modes and adjunct parameters of mechanical ventilation and compare the interrelationships between pressure, volume, flow and time.
11. Model professional behavior and communication skills to collaborate, and coordinate with a physician and nurse to optimize patient management on NIV and invasive mechanical ventilation.
12. Practice medical charting for application of noninvasive and invasive mechanical ventilation.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Service Learning, Online instructor-provided resources, Visiting Lecturers, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
10.000%	Application of NIV on V60, PB 840, 980, Avea, Servo-I ventilators -NIV Modes
5.000%	NIV interfaces
15.000%	NIV assessment of need and monitoring, modes, interfaces, modify NIV therapy, NIV hazards and complications
5.000%	Ventilator set up and verification of operation
10.000%	Modes of ventilation and Mechanical ventilation parameters
15.000%	Assessment of need of mechanical ventilation and limitations of mechanical ventilation
20.000%	Clinical experience in noninvasive and invasive mechanical ventilation: assessment of need, initiation, ventilator set-up, modes and monitoring.
20.000%	Assessment in competencies in noninvasive and invasive mechanical ventilation, demonstrate how to perform assessment of need, initiation, ventilator set-up, modes and monitoring.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Performance Perform verification of operation and assessment noninvasive ventilation.
20%	Other Verbal and written communication skills required to perform optimal patient care
30%	Simulation Clinical scenarios performing assessment of need, initiation, interfaces, modes, monitoring, recommendations, termination, hazards and complications.
25%	Final Performance Perform verification of operation and assessment Invasive ventilation.
100%	Total

VII. **Sample Assignments:**

Written assignment:

Transfer data collected from paper daily log of activities observed, performed with assistance and perform without assistance related to noninvasive ventilation to dataarc. In addition, summarize clinical day and reflect on learning experience by comparing and contrasting clinical experience with didactic knowledge

Lab assignment:

Complete procedure check list for the chapter on mechanical ventilation. Assemble ventilator circuit with HME and with heated humidifier. Perform verification of operation on the servo-i and PB series (840 and 980) ventilators.

VIII. **Student Learning Outcomes:**

1. Initiate NIV therapy, monitor patient and communicate with physician when modifications to therapy are required
2. Demonstrate how to assess the need for NIV therapy, select proper ventilator-patient interface and initial settings based on patient's condition.
3. Demonstrate how to monitor a patient's response to NIV and make recommendations to physician when modifications to therapy are required.
4. Assemble ventilator circuit and perform operation verification for servo-I and PB series (840 or 980) ventilators.
5. Demonstrate how to assess indications for volume control mechanical ventilation.
6. Demonstrate how to correctly assemble, perform operational verification procedure or ventilator self-test, select proper mode of ventilation and parameters based on the patient's medical condition.

Corequisite Checklist and Worksheet

RC 7L- Applied Introduction to Mechanical Ventilation

Corequisite: RC 7- Introduction to Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 7L is the corequisite to RC 7. RC 7 covers the assessment of need, initiation, monitoring and assessment of outcome for patients requiring noninvasive and invasive mechanical ventilation. Evidence-based research is used to guide the selection of the correct interface and mode of ventilation for a particular condition requiring NIV. RC 7L is the course where the students practice the knowledge learned in RC 7, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 8, Physician Interaction II

Units:	1.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	3.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 6 RC 7
Prerequisite(s):	RC 5
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / C - Clearly Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianCall a physician regarding a critical situation of a patient rapidly deteriorating. Use SBAR method to coherently and effectively communicate the need to initiate noninvasive or intubation and invasive mechanical ventilation to a physician. Use critical thinking skills such as formulate, anticipate, prioritize, analyze, infer, interpret, negotiate, trouble-shoot and decision making (recommend).
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associate Degree.

I. **Catalog Description**
This course provides direct physician interaction and student involvement in clinical and nonclinical settings. The course will focus on the ability to present case studies coherently and efficiently to a physician. Topics covered include initiation of noninvasive and invasive mechanical ventilation, airway management, and chest x-ray review.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. 1. Evaluate critical thinking skills required by respiratory care practitioners to function in the acute care setting and interact with a physician.
2. Compare and contrast the Mallampati classification and Comarck-Lehane grade as it relates to assessing airway difficulties during intubation.
3. Evaluate the chest x-ray film for tube placement, volume loss (obstructed airway), pulmonary edema and pneumothorax.
4. Anticipate and prioritize care for a patient with impending respiratory compromise. Alert physician using the SBAR method to indicate the need for emergency airway, noninvasive or invasive ventilation.
5. Select initial ventilator settings to various types of patients requiring mechanical ventilation, defend rationale for each parameter selected to a physician.
6. Evaluate skills required of a respiratory care practitioner as member of the rapid response team (medical emergency) to a clinical situation of rapidly deteriorating patient, from a physician's perspective. What skills does a physician believe are essential for the RCP to function as member of the rapid response team.

7. Present a patient profile of a patient with artificial airway and on mechanical ventilation. Provide list of drugs the patient is on pertinent to respiratory care and explain: Mechanism of action • Pharmacologic classification • Tme/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education
8. Evaluate the decision-making process of a physician to determine the type surgical procedure to tracheostomy, beside percutaneous dilatational tracheostomy vs. open surgical tracheostomy.
9. Model professional behavior and communication skills to collaborate, and coordinate with a physician to establish goals of mechanical ventilation..

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Critique, Visiting Lecturers, Group Work, Online instructor-provided resources, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
20.000%	Emergency airway management
20.000%	Noninvasive ventilation
20.000%	Intubation and tracheostomy procedures
20.000%	Initiation of mechanical ventilation
20.000%	Case study presentation, communication skills
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Oral Presentation: Case study Presentation
25%	Simulation: Clinical simulations
30%	Final exam
20%	Group Projects
100%	Total

VII. **Sample Assignments:**
Patient profile: Select a patient intubated/trached and on mechanical ventilation, and then write a patient profile or case study report; present it to a physician in class or the clinical setting.

Written: Write a script to communicate with a physician regarding a critical situation of a patient rapidly deteriorating. Use the SBAR method to coherently and effectively communicate the need to initiate noninvasive or intubation and invasive mechanical ventilation to a physician. Use critical thinking skills such to formulate, anticipate, prioritize, analyze, infer, interpret, negotiate, trouble-shoot and decide.

VIII. **Student Learning Outcomes:**
1. 1. Demonstrate coherent and efficient verbal communication skills to present a patient that requires noninvasive or intubation and invasive mechanical ventilation to a physician.
2. 2. Demonstrate to a physician the RCP is able to anticipate, prioritize, prevent, recognize and correctly determine that the artificial airway has been properly placed.

Corequisite Checklist and Worksheet

RC 8- Physician Interaction II
Corequisite: RC 6- Airway Management
Corequisite - RC 7- Introduction to Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 6 is a corequisite to RC 8. RC 8 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will focus on the ability to present case studies in a coherently and efficiently to a physician. The topics covered are initiation of noninvasive and invasive mechanical ventilation, airway management and ability to review chest x-ray. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 8- Physician Interaction II
Corequisite: RC 7- Introduction to Mechanical Ventilation
Corequisite - RC 6- Airway management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 7 is a corequisite to RC 8. RC 8 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will focus on the ability to present case studies in a coherently and efficiently to a physician. The topics covered are initiation of noninvasive and invasive mechanical ventilation, airway management and ability to review chest x-ray. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 8 – Physician Interaction II

Prerequisite: RC 5 – Integrated Respiratory Physiology and Pathophysiology II
Corequisite is RC 6 – Airway Management
Corequisite is RC 7 – Introduction to Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 8**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Describe blood flow in the lungs and relate it to ventilation/perfusion relationships and apply it apply various disease processes. Evaluate results from classic shunt equation and five different shunts indicators to determine degree of intrapulmonary shunting.
B)	Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
C)	Describe disease process and treatment of communicable diseases such as TB and their adverse consequences in immunocompromised individuals.

D)	Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
E)	Categorize causes of pulmonary edema and apply evidence-based medicine to treat it according to cause
F)	Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
G)	Describe the disease process and treatment of smoke inhalation, thermal injuries and near-drowning.
H)	Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan

EXIT SKILLS (objectives) FOR **RC 5**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Describe blood flow in the lungs and relate it to ventilation/perfusion relationships and apply it apply various disease processes. Evaluate results from classic shunt equation and five different shunts indicators to determine degree of intrapulmonary shunting.
2.	Differentiate among various neuromuscular diseases, describe the impact on the respiratory system, develop respiratory monitoring plan and treatment for airway protection and/or respiratory failure.
3.	Describe disease process and treatment of communicable diseases such as TB and their adverse consequences in immunocompromised individuals.
4.	Associate chest traumas sequalae to pneumothorax and flail chest and evaluate appropriate treatment according to degree life-threatening emergency.
5.	Categorize causes of pulmonary edema and apply evidence-based medicine to treat it according to cause
6.	Evaluate hemodynamic data to distinguish heart failure, cardiogenic pulmonary edema from noncardiogenic pulmonary edema.
7.	Describe the disease process and treatment of smoke inhalation, thermal injuries, and near-drowning.
8.	Interpret patient blood gas, use expected compensatory values, Henderson-Hasselbalch, and anion gap to differentiate between various blood gas abnormalities. Use those findings to formulate appropriate treatment plan

	ENTRANCE SKILLS FOR (RC 8)								
EXIT SKILLS FOR (RC 5)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 9, Intermediate Mechanical Ventilation

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 9L
Prerequisite(s):	RC 6 RC 7 RC 8
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH, Or BSRT or BS degree llfe sciences AND at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course covers highly sophisticated and complex modern mechanical ventilators. Operational differences, mechanism of action, and taxonomy of the modes of commonly used mechanical ventilators is covered. The course also looks at innovations such closed-loop control of ventilation and the future of the ICU ventilator. Emphasis is placed on understanding the effects of positive pressure ventilation on various physiological systems and how to minimize adverse effects and identification of patient-ventilator asynchrony and strategies to correct it.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek , Elsevier- Mosby © 2017
2. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F., Elsevier-Mosby © 2012
3. Mosby's Respiratory Care Equipment , Cairo, Pilbeam, Elsevier-Mosby © 2018

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Compare and contrast negative pressure ventilation and positive pressure ventilation and evaluate effects of mechanical ventilation on oxygenation, ventilation, and lung mechanics.
2. Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion, gastrointestinal function, and central nervous system.
3. Assess indications application of positive end expiratory pressure (PEEP) and physiological sequalae on hemodynamics.
4. Compare and contrast various scalar waveforms, pressure, flow and volume and loops and their use to identify mechanical, spontaneous, and assisted breaths.
5. Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).
6. Optimize the settings of rise time during pressure-targeted ventilation and expiratory cycling setting criteria during pressure support ventilation.

7. Compare and contrast proportional assist ventilation (PAV) and neurally adjusted ventilatory assist (NAVA) modes and examine why they result in the least asynchrony.
8. Describe the basic operation of modern mechanical ventilators and explain how pressure-, flow, and volume-triggering mechanisms work to begin the inspiratory phase of a breath.
9. Apply the 10 fundamental maxims to describe targeting schemes and classify various modes of ventilation.
10. Compare and contrast alarms settings required for various modes of mechanical ventilation. i.e. volume control vs. pressure control. High and low pressure • High and low oxygen percentage • High and low minute volume • High rate • High and low positive end-expiratory pressure (PEEP)/continuous positive airway pressure (CPAP) • Alarm-silencing buttons.
11. Differentiate between leak compensation and tube compensation, how it is achieved, and which ventilators offer this feature.
12. Evaluate the integration of artificial intelligence into Knowledge-Based Systems for Automatic Ventilatory Management as it relates to weaning and adaptive support.
13. Evaluate the concept of automated measurement of FRC during mechanical ventilation and compare measurements obtained by Nitrogen washout and FRC Inview.
14. Evaluate how graphical information presentation can improve situational awareness, enhance clinical performance and improve patient safety. For example, dynamic lung used Hamilton G5 to demonstrate changes in compliance and resistance.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Visiting Lecturers, Online instructor-provided resources, Group Work

V. **Course Content**

% of Course	Topic
15.000%	Effects of positive pressure on physiological systems
10.000%	Ventilator waveforms
15.000%	Patient-ventilator asynchrony
10.000%	Management of Auto-PEEP
10.000%	Mechanical ventilators basics of operation, mechanism of action.
15.000%	Innovations in mechanical ventilation (ASV, NAVA, PAV, etc.)
10.000%	Automatic tube compensation, leak compensation
15.000%	Maxims of ventilator taxonomy
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
20%	Exams/Tests Midterm #1 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
30%	Final exam

5%	Oral Presentation Journal presentation
20%	Exams/Tests Midterm #1 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
100%	Total

VII. **Sample Assignments:**

Workbook:

After reading the chapter on physiological effects of positive pressure ventilation, complete the workbook. Write summary explaining how auto-PEEP affects the various physiological systems and what you can do correct it.

Journal Presentation:

Journal presentations, read a recent published journal article based on innovations of mechanical ventilation. Topics may include, automatic tube compensation, closed-loop weaning, ASV, NAVA, PAV, or automated measurements of FRC. Compose a power point or prezi presentation and present to class.

VIII. **Student Learning Outcomes:**

1. Explain how to recognize auto-PEEP and its sequelae on various physiological systems.
2. Describe how to recognize various types of patient-ventilator asynchronies.
3. Describe basic operation of mechanical ventilation, and systematic approach to name modes of mechanical ventilation.
4. Describe innovations in mechanical ventilation such as automated FRC measurement, knowledge-based systems for automatic ventilatory management, closed-loop weaning, ASV, NAVA and PAV modes of mechanical ventilation.

Corequisite Checklist and Worksheet

RC 9- Intermediate Mechanical Ventilation
Corequisite: RC 9L- Applied Intermediate Mechanical Ventilation
Prerequisite RC 8 –Physician interaction II
Prerequisite RC 6 – Airway Management
Prerequisite RC 7 – Introduction to Mechanical Ventilation
Corequisite RC 9L- Applied Intermediate Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 9L is the corequisite to RC 9. RC 9 covers highly sophisticated and complex modern mechanical ventilators. Operational differences, mechanism of action, and taxonomy of the modes of commonly used mechanical ventilators is covered. The course also looks at innovations such closed-loop control of ventilation and the future of the ICU ventilator. Emphasis is placed on understanding the effects of positive pressure ventilation on various physiological systems and how to minimize adverse effects and identification of patient-ventilator asynchrony and strategies to correct it. RC 9L is the course where the students practice the knowledge learned in RC 9, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Prerequisite Checklist and Worksheet: RC 9 – Intermediate Mechanical Ventilation

Prerequisite: RC 6 – Airway Management
Corequisite RC 9L –Applied Intermediate Mechanical Ventilation
Prerequisite RC 7 – Introduction to Mechanical Ventilation
Prerequisite RC 8 – Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 9**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Assess the need for tracheal suction, select, assemble, operate equipment, perform nasotracheal suction using sterile technique and endotracheal suction using the open suction and closed suction technique. Recognize adverse effects to airway suction.
B)	Model professional behavior and communication skills to collaborate, and coordinate with a physician to when assisting with intubation or tracheostomy procedure.
C)	Assess the ability to wean off from tracheostomy, indication for speaking valve,

	demonstrate professional behavior and communication skills to collaborate, and coordinate with a physician, nurse and/or speech therapist when a patient is ready for its use. Recognize adverse effects to speaking valve.
D)	Document items related to type, and size of artificial airway, cuff pressure, suctioning the airway and side effects if any.
E)	Evaluate among various bag-valve-mask resuscitators, select proper size, and demonstrate proper use and troubleshoot technique or equipment.

EXIT SKILLS (objectives) FOR **RC 6**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Assess the need for tracheal suction, select, assemble, operate equipment, perform nasotracheal suction using sterile technique and endotracheal suction using the open suction and closed suction technique. Recognize adverse effects to airway suction.
2.	Model professional behavior and communication skills to collaborate, and coordinate with a physician to when assisting with intubation or tracheostomy procedure.
3.	Assess the ability to wean off from tracheostomy, indication for speaking valve, demonstrate professional behavior and communication skills to collaborate, and coordinate with a physician, nurse and/or speech therapist when a patient is ready for its use. Recognize adverse effects to speaking valve.
4.	Document items related to type, and size of artificial airway, cuff pressure, suctioning the airway and side effects if any.
5.	Evaluate among various bag-valve-mask resuscitators, select proper size, and demonstrate proper use and troubleshoot technique or equipment.

	ENTRANCE SKILLS FOR (RC 9)								
EXIT SKILLS FOR (RC 6)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6								
	7								
	8								

Prerequisite Checklist and Worksheet: RC 9 – Intermediate Mechanical Ventilation

Prerequisite: RC 7 – Introduction to Mechanical Ventilation
Corequisite RC 9L –Applied Intermediate Mechanical Ventilation
Prerequisite RC 6 – Airway management
Prerequisite RC 8 – Physician Interaction II

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 9**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Assesses ventilator data, patient data, imaging data, to determine positive response to NIV and recommend changed as needed.
B)	Differentiate between various mechanical ventilation modes, CMV, IMV, or CSV pattern of ventilation.
C)	Describe the 10 maxims used to develop a standardized ventilator taxonomy.
D)	Document items related to type, and size of artificial airway, cuff pressure, suctioning the airway and side effects if any.

E)	Interpret monitored ventilator data, waveforms, pulmonary mechanics to determine if the three main goals of mechanical ventilator support are met.
F)	Define respiratory failure, differentiate between hypoxemic respiratory failure (type I) and hypercapnic respiratory failure (type II) and discuss general management for each type.
G)	Evaluate indications, exclusion criteria, complications, goals and benefits of noninvasive ventilation (NIV).
H)	Describe the operating characteristics of mechanical ventilators used along the continuum of care (positive pressure and negative mechanical ventilators).

EXIT SKILLS (objectives) FOR **RC 7**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Assesses ventilator data, patient data, imaging data, to determine positive response to NIV and recommend changed as needed.
2.	Differentiate between various mechanical ventilation modes, CMV, IMV, or CSV pattern of ventilation.
3.	Describe the 10 maxims used to develop a standardized ventilator taxonomy.
4.	Document items related to type, and size of artificial airway, cuff pressure, suctioning the airway and side effects if any.
5.	Interpret monitored ventilator data, waveforms, pulmonary mechanics to determine if the three main goals of mechanical ventilator support are met.
6.	Define respiratory failure, differentiate between hypoxemic respiratory failure (type I) and hypercapnic respiratory failure (type II) and discuss general management for each type.
7.	Evaluate indications, exclusion criteria, complications, goals and benefits of noninvasive ventilation (NIV).
8.	Describe the operating characteristics of mechanical ventilators used along the continuum of care (positive pressure and negative mechanical ventilators).

	ENTRANCE SKILLS FOR (RC 9)								
EXIT SKILLS FOR (RC 7)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

Prerequisite Checklist and Worksheet: RC 9 – Intermediate Mechanical Ventilation

Prerequisite: RC 8 – Physician Interaction II
Corequisite RC 9L –Applied Intermediate Mechanical Ventilation
Prerequisite RC 7 – Introduction to Mechanical Ventilation
Prerequisite RC 6- Airway Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 9**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Select initial ventilator settings to various types of patients requiring mechanical ventilation, defend rationale for each parameter selected to a physician.
B)	Anticipate and prioritize care for a patient with impending respiratory compromise. Alert physician using the SBAR method to indicate the need for emergency airway, noninvasive or invasive ventilation.
C)	Evaluate the decision-making process of a physician to determine the type surgical procedure to tracheostomy, beside percutaneous dilatational tracheostomy vs. open surgical tracheostomy.

D)	Compare and contrast types of patient interfaces available for NIV and how to choose an appropriate interface for a patient and evaluate advantages and disadvantages of nasal and full-face masks as the patient-ventilator interface.
E)	Present a patient profile of a patient with artificial airway and on mechanical ventilation. Provide list of drugs the patient is on pertinent to respiratory care and explain: Mechanism of action • Pharmacologic classification • Tme/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education
F)	Anticipate and prioritize care for a patient with impending respiratory compromise. Alert physician using the SBAR method to indicate the need for emergency airway, noninvasive or invasive ventilation.

EXIT SKILLS (objectives) FOR **RC 8**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Select initial ventilator settings to various types of patients requiring mechanical ventilation, defend rationale for each parameter selected to a physician.
2.	Anticipate and prioritize care for a patient with impending respiratory compromise. Alert physician using the SBAR method to indicate the need for emergency airway, noninvasive or invasive ventilation.
3.	Evaluate the decision-making process of a physician to determine the type surgical procedure to tracheostomy, beside percutaneous dilatational tracheostomy vs. open surgical tracheostomy.
4.	Compare and contrast types of patient interfaces available for NIV and how to choose an appropriate interface for a patient and evaluate advantages and disadvantages of nasal and full-face masks as the patient-ventilator interface.
5.	Present a patient profile of a patient with artificial airway and on mechanical ventilation. Provide list of drugs the patient is on pertinent to respiratory care and explain: Mechanism of action • Pharmacologic classification • Tme/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education

	ENTRANCE SKILLS FOR (RC 9)								
EXIT SKILLS FOR (RC 8)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6								
	7								
	8								

New Course: RESPIRATORY CARE 9L, Applied Intermediate Mechanical Ventilation

Units:	3.00
Total Instructional Hours (usually 18 per unit):	162.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	9.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 9
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course provides hands-on skills in the lab setting and supervised clinical experience at local area hospitals with the purpose of gaining experience in the application of mechanical ventilation in the acute care setting. This course provides practice in recognizing and correcting patient-ventilator interactions that cause asynchrony and physiological effects of positive pressure ventilation. In addition, the course explores innovations in mechanical ventilation. Emphasis is placed on evaluating features and capabilities of various mechanical ventilators.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012
2. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
3. Mosby's Respiratory Care Equipment, JM Cairo, Elsevier-Mosby © 2018
4. Dataarc. www.dataarc.ws, 2.0 ed.
   Software that allows the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned during day.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Recognize adverse effects of positive pressure ventilation on various physiological systems such as, cardiovascular, ICPs, renal function, liver splanchnic perfusion, GI function, and central nervous system.
2. Assess indications for extrinsic PEEP, recognize intrinsic-PEEP by expiratory pause, expiratory flow waveform, and end-exhale flow (Vee); formulate a plan to correct intrinsic PEEP.
3. Evaluate the presence of various forms of patient-ventilatory asynchrony (flow, trigger, cycling) and formulate plan to correct prior to the initiation of sedatives.
4. Propose initial settings for rise-time and flow cycle off according to patient's comfort.

5. Evaluate features of common ICU ventilators and compare and contrast modes of ventilation in these ventilators- (Covidien PB 840, 980, Hamilton G-5, Servo I, Servo U, CareFusion Avea, Drager Evita, GE Healthcare Carescape R860)
6. Select settings for following: Airway pressure release ventilation • Automatic tube compensation • Automode • Intermittent mandatory ventilation (SIMV) • Inverse ratio ventilation • Pressure regulated volume control (PRVC) • Proportional assist ventilation (PAV) • Volume support ventilation (VSV)
7. Differentiate between static and dynamic compliance to determine issues with elastic properties of the lung and thoracic cage versus airway resistance.
8. Perform operational verification procedure or ventilator self-test on various ventilator, assemble correct circuit, HME or heated humidifier, suction Ballard. Initiate MV. • Pressure Control Ventilation • Select and enter the correct mode and parameters. • Compare the interrelationships between pressure, volume, flow and time
9. Modify mechanical ventilation mode(s), settings (Vt, f, peak inspiratory flow, PEEP), and FiO2 based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, ventilation and oxygenation data. • Relate changes that might occur in parameters of pressure flow, and time based on changes to the above parameters.
10. Model professional behavior and communication skills when communicating with a physician and/or nurse to relate adverse effects of positive pressure ventilation and/or patient-ventilator asynchrony.
11. Practice medical charting for the application of mechanical ventilation, document adverse effects of positive pressure ventilation and patient-ventilator asynchrony and alarm settings.
12. Make to mechanical ventilation mode(s), settings (Vt, f, peak inspiratory flow, PEEP), and FiO2 based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, ventilation and oxygenation data. • Relate changes that might occur in parameters of pressure flow, and time based on changes to the above parameters.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Visiting Lecturers, Group Work, Online instructor-provided resources, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
5.000%	Management of auto-PEEP
10.000%	Physiological effects of positive pressure ventilation.
5.000%	Types of patient-ventilator asynchrony
5.000%	Mechanical ventilation waveforms
10.000%	Features of common critical care ventilators
10.000%	Innovative modes of mechanical ventilation
5.000%	Input modes of mechanical ventilation
5.000%	Spontaneous modes, back-up modes, alarms
20.000%	Clinical experience in mechanical ventilation (monitoring, assess for patient-ventilator asynchronies, and physiological effects of positive pressure)
20.000%	Assessment in competencies in mechanical ventilation (monitoring, recognizing and correcting asynchronies and understanding of physiological effects of positive pressure ventilation)
5.000%	Pressure Control Ventilation
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic

20%	Other Professional behavior, verbal and written communication skills consistent with the role of a respiratory care practitioner when working in the critical care unit.
25%	Performance Recognize and correct asynchrony competency at the novice level
30%	Simulation Clinical simulation, setting up ventilators, explain features of various ventilators, VC vs. PCV, patient-ventilator asynchrony.
25%	Final Performance Assess and implement volume control or pressure control ventilation given the condition of a critically ill patient requiring mechanical ventilation.
100%	Total

VII. **Sample Assignments:**

Lab Project:

Place a test lung on pressure control and volume control ventilation, draw scalars for pressure-time, volume-time and flow-time, as depicted by servo-I, PB 840, PB 980 and Avea ventilators. Use the data to compare and contrast between scalars pressure control and volume control ventilation

Written assignment:

Write a summary of the article, Closed-Loop Control of Mechanical Ventilation: Description and Classification of Targeting Schemes. http://rc.rcjournal.com/content/respcare/56/1/85.full.pdf State your position whether it can be viable alternative to current weaning strategies. Come to class prepared to defend your position.

VIII. **Student Learning Outcomes:**

1. Demonstrate how to recognize various ways to recognizes auto-PEEP recommend treatment.
2. Demonstrate how to recognize among various types of patient-ventilator asynchronies and recommend treatment
3. Evaluate features, capabilities and modes of ventilation on (Covidien PB 840, 980, Hamilton G-5, Servo I, Servo U, Carefusion Avea, Drager Evita, GE Healthcare Carescape R860).
4. Select mode of ventilation, and defend reason for selecting that mode. Demonstrate how to select initial settings and alarms to include: • Airway pressure release ventilation • Automatic tube compensation • Automode • Intermittent mandatory ventilation (SIMV) • Inverse ratio ventilation • Pressure regulated volume control (PRVC) • Proportional assist ventilation (PAV) • Volume support ventilation (VSV)
5. Demonstrate how to assess the indications for pressure control ventilation. Select correct Mechanical Ventilation parameters, pressure control pressure (Titrate Delta P for Vt 6-8 mL/Kg or 4-6 for lung protective strategy), I-time, PEEP, FiO2.
6. Demonstrate how to recognize common patient-ventilator asynchronies (flow starvation, double triggering, auto-triggering, auto-cycle, decreased sensitivity) and strategies to correct them.
7. Demonstrate how to recognize adverse physiological effects of positive pressure ventilation to the cardiovascular system by gathering data from patient assessment, the vital signs monitor, history and physical, progress note, ventilator flowsheet and ventilator.

Corequisite Checklist and Worksheet

RC 9L- Applied Intermediate Mechanical Ventilation

Corequisite: RC 9- Intermediate Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 9L is the corequisite to RC 9. RC 9 covers highly sophisticated and complex modern mechanical ventilators. Operational differences, mechanism of action, and taxonomy of the modes of commonly used mechanical ventilators is covered. The course also looks at innovations such closed-loop control of ventilation and the future of the ICU ventilator. Emphasis is placed on understanding the effects of positive pressure ventilation on various physiological systems and how to minimize adverse effects and identification of patient-ventilator asynchrony and strategies to correct it. RC 9L is the course where the students practice the knowledge learned in RC 9, in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 10, Advanced Life Support and ICU Monitoring

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 10L RC 11 RC 12
Prerequisite(s):	RC 9
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associate Degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associates degree

I. **Catalog Description**
This course covers the essentials of invasive and noninvasive monitoring devices. Pulse oximetry, capnography, volumetric capnography and transcutaneous monitoring are covered as well as cardiovascular monitoring using invasive and indwelling catheters. The course also covers drugs used in the application of critical care and advanced life support.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Rau's Respiratory Care pharmacology, Douglas S. Gardenhire, Elsevier © 2020
2. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, Elsevier © 2017
3. Cairo, Pilbeam Mosby's Respiratory Care Equipment , Cairo, Pilbeam, Elsevier-Mosby © 2018
4. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F., Elsevier-Mosby © 2012
5. Mosby's Respiratory Care Equipment, Cairo, Pilbeam, Elsevier- Mosby © 2018

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Interpret normal ECG tracings, distinguish between lethal and nonlethal arrhythmias, and formulate treatment using the latest AHA ACLS guidelines.
2. Classify neuromuscular blocking agents (NMBAs), evaluate indications for their use and monitoring methods.
3. Classify diuretics according to their mechanism of action, indications and adverse effects.
4. Evaluate the use anxiolytics, barbiturates and other hypnotics in the ICU.
5. Assess indications for local and general anesthesia and evaluate the role the RCP during conscious sedation as it relates to airway management and ventilation/oxygenation monitoring.
6. Describe mechanism of action for inotropes and vasopressors and design an algorithm for the management of hypotension.
7. Compare and contrast anticoagulants vs. thrombolytics, indications, hazards and complications.

8. Distinguish physiologic and psychological basis of pain and the classes of analgesics used to treat pain sing proportions and percentage-strength solutions
9. Evaluate noninvasive monitoring (Pulse oximetry, photoplethysmography Capnography, Volumetric capnography, Transcutaneous monitoring) interpret results and assess their limitation.
10. Recognize components of a normal capnogram, evaluate abnormal capnogram and related it to changes in metabolic status and physiology of lung can cardiac output.
11. Evaluate advantages of point-of-care testing and quality control procedures used in a blood gas laboratory.
12. Discuss the use of selective pulmonary vasodilators in pulmonary hypotension.
13. Compare and contrast an arterial line catheter, a central venous pressure line and a pulmonary artery catheter used for hemodynamic monitoring and blood gas sampling which Includes indications, normal values, preferred routes of vessel access, correct anatomical placement of the catheter, hazards and complications, waveform tracing, data to help determine: fluid balance, adequacy of venous return, right ventricular preload, right ventricular afterload, left ventricular preload, cardiac output, mixed venous oxygen saturation, PVR and SVR.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Visiting Lecturers, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
5.000%	Selective pulmonary vasodilators
5.000%	Diuretics, anticoagulants, thrombolytics
10.000%	Management of cardiac arrest
10.000%	Intensive care cardiovascular pharmacology Neuromuscular Blocking agents (NMBAs) Anxiolytics, barbiturates, opioids, Cardiovascular (inotropes, antiarrhythmics)
5.000%	Pulse oximetry
10.000%	Capnography, volumetric capnography
5.000%	Transcutaneous CO2 monitoring
3.000%	Doppler and ultrasound
10.000%	Hazards and limitations of noninvasive monitoring
12.000%	Arterial blood gas sampling and Arterial line blood gas sampling
10.000%	Hemodynamic monitoring (A-line, CPV, Swan-Ganz)
5.000%	Interpretation of acid-based status, oxygenation and ventilation
10.000%	Interpretation of hemodynamic data
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Exams/Tests Exam #1 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Written assignments

	Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
5%	Oral Presentation Journal presentation
30%	Final exam
20%	Exams/Tests Exam #2 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
100%	Total

VII. **Sample Assignments:**

Homework:

Following successful placement and calibration of the PA catheter, the following values were obtained: Oxygen consumption (VO2) 280 ml/min PA systolic 56 mm Hg PA diastolic 41 mm Hg PCWP 30 mm Hg CVP 14 mm Hg C(a-v)O2 7.2 vol% Cardiac output 3.9 L The most likely cause for the above data is _____.

Online assignment:

Go to https://www.practicalclinicalskills.com/ take ECG quizzes, score >75%. Print copy and turn in by due date.

VIII. **Student Learning Outcomes:**

1. State indications for NMBAs, anxiolytics and opioids during intubation, mechanical ventilation and surgery.
2. Recognize lethal arrhythmias on ECG tracing and recommend treatment per ACLS guidelines.
3. Determine the best noninvasive monitoring device based on the patient's condition, interpret results and recommend treatment if required.
4. Explain the assessment of the need for arterial blood gas sampling, interpret results and report critical values to the healthcare team.
5. Discuss the rationale for hemodynamic monitoring in the critically ill patient, identify the placement of the pulmonary artery catheter using waveform, and interpret pulmonary artery catheter data.

Corequisite Checklist and Worksheet

RC 10- Advanced Life Support and ICU Monitoring
Corequisite: RC 10L- Applied Advanced Life Support and ICU Monitoring
Prerequisite- RC 9- Intermediate Mechanical Ventilation
Corequisite RC 11- Advanced Mechanical Ventilation
Corequisite RC 12- Physician Interaction III

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 10L is a corequisite to RC 10. RC 10 covers the essentials of invasive and noninvasive monitoring devices. Pulse oximetry, capnography, volumetric capnography and transcutaneous monitoring, cardiovascular monitoring using invasive and indwelling catheters and the application of critical care and advanced life support. RC 10L is the course where the students practice the knowledge learned in RC 10 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 10- Advanced Life Support and ICU Monitoring
Corequisite: RC 11- Advanced Mechanical Ventilation
Prerequisite RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 12 –Physician Interaction III
Corequisite RC 10L – Applied Advanced Life Support and ICU Monitoring

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 11 is a corequisite to RC 10. RC 11 covers protective lung strategies, weaning and liberation from mechanical ventilation. Information learned in RC 10 such noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring is essential for RC 11 and go hand-in-hand. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 10- Advanced Cardiac Life Support and ICU Monitoring
Corequisite: RC 12- Physician Interaction III
Prerequisite - RC 9- Intermediate Mechanical Ventilation
Corequisite RC 10L – Applied Advanced Life Support and ICU monitoring
Corequisite RC 11- Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 12 is a corequisite to RC 10. RC 12 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung protective strategies, weaning and liberation from mechanical ventilation. Noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring are also covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 10 – Advanced Life Support and ICU Monitoring

Prerequisite: RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 10L –Applied Advanced Life Support and ICU monitoring
Corequisite RC 12- Physician Interaction III
Corequisite RC 11- Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 10**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Compare and contrast negative pressure ventilation and positive pressure ventilation and evaluate effects of mechanical ventilation on oxygenation, ventilation, and lung mechanics.
B)	Assess indications application of positive end expiratory pressure (PEEP) and physiological sequalae on hemodynamics.
C)	Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion,

	gastrointestinal function, and central nervous system
D)	Appraise adverse effects of mechanical ventilation and formulate plan to minimize it when present.
E)	Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).

EXIT SKILLS (objectives) FOR **RC 9**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Compare and contrast negative pressure ventilation and positive pressure ventilation and evaluate effects of mechanical ventilation on oxygenation, ventilation, and lung mechanics.
2.	Assess indications application of positive end expiratory pressure (PEEP) and physiological sequalae on hemodynamics.
3.	Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion, gastrointestinal function, and central nervous system
4.	Appraise adverse effects of mechanical ventilation and formulate plan to minimize it when present.
5.	Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).

	ENTRANCE SKILLS FOR (RC 10)								
EXIT SKILLS FOR (RC 9)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6								
	7								
	8								

New Course: RESPIRATORY CARE 10L, Applied Advanced Life Support and ICU Monitoring

Units:	3.00
Total Instructional Hours (usually 18 per unit):	162.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	9.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 10
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associates degree

I. **Catalog Description**
This course provides hands-on skills and supervised clinical experience at local area hospitals with the purpose of gaining experience in the initiation, monitoring and troubleshooting of noninvasive monitoring devices, hemodynamic monitoring and arterial sampling measurement and interpretation in the acute care setting. This course also provides examples of application of medications frequently used in advanced life support and in the intensive care unit (ICU).

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Rau's Respiratory Care pharmacology, Douglas S. Gardenhire, Elsevier © 2020
2. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
3. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012
4. Dataarc. www.dataarc.ws, 2.0 ed.
   Software that allows the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned during day.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Perform 12-lead ECG and distinguish normal ECG tracings from lethal and nonlethal arrhythmias, and formulate treatment for identified arrythmias using AHA guidelines.
2. Assemble intubation equipment, recommend meds (analgesics, hypnotic, NMBA) for rapid sequence intubation procedure. Assist rapid in sequence intubation.
3. Evaluate physical and laboratory findings in patients with fluid overload, septic shock, cardiogenic and noncardiogenic pulmonary edema. Recommend appropriate drug class and respiratory care, including invasive and noninvasive ventilation.
4. Prepare respiratory care equipment to perform, monitor, respond to emergency, if necessary, when assisting with conscious sedation procedure.

5. Develop professional rapport to collaborate and coordinate with a physician to develop a treatment plan on mechanical ventilation requiring nitric oxide or prostacyclin analogs.
6. Recognize insufficient NMBAs to establish paralysis during mechanical ventilation and inform the nurse and call the physician to modify dosage.
7. Evaluate need for arterial blood gas analysis. Perform arterial blood gas puncture using standard of care methods, interpret results, recommend treatment when needed.
8. Evaluate need for hemodynamic pressure monitoring (Arterial line, Central venous line, Pulmonary artery catheter), assemble required equipment for hemodynamic pressure monitoring, set up equipment, and zero the pressure-monitoring system- use phlebostatic axis reference point, end-expiratory pressure reference for PAC. Troubleshoot hemodynamic pressure monitoring devices and correct four causes of a damped waveform.
9. Establish professional rapport to collaborate and coordinate with a physician and/or nurse when reporting critical arterial blood gas values and hemodynamic data.
10. Assemble, set up, calibrate, monitor, and troubleshoot pulse oximetry, including alarms range for an individual patient.
11. Assemble, set up, calibrate, monitor and troubleshoot capnography device and where available volumetric capnography, including alarms range for individual patient. Interpret data to determine tracheal intubation, esophageal intubation, hypoventilation, hyperventilation, degree of paralysis, and return of spontaneous circulation if performing CPR.
12. Practice medical charting, record ventilator parameter on ventilator flowsheet, suctioning procedure, artificial airway, blood gas values, and other beside assessment such capnography, A-line, CVP and PAP when documenting a patient-ventilator assessment of a critically ill patient.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Service Learning, Online instructor-provided resources, Visiting Lecturers, Lecture and Discussion, Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
5.000%	RT Role in ICU and Procedural Sedation and Analgesia
5.000%	Electrocardiograms and arrhythmia recognition
5.000%	ACLS and Intensive care cardiovascular pharmacology
5.000%	Selective pulmonary vasodilators and diuretics
5.000%	Drugs for intubation procedure and to facilitate mechanical ventilation
5.000%	pulse oximetry
5.000%	Volumetric Capnography
7.000%	End-tidal CO2 monitoring - Capnography
5.000%	Transcutaneous oxygen/carbon dioxide monitoring
3.000%	Doppler and ultrasound
5.000%	Arterial blood gas sampling, puncture and arterial line draw
5.000%	Hemodynamic pressure monitoring systems and analysis
5.000%	Hemodynamic (Aline, CVP, and PA catheter) waveform tracings
5.000%	Complications and hazards of blood gas sampling and hemodynamic monitoring
15.000%	Clinical experience in monitoring critically ill patient in the critical care unit (ICU) using noninvasive monitoring, hemodynamic monitoring and blood gas analysis. Application of ICU pharmacology and ECG tracing readings are practiced during patient assessment rounds.

15.000%	Assessment in competencies in noninvasive monitoring (pulse oximetry, capnography, blood gas results interpretation, recognizing ECG tracing and arterial line, central venous pressure, and pulmonary artery catheter waveforms and normal values)
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Performance Practicum competencies- perform 12-lead ECG, assist in RSI, drugs for intubation, conscious sedition and to facilitate mechanical ventilation.
30%	Simulation Mock cardiac arrest codes using ACLS protocols and algorithms, or clinical simulation using arterial blood gas puncture, A-line, CPV or PA catheter monitoring.
10%	Written assignments Software that allows the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned during day
20%	Other Professional behavior, verbal and written communication skills consistent with the role of a respiratory care practitioner when working in the critical care unit, monitoring patients
20%	Final Performance Practicum competency in performing an arterial blood gas sample and relaying critical values to MD and RN. Monitor PA catheter, CVP and A-line systems, interpret results to explain or anticipate patient's condition.
100%	Total

VII. **Sample Assignments:**

group assignment: Compare and contrast pulse oximetry and capnography noninvasive monitoring to assess oxygenation and ventilation. Explain how their waveforms can be useful to assess ventilation and oxygenation. Discuss your finding with your group

online assignment: Visit the American Heart Association, https://www.ahajournals.org/journal/circ and Parts: 7, 8, 9 and 10. Come prepared to participate to practice ACLS algorithms.

VIII. **Student Learning Outcomes:**

1. Demonstrate how to select the appropriate drug for intubation procedure and to facilitate the mechanical ventilation procedure.
2. Demonstrate appropriate respiratory care interventions for patients who require advanced cardiac life support.
3. Demonstrate how to select and set up an appropriate noninvasive monitoring device based on the patient’s clinical condition. The student is also expected to know how to calibrate, troubleshoot and set alarms for noninvasive monitoring device.
4. Demonstrate how to perform an arterial blood puncture and all of the tasks associated with the procedure.
5. Assess the need for hemodynamic monitoring, interpret pulmonary artery catheter data, and distinguish between cardiogenic and non-cardiogenic pulmonary edema.
6. Demonstrate how to set-up, monitor, troubleshoot pulse oximetry and/or capnography. Interpret values and recommend corrective action to fix problem.
7. Conduct round with clinical instructor and demonstrate how to recognize between normal and abnormal invasive and noninvasive hemodynamic monitoring. ECG tracings, CVP, PAC, A-line.

Corequisite Checklist and Worksheet

RC 10L- Applied Advanced Life Support and ICU Monitoring

Corequisite: RC 10- Advanced Life Support and ICU Monitoring

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 10L is a corequisite to RC 10. RC 10 covers the essentials of invasive and noninvasive monitoring devices. Pulse oximetry, capnography, volumetric capnography and transcutaneous monitoring, cardiovascular monitoring using invasive and indwelling catheters and the application of critical care and advanced life support. RC 10L is the course where the students practice the knowledge learned in RC 10 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 11, Advanced Mechanical Ventilation

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 11L RC 10 RC 12
Prerequisite(s):	RC 9
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care associate degree.

I. **Catalog Description**
This course presents conventional and unconventional strategies of mechanical ventilation to minimize lung injury. Emphasis is placed on the ARDSnet protocol and airway pressure release ventilation. The concepts of the "baby lung" and assessment of esophageal pressure, stress index, driving pressure and P-SILI are highlighted. Salvage therapies for ARDS are also discussed. In addition, conventional and unconventional strategies of the gradual or abrupt discontinuation of mechanical ventilation are covered.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier- Mosby © 2017
2. Workbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F., Elsevier-Mosby © 2012
3. American Association for Respiratory Care Clinical Practice guidelines. Mechanical ventilation guidelines

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate factors that should be optimized before an attempt is made at ventilator discontinuation or weaning, assess respiratory, cardiovascular, neurological, and psychological reasons for ventilator dependence.
2. Evaluate signs that point toward resolution of a ventilator-dependent patient's disease process attempting ventilator discontinuation or weaning; collect, calculate, and evaluate weaning indices used to predict a patient's readiness for discontinuation of ventilatory support.
3. Compare and contrast techniques used in ventilator weaning, including daily spontaneous breathing trials, synchronized intermittent mandatory ventilation, pressure support ventilation, and other newer methods (NAVA, ATC), advantages and disadvantages associated with the various weaning methods and techniques.
4. Examine primary reasons why patients fail a ventilator discontinuance trial, and importance of a cuff leak test prior to extubation as well as the use of systemic steroids.

5. Evaluate signs a patient is tolerating a spontaneous breathing trial and assess for extubation and steps for removal of ETT.
6. Evaluate implications that sedation liberation protocols and early mobility can decrease duration of mechanical ventilation.
7. Explain how NIV can be used in high risk extubation failures to prevent reintubation
8. Compare acute lung injury to acute respiratory distress syndrome and use the Berlin definition to categorize the severity of ARDS.
9. Correlate the concept of the "baby lung" in ARDS to the clinical implications of stress index and strain in lung physiology, and the rationale for the use of the ARDSnet protocol as lung protective strategy.
10. Evaluate how driving pressure and transpulmonary pressures can be applied to prevent lung injury and compare and contrast recruitment maneuvers with "best PEEP."
11. Defend the rationale for the use of APRV, benefits and disadvantages of airway pressure-release ventilation (APRV).
12. Evaluate the assessment of need for salvage therapies (nitric oxide, HFOV, proning position) in acute lung injury and ARDS.
13. Support recommended initial settings and evaluate complications associated APRV HFOV, and nitric oxide.
14. Describe the physiology behind improvements seen in ARDS once placed in the prone position.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Visiting Lecturers, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
10.000%	Determine readiness and failure for liberation of mechanical ventilation
7.000%	Weaning parameters
15.000%	Mechanical ventilation weaning strategies (PSV, IMV, T-tube, ATC, NAVA, etc.)
10.000%	Spontaneous breathing trials
2.000%	Tracheal cuff leak test
5.000%	NIV as a bridge to successful extubation
3.000%	Early mobilization
10.000%	Acute lung injury and ARDS
3.000%	Baby lung concept
3.000%	Stress index and strain
3.000%	Driving pressure, esophageal pressure
14.000%	ARDSnets protocol
10.000%	APRV
5.000%	Salvage therapies (nitric oxide, HFVO and proning position)
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Exams/Tests

	Exam #1 - multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
5%	Oral Presentation Journal Presentation
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class note
30%	Final exam
20%	Exams/Tests Exam #2 - multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
100%	Total

VII. **Sample Assignments:**

Journal Presentation:

Journal presentations, read a recent published journal article based on assigned topic related weaning or liberation from mechanical ventilation.

Online Assignment:

Online assignment- go to http://www.ardsnet.org/ read the Higher vs. Lower PEEP (ALVEOLI) study. Write a one page summary of the study, do you agree with the Higher or Lower PEEP strategy. Come prepared to defend your position.

VIII. **Student Learning Outcomes:**

1. Describe how to determine readiness for liberation from mechanical ventilation.
2. Differentiate between various strategies of weaning from mechanical ventilation.
3. Evaluate the concept of the baby lung in ALI and ARDS and strategies to minimize it.
4. Analyze when the ARDSnet protocol, APRV, and other salvage therapies should be implemented.

Corequisite Checklist and Worksheet

RC 11- Advanced Mechanical Ventilation
Corequisite: RC 10- Advanced Life Support and ICU Monitoring
Prerequisite RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 12 –Physician Interaction III
Corequisite RC 11L – Applied Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 10 is a corequisite to RC 11. RC 11 covers protective lung strategies, weaning and liberation from mechanical ventilation. Information learned in RC 10 such noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring is essential for RC 11 and go hand-in-hand. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 11- Advanced Mechanical Ventilation
Corequisite: RC 11L- Applied Advanced Mechanical Ventilation
Corequisite RC 10 –Advanced Life Support and ICU monitoring
Prerequisite RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 12 – Physician Interaction III

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 11L is the corequisite to RC 11. RC 11 presents conventional and unconventional strategies of mechanical ventilation to minimize lung injury. Emphasis is placed on the ARDSnet protocol and airway pressure release ventilation. The concepts of the "baby lung" and assessment of esophageal pressure, stress index, driving pressure and P-SILI are highlighted, as wells as salvage therapies for ARDS. RC 11L is the course where the students practice the knowledge learned in RC 11 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 11- Advanced Mechanical Ventilation
Corequisite: RC 12- Physician Interaction III
Prerequisite RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 10 –Advanced Life Support and ICU monitoring
Corequisite RC 11L – Applied Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 12 is a corequisite to RC 11. RC 12 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung protective strategies, weaning and liberation from mechanical ventilation. Noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring are also covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 11 – Advanced Mechanical Ventilation

Prerequisite: RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 11L – Applied Mechanical Ventilation
Corequisite RC 12- Physician Interaction
Corequisite RC 10- Advanced Life Support and ICU monitoring

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 11**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Compare and contrast negative pressure ventilation and positive pressure ventilation and evaluate effects of mechanical ventilation on oxygenation, ventilation, and lung mechanics.
B)	Describe the basic operation of modern mechanical ventilators and explain how pressure-, flow, and volume-triggering mechanisms work to begin the inspiratory phase of a breath.
C)	Compare and contrast various scalar waveforms, pressure, flow and volume and loops and their use to identify mechanical, spontaneous, and assisted breaths.
D)	Use the 10 fundamental maxims to describe targeting schemes and classify various modes of ventilation.
E)	Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).
F)	Compare and contrast alarms settings required for various modes of mechanical ventilation. i.e. volume control vs. pressure control. High and low pressure • High

	and low oxygen percentage • High and low minute volume • High rate • High and low positive end-expiratory pressure (PEEP)/continuous positive airway pressure (CPAP) • Alarm-silencing buttons.
G)	Differentiate between leak compensation and tube compensation, how it is achieved, and which ventilators offer this feature.
H)	Optimize the settings of rise time during pressure-targeted ventilation and expiratory cycling setting criteria during pressure support ventilation.

EXIT SKILLS (objectives) FOR **RC 9**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Compare and contrast negative pressure ventilation and positive pressure ventilation and evaluate effects of mechanical ventilation on oxygenation, ventilation, and lung mechanics.
2.	Describe the basic operation of modern mechanical ventilators and explain how pressure-, flow, and volume-triggering mechanisms work to begin the inspiratory phase of a breath.
3.	Compare and contrast various scalar waveforms, pressure, flow and volume and loops and their use to identify mechanical, spontaneous, and assisted breaths.
4.	Use the 10 fundamental maxims to describe targeting schemes and classify various modes of ventilation.
5.	Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).
6.	Compare and contrast alarms settings required for various modes of mechanical ventilation. i.e. volume control vs. pressure control. High and low pressure • High and low oxygen percentage • High and low minute volume • High rate • High and low positive end-expiratory pressure (PEEP)/continuous positive airway pressure (CPAP) • Alarm-silencing buttons.
7.	Differentiate between leak compensation and tube compensation, how it is achieved, and which ventilators offer this feature.
8.	Optimize the settings of rise time during pressure-targeted ventilation and expiratory cycling setting criteria during pressure support ventilation.

	ENTRANCE SKILLS FOR (RC 11)								
EXIT SKILLS FOR (RC 9)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 11L, Applied Advanced Mechanical Ventilation

Units:	2.50
Total Instructional Hours (usually 18 per unit):	135.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	7.50
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit – Degree Applicable
Corequisite(s):	RC 11
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care associate degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care associate degree.

I. **Catalog Description**
This course provides hands-on skills in lab setting and supervised clinical experience at local area hospitals with the purpose of gaining experience in applying evidence-based medicine to advanced concepts in mechanical ventilation. Emphasis is placed on recognizing acute lung injury, acute respiratory distress, and minimizing iatrogenic ventilator induced lung injury. In addition, practice in weaning and discontinuation of mechanical ventilation is covered.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012
2. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek , Elsevier- Mosby © 2017

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Assess a patient's readiness for weaning and liberation from mechanical via direct physical assessment, weaning parameters, chart review, laboratory data, imaging data, medical surgical and occupational, social, and family history.
2. Determine the most appropriate weaning strategy and conduct procedure, SBT with PSV, T-Tube, ATC according to the patient's condition.
3. Assess and perform weaning parameters, tracheal cuff leak test results, including RSBI, if acceptable, perform extubation procedure.
4. Assess need for NIV as bridge therapy in high-risk extubations to prevent reintubation.
5. Evaluate patient for evidence of acute lung injury and/or ARDS and determine severity of ARDS using the Berlin definition through direct patient assessment and medical records review.
6. Evaluate need for ARDSnet protocol and setup mechanical ventilator settings, mode, Vt, f, I:E ratio, PEEP and FiO2, make adjustments based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, ventilation and oxygenation data. When ready wean off ARDSnet protocol based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, ventilation, and oxygenation data.

7. Evaluate assessment of need for APRV, setup initial settings (T-high, T-low, P-high, P-low, fiO2), make adjustments based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, ventilation and oxygenation data.
8. Evaluate assessment of need for HFOV, set initial settings (Hz, amplitude, MAP, IT%, FiO2) make adjustments based on patient data such changes to compliance, resistance and/or patient comfort, acid-base status, ventilation and oxygenation data.
9. Recognize complications/adverse effects of ARDSnet protocol, APRV, proning position, nitric oxide, and HFOV.
10. Apply evidence-based medicine mechanical ventilation strategies to confer lung protection from iatrogenic ventilator induced lung injury.
11. Evaluate indications proning position, precautions, complications, and contraindications associated with it use.
12. Communicate effectively and establish rapport to collaborate, and coordinate with a physician and nurse to liberate patients from mechanical ventilation, or initiate and modify ARDSnet protocol, APRV, HFOV and nitric oxide modalities.
13. Document in the medical records the application of SBT, weaning parameters and/or extubation procedure, the initiation, and modifications of ARDSnet protocol, APRV, HFOV and nitric oxide modalities.

IV. **Methods of Presentation:**
Field Experience, Observation and Demonstration, Lab, Projects, Visiting Lecturers, Service Learning, Online instructor-provided resources, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
10.000%	Evaluate readiness for weaning and liberation from mechanical ventilation. Strategies of weaning and liberation from mechanical ventilation
10.000%	Initiate, monitor and modify SBT
5.000%	Weaning parameters, Tracheal cuff leak test
10.000%	ARDSnet protocol
10.000%	APRV and Proning Position
5.000%	Salvage therapies for management of ARDS: Nitric Oxide, HFOV, ECMO
25.000%	Clinical experience in application of advanced concepts of mechanical ventilation and lung protection strategies. Weaning and liberation from mechanical ventilation are also practiced.
25.000%	Assessment in competencies of advanced concepts of mechanical ventilation and lung protection strategies. Weaning and liberation from mechanical ventilation are also practiced
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Performance Practicum competency – Initiate, make modifications to ARDSnet protocol and APRV, select optimal settings based on patients condition.
30%	Simulation Clinical simulation managing a patient with ARDS in the ICU. Utilize best mechanical ventilation strategy to minimize lung injury. Or clinical simulation scenarios dealing with SBT, weaning parameters and extubation
10%	Written assignments

	Track procedures observed, performed with assistance, perform unassisted in advanced concepts of mechanical ventilation and lung protection strategies and weaning and liberation from mechanical ventilation. Summarize your day in the clinical setting and reflect on experiences learned during day. Compare and contrast clinical experience with didactic knowledge learned in the classroom or lab setting
20%	Other Professional behavior, verbal and written communication skills consistent with the role of a respiratory care practitioner when working in the critical care unit, monitoring patients.
20%	Final Performance Practicum competencies in SBT, weaning parameters, and extubation.
100%	Total

VII. **Sample Assignments:**

Online Assignment:

Online assignment- go to http://www.ardsnet.org/ download the ARDSnet protocol. Select settings for a a male patient diagnosed with ARDS, he is 5'10" tall, weighs 210lbs. The patient is on mechanical ventilation, A/C, VC , f = 20, Vt 500 mL, PEEP 8 cm H2O, FiO2 .50, P/F ratio. If more data is required, state what data. Come prepared your settings to the finding of your classmates in your group

Written:

Write a one page argument comparing and contrasting gradual weaning and abrupt weaning strategies. What's your take on the SBT with pressure support or SBT without pressure support or T-piece trial.

VIII. **Student Learning Outcomes:**

1. Evaluate readiness for weaning and liberation from mechanical ventilation.
2. Perform weaning parameter and extubation procedure.
3. Evaluate the need to start the ARDSnet protocol and APRV per physician orders and make recommendations as needed.
4. Analyze the patient's condition to determine best mechanical ventilation parameters when using the ARDSnet protocol or APRV.
5. Evaluate the need to initiate, monitor, make recommendations to patient with ARDS using lung protective strategies such as the ARDSnet protocol or APRV.

Corequisite Checklist and Worksheet

RC 11L- Applied Advanced Mechanical Ventilation

Corequisite: RC 11- Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 11L is a corequisite to RC 11. RC 11 presents conventional and unconventional strategies of mechanical ventilation to minimize lung injury. Emphasis is placed on the ARDSnet protocol and airway pressure release ventilation. The concepts of the "baby lung" and assessment of esophageal pressure, stress index, driving pressure and P-SILI are highlighted, as wells as salvage therapies for ARDS. RC 11L is the course where the students practice the knowledge learned in RC 11 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 12, Physician Interaction III

Units:	1.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	3.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 10 RC 11
Prerequisite(s):	RC 9
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMD degree or Masters degree in Respiratory Care, Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associate Degree.

I. **Catalog Description**
This course provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung protective strategies, weaning and liberation from mechanical ventilation. In addition, noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring are also covered.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
2. Evaluate noninvasive monitoring device for a given patient condition. (ECG, pulse oximetry, capnography, A-line, PAC, etc.)
3. Collect and synthesize capnography data to determine tracheal intubation, esophageal intubation, hypoventilation, hyperventilation, degree of paralysis, and return of spontaneous circulation if performing CPR. Present information to physician in a coherent and efficient manner..
4. Collect and synthesize hemodynamic data and waveforms and discuss finding with physician to optimize plan of care.
5. Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
6. Evaluate initial settings of mechanical ventilation, defend rationale for each parameter to a physician caring for that patient.

7. Communicate effectively with physician in coherent and efficient manner while functioning as a member of a code blue team during resuscitation effort, applying ACLS algorithms for lethal arrhythmias (ventricular fibrillation and ventricular fibrillation, asystole).
8. Communicate effectively with physician the need to start analgesics, sedatives or NMBA during mechanical ventilation for patient-ventilator asynchrony or decrease oxygen consumption.
9. Evaluate the decision-making process of a physician to determine the need to start analgesics, sedatives or NMBA during mechanical ventilation for patient-ventilator asynchrony or decrease oxygen consumption.
10. Formulate plan using evidenced-based lung protection strategies for a patient diagnosed with ARDS and recommend to a physician the best strategy, ARDSnet protocol, proning, APRV, NO, ECMO.
11. Communicate effectively with a physician medications patient is currently on as it pertains to cardiopulmonary condition. Systematically answer the following questions: • Mechanism of action • Pharmacologic classification • Time/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education.
12. Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to the physician.
13. Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).
14. Effectively communicate a ventilator patient profile to an ICU rounding team.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Critique, Visiting Lecturers, Group Work, Online instructor-provided resources, Lecture and Discussion, Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
20.000%	Noninvasive and invasive monitoring
20.000%	Lung protective strategies
20.000%	Hemodynamic monitoring
20.000%	Weaning and liberation from mechanical ventilation
20.000%	Case study presentation, communication skills
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
30%	Final exam
25%	Simulation Clinical Simulation
25%	Oral Presentation Case study presentation
20%	Group Projects
100%	Total

VII. **Sample Assignments:**
Patient Profile:
Select a patient intubated/trached and on mechanical ventilation, who is being weaned off mechanical ventilation or has been diagnosed with ARDS and actively being managed with lung protection strategies. Include type of

noninvasive monitoring being used. Write a patient profile or case study report, present it to a physician in a class setting or clinical setting.

Written:
Create a script to communicate with a physician regarding a patient's readiness for weaning and liberation off mechanical ventilation or for a patient who is a candidate for lung protection strategies. Use the SBAR method of communication to coherently and effectively communicate to a physician the need to initiate the ARDSnet protocol as a lung protective strategy or if a patient is determined ready for weaning and liberation off mechanical ventilation, recommend best weaning method. Use critical thinking skills such as formulate, anticipate, prioritize, analyze, infer, interpret, negotiate, trouble-shoot and decision making (recommend).

VIII. **Student Learning Outcomes:**

1. Demonstrate coherent and efficient verbal communication skills to present a patient that requires lung protective strategies of mechanical ventilation to a physician. Include data obtained via noninvasive or invasive monitoring.
2. Work in Partnership with a physician to determine a patient’s readiness for weaning and liberation off mechanical ventilation. The RCP will anticipate, prioritize, and recognize signs the patient is ready and communicate it to the physician in a coherent and efficient manner. The RCP will then recommend the best weaning strategy or request order to extubate patient.

Corequisite Checklist and Worksheet

RC 12- Physician Interaction III
Corequisite: RC 10- Advanced Cardiac Life Support and ICU Monitoring
Prerequisite - RC 9- Intermediate Mechanical Ventilation
Corequisite RC 11 – Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 10 is a corequisite to RC 12. RC 12 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung protective strategies, weaning and liberation from mechanical ventilation. Noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring are also covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 12- Physician Interaction III
Corequisite: RC 11- Advanced Mechanical Ventilation
Prerequisite - RC 9- Intermediate Mechanical Ventilation
Corequisite RC 10 – Advanced Cardiac Life Support and ICU Monitoring

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 11 is a corequisite to RC 12. RC 12 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung protective strategies, weaning and liberation from mechanical ventilation. Noninvasive and invasive monitoring, capnography, pulse oximetry, transcutaneous and hemodynamic monitoring are also covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 12 – Physician Interaction III

Prerequisite: RC 9 – Intermediate Mechanical Ventilation
Corequisite RC 10 –Advanced Life Support and ICU monitoring
Corequisite RC 11- Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 12**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Compare and contrast alarms settings required for various modes of mechanical ventilation. i.e. volume control vs. pressure control. High and low pressure • High and low oxygen percentage • High and low minute volume • High rate • High and low positive end-expiratory pressure (PEEP)/continuous positive airway pressure (CPAP) • Alarm-silencing buttons.
B)	Assess indications application of positive end expiratory pressure (PEEP) and physiological sequalae on hemodynamics.
C)	Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion, gastrointestinal function, and central nervous system
D)	Appraise adverse effects of mechanical ventilation and formulate plan to minimize it when present.
E)	Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).

F)	Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion, gastrointestinal function, and central nervous system.
G)	Optimize the settings of rise time during pressure-targeted ventilation and expiratory cycling setting criteria during pressure support ventilation.
H)	Use the 10 fundamental maxims to describe targeting schemes and classify various modes of ventilation.

EXIT SKILLS (objectives) FOR **RC 9**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Compare and contrast alarms settings required for various modes of mechanical ventilation. i.e. volume control vs. pressure control. High and low pressure • High and low oxygen percentage • High and low minute volume • High rate • High and low positive end-expiratory pressure (PEEP)/continuous positive airway pressure (CPAP) • Alarm-silencing buttons.
2.	Assess indications application of positive end expiratory pressure (PEEP) and physiological sequalae on hemodynamics.
3.	Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion, gastrointestinal function, and central nervous system
4.	Appraise adverse effects of mechanical ventilation and formulate plan to minimize it when present.
5.	Evaluate presence of patient-ventilator asynchrony by assessing patient and ventilator waveforms and formulate a plan to correct, modify or eliminate various types of asynchrony (flow, triggering, cycling).
6.	Evaluate complications and hazards of positive pressure on physiological systems such as: intracranial pressure, renal function, liver and splanchnic perfusion, gastrointestinal function, and central nervous system.
7.	Optimize the settings of rise time during pressure-targeted ventilation and expiratory cycling setting criteria during pressure support ventilation.
8.	Use the 10 fundamental maxims to describe targeting schemes and classify various modes of ventilation.

	ENTRANCE SKILLS FOR (RC 12)								
EXIT SKILLS FOR (RC 9)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						x		
	7							x	
	8								x

New Course: RESPIRATORY CARE 13, Neonatal and Pediatric Respiratory Care

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 13L
Prerequisite(s):	RC 10 RC 11
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care associate degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care associate degree.

I. **Catalog Description**
This course presents prenatal development, high risk pregnancy and normal labor and delivery. Assessment of the newborn and pediatric patient, neonatal and pediatric diseases and disorders are described with an emphasis on the respiratory care interventions, techniques, and equipment used in neonatal and pediatric patient care. The use of noninvasive and invasive mechanical ventilation and strategies to reduce the likelihood of ventilator induced lung injury are also discussed.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Neonatal & Pediatric Respiratory Care, Bryan K. Walsh, Elsevier © 2019

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Correlate fetal and neonatal lung development to conditions/disease processes in some neonatal and pediatric patients.
2. Compare and contrast the fetal-placental unit to fetal-newborn pulmonary and circulatory transition.
3. Analyze the significance of thermoregulation of the newborn in care of premature infants.
4. Describe pathogenesis, diagnosis, and treatment of common neonatal and pediatric respiratory diseases.
5. Evaluate the sequalae of high-risk pregnancy and compare it to the normal clinical course of labor and delivery of the newborn, including high-risk delivery.
6. Determine the assessment of need for nitric oxide in neonatal patient based on disease process or condition for which nitric oxide may be indicated.
7. Interpret neonatal and pediatric arterial blood gas, common medical tests, laboratory data and graphic images typically available in the NICU and labor and delivery room.
8. Evaluate the use of continuous positive airway pressure, initiation of mechanical ventilation, including high-frequency ventilation in the care of infants and children.
9. Calculate the approximate tidal volume (VT) delivered by a typical infant ventilator when given a particular flow and inspiratory time (TI), select controls, monitors, alarm, and safety systems typically found on infant and pediatric ventilators.

10. Evaluate the use of noninvasive ventilation in infants and children, precautions and key troubleshooting points for nasal CPAP devices and neonatal and pediatric ventilators.
11. Formulate a ventilator management plan for a patient in status asthmaticus, including the use of heliox, CBT and systemic steroids.
12. Assess the process ventilator discontinuance for infants and children, including a safety screen and assessment of ability to breathe spontaneously.
13. Discuss importance of exogenous surfactant in the reduction and prevention of lung injury such as BPD.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Visiting Lecturers, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
15.000%	Newborn and pediatric physical assessment
10.000%	High-risk pregnancies
5.000%	Lung development and Fetal circulation
10.000%	High-risk delivery vs. normal newborn
5.000%	Neonatal and pediatric medical tests and lab data
20.000%	Newborn and pediatric respiratory diseases and conditions
10.000%	Neonatal and pediatric modes and ventilator controls
20.000%	Neonatal and pediatric Noninvasive and Invasive mechanical ventilation
5.000%	Neonatal and pediatric Weaning of mechanical ventilation
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Exams/Tests Exam #1 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
5%	Oral Presentation Journal presentation
30%	Final exam
20%	Exams/Tests Exam #2 -multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
100%	Total

VII. **Sample Assignments:**

Online Assignmnet:

Internet education via nicuniversity.org or pedsuniversity.org; students' choice of any 2, 1 hour seminar presentations with proof of completion from quiz at end of presentation.

Journal Presentation:

Read a recent published journal article based on assigned topics related to neonatal and/or pediatric conditions pertinent to respiratory care practitioners. Compose a power point or Prezi presentation and deliver to class

VIII. **Student Learning Outcomes:**

1. Explain the pathogenesis of common neonatal-pediatric disease/conditions.
2. List conditions that can lead to high-risk pregnancy and what the RCP can do help prepare for risk-risk delivery.
3. Describe the indications for the initiation of invasive and noninvasive mechanical ventilation of the neonate and pediatric patient.
4. Describe the weaning process of a neonate and pediatric patient of mechanical ventilation.

Corequisite Checklist and Worksheet

RC 13- Neonatal and Pediatric Respiratory Care
Corequisite: RC 13L- Applied Neonatal and Pediatric Respiratory Care
Prerequisite RC 11- Advanced Mechanical Ventilation
Prerequisite RC 10- Advanced Life Support and ICU Monitoring

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 13L is the corequisite to RC 13. RC 13 presents prenatal development, high-risk pregnancy and normal labor and delivery. Assessment of the newborn and pediatric patient, neonatal and pediatric diseases and disorders are described with an emphasis on respiratory care interventions, techniques, and equipment used in neonatal and pediatric patient care. RC 13L is the course where the students practice the knowledge learned in RC 13 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Prerequisite Checklist and Worksheet: RC 13 – Neonatal and Pediatric Respiratory Care

Prerequisite: RC 10 – Advanced Life Support and ICU Monitoring
Corequisite is RC 13L –Applied Neonatal and Pediatric Respiratory Care
Prerequisite is RC 11 – Advanced Mechanical Ventilation

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 13**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Evaluate noninvasive monitoring (Pulse oximetry, photoplethysmography Capnography, Volumetric capnography, Transcutaneous monitoring) interpret results and assess their limitation.
B)	Discuss the use of selective pulmonary vasodilators in pulmonary hypertension.
C)	Recognize components of a normal capnogram, evaluate abnormal capnogram and related it to changes in metabolic status and physiology of lung can cardiac output.
D)	Classify diuretics according to their mechanism of action, indications, and adverse effects.

E)	Evaluate advantages of point-of-care testing and quality control procedures used in a blood gas laboratory.
F)	Assess indications for local and general anesthesia and evaluate the role the RCP during conscious sedation as it relates to airway management and ventilation/oxygenation monitoring.

EXIT SKILLS (objectives) FOR **RC 10**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Evaluate noninvasive monitoring (Pulse oximetry, photoplethysmography Capnography, Volumetric capnography, Transcutaneous monitoring) interpret results and assess their limitation.
2.	Discuss the use of selective pulmonary vasodilators in pulmonary hypertension.
3.	Recognize components of a normal capnogram, evaluate abnormal capnogram and related it to changes in metabolic status and physiology of lung can cardiac output.
4.	Classify diuretics according to their mechanism of action, indications, and adverse effects.
5.	Evaluate advantages of point-of-care testing and quality control procedures used in a blood gas laboratory.
6.	Assess indications for local and general anesthesia and evaluate the role the RCP during conscious sedation as it relates to airway management and ventilation/oxygenation monitoring.

	ENTRANCE SKILLS FOR (RC 13)								
EXIT SKILLS FOR (RC 10)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						X		
	7								
	8								

Prerequisite Checklist and Worksheet: RC 13 – Neonatal and Pediatric Respiratory Care

Prerequisite: RC 11 – Advanced Mechanical Ventilation
Corequisite is RC 13L –Applied Neonatal and Pediatric Respiratory Care
Prerequisite is RC 10 – Advanced Life Support and ICU monitoring

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 13**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Evaluate factors that should be optimized before an attempt is made at ventilator discontinuation or weaning, assess respiratory, cardiovascular, neurological, and psychological reasons for ventilator dependence.
B)	Compare and contrast techniques used in ventilator weaning, including daily spontaneous breathing trials, synchronized intermittent mandatory ventilation, pressure support ventilation, and other newer methods (NAVA, ATC), advantages and disadvantages associated with the various weaning methods and techniques.
C)	Examine primary reasons why patients fail a ventilator discontinuance trial, and importance of a cuff leak test prior to extubation and systemic steroids

D)	Support recommended initial settings and evaluate complications associated APRV HFOV, and nitric oxide.
E)	Evaluate how driving pressure and transpulmonary pressures can be applied to prevent lung injury and compare and contrast recruitment maneuvers with “best PEEP.”
F)	Correlate the concept of the “baby lung” in ARDS to the clinical implications of stress index and strain in lung physiology, and the rationale for the use of the ARDSnet protocol as lung protective strategy.
G)	Support recommended initial settings and evaluate complications associated APRV HFOV, and nitric oxide.

EXIT SKILLS (objectives) FOR **RC 11**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Evaluate factors that should be optimized before an attempt is made at ventilator discontinuation or weaning, assess respiratory, cardiovascular, neurological, and psychological reasons for ventilator dependence.
2.	Compare and contrast techniques used in ventilator weaning, including daily spontaneous breathing trials, synchronized intermittent mandatory ventilation, pressure support ventilation, and other newer methods (NAVA, ATC), advantages and disadvantages associated with the various weaning methods and techniques.
3.	Examine primary reasons why patients fail a ventilator discontinuance trial, and importance of a cuff leak test prior to extubation and systemic steroids
4.	Support recommended initial settings and evaluate complications associated APRV HFOV, and nitric oxide.
5.	Evaluate how driving pressure and transpulmonary pressures can be applied to prevent lung injury and compare and contrast recruitment maneuvers with “best PEEP.”
6.	Correlate the concept of the “baby lung” in ARDS to the clinical implications of stress index and strain in lung physiology, and the rationale for the use of the ARDSnet protocol as lung protective strategy.
7.	Support recommended initial settings and evaluate complications associated APRV HFOV, and nitric oxide.

		RC 13							
		A	B	C	D	E	F	G	H
EXIT SKILLS FOR (RC 11)	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						X		
	7							X	
	8								

New Course: RESPIRATORY CARE 13L, Applied Neonatal and Pediatric Respiratory Care

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit – Degree Applicable
Corequisite(s):	RC 13
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care associate degree degree.

Rationale
This is course is part of the comprehensive Respiratory Care associate degree degree.

I. **Catalog Description**
This course presents hands-on application of neonatal-pediatric respiratory care, physical assessment, neutral thermal environment and management of common respiratory diseases/conditions. Application of technical skills used to assess need, initial setup, and monitoring of neonatal and pediatric patient requiring noninvasive and invasive mechanical ventilation are also covered.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Neonatal & Pediatric Respiratory Care, Bryan K. Walsh, Elsevier © 2019
2. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2013

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Evaluate the medical record, and maternal assessment to determine high-risk pregnancy and high-risk delivery.
2. Assemble and setup equipment required for neonatal resuscitation procedure.
3. Collect and synthesize warning signs (red flags) of respiratory distress, tachypnea, mechanics of breathing, retractions, tracheal tug, nasal flaring, head bobbing, grunting on exhalation, prolonged expiratory phase, diminished air entry, change in breath sounds, stridor, wheezing.
4. Gather and synthesize red flags of cardiovascular collapse, tachycardia, altered perfusion, skin, prolonged capillary refill > 2 sec, increased core to skin temperature gradient, brain, altered level of consciousness/activity, decreased response, "worried" appearance, kidneys, decreased urinary output
5. Assess the need for oxygen therapy, aerosol therapy and bronchial hygiene to neonatal and pediatric patient and practice its application, as necessary.
6. Evaluate the need for invasive mechanical ventilation, and set-up initial ventilator settings for neonatal or pediatric based on their condition.
7. Gather and synthesize monitored data, recognize adverse effects to mechanical ventilation and make appropriate recommendations.
8. Evaluate the need for specialty gases (nitric oxide, heliox) and provide overview of device set-up.

9. Evaluate need for surfactant delivery to neonate and describe methods of instilling exogenous surfactant when indicated
10. Document in the medical record findings about that patient condition and the application of invasive and noninvasive mechanical ventilation.
11. Effectively communicate information regarding patient's conditions (ex. APGAR score) using professional behavior and communication skills to collaborate, and coordinate with a physician and nurse the best approach to optimize outcome of infant or child.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Service Learning, Visiting Lecturers, Online instructor-provided resources, Discussion, Lecture and Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
15.000%	Patient assessment (neonatal and pediatric)
10.000%	High-risk pregnancy
15.000%	Neonatal and pediatric respiratory care modalities
5.000%	Neonatal and pediatric blood gas interpretation
20.000%	Assessment of need of mechanical ventilation, Modes of mechanical ventilation with commonly used ventilators invasive and noninvasive ventilation complications of mechanical ventilation. Mechanical ventilation parameters for neonatal and pediatric patients.
5.000%	Adjunctive therapies: special gasses (heliox and nitric oxide), nutrition, extracorporeal membrane oxygenation, pharmacology, surfactant administration in the neonatal and pediatric population.
20.000%	Case Studies: Assessments, interpretation and evaluation of given case studies with plan for care.
10.000%	Wean neonatal and pediatric patient of mechanical ventilation.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Group Projects Lab book, case studies
30%	Simulation
20%	Final exam
10%	Quizzes
20%	Class Work The work relates to the NRP (Neonatal Resuscitation Program - students will complete the American Association of Pediatrics and American Heart Association, basics skills and training of neonatal resuscitation. Passing the exam will grant them the NRP certificate).
100%	Total

VII. **Sample Assignments:**
Case study:
Given a case scenario of a neonate or infant on a mechanical ventilation or requiring mechanical ventilation, work in a group of no more than four students to evaluate the following: 1. Indication for mechanical ventilation, if any, 2. Validate your findings 3. If patient is on mechanical ventilation, do you agree with ventilator settings?

Lab activity:
Complete clinic competencies, 1st evaluated by peer-to-peer. The faculty will then perform final evaluation for performance of physical assessment on neonatal and pediatric patients and the application of various respiratory care modalities to treat a particular patient condition. You will be evaluated at advanced beginner level according to Dreyfus model of skill acquisition, satisfactorily performed as deemed by the faculty.

VIII. **Student Learning Outcomes:**

1. Assess both neonatal and pediatric patients for respiratory problems and then prioritize the patients' care (relative to the other patients they are assigned to take care of) as a result of this assessment.
2. Perform an initial assessment of a patient and propose a respiratory care plan based on this assessment.
3. Apply various forms of respiratory care modalities to particular neonatal/pediatric respiratory care conditions.
4. Demonstrate how to assess need for mechanical ventilation in neonatal and pediatric patient.
5. Demonstrate how to correctly select the type of mechanical ventilation (invasive vs. noninvasive), CPAP level, Vt, F, I-time, FiO2, PEEP, PSV, etc. for neonatal or pediatric patient based on their condition.

Corequisite Checklist and Worksheet

RC 13L- Applied Neonatal and Pediatric Respiratory Care

Corequisite: RC 13- Neonatal and Pediatric Respiratory Care

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 13L is the corequisite to RC 13. RC 13 presents prenatal development, high-risk pregnancy and normal labor and delivery. Assessment of the newborn and pediatric patient, neonatal and pediatric diseases and disorders are described with an emphasis on respiratory care interventions, techniques, and equipment used in neonatal and pediatric patient care. RC 13L is the course where the students practice the knowledge learned in RC 13 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 14, Outpatient Respiratory Care

Units:	1.00
Total Instructional Hours (usually 18 per unit):	18.00
Hours per week (full semester equivalent) in Lecture:	1.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	36.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 14L RC 15 RC 17
Prerequisite(s):	RC 12
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associate Degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care associate degree.

I. **Catalog Description**
This course covers pulmonary function testing (PFT), sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. Emphasis is placed on indication for PFT and cardiopulmonary rehabilitation. Respiratory care in alternative settings is covered as it pertains to the scope of practice of respiratory care practitioners.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Egan's Fundamentals of Respiratory Care, Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
2. orkbook to Accompany Egan's Fundamentals of Respiratory Care, Wehrman, Stephen F, Elsevier © 2012
3. American Thoracic Society and European Respiratory Society https://www.atsjournals.org/doi/full/10.1164/rccm.201908-1590ST#readcube-epdf

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Determine the need for pulmonary function tests (PFT), evaluate results and correlate it to pathophysiologic patterns associated with obstructive and restrictive lung disease.
2. Assess the need for cardiopulmonary exercise testing (CPX) and correlate findings to cardiovascular and/or pulmonary disease.
3. Assess patients for pulmonary rehabilitation or cardiac rehabilitation based on their general rehabilitation goals.
4. Examine rationale for exercise conditioning and psychosocial support of patients with chronic pulmonary disease.
5. Develop educational content, program design, outcome measures, and potential hazards for pulmonary rehabilitation program.
6. Formulate an effective discharge plan that includes, strategies for restoration to the fullest medical, mental, emotional, social, and vocational potential to maximize functional ability and minimize the impact of the disability.
7. Assess the need for sleep study, interpret results and correlate to sleep disorder.

8. Evaluate forms of therapy available (CPAP vs Bilevel pressure vs CPAP auto-titrating) for treatment of OSA.
9. Appraise need the for oxygen (O2) therapy in home care setting, determine appropriateness of therapy and make recommendations are needed.
10. Evaluate the home environment for appropriateness of prescribed respiratory care therapy and identity risk factors for compliance.
11. Evaluate the home environment for oxygen therapy safety, including presence of fire extinguishers, smoke detectors, smoking cessation, evacuation routes, open flames, etc.
12. Educate patients in the process of disinfecting home medical equipment to prevent and minimize infection.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources

V. **Course Content**

% of Course	Topic
25.000%	Pulmonary function testing
25.000%	pulmonary rehabilitation
25.000%	Sleep laboratory
25.000%	Home care
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
15%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Group Projects Journal presentation
20%	Exams/Tests Exam #1- multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
10%	Written assignments Complete workbook utilizing information from assigned chapter readings, journal articles, in-class notes.
25%	Final exam
20%	Exams/Tests Exam #2- multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination.
100%	Total

VII. **Sample Assignments:**
Written Assignment:
Compare and contrast the flow-volume loop of a normal individual with those of person with obstructive lung disease or restrictive lung disease. Write a one page summary and come prepare to defend your position.

Journal :
Read this article on coaching patients during pulmonary function. Write a brief summary, name at least three of

best tips you learned and why do you think they are useful in any setting.
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4530837/pdf/cjrt-51-65.pdf

VIII. **Student Learning Outcomes:**

1. 1. Evaluate the assessment of need for a PFT and sleep lab and interpret the results.
2. 2. Examine which patients would be candidates to enroll in for pulmonary rehabilitation program.

Corequisite Checklist and Worksheet

RC 14- Outpatient Respiratory Care
Corequisite: RC 14L- Applied Outpatient Respiratory Care
Prerequisite- RC 12 - Physician Interaction III
Corequisite- RC 15 – Respiratory Disease Management
Corequisite- RC 17 – Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 14L is a corequisite to RC 14. RC 14 presents pulmonary function testing, sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. Emphasis is placed on indications for PFT and cardiopulmonary rehabilitation. Respiratory care in alternative settings is covered as it pertains to the scope of practice of respiratory care practitioners. RC 14L is the course where the students practice the knowledge learned in RC 14 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 14- Outpatient Respiratory Care
Corequisite: RC 15- Respiratory Disease Management
Prerequisite- RC 12 - Physician Interaction III
Corequisite- RC 14L– Applied Outpatient Respiratory Care
Corequisite- RC 17 – Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 15 is a corequisite to RC 14. The role of Respiratory Care Practitioners (RCPs) is expanding to include outpatient care settings. RC 14 and RC 15 explore career opportunities for RCPs in the acute care setting, outpatient (PFT, Pulmonary Rehabilitation, sleep labs) and beyond as a respiratory disease manager or navigator. RC 15 covers the health system requirements, practitioner knowledge base, technical skills in case management, patient-education, and self-management. RC 14 includes pulmonary function testing, sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 14 – Outpatient Respiratory Care
Corequisite: RC 17- Physician Interaction IV
Prerequisite RC 12 – Physician Interaction III
Corequisite RC 14L- Applied Outpatient Respiratory Care
Corequisite RC 15- Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 14 is a corequisite to RC 17. RC 17 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course focuses on the implementation of physician-ordered respiratory care protocols, respiratory disease management and the interaction between the RCP and the physician in the outpatient care setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. The CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 14 – Outpatient Respiratory Care

Prerequisite: RC 12 – Physician Interaction III
Corequisite is RC 14L – Applied Outpatient Respiratory Care
Corequisite is RC 15 – Respiratory Disease Management
Corequisite RC 17- Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required.
The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below.
Please identify which one is being used to justify the proposed prerequisite.
The additional level of scrutiny corresponding to each type of
prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 14**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
B)	Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
C)	Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to

	the physician.
D)	Evaluate initial settings of mechanical ventilation, defend rationale for each parameter to a physician caring for that patient.
E)	Communicate effectively with a physician medications patient is currently on as it pertains to cardiopulmonary condition. Systematically answer the following questions: • Mechanism of action • Pharmacologic classification • Time/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education.
F)	Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).

EXIT SKILLS (objectives) FOR **RC 12**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
2.	Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
3.	Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to the physician.
4.	Evaluate initial settings of mechanical ventilation, defend rationale for each parameter to a physician caring for that patient.
5.	Communicate effectively with a physician medications patient is currently on as it pertains to cardiopulmonary condition. Systematically answer the following questions: • Mechanism of action • Pharmacologic classification • Time/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education.
6.	Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).

	ENTRANCE SKILLS FOR (RC 14)								
EXIT SKILLS FOR (RC 12)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						X		
	7								
	8								

New Course: RESPIRATORY CARE 14L, Applied Outpatient Respiratory Care

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 14
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU is preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associate Degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care associate degree.

I. **Catalog Description**
This course presents hands-on application of outpatient pulmonary care services such as pulmonary function tests, sleep labs, pulmonary rehabilitation and in alternative settings such as physician offices and home care. In addition, supervised clinical experience at local area hospitals is provided. Clinical rotations in pulmonary function lab, pulmonary rehabilitation and sleep lab will be provided.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)

1. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012
2. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
3. Dataarc. dataarc.ws, 2 ed.
   Software that allows the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned during day.

III. **Course Objectives**
Upon completion of this course, the student will be able to:

1. Gather and synthesize assessment data through direct, chart review, medical surgical and occupational, social, and family history for patient undergoing PFT.
2. Calibrate PFT equipment and perform basic spirometry tests, including MIP, NIF, MEP, FVC, MMV and PEF.
3. Educate patient/care giver on ability to perform home regimen respiratory care in the home setting.
4. Effectively communicate with physicians or other healthcare provider about a patient's PFTs, sleep study results, and pulmonary rehabilitation.
5. Gather and synthesize clinical data to identify special factors and co-morbid conditions affecting individuals with potential sleep disorders. disorders.

6. Evaluate special requirements associated a patient's psychological, physical, cultural, language, and cognitive status.
7. Conduct placement of electrodes and sensors at optimal locations to obtain data on airflow, snoring, body position, ECG, respiratory effort, EEG, leg movements, eye movements, chin EMG, exhaled CO2 and/or SpO2.
8. Determine the most appropriate treatment for particular sleep disorder- CPAP, Auto-CPAP, bilevel PAP, supplemental oxygen, patient position, and other forms of noninvasive therapy.
9. Develop a blueprint for a basic pulmonary rehabilitation session based on patient's condition.
10. Develop an educational plan to ensure patients remain compliant with home regimen respiratory care modalities as prescribed by a physician.
11. Develop a safety plan for home care oxygen therapy and equipment cleaning and disinfection of home medical equipment.
12. Document in the medical record patient findings and patients' response to rehab program/therapy and make recommendations as needed.

IV. **Methods of Presentation:**
Lab, Field Experience, Observation and Demonstration, Projects, Visiting Lecturers, Online instructor-provided resources, Group Work, Discussion, Work Experience (internship), Lecture and Discussion

V. **Course Content**

% of Course	Topic
25.000%	Pulmonary Function Testing
25.000%	Pulmonary Rehabilitation
25.000%	Sleep laboratory
25.000%	Respiratory care in alternative settings, primarily home care.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Simulation Clinical simulations - Assessment in competencies related to pulmonary function test and sleep study exam.
15%	Group Projects
20%	Other Professional behavior, verbal and written communication skills consistent with the role of a respiratory care practitioner when working in the pulmonary function lab, sleep lab and home care setting or physician's office.
20%	Performance Practicum competency in basic spirometry
20%	Performance Homecare/Sleep lab
100%	Total

VII. **Sample Assignments:**
case study:
Interpret the following PFT results. Case Study 1: 47 year-old male, 70 inches, 185 pounds, smoking history, shortness of breath on moderate exertion. Interpret the following PFT and support your findings. PFT Before Brochodilator Therapy After Brochodilator Therapy Lung Mechanics Observed Predicted % Pred. Observed %

Pred. FVC (L) 4.01 4.97 81 4.49 90 FEV1 (L) 2.05 3.67 56 2.40 65 FEV1/FVC % 51 74 53 MVV (L/min) 71 136 52 85 63 FEF 25 (L/sec) 2.02 6.18 33 2.45 40 FEF 50 (L/sec) 1.54 4.45 34 1.82 41 FEF 75 (L/sec) 0.60 1.85 32 0.65 35

Lab activity:
Complete clinic competencies, 1st evaluated by peer-to-peer. The faculty will then perform a final evaluation in performing basic spirometry. The student will be evaluated at advanced beginner level according to the Dreyfus model of skill acquisition and determined if satisfactorily performed by the faculty.

VIII. **Student Learning Outcomes:**

1. Evaluate the need for PFT, perform basic spirometry and interpret results.
2. Evaluate the need for a sleep study and recommend therapy when appropriate.

Corequisite Checklist and Worksheet

RC 14L- Applied Outpatient Respiratory Care

Corequisite: RC 14- Outpatient Respiratory Care

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 14L is the corequisite to RC 14. RC 14 presents pulmonary function testing, sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. Emphasis is placed on indications for PFT and cardiopulmonary rehabilitation. Respiratory care in alternative settings is covered as it pertains to the scope of practice of respiratory care practitioners. RC 14L is the course where the students practice the knowledge learned in RC 14 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 15, Respiratory Disease Management

Units:	2.00
Total Instructional Hours (usually 18 per unit):	36.00
Hours per week (full semester equivalent) in Lecture:	2.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	72.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 14 RC 15L RC 17
Prerequisite(s):	RC 12
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care, MPH, Or BSRT or BS degree llfe sciences AND at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
his is course part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course explores career opportunities for respiratory care practitioners in the acute care setting and beyond as a respiratory disease manager or navigator. The course covers the health system requirements, practitioner knowledge base, technical skills in case management, patient-education, and self-management, essential tools required to function and succeed as pulmonary disease manager, including the implementation of protocol-directed respiratory care.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Respiratory Care Clinical manifestations and Assessment of Respiratory Diseases, Des Jardinds, Burton, Elsevier-Mosby © 2020
2. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
3. The Respiratory Therapist as Disease Manager, Harry Leen, Jones and Bartlett Learning © 2020
4. American Association for Respiratory Care model protocol http://c.aarc.org/members_area/resources/model_protocols.asp

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Differentiate between practice guidelines and protocols, and how information should be presented, algorithm or flowchart.
2. Evaluate the skills required for a successful Therapist-Driven Protocol (TDP) program, and include: The clinical manifestations, assessments, and treatment selections made by the respiratory care practitioner, frequency at which a respiratory therapy modality can be determined in response to a severity assessment.
3. Apply evidence-based medicine to develop the following respiratory care protocols: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
4. Present an overview of the management of chronic respiratory diseases: Chronic Obstructive Pulmonary Disease, asthma, bronchiectasis, interstitial lung disease, pulmonary hypertension.

5. Discuss the role of the respiratory care practitioner as self-management trainer and improve quality of life and reduce costs.
6. Evaluate the need for palliative care and incorporate it to the discussion of disease management.
7. Conduct an education sessions to empower and engage patients in health behavior theory and home respiratory care support.
8. Explain the healthcare and financial reimbursement systems and the need to reduce the cost of delivering respiratory care.
9. Describe the regulatory requirements that impact the healthcare system and how they impact patient care.
10. Demonstrate cultural competence and literacy when communicating with a patient, family and various members of the healthcare team.

IV. **Methods of Presentation:**
Lecture and Discussion, Observation and Demonstration, Projects, Group Work, Online instructor-provided resources, Visiting Lecturers

V. **Course Content**

% of Course	Topic
25.000%	Protocol-driven respiratory care
25.000%	Foundations of case management and role of respiratory care practitioner as disease manager/ care transitions coordinator
25.000%	Overview of chronic respiratory diseases
25.000%	Patient education, behavioral modification and counseling, and professional behavior and communication skills.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
20%	Exams/Tests Midterms (multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination).
20%	Group Projects Project design a discharge plan
20%	Other Design a protocol to manage COPD exacerbation in the ER and floor care.
10%	Oral Presentation Journal presentation on articles related to respiratory care practitioners as disease managers.
20%	Final exam
10%	Quizzes Multiple choice questions will be used similar in content to those presented in the National Board for Respiratory Care (NBRC) examination
100%	Total

VII. **Sample Assignments:**
Written Assignment:
Visit the AARC, http://www.aarc.org/webcasts/chronic-disease-management/ watch the webcast video on respiratory care chronic disease management. Write a summary of your learning experience, do you think it is feasible for RCPs to become respiratory disease managers

Written assigment:
Visit the AARC, http://www.aarc.org/webcasts/chronic-disease-management/ watch the webcast video on respiratory care chronic disease management. Write a summary of your learning experience, do you think it is feasible for RCPs to become respiratory disease managers?

VIII. **Student Learning Outcomes:**

1. Evaluate and assess the need for Respiratory Care Practitioners (RCPs) to function in the role of respiratory disease managers (navigators) by applying evidence-based medicine that justifies that patients managed by a respiratory disease manager have improved quality of life and reduced costs to the healthcare system. Include skills specific to respiratory care practitioners that make well suited for the role.
2. Design a respiratory care protocol using the latest evidence-based medicine literature for an asthmatic or COPD patient, to be used in the emergency room or hospital wards. Make sure to evaluate the source of scientific data and the type of skills required by the respiratory care practitioner to carry out the protocol.

Corequisite Checklist and Worksheet

RC 15- Respiratory Disease Management
Corequisite: RC 14- Outpatient Respiratory Care
Prerequisite- RC 12 - Physician Interaction III
Corequisite- RC 15L– Applied Respiratory Disease Management
Corequisite- RC 17 – Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 15 is a corequisite to RC 14. The role of Respiratory Care Practitioners (RCPs) is expanding to include outpatient care settings. RC 14 and RC 15 explore career opportunities for RCPs in the acute care setting, outpatient (PFT, Pulmonary Rehabilitation, sleep labs) and beyond as a respiratory disease manager or navigator. RC 15 covers the health system requirements, practitioner knowledge base, technical skills in case management, patient-education, and self-management. RC 14 includes pulmonary function testing, sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 15- Respiratory Disease Management
Corequisite: RC 15L- Applied Respiratory Disease Management
Prerequisite RC 12 - Physician Interaction III
Corequisite RC 14 – Outpatient Respiratory Care
Corequisite RC 17 – Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 15L is a corequisite to RC 15. RC 15 explores career opportunities for respiratory care practitioners in the acute care setting and beyond as a respiratory disease manager or navigator. The course covers the health system requirements, practitioner knowledge content, technical skills in case management, patient-education, and self-management. RC 15L is the course where the students practice the knowledge learned in RC 15 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

Corequisite Checklist and Worksheet

RC 15- Respiratory Disease Management
Corequisite: RC 17- Physician Interaction IV
Prerequisite RC 12 – Physician Interaction III
Corequisite RC 14- Outpatient Respiratory Care
Corequisite RC 15L- Applied Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 15 is a corequisite to RC 17. RC 17 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include career opportunities for respiratory care practitioners in the acute care setting and beyond as a respiratory disease manager or navigator. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 15 –Respiratory Disease Management

Prerequisite: RC 12 – Physician Interaction III
Corequisite is RC 14 –Outpatient Respiratory Care
Corequisite is RC 17 – Physician interaction IV
Corequisite is RC 15L – Applied Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required.
The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below.
Please identify which one is being used to justify the proposed prerequisite.
The additional level of scrutiny corresponding to each type of
prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 15**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
B)	Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
C)	Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to the physician.
D)	Communicate effectively with physician in coherent and efficient manner while functioning as member of code blue team during resuscitation effort, applying ACLS algorithms for lethal arrhythmias (ventricular fibrillation and ventricular fibrillation, asystole).
E)	Communicate effectively with a physician medications patient is currently on as it

	pertains to cardiopulmonary condition. Systematically answer the following questions: • Mechanism of action • Pharmacologic classification • Time/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education.
F)	Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).

EXIT SKILLS (objectives) FOR **RC 12**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
2.	Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
3.	Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to the physician.
4.	Communicate effectively with physician in coherent and efficient manner while functioning as member of code blue team during resuscitation effort, applying ACLS algorithms for lethal arrhythmias (ventricular fibrillation and ventricular fibrillation, asystole).
5.	Communicate effectively with a physician medications patient is currently on as it pertains to cardiopulmonary condition. Systematically answer the following questions: • Mechanism of action • Pharmacologic classification • Time/action profile • Contraindications • Side effects • Interactions • Route and dosage • Respiratory implications • Patient education.
6.	Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).

	ENTRANCE SKILLS FOR (RC 15)								
EXIT SKILLS FOR (RC 12)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						X		
	7								
	8								

New Course: RESPIRATORY CARE 15L, Applied Respiratory Disease Management

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 15
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMasters degree in Respiratory Care, MPH Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course presents hands-on application skills required for a respiratory care practitioner (RCP) to function in the role of respiratory disease manager (navigator). Emphasis is placed on the design, review and implementation of respiratory care protocols using principles of evidence-based medicine. In addition, this course provides supervised clinical experience at local area hospitals. The emphasis of the clinical rotation is implementation of protocol-directed respiratory care, and the role of the RCP as disease manager in a hospital setting.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Respiratory Care Clinical manifestations and Assessment of Respiratory Diseases, Des Jardinds, Burton, Elsevier-Mosby © 2020
2. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
3. The Respiratory Therapist as Disease Manager, Harry Leen, Jones and Bartlett Learning © 2020
4. American Association for Respiratory Care. http://www.aarc.org/resources/clinical-resources/protocols/protocols-and-pathways/

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Develop respiratory care protocols with comprehensive understanding of the management (prevention, diagnosis, clinical manifestation, and treatment) of COPD, asthma.
2. Analyze the integration of disease management into the health care system to care for the disease state rather than an acute episode.
3. Describe how components of disease management (prevention, treatment, patient tracking and follow up) integrate into the health system and across the continuum of care.
4. Demonstrate how to educate COPD, asthma or ILD patients about environmental assessment, symptoms, physiology, and medications. Request demonstration from patients about the identity of triggers, techniques of peak flow meter, spacers, MDI, DPI, HHN, etc.
5. Formulate a plan to educate patients on self-management, behavioral modifications and counseling enrolled in a disease management program.

6. Differentiate between management of Chronic Diseases (COPD, Asthma) and Acute Disease Management
7. Create a discharge plan for a COPD or Asthma patient to reduce readmission rates.
8. Develop a team-oriented (nurses, pharmacists, and physicians), multidisciplinary approach to the management of chronic respiratory diseases.
9. Document in the medical record patient findings related to the initiation, modification, termination or follow up of respiratory protocols and/or disease management program.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Projects, Visiting Lecturers, Group Work, Online instructor-provided resources, Discussion, Lecture and Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
25.000%	Overview of chronic respiratory diseases
25.000%	Patient education, behavioral modification and counseling, and Professional behavior and communication skills.
25.000%	Design a Respiratory care protocol
25.000%	Initiate, modify, terminate and document respiratory care protocols
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Performance Practicum competency - Conduct patient education to COPD and/or Asthma patient. Demonstrate how to perform: Environmental assessment Review physiology and medication of disease Review symptoms with patient. Identify triggers and overcome barriers to care Critique techniques of peak flow meter, spacers, MDI,DPI, HHN, etc. Create plan of care
25%	Simulation Clinical simulation functioning in the role of disease respiratory manager or implementing respiratory protocols.
25%	Performance Complete clinic competencies, 1st evaluated by peer-to-peer. The faculty will then perform final evaluation for appropriate selection, initiation, modifications and termination of respiratory care protocols discussed in the class. The Student will be evaluated at advanced beginner level according to Dreyfus model of skill acquisition, satisfactorily performed as deemed by the faculty
25%	Other Verbal and written communication skills with physician, RN, patient and family members when implementing a respiratory care protocol or functioning as a respiratory disease manager.
100%	Total

VII. **Sample Assignments:**
Written assignment:
Create a script for working with COPD or Asthma patients. See examples of scripts, come up with your version that will work for you. Be ready to present at end of term. https://www.cdc.gov/arthritis/marketing-support/1-2-3-approach/docs/pdf/Chronic_Toolkit_SCRIPTS.pdf

protocol implementation:
Given a patient scenario, based on the condition of the patient and your assessment, determine the most

appropriate respiratory care protocol to use. State the name of protocol and write a SOAP assessment of your findings.

VIII. **Student Learning Outcomes:**

1. Demonstrate the duties of a respiratory disease manager to educate a patient with COPD or asthma about the disease process, prevention, treatment and self-management of their particular disease.
2. Given a patient condition, determine assessment of need and select most appropriate respiratory care protocol to treat the patient's condition. Demonstrate confidence initiating, modifying, monitoring and discontinuing respiratory care therapeutic protocols.
3. 1. Demonstrate how to perform patient education to a patient with COPD, asthma or ILD considering the following: • Environmental assessment • Review physiology and medication of disease • Review symptoms with patient. • Identify triggers and overcome barriers to care • Critique techniques of peak flow meter, spacers, MDI, DPI, HHN, etc. • Create plan of care

Corequisite Checklist and Worksheet

RC 15L- Applied Respiratory Disease Management

Corequisite: RC 15- Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 15L is a corequisite to RC 15. RC 15 explores career opportunities for respiratory care practitioners in the acute care setting and beyond as a respiratory disease manager or navigator. The course covers the health system requirements, practitioner knowledge content, technical skills in case management, patient-education, and self-management. RC 15L is the course where the students practice the knowledge learned in RC 15 in the skills lab and clinical setting. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting.

New Course: RESPIRATORY CARE 16, Transition to Independent Practice

Units:	2.00
Total Instructional Hours (usually 18 per unit):	108.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	6.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 17
Prerequisite(s):	RC 15
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technologies Masters degree in Respiratory Care, MPH, Or BSRT or BS degree llfe sciences AND at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree.

Rationale
This is course part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course provides supervised clinical experience at local area hospitals. This course facilitates students' successful transition to clinical practice. The student practices civic professionalism, patient education, decision-making, advanced-level respiratory care skills and leadership skills essential to patient care requiring respiratory therapeutics and ventilator management. Readiness to enter the workforce is strengthened as the student gains self-confidence and independence by developing time management skills as the student assumes the role of a practicing Respiratory Care Practitioner.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Egan's Fundamentals of Respiratory Care , Wilkins, Stoller, Kacmarek, Elsevier-Mosby © 2017
2. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012
3. Dataarc. dataarc.ws, 2 ed.
   Software that allows the student to track procedures observed, performed with assistance, perform unassisted. The latter allows the program to track areas and procedures where the student has been assigned and provide students with equitable clinical rotations. The student also journals his/her day in the clinical setting and reflects on experiences learned during day.

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Model civic, professional behavior, communication, integrity, compassion, and confidentiality as in a member of the health care team.
2. Competently don and doff PPE for various types of patient care isolation situations.
3. Perform a complete cardiopulmonary assessment of patient through direct patient physical assessment, and indirect by gathering information from the medical record.
4. Proficiently determine the assessment of need, set up, administer respiratory therapeutic modalities, monitor, assess response and make recommendations as needed based on patient's condition.

5. Competently assess indications for noninvasive and invasive mechanical, set-up ventilator, perform verification of operation, initial settings, monitor physiological response, modify mode, and make recommendations as needed.
6. Evaluate the need to initiate lung protective strategies in ARDS patients and select most appropriate strategy when required.
7. Appraise readiness for weaning and liberation off mechanical ventilation and consult with physician to determine most appropriate weaning strategy and extubate when ready.
8. Recognize rapidly deteriorating patients with obstructive lung disease/restrictive lung disease mechanical ventilation on and off mechanical ventilation and recognize common ventilator induced harms due to over inflation in obstructed patients.
9. Proficiently conduct intra-hospital transport of critically and function as member of the rapid response team or code blue team.
10. Systematically review a chest radiograph for tube placement, volume loss (obstructed airway), and pneumothorax.
11. Educate patients on disease management, promotion of cardiopulmonary wellness, and pulmonary rehabilitation using multidisciplinary approach and community support.
12. Proficiently document in the electronic medical record patient assessment, ventilator settings, alarms, and end of shift SOAP assessment.
13. Competently and efficiently provide hands-off report to incoming shift regarding patient's condition, including plan of care in a systematic approach.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Visiting Lecturers, Group Work, Online instructor-provided resources, Work Experience (internship), Lecture and Discussion, Discussion

V. **Course Content**

% of Course	Topic
25.000%	Clinical experience ICU-transition to practice.
10.000%	Independent practice in ER.
25.000%	Independent practice in floor care
15.000%	Independent practice creating therapist-driven protocols
15.000%	Indenpendently applying mechanical ventilation protocol
10.000%	Applying weanig protocols and extubation
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Performance Clinical competencies- perform floor therapy at competent level
25%	Other Professional behavior, verbal and written communication skills consistent with the role of a respiratory care practitioner functioning as a member of the healthcare team in a clinical setting.
25%	Final Performance Competency in managing a patient on mechanical ventilation.
25%	Final Performance Wean and extubate from mechanical ventilation
100%	Total

VII. **Sample Assignments:**

Dataarc entry:

You will track procedures observed, performed with assistance, perform unassisted in the clinical setting, floor care and ICU, respectively. The latter allows the program to track areas and procedures where you have been assigned and provide you with equitable clinical rotations. You will also journal your day in the clinical setting and reflect on experiences learned during day, by comparing and contrasting clinical experience with didactic knowledge.

Clinical Activity:

Complete clinical competencies caring for a patient requiring respiratory care therapeutics or on mechanical ventilation requiring airway management. You will be evaluated on information gathering, decision making obtained from the medical records, and patient assessment of a patient on mechanical ventilation or breathing treatment. You will be assessed in initiation, monitoring, making modifications respiratory care treatments as needed. The evaluations will be summative in nature.

VIII. **Student Learning Outcomes:**

1. Demonstrate ability to assess, treat, monitor, evaluate response and make recommendations to respiratory care therapeutic modalities to patients requiring respiratory care services.
2. Demonstrate ability to care for a patient on mechanical ventilation, assess, secure and manage artificial airway; set-up, select, initiate, monitor, modify mode of mechanical ventilation and determine readiness to liberate from mechanical ventilation.
3. Demonstrate an understanding of how to function as a member of the rapid response/code blue team and provide emergency care consistent with BLS and ACLS guidelines.
4. Demonstrate how to perform weaning parameters and extubation procedure.
5. Demonstrate ability to give hands-off report to upcoming shift regarding patient's condition, including plan of care in a systematic approach.

Corequisite Checklist and Worksheet

RC 16- Transition to Independent Practice
Corequisite: RC 17- Physician Interaction IV
Prerequisite RC 15- Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 17 is a corequisite to RC 16. RC 17 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course focuses on the implementation of physician-ordered respiratory care protocols, respiratory disease management and the interaction between the RCP and the physician in the outpatient care setting. In additions, the technical skills, personal attributes, overview of health care financing and action planning required for successful transition to independent practice are covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience, in a clinical setting. The CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 16 – Transition to Independent Practice

Prerequisite: RC 15 – Respiratory Disease Management
Corequisite is RC 17 – Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required.
The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below.
Please identify which one is being used to justify the proposed prerequisite.
The additional level of scrutiny corresponding to each type of
prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 16**

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Differentiate between practice guidelines and protocols, and how information should be presented, algorithm or flowchart.
B)	Evaluate the skills required for a successful Therapist-Driven Protocol (TDP) program, and include: The clinical manifestations, assessments, and treatment selections made by the respiratory care practitioner, frequency at which a respiratory therapy modality can be determined in response to a severity assessment.
C)	Apply evidence-based medicine to develop the following respiratory care protocols: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
D)	Conduct an education sessions to empower and engage patients in health behavior theory and home respiratory care support.
E)	Examine essential cornerstone respiratory protocols for a successful TDP program: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung

	expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
F)	Describe the regulatory requirements that impact the healthcare system and how they impact patient care.
G)	Evaluate the need for palliative care and incorporate it to the discussion of disease management.

EXIT SKILLS (objectives) FOR **RC 15**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Differentiate between practice guidelines and protocols, and how information should be presented, algorithm or flowchart.
2.	Evaluate the skills required for a successful Therapist-Driven Protocol (TDP) program, and include: The clinical manifestations, assessments, and treatment selections made by the respiratory care practitioner, frequency at which a respiratory therapy modality can be determined in response to a severity assessment.
3.	Apply evidence-based medicine to develop the following respiratory care protocols: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
4.	Conduct an education sessions to empower and engage patients in health behavior theory and home respiratory care support.
5.	Examine essential cornerstone respiratory protocols for a successful TDP program: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
6.	Describe the regulatory requirements that impact the healthcare system and how they impact patient care.
7.	Evaluate the need for palliative care and incorporate it to the discussion of disease management.

	ENTRANCE SKILLS FOR (RC 16)								
EXIT SKILLS FOR (RC 15)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						X		
	7							X	
	8								

New Course: RESPIRATORY CARE 17, Physician Interaction IV

Units:	1.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	3.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Corequisite(s):	RC 15 RC 14 RC 16
Prerequisite(s):	RC 12
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory TechnicianMD degree or Masters degree in Respiratory Care, Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care AS degree

Rationale
This course is part of the comprehensive curriculum for the Respiratory Care Associate Degree.

I. **Catalog Description**
This course provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course focuses on the implementation of physician-ordered respiratory care protocols, respiratory disease management and the interaction between the RCP and the physician in the outpatient care setting. Lastly, with the physician in the role of a mentor, the course covers the technical skills, personal attributes, overview of health care financing and action planning required for successful transition to independent practice

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Clinical Lab Competencies for Respiratory Care: An Integrated Approach, Gary C. White, Cengage © 2012

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Competently and efficiently assess a patient profile of a critically ill patient in the ICU on invasive or noninvasive mechanical ventilation.
2. Formulate a disease management plan for a COPD, which may include pulmonary rehabilitation program.
3. Discuss reimbursement criteria and/or cost allocation for respiratory therapy/equipment and how it fits into the financial state of a health system.
4. Develop a protocol-directed respiratory care plan for a patient with obstructive lung disease and consult with a physician for recommendations and optimization of therapy.
5. Collaborate with a physician to develop, administer, evaluate, and modify respiratory care plan in the acute care setting, management of chronic disease (COPD), using evidence based.
6. Discuss with physician using the SBAR method to indicate the need for emergency airway, noninvasive or invasive ventilation.
7. Effectively discuss with physician using the SBAR method to indicate the need for emergency airway, noninvasive or invasive ventilation.
8. Evaluate noninvasive monitoring devices, signs, and symptoms of patient with impending respiratory compromise and work with a physician to develop a corrective form of therapeutic intervention.

9. Competently and efficiently using evidence-based medicine, administer, evaluate, and modify a respiratory care plan in the acute care setting to manage patients with chronic lung disease.
10. Model professional behavior, honesty and team-oriented attitude to treat patients and collaborating with nurses, pharmacists and physicians.

IV. **Methods of Presentation:**
Field Experience, Lab, Observation and Demonstration, Critique, Visiting Lecturers, Group Work, Online instructor-provided resources, Discussion, Lecture and Discussion, Work Experience (internship)

V. **Course Content**

% of Course	Topic
20.000%	PFT
25.000%	Sleep study
15.000%	Healthcare finance overview
20.000%	Disease management
20.000%	Case study presentation, communication skills
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Simulation Clinical Simulation
25%	Oral Presentation
20%	Group Projects
30%	Final exam
100%	Total

VII. **Sample Assignments:**
Case study presentation:
Select a patient scheduled for PFT or sleep, write a patient profile or case study report, present it to physician in class setting or clinical setting.

Written assignment:
Write a patient profile on a ventilator and present it to a physician in a coherent and efficient manner. Be ready to answer questions regarding pathophysiology, pharmacology, mode of ventilation, arterial blood gas, and plan of care.

VIII. **Student Learning Outcomes:**
1. Coherently, efficiently, and competently present a patient respiratory assessment to a physician and a ventilator patient profile to an ICU rounding team.
2. Interpret PFT/sleep study results and in collaboration with physician develop treatment plan.

Corequisite Checklist and Worksheet

RC 17- Physician Interaction IV
Corequisite: RC 14- Outpatient Respiratory Care
Prerequisite RC 12 – Physician Interaction III
Corequisite RC 16- Transition to Independent Practice
Corequisite RC 15- Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 14 is a corequisite to RC 17. RC 17 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung pulmonary function testing, sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. Career opportunities for respiratory care practitioners in the acute care setting and beyond as a respiratory disease manager or navigator are also covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 17- Physician Interaction IV
Corequisite: RC 15- Respiratory Disease Management
Prerequisite RC 12 – Physician Interaction III
Corequisite RC 16- Transition to Independent Practice
Corequisite RC 14- Outpatient Respiratory Care

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 15 is a corequisite to RC 17. RC 17 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course will prepare students to present case studies coherently and efficiently to a physician. The topics covered include lung pulmonary function testing, sleep lab, pulmonary rehabilitation, and respiratory care in alternative settings. Career opportunities for respiratory care practitioners in the acute care setting and beyond as a respiratory disease manager or navigator are also covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. In addition, the CoARC requires frequent student-physician interaction.

Corequisite Checklist and Worksheet

RC 17- Physician Interaction IV
Corequisite: RC 16- Transition to Independent Practice
Prerequisite RC 12 – Physician Interaction III
Corequisite RC 14- Outpatient Respiratory Care
Corequisite RC 15- Respiratory Disease Management

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the corequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the corequisite.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this corequisite is based on tests, the type and number of examinations, grading criteria, applicability to performance or skill, or required additional support for the successful completion of both courses.	X	
4. Selection of this corequisite is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this corequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the corequisite.	X	
8. The body of knowledge and/or skills taught in the corequisite are not an instructional unit of the course requiring the corequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION 2 – please explain how the corequisite will support the course and why it is necessary for students to succeed:

RC 16 is a corequisite to RC 17. RC 17 provides direct physician interaction and student involvement in the clinical and nonclinical settings. The course focuses on the implementation of physician-ordered respiratory care protocols, respiratory disease management and the interaction between the RCP and the physician in the outpatient care setting. In addition, the technical skills, personal attributes, overview of health care financing and action planning required for successful transition to independent practice are covered. The CoARC requires curriculum to include didactic knowledge, skill attainment in a laboratory setting and clinical experience in a clinical setting. The CoARC requires frequent student-physician interaction.

Prerequisite Checklist and Worksheet: RC 17 – Physician Interaction IV

Prerequisite: RC 12 – Physician Interaction III
Corequisite is RC 14 – Outpatient Respiratory Care
Corequisite is RC 15 – Respiratory Disease Management
Corequisite is RC 16 – Transition to Independent Practice

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required.
The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below.
Please identify which one is being used to justify the proposed prerequisite.
The additional level of scrutiny corresponding to each type of
prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 17**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
B)	Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
C)	Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to

	the physician.
D)	Evaluate initial settings of mechanical ventilation, defend rationale for each parameter to a physician caring for that patient.
E)	Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).

EXIT SKILLS (objectives) FOR **RC 12**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Collect and synthesize patient data of with impending respiratory compromise based on data obtained from noninvasive monitoring device.
2.	Communicate effectively with physician using the SBAR method the need to initiate noninvasive monitoring, evaluate and establish goals.
3.	Assess a patient's readiness for weaning and liberation from mechanical ventilation and recommend to a strategy best suited for the patient, if patient is tolerating it, evaluate weaning parameters (NIF, MIP, VC, RSBi) and recommend extubation to the physician.
4.	Evaluate initial settings of mechanical ventilation, defend rationale for each parameter to a physician caring for that patient.
5.	Formulate plan with physician on most appropriate approach to transition patient post extubation (type of oxygen therapy, high-flow NC, NIV, or other form of therapy that will lead to successful extubation).

	ENTRANCE SKILLS FOR (RC 17)								
EXIT SKILLS FOR (RC 12)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6								
	7								
	8								

New Course: RESPIRATORY CARE 18, Computer Assisted Clinical Simulations

Units:	1.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	0.00
In-Class Lab:	3.00
Arranged:	0.00
Outside-of-Class Hours:	0.00
Date Submitted:	February 2020

Transferability:	Transfers to CSU
Degree Applicability:	Credit – Degree Applicable
Prerequisite(s):	RC 15
Proposed Start:	Fall 2021
TOP/SAM Code:	121000 - Respiratory Care/Therapy / B - Advanced Occupational
Grading:	Letter Grade or P/NP
Repeatability:	Yes
Library:	Library has adequate materials to support course
Minimum Qualification:	Respiratory Technician Masters degree in Respiratory Care Or BSRT or BS degree llfe sciences AND Must have at least 6 years of ICU experience in the MICU, CTICU, SICU, Trauma-ICU or CCU is preferred. AND Possess valid California Respiratory Care License.
Program Impact:	Proposed for inclusion in a forthcoming degree or certificate • Respiratory Care Associate Degree

Rationale
This is course part of the comprehensive curriculum for the Respiratory Care AS degree.

I. **Catalog Description**
This course helps prepare students for National Board for Respiratory Examinations using computer assisted clinical simulations.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. The comprehensive Respiratory Therapy Exam Review, James R. Sills, Elsevier-Mosby © 2016
2. Kettering/NBRC. ketteringseminars and NBRC, 1 ed.
   The Program will use Kettering seminars online software and the NBRC CSE to practice clinical simulation exams and TMC exam. https://www.nbrc.org/examinations/cse/#self-assessment
   https://www.ketteringseminars.com/practice/

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Describe the NBRC clinical simulation exam format for both the Therapist Multiple Choice Exam (TMC) and the Clinical Simulation Exam (CSE).
2. Compare and contrast the NBRC detailed content for both TMC and CSE examinations.
3. Describe the diseases or conditions tested in the clinical simulation examination.
4. Organize a systematic approach to gather information for given clinical scenarios.
5. Develop a systematic approach improve the decision-making process in given clinical simulation scenario.
6. Analyze blood gas results to make informed decision in in the management of mechanical ventilation, cardiopulmonary resuscitation, airway management and pulmonary function test.
7. Propose therapeutic modality based on information gathered for a given clinical simulation scenario.
8. Recommend adjustments to oxygen administration and mechanical ventilation from arterial blood gas results and information gathered in a clinical simulation scenario.
9. Perform clinical simulations scenarios tested by the NBRC using computer assisted simulations.

IV. **Methods of Presentation:**

Lab, Directed Study (independent study and internships), Group Work, Online instructor-provided resources, Other, Observation and Demonstration, Lecture and Discussion, Discussion, Visiting Lecturers
Other Methods: The Program will use Kettering seminars online software and the NBRC CSE to practice clinical simulation exams and TMC exam. https://www.nbrc.org/examinations/cse/#self-assessment https://www.ketteringseminars.com

V. **Course Content**

% of Course	Topic
10.000%	Overview CSE exam, navigating software
20.000%	Information gathering skills
20.000%	Decision-making skills
25.000%	TMC Preparation
25.000%	CSE preparation
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
25%	Performance: Computer clinical simulations self-assessment, the student will have three attempts to achieve a minimum score of 72%
25%	Simulation: Computer assisted simulation Practice Clinical simulation using kettering seminars software. Must score a miminum of 72% on each assigned clinical simulation
25%	Final exam: NBRC practice TMC must score 75% or higher
25%	Final Performance: NBRC CSE exam, must pass practice exam
100%	Total

VII. **Sample Assignments:**
NBRC credentials: Watch these videos to familiarize yourself with the NBRC exams. NBRC Credentials https://youtu.be/tVJXcJ30elA How to apply for NBRC examinations https://youtu.be/uf4By-H01k4 How to use the candidate/practitioner dashboard https://youtu.be/cPjh4kgj6GA All these videos can be accessed at https://www.nbrc.org/resources/

Practice CSE : You will be assigned online clinical simulations using Kettering online practice https://www.ketteringseminars.com/practice/ A. Adult Chronic Airways Disease (7) 1. Intubation and mechanical ventilation (2) 2. Noninvasive management -for example , medical treatment, noninvasive positive pressure ventilation (2) 3. Outpatient management of COPD -for example, medical treatment, discharge planning, rehabilitation (1) 4. Outpatient management of asthma-for example, medical treatment, discharge planning, rehabilitation (1) 5. Diagnosis - for example emphysema, chronic bronchitis, bronchiectasis, asthma (1) B. Adult Trauma (1) C. Adult Cardiovascular (2) 1.Heart failure (1) 2. Other -for example, arrhythmia, pulmonary hypertension, myocardial ischemia / infarction, pulmonary embolism (1) D. Adult Neurological or Neuromuscular (1) E. Adult Medical or Surgical (5) 1. Cystic fibrosis or non-cystic fibrosis bronchiectasis (1) 2. Infectious disease (1) 3. Acute respiratory distress syndrome (1) 4. Other -for example,immunocompromised, shock, bariatric, psychiatric (2) F. Pediatric (2) 1. Asthma (1) 2. Other -for example, infectious disease, bronchiolitis, chronic lung disease of prematurity, congenital defect (1) G. Neonatal (2) 1. Respiratory distress syndrome (1) 2. Resuscitation (1) Total 20

VIII. **Student Learning Outcomes:**
1. Effectively answer NBRC style questions and achieve a score of > 75% on official NBRC Self-Assessment Exams (SAE).

Prerequisite Checklist and Worksheet: RC 18 – Computer Assisted Clinical Simulation

Prerequisite: RC 15 – Respiratory Disease Management
Corequisite is RC 16 – Transition to Independent Practice
Corequisite is RC 17 – Physician Interaction IV

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	**X**	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	**X**	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	**X**	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	**X**	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	**X**	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	**X**	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	**X**	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	**X**	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	**X**	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:
In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required.
The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below.
Please identify which one is being used to justify the proposed prerequisite.
The additional level of scrutiny corresponding to each type of
prerequisite is identified below.

X Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, …)
Complete the Prerequisite Worksheet

ENTRANCE SKILLS FOR **RC 18**
(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Differentiate between a practice guideline and a protocol
B)	Evaluate the skills required for a successful TDP program, and include: The clinical manifestations, assessments, and treatment selections made by the respiratory care practitioner, frequency at which a respiratory therapy modality can be determined in response to a severity assessment.
C)	Compare and evaluate the indication and contraindication for sleep studies.
D)	Describe overview of the following diseases: Chronic Obstructive Pulmonary Disease, asthma, bronchiectasis, interstitial lung disease, pulmonary hypertension.

modified 09/26/2012

E)	Examine essential cornerstone respiratory protocols for a successful TDP program: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
F)	Evaluate the importance of including palliative care as part of the discussion of disease management.

EXIT SKILLS (objectives) FOR **RC 15**

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Differentiate between a practice guideline and a protocol
2.	Evaluate the skills required for a successful TDP program, and include: The clinical manifestations, assessments, and treatment selections made by the respiratory care practitioner, frequency at which a respiratory therapy modality can be determined in response to a severity assessment.
3.	Compare and evaluate the indication and contraindication for sleep studies.
4.	Describe overview of the following diseases: Chronic Obstructive Pulmonary Disease, asthma, bronchiectasis, interstitial lung disease, pulmonary hypertension.
5.	Examine essential cornerstone respiratory protocols for a successful TDP program: oxygen therapy protocol, bronchopulmonary hygiene therapy protocol, lung expansion therapy protocol, aerosolized medication therapy protocol, mechanical ventilation protocol, mechanical ventilation weaning protocol.
6.	Evaluate the importance of including palliative care as part of the discussion of disease management.

	ENTRANCE SKILLS FOR (RC 18)								
EXIT SKILLS FOR (RC 15)		A	B	C	D	E	F	G	H
	1	x							
	2		x						
	3			x					
	4				x				
	5					x			
	6						X		
	7								
	8								

Substantial Change: COMPUTER APPLICATIONS 57, Website Planning and Production

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Date Submitted:	March 2021
Transferability:	Transfers to CSU
Degree Applicability:	Credit - Degree Applicable
Skills Advisory(s):	CIS 51 or CIS 59A

Rationale
This is an update of SLOs to match what is ISIS

I. **Catalog Description**
This course provides the knowledge, skills, and hands-on experience needed to deliver successful commercial websites. Students will learn the many pitfalls of website planning and production and how to overcome them. This includes understanding what is wanted, and learning how to create the website in a speedy and efficient manner. Students will learn how to manage the project and the client, and perfect techniques in design. Learning how to design for the intended audience, obtain content, select a proper navigation, incorporate various media (graphics, database, animations, etc.), deploy and maintain the website are the key elements covered. This is a hands-on course and the students will utilize newly learned skills to build a website for a client which can be added to their portfolio.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. Head First Web Design, Ethan Watrall and Jeff Siarto, O'Reilly Media Corporation © 2009, ISBN: 9780596520304

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Discuss how to conceptualize, plan, coordinate, and implement an entire website
2. Create a detailed site plan that clearly explains the cost, manpower, and technology involved in a website
3. Explain how to implement various components involved in creating a commercial website
4. Demonstrate how to deliver a functioning website through the hands-on experiences in the classroom.
5. Create an integrated website

IV. **Methods of Presentation:**
Lecture and Discussion, Other (Specify)
Other Methods: Classroom lectures, handouts, demonstrations, and discussions to introduce students to each subject area. Hands-on practice, with questions and answers between instructor and students to analyze the process of creating a website for a customer. Out of class project and homework assignments to review and practice the topics discussed in the class.

V. **Course Content**

% of Course	Topic
10.000%	Website Planning
10.000%	Website Cost
10.000%	Website Contents
10.000%	Explore Design Principles, Web Typography and Construction

5.000%	Planning the Navigation
5.000%	Using Graphics and Color
5.000%	Using Animation
5.000%	Using Audio, Video and Web 2.0 elements
5.000%	Testing
5.000%	Prepare the Technical and User Documentation
5.000%	Package and Deliver
5.000%	Maintenance
20.000%	Students Projects
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
30%	Final exam
30%	Homework
20%	Projects
20%	Quizzes
100%	Total

VII. **Sample Assignments:**

Assignment 1:

Sample 1: Acting as coordinators, students will create a detailed site plan that clearly explains the cost, manpower, and targeted delivery date involved in a website project

Assignment 2:

Sample 2:Given an obstacle in designing the layout for a website, devise workaround solutions that do not compromise the cost and delivery of the website

VIII. **Student Learning Outcomes:**

1. Acting as a coordinator, a student will conceptualize, plan, and implement an entire website.
2. Acting as coordinators, students will create a detailed site plan that clearly explains the cost, manpower, and technology involved in a website project.

DE for Non-DE Course: ART HISTORY 6, Latin American Art History 2

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Date Submitted:	February 2021

Transferability:	Transfers to CSU, UC
Degree Applicability:	Credit - Degree Applicable

Rationale

This class provides an introduction to the art, architecture, and visual culture of Latin America from the colonial to the contemporary period. The course will begin by examining early contact between Europeans and indigenous Americans, the importation and adaptation of European artistic models in the Americas, and the transformation of indigenous art as a result of the conquest. We will analyze a variety of materials and topics including urban planning, religious architecture, paintings, sculpture, manuscript drawings, and prints from the colonial period (1492 -1820). We will place particular emphasis on the interaction between native traditions and imported ideas, particularly in relationship to religion, politics, and daily life. The second half of the course will examine art from the early nineteenth century to the present, considering the role of the arts in building independent nations and developments in modern and contemporary art.

I. **Catalog Description**

This course is an introductory survey of the art, architecture, and visual culture of Latin America from the colonial to the contemporary period. The course examines the introduction and adaption of European artistic models in the Americas as well as the transformation of American art as a result of the conquest, analyzing a variety of materials and media including urban planning, religious and secular architecture, painting, sculpture, manuscript drawings and prints from the colonial period (1492-1820). Students examine the role of Latin American artists in building independent nations in the 19th c. and engaging with issues of race, gender, new technologies, politics, and globalization in the 20th and 21st centuries.

II. **Examples of Appropriate Text or Other Required Reading:**

(include all publication dates; for transferable courses at least one text should have been published within the last five years)

1. Hemispheric Integration: Materiality, Mobility, and the Making of Latin American Art, Vicario, Niko, University of California Press © 2020, ISBN: 9780520310025
2. Dematerialization: Art and Design in Latin America, Benezra, Karen, University of California Press © 2020, ISBN: 9780520307063
3. Abstract Crossings: Cultural Exchange between Argentina and Brazil , Amalia Garcia, Maria, University of California Press © 2019, ISBN: 9780520302198

III. **Course Objectives**

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

1. Distinguish pre- and post-conquest art of indigenous people of Latin America and describe the different ways in which Europeans practiced conquest and colonization in the new world and how that impacted artistic production and consumption.
2. Document artistic development in the Americas explaining the effect of religion and commerce paying particular attention to maps, print culture, and architecture.
3. Chronicle the use of the visual arts in the creation of national cultures after the respective revolutions.
4. Demonstrate an understanding of the various ways that race configured in different colonial and later national settings and how European, Asian, indigenous, and African communities overlapped and merged together.
5. Discuss the ways non-Europeans were subjects and producers of Latin American art and the implications of these representations of race and identity.
6. Relate the genre of landscape to the visual colonization of the region.
7. Describe the ways art was used to promote new identities for women and non-Europeans as well as to keep those identities static.

8. Document the development of different Modernisms in Latin America in the early 20th century
9. Report on contemporary art practices in the late 20th and early 21st centuries.

IV. **Methods of Presentation:**
Field Trips, Group Work, Lecture and Discussion, Projects, Visiting Lecturers

V. **Course Content**

% of Course	Topic
10.000%	Introduction and overview to Latin American and art history definitions and principles.
18.000%	Visual culture of 16th century Latin America: Indigenous cultures and European colonizers
18.000%	Visual culture of 17th & 18th century Latin America: Baroque art and architecture including Mexico & Brazil
18.000%	Visual culture of 19th century independence movements including Mexico, Peru, Brazil, & the Caribbean nations.
18.000%	Visual Culture of 20th century democracies and dictatorships including Venezuela, Chile, Argentina, Brazil & Mexico.
18.000%	Visual culture of late 20th & Early 21st centuries- Globalization and emerging economies
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
30%	Exams/Tests
10%	Class Participation
20%	Group Projects
20%	Homework
20%	Written assignments
100%	Total

VII. **Sample Assignments:**
Christopher Columbus and European depictions of the Americas:
In 1492 CE, Christopher Columbus arrived in the Caribbean. His voyage was funded by the Spanish King and Queen of Castille. In 1493, he sent a letter back to the royals telling them of his experience in the Americas. Step 1: Read Columbus' Letter Step 2: Answer the following questions (2 to 4 sentences each) 1. How does Columbus describe the indigenous peoples of the Americas? 2. How does Columbus portray himself during these encounters? 3.What is Columbus asking from the King and Queen of Castille? In other words, why he is ultimately writing the letter? Step 3: Look at the artwork Vespucci Discovers America (1587 CE) made by Dutch artist Jan Van Der Straet. Vespucci was an Italian navigator who reached the shores of South America in 1501. 4. How does Columbus' description of the indigenous people parallel the representation of indigenous people in Jan Van Der Straet's print? 5. How does Columbus' portrayal of himself represent the way Vespucci (the man standing holding a flag) is depicted in the print?

Painting the Virgin of Guadalupe:
The Book of Revelation, also known as the Apocalypse, is the last book of the Christian New Testament. The author of the book, John, recounts his vision of God's plan of judgment and salvation. The text is filled with symbolic numbers, colors, animals, angelic and demonic beings. For this assignment, you will read one short section of the Book of Revelation, and then answer the following questions. 1. Who is the dragon? (4 points) 2. What happened when the dragon tried to pursue the woman? (4 points) 3. Look at the painting entitled, Virgin of

the Apocalypse, by Mexican artist Miguel Cabrera (oil on canvas, 1760). What aspects of the Book of Revelation text appear in the painting? Identify three specific examples (12 points)

VIII. **Student Learning Outcomes:**

1. Demonstrate visual literacy and effectively communicate visual phenomenon with appropriate art historical terms; emphasizing cultural connections with the art objects' larger social, political, and economic context while noting how that function may have changed over time.
2. Acquire research skills including the ability to evaluate sources and evidence and distinguish common methodologies used in art historical analysis.
3. Engage in interdisciplinary, cross-cultural, and relational thinking through a critical examination of interdisciplinary connections with art globally and throughout history; Contextualizing works of art within their larger social, political, and economic function.
4. Demonstrate that contemporary visual culture is not random but on the contrary a mediated chain of material signifiers that is both historically and culturally embedded.

AHIS 6 Distance Education Application

1a. Instructor - Student Interaction:
Instructor will send frequent announcements about upcoming deadlines. Instructor will provide feedback on graded assignments and students' discussions. There will be virtual office hours discussions and the instructor will comment on threaded discussion boards.

1b. Student - Student Interaction:
Students will interact with each other through asynchronous discussion forums and have collaborative digital group projects.

1c. Student - Content Interaction:
Student assignments include written assignments, discussion boards, lecture materials, homework, and projects.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	Percentage of Online Course Hours
Discussion Boards	Respond to a discussion question and then to other students' responses	20.00%
Project Presentation	Work on a group project and present results to the class	20.00%
Online Lecture	Watch online lectures and make comments/questions about material.	20.00%
Written assignments	Written assignments that respond to readings and videos.	20.00%
Exams	Exams on course content	20.00%

2. Organization of Content:
Course content will be organized into weekly modules in the learning management system.

3. Assessments:

% of grade	Activity	Assessment Method
30.00%	Exams/Tests	Students will complete exams consisting of short answer and essay questions using images and written resources covered in the course. These will be submitted to the course learning management system where the instructor will provide a grade and feedback.
20.00%	Group Projects	Students will collaborate on group projects covering content related to the course. Students will communicate with each other via their school email or video chat. Students can submit a presentation to the instructor and their peers, who will provide feedback.
10.00%	Class Participation	Class participation is achieved through asynchronous discussion board post assignments. A question will be posted by the instructor and then students will respond to that question in a post and also respond to the posts of two other classmates. Instructor will also provide commentary on the discussion topic.

20.00%	Homework	Students will have written homework assignments on course topics to be submitted via the course learning management system. Instructor will provide feedback on submitted work.
20.00%	Written Assignments	Students will complete writing assignments on course topics and submit them to the learning management system for grading and instructor feedback.

4. Instructor's Technical Qualifications:
The instructor will need the college's existing technology.

5. Student Support Services:
Links to counseling, financial aid, and library

6. Accessibility Requirements:
Images will have descriptive alternative text, content pages will include heading styles, accurate captioning for videos, content will have sufficient color contrast and font size.

7. Representative Online Lesson or Activity:
Discussion #2: Casta Paintings
For this threaded discussion, read a section of Ilona Katzew's book, Casta Painting, then answer questions 1-3. Katzew is the curator of Latin American colonial art at the Los Angles County Museum of Art (LACMA). Read this story that came out in the L.A. Times last October about a curious incident surrounding a casta painting series and then answer question #4.

Questions: (Answers should be 1-3 sentences each)

1. According to Katzew, why did casta paintings emerge? (5 points)

2. Define the concept limpieza de Sangre (purity of blood) (5 points)

3. How were individuals able to challenge the casta system using calidad? (5 points)

4. As a private collector, do you think the owner of the Española painting has an obligation to be more open about their ownership of the work? Why or why not? (5 points)

DE for Non-DE Course: PHILOSOPHY 6, Philosophy Of Science

Units:	3.00
Total Instructional Hours (usually 18 per unit):	54.00
Hours per week (full semester equivalent) in Lecture:	3.00
In-Class Lab:	0.00
Arranged:	0.00
Outside-of-Class Hours:	108.00
Date Submitted:	March 2021
Transferability:	Transfers to CSU, UC
Degree Applicability:	Credit - Degree Applicable

Rationale
Update for Program Review

I. **Catalog Description**
This course is a general introduction to the philosophy of science, aimed at fostering an enhanced awareness of the philosophical aspects and implications inherent in the scientific enterprise. The central concepts and methodology of science will be analyzed, and philosophical topics like distinguishing science from pseudoscience, virtues of explanations including simplicity and falsifiability, gestalt and paradigm shifts, incommensurability, underdetermination, objectivity and subjectivity, realism and anti-realism, bias within science and more will be examined. Specific episodes taken from the history of science will be regularly employed to illustrate and elucidate these general ideas. A background in philosophy or the physical sciences is helpful but not a requirement for this course.

II. **Examples of Appropriate Text or Other Required Reading:**
(include all publication dates; for transferable courses at least one text should have been published within the last five years)
1. What Is This Thing Called Science?, 4th, Chalmers, Alan F., Hackett © 2013, ISBN: 978-1624660382
2. Understanding Scientific Reasoning, 5th, Giere, Ronald N., Bickle, John and Mauldin, Robert, Cengage © 2005, ISBN: 9780155063266
3. Physics: Locality, Fields, Energy and Mass, 1st, Lange, Marc, Springer © 2019, ISBN: 9780631225010
4. Theory and Reality: Introduction to the Philosophy of Science, 2nd, Godfrey-Smith, Peter, U of Chicago P © 2021, ISBN: 9780226618654
5. Worldviews: An Introduction to the History and Philosophy of Science, 3rd, DeWitt, Richard, Wiley-Blackwell © 2018, ISBN: 9781119118893
6. Structure of Scientific Revolution, 4th, Kuhn, Thomas S., U of Chicago P © 2012, ISBN: 9780226458120
7. Reading the Book of Nature, 1st, Kosso, Peter, Cambridge U P © 1992, ISBN: 9780521416757

III. **Course Objectives**
Upon completion of this course, the student will be able to:
1. Identify and discuss the philosophical debate concerning the nature and epistemic value of perception, and its impact upon the doctrine of empiricism.
2. Recognize the various forms of inductive reasoning regularly utilized in the sciences, and demonstrate an understanding of the epistemic ramifications entailed by the employment of this type of inference, inherent in the universally accepted methodologies of science.
3. Explain and discuss the nature, function, and semantic implications of model-construction within the sciences.
4. Explain and discuss the philosophically significant concepts and factors essential to understanding what goes on when measurement occurs, within the domain of science.
5. Describe and discuss the various philosophical perspectives concerning the nature, ontological status, and explanatory role of scientific laws.
6. Explain and discuss the significant philosophical issues pertinent to the nature, formation, selection, acceptability, and confirmation of scientific theories.
7. Explain and discuss significant philosophical issues within the special branches of science.
8. Recognize the metaphysical features inherent in the concepts and structure of the various sciences.

IV. **Methods of Presentation:**
Observation and Demonstration, Lecture and Discussion, Visiting Lecturers, Other (Specify)

Other Methods: Videos

V. **Course Content**

% of Course	Topic
12.000%	Part One: A Philosophical Inquiry into the Methodology of Science Observation 1. Are there observable naked facts? Do facts speak for themselves? 2. Sense data: sensations versus observations. 3. What are the objects of observation? 4. The framework-dependence of observation. 5. Observation statements: perceptual discrimination and its structural implications. Induction 1. Inductive versus deductive reasoning. 2. Inductive generalizations. 3. Inductive methods. 4. Probability.
19.000%	Models Representation of data: representing, modeling, and mapping the data. The abstractive nature of model-construction: properties, relations, and selectivity. The organizational aspect of model-construction: classification, ordering, and organizing the data. Reference: linking the map to the territory. Structural invariance: the model as a means of exhibiting the invariant relational structure of the model data. Inference: models as inference machines. Prediction: models as predictive devices. Calculation: models and calculi languages. Characteristic types of ordered relations exhibited by models: symmetry, asymmetry, transitivity, and intransitivity. Measurement Magnitudes: qualitative and quantitative. Counting: intervals, units, and additivity. Cardinality: more, less, and the same. Ordinality: position in a sequence. Scales: invariant ratios, proportionality, and calibration. Fundamental and derived measurement: extensive versus intensive properties.
19.000%	Laws Universal generalizations: de facto versus nomic universality. Necessity: factual versus logical necessity. Lawlike statements: assertions of invariance, but are they true? Laws of science versus laws of nature. Ontological status of laws: realism, nominalism, and conceptualism. The nomic model of explanation. Conventionalism: are laws disguised definitions? Theory What is a theory? What is the relationship between "facts" and theory? Criteria of theory acceptability: what should a good theory do? Theory selection: what factors influence theory selection? Are there any objective criteria for theory selection? The unbearable lightness of data: could rival theories be, in principle, empirically equivalent? Confirmation and refutation: what statements are confirmable? Is it possible to verify or falsify a given theory? Truth: how are true theories epistemically to be distinguished from false ones? Realism versus instrumentalism: do scientists discover the truth or do they create useful fictions?
25.000%	Part Two: A Philosophical Issues Arising Within Some of the Specific Branches of Science Physics 1. Central concepts of physics. A. Matter: particles and fields. B. Space and time: absolute or relational? C. Energy: kinetic energy versus potential energy, and their connection to mass. D. Force: a methodological intermediate. E. Causality: correlation, efficacy, and necessity. 2. Einsteinian Physics: special and general theories of relativity. 3. Entering the Quantum World. A. What are the quantum "facts"? B. What is the quantum theory? C. The measurement problem and proposed solutions. D. The EPR Paradox. E. Bell's Interconnectedness Theorem.
19.000%	Biology Teleology A. Causes versus becauses. B. Teleological idioms in the biological sciences. C. Goal-directedness in organisms. The Autonomy of Biology: reductionism versus emergantism. Enter Genetics A. What is information? B. DNA and the Genetic "code."
6.000%	Part Three: Tying Together Some Loose Ends Science and Non-Science 1. The Problem of Demarcation A. Is there a rigorous distinction between science and other ways of understanding the world? B. The need for a supra-historical criteria, and the ramifications if there are none. Metaphysics and Science 1. The intimate connection between science and metaphysics. A. Science as continuous with the tradition of metaphysical theory-construction. B. The ontological commitments of science. C. The metaphysical foundations of science. 2. The heuristic value of Metaphysics. A. Metaphysics as a necessary precondition for obtaining any sort of scientific understanding. B. Metaphysics as a heuristic for understanding science.
100.000%	Total

VI. **Methods of Evaluation**

% of Course	Topic
5%	Class Participation Reading/Classroom participation
30%	Exams/Tests Two Exams (15% each)
20%	Final exam
45%	Papers Three Written Papers (15% each)
100%	Total

VII. **Sample Assignments:**

Sample Assignment #1:
Present, compare and contrast the philosophical ideas of Karl Popper and Thomas Kuhn; and include a discussion of each man's view of inductivism.

Sample Assignment #2:
Present, compare and contrast the philosophical perspectives of the scientific realists and the scientific instrumentalists, with a focus on their respective epistemological interpretations of the underdetermination of data.

VIII. **Student Learning Outcomes:**

1. Demonstrate academic responsibility and integrity.
2. Demonstrate through oral and/or written work knowledge of the course content: the philosophical aspects and implications inherent in the scientific enterprise, the central concepts and methodology of science, and philosophical issues arising within selected branches of science.
3. Demonstrate proficiency in the research, analytical, and communication skills necessary to present, orally and/or in writing, compelling and original arguments that analyze and critique the central concepts and methodologies of science and discuss how these concepts and methodologies have changed over time.

PHILOS 6 Distance Education Application

1a. Instructor - Student Interaction:
The instructor will initiate contact with students before the course begins through a welcome letter (or video) that explains important details about the course including course materials, start and end dates, reliable access to the internet and technology, instructions on how students will access the course via Course Management System (CMS), links to guides and support, and tips on how to be successful in the course. The instructor will also initiate contact at the beginning of the course with a warm and welcoming video, email, or announcement to students that introduces the course and the instructor, and directs students on where and how to get started. The instructor will maintain regular and effective instructor-initiated contact with students throughout the semester using a variety of CMS tools including: Announcements, Assignment (feedback), Discussion (comments), Conference/Zoom (office hours), Grading (Message Students Who …), Pages, Email/Message, and Gateway to Persistence and Success (GPS). • Announcements will be used at the beginning of each learning unit to announce the beginning of a new topic and assignments, and/or used to remind students of upcoming due dates. • At the beginning of each learning unit (module), instructor will introduce students to the new topic, the types of assignments, expected workload, and learning objectives on Pages • Instructor will comment and provide regular and constructive feedback on Assignments. • Instructor will use the Discussion tool (or similar) to post regular Discussion forums, and comment on and/or contribute to the discussion, or use the Discussion tool as a Q&A for student-initiated contact with the instructor. • Instructor will conduct office hours through Conference/Zoom, Chat, or Email/Message. • Instructor will use Message Students Who … through the Grading tool to send reminders to students about upcoming due dates, message and send kudos to students who earned a high score on a particular quiz/assignment, and reach out to students who earned a low score to offer support and/or provide additional resources. • Instructor will use GPS (early alert) to send kudos to students who are performing well, respond to student-raised flags, and connect students to resources as needed. • Instructor will use CMS inbox to email or respond to emails from students. • Instructor will use the Quiz tool (or similar) to anonymously survey students at the end of the course, and use Quiz tool (or similar) to poll/survey students as a just-in-time teaching strategy to determine if learning is occurring and tweak where necessary or to get the pulse of the class Students will be encouraged to initiate contact with the instructor throughout the semester with instructor contact information clearly posted and easy to find on

the syllabus and homepage along with expected response times (within 24 hours) and through GPS. The instructor may also provide student-initiated contact opportunities through Chat, Discussion (Q&A), or student-requested office hours via Zoom, Chat, or Conference, where appropriate.

1b. Student - Student Interaction:
The instructor will provide opportunities for, and encourage, regular and effective student-initiated contact with other students, making use of a variety of CMS (and other) tools, methods, and assignments/activities. These include discussions (group, Q&A, open-ended prompts), group assignments, peer review, group chats (audio, video, written), or collaboration on documents using CMS tools, or group work through Zoom break-out sessions or the creation of Student Lounge/Café using external tools. The idea behind using a variety of tools, methods, and assignments/activities is to accommodate a variety of communication styles and create an inclusive community of learners in the online environment. The instructor will also provide guidelines with each of these assignments/activities that explain the standard/required levels of student participation (both quantity and quality) and how that participation will be evaluated.

1c. Student - Content Interaction:
The instructor will provide frequent opportunities for students to interact with varied and substantial course content. This content will be chunked into manageable portions and sequenced in modules, making it easy for students to follow and navigate. Both the variety and organization of the content will encourage frequent student engagement with the course content, and facilitate student learning. The instructor will also include unit learning objectives (such as students will be able to define, explain, assess, apply, etc.) at the beginning of each module, and align the content, assignments, activities, and assessments to these learning objectives. In terms of variety of content and frequency of interaction, a typical module will include a combination of reading, video lesson, slide presentation, case studies, policy briefs, activity, deliberate practice, discussion Q&A, and poll/survey to gauge student learning in addition to frequent and varied formative and summative assessments (discussed below) The instructor will include instructions for learners to work with the content in meaningful ways such as explaining the purpose of a particular reading or resource, instructing students to take notes during a video or slide presentation, reminding students to keep important points in mind while reading, alerting students that they will be discussing or reporting on the content in a follow-up assignment, etc. The instructor will also offer individualized learning opportunities, such as providing resource pages or supplemental materials for remedial activities or recommendations for more advanced learning.

1d. Distance Ed Interactions:

Online class activities that promote class interaction and engagement	Brief Description	Percentage of Online Course Hours
Online Lecture	Students will view/listen to lectures posted by instructor (with audio/video embedded when possible); lectures will be posted in Modules, using Microsoft Office 365 or other file sharing options	30.00%
Videos	Using PlayPosit or other video software, students will view videos provided by instructor to supplement lectures and readings, similar to videos that would be shown during face-to-face class-time	10.00%
Discussion	Using Threaded Discussions, instructor will regularly assign discussion questions which require short written responses and replies to the posts of other students similar to discussions in on-ground classes	30.00%
Project Presentation	Using Collaborations, students will collaborate on projects which require dialogue, deliberation and debate in order to build consensus on project assignments.	10.00%
Exams	Students will periodically take online quizzes and exams using the Quizzes function	10.00%
Peer Feedback	Using Peer Review function in Assignments, students will be paired with a classmate to read and provide feedback on rough drafts of essays; this activity will be similar to an in-class peer review session	10.00%

2. Organization of Content:
The instructor will organize the content in meaningful and distinct learning units (modules) by week, topic, or major theme to facilitate student learning, and ensure that the course material is accessible and easy for students to navigate. This will reduce the cognitive load for students and facilitate student learning. The instructor will include unit learning objectives at the beginning of each module, and align the content, assignments, activities, and assessments to these objectives. The instructor will present content using a variety of modalities such as text (readings, slides), audio (podcast, interviews), video (lessons, lecture, presentations) and graphics (graphs, tables, charts, visuals, and banners),

to facilitate student-centered learning. The instructor will use multiple CMS tools to deliver the content and streamline access to materials and activities for students. These tools include Pages to deliver reading, slides, and deliberate practice, and to embed or link to videos and audio, Discussion forums to deliver prompts on course content, Chat to deliver responses to questions, Collaboration and Groups to deliver student-created content, Quiz tool to deliver polls & surveys. The instructor will also use external apps such as Zoom to deliver lessons, responses to questions, and share documents, iClickers to deliver polls & surveys, and FlipGrid, PlayPosit, AdobeSpark, Screencast-o-matic, or Explain Everything to deliver video and active learning video lessons. The instructor will include a course outline (schedule) and list all materials/tools required for student success, on the syllabus.

3. Assessments:

% of grade	Activity	Assessment Method
30.00%	Take positions in debates about the strengths and limits of the doctrine of empiricism.	Essays: Student will be paired through the Peer Review function in Canvas in order to provide feedback to each other on their written work prior to submission of final. Instructor will provide feedback to students privately in Speed Grader.
10.00%	Demonstrate content knowledge through multiple choice and/or short response questions and answers	Exams: Instructor will use Canvas Quizzes and provide feedback to students privately using Speed Grader.
20.00%	Discuss definitions, conceptual distinctions, arguments, and opposing perspectives	Discussion: Students will post questions, explanations, arguments, and objections on the discussion board as well as significant feedback to at least two classmates. Instructor will also provide feedback to students privately in the Speed Grader.
20.00%	Demonstrate comprehension by outlining readings or videos, mapping arguments or answering questions	Reading Quizzes: Instructor will use Canvas Quizzes and provide feedback to students by privately using Speed Grader.
20.00%	Use a theory of science to establish whether a body of knowledge e.g. astrology counts as a science	Essays: Students will be paired for outline development and Peer Review in order to provide feedback to each other on their written work prior to submission of final. Instructor will provide feedback to students privately in Speed Grader.

4. Instructor's Technical Qualifications:

The college’s existing technology and CMS is sufficient for delivery of this course. Individual faculty would greatly benefit from additional professional development on equity-minded, effective online teaching practices, as well as professional development to enhance the technological skills of the faculty member.

5. Student Support Services:

The instructor will provide students with active links to student support and institutional services and policies, so that students do not have to leave the CMS to access these resources or learn about these policies. These resources and policies will be clearly labeled and easy to find, and the instructor will provide instructions about use and expectations, where appropriate. Resources and policies include: • Online Counseling • Disability Resources • Financial Aid • Bookstore • Online tutoring. • Canvas Resources and Technical Support • Title IX Policy & Resources • SMC Drop & Withdrawal Policies • Livesafe • Veteran’s Resource Center • Resources for DREAMERS, DACAmented students, and undocumented students • Pronouns • Honor Code • Netiquette

6. Accessibility Requirements:

All content for the course will be 508 compliant using the tools provided by the college. For example: • Content Pages will consistently use heading styles such as Heading 2, Heading 3, etc. • Lists will be created using the Bullet or Numbered List tool in the rich text editor. • Links will not use non-descriptive phrases like CLICK HERE, for example. • Underlining will only be used to denote active hyperlinks. • There will be sufficient color contrast between foreground and background to meet Section 508 standards. • Visual elements (color, bolding, all caps) will not be used as the sole way to convey importance or meaning. • Images (including those used in Pages, Discussions, Quizzes and Assignments) will use descriptive alternative text

7. Representative Online Lesson or Activity:

Course Objective: Critique and Construct a Philosophical Argument
Formative Assessments:
1) Read Helen E. Longino’s “Can There Be A Feminist Science” and post your answer to the following questions on Canvas Discussion Board: How does Helen Longino argue against the idea that good science neutral among social, moral, and political values? Do you find her argument convincing? Why or why not?

2) Find a post from one of your peers that you disagree with and explain why.

Summative Assessment:

Write an argumentative essay in which you argue for or against the following claim: “There is not masculinist and feminist science, just good or bad science.” To receive full credit, you must use the Canvas Peer Review function to review a peer’s essay and submit your essay on time so that it can be reviewed. In the course of your essay, be sure to perform all of the following tasks (though not necessarily in this order):
1) Discuss the logical positivist’s attempt to explain how good science is value neutral
2) Discuss Helen Longino’s defense of feminist science.
3) State your thesis, e.g. “In this paper I will argue that no science, including good science, is value free but that some values can nonetheless improve the objectivity of a science.”
4) Present an argument in favor of your thesis. Feel free to draw on the philosopher(s) most in line with your point of view when making your case.
5) Provide a critique of your opponent’s arguments.
6) Consider how your opposition might object to your argument and offer a response.

Program of Study

Digital Marketing Certificate of Achievement

The digital revolution in the business sector has led to an ever-increasing demand for skilled digital marketing professionals. Our program trains students to understand and develop various digital marketing channels, such as search-engine optimization (SEO), search engine marketing (SEM), social media marketing, pay per click (PPC) advertising, affiliate marketing, email marketing and content marketing, and how these channels relate to the customer experience. Students use digital marketing applications and tools to create effective content and a dynamic web presence to drive brand awareness and generate leads, as well as measure and track online performance.

Program Learning Outcomes:
Upon completion of the program, students can demonstrate the ability to build digital marketing channels for an effective, customer-focused strategy and utilize applications and tools to create content, build a web presence and measure and analyze online performance.

Area of Emphasis

BUS 34A DE	Introduction to Digital Marketing (Formerly: BUS 34)	3.0
BUS 34B *(same as CIS 70)*	Digital Marketing Applications	3.0
BUS 34C	Digital Marketing Analytics	3.0
BUS 35 DE	Customer Relationship Management	3.0
	Total: 12.0	

Digital Marketing
Certificate of Achievement

1. Program Goals and Objectives

- The digital revolution in the business sector has led to an ever-increasing demand for skilled digital marketing professionals. Our program trains students to understand and develop various digital marketing channels, such as search-engine optimization (SEO), search engine marketing (SEM), social media marketing, pay per click (PPC) advertising, affiliate marketing, email marketing and content marketing, and how these channels relate to the customer experience. Students use digital marketing applications and tools to create effective content and a dynamic web presence to drive brand awareness and generate leads, as well as measure and track online performance.

- Upon completion of the program, students can demonstrate the ability to build digital marketing channels for an effective, customer-focused strategy and utilize applications and tools to create content, build a web presence and measure and analyze online performance.

    - Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
    - Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.
    - Content Knowledge (as specified by Course Objectives)
    - Critical Thinking (drawing sound conclusions and problem solving)
    - Oral and Written Communication Skills
    - Course material has contemporary significance

- This is a new program as recommended by the Business Dept Advisory Board and the Computer Information Systems Advisory Board. The program objective is to prepare students for careers in digital marketing industry, such as digital marketing manager, content manager and strategist, search engine marketing specialist, email marketing specialist and digital marketing analyst.

2. Catalog Description

- The digital revolution in the business sector has led to an ever-increasing demand for skilled digital marketing professionals. Our program trains students to understand and develop various digital marketing channels, such as search-engine optimization (SEO), search engine marketing (SEM), social media marketing, pay per click (PPC) advertising, affiliate marketing, email marketing and content marketing, and how these channels relate to the customer experience. Students use digital marketing applications and tools to create effective content and a dynamic web presence to drive brand awareness and generate leads, as well as measure and track online performance.

- Upon completion of the program, students can demonstrate the ability to build digital marketing channels for an effective, customer-focused strategy and utilize applications and tools to create content, build a web presence and measure and analyze online performance.

    - Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
    - Demonstrate a level of engagement in the subject matter that enables and motivates the integration of acquired knowledge and skills beyond the classroom.
    - Content Knowledge (as specified by Course Objectives)
    - Critical Thinking (drawing sound conclusions and problem solving)
    - Oral and Written Communication Skills
    - Course material has contemporary significance

3. Program Requirements

- BUS 34A Introduction to Digital Marketing
- BUS 34B/CIS 70 Digital Marketing Applications
- BUS 34C Digital Marketing Analytics
- BUS 35 Customer Relationship Management
- **Sequencing:** All classes can be taken in any order or in the same single semester.
- **Advisory Minutes approval:**

CIS Advisory Board May 8 2020 Minutes: "Brenda Rothaupt showed the Social Media Assistant certificate and then requested feedback for a Business/CIS Digital Marketing certificate.
The board supports the department's plans to pursue a digital marketing certificate and the changes to CIS 70."
Business Advisory Board Meeting November 13 2020: "Workforce skills and trends; existing and new curricula. Advisors did the following: affirmed the breadth and relevance of SMC's Business-Department course offerings; noted re CRM that, for the incubators who need more cost-efficient tools, there are alternatives to Salesforce; support the development of a Digital Marketing certificate; et al"

4. Master Planning

- As an institution that provides career educational training, the program fulfills SMC's mission to provide students with relevant and updated skills and knowledge that are required for employment in the current economy. The training and knowledge gained from this program will enable graduates to find employment in the high-demand digital marketing field.

5. Enrollment and Completer Projections

- Enrollment completer projections are 50 students per year.

6. **Place of Program in Curriculum/Similar Program**

   - The digital marketing certificate of achievement complements the existing marketing and entrepreneurship certificates in the Business Department as the students from these programs often seek the training and knowledge that the Digital Marketing program provides. Whether students complete these other Business programs for self-employment or employment in industry, they can also benefit from completing the Digital Marketing program.

7. **Similar Programs at Other Colleges in Service Area**
   - A Digital marketing certificate is also offered at Fullerton College. However, this program does not offer a customer focus. So, our Digital Marketing program will be unique in the service area.

8. **Transfer Preparation Information**
   - This is not a transfer degree

SANTA MONICA COLLEGE
ADMINISTRATION OF JUSTICE
ADVISORY BOARD MEETING MINUTES

Date: November 13, 2020
Time: 10 a.m., Virtual Zoom Meeting
Facilitators: Sal Veas and Enrique Lopez

In Attendance

Santa Monica College Faculty and Staff
Sal Veas – Business Department Chair
Sasha King – Associate Dean of Career Technical Education
Dana Nasser – Business Faculty, Curriculum Chair
Enrique Lopez – Business Faculty
Ming Lu – Business Faculty
Gregory Brookins – Business Faculty
Marcella Kelly – Business Faculty
Jenny Resnick – Business Faculty
Brenda Rothaupt – CSIS & Digital Faculty
Nathan Khalil – Business Faculty

Advisory Board
Jim Taylor – Farmer's Insurance, Executive in Claims Department
Paul Shapiro – CPA & part-time Finance Resource for startups
Barbara Roll – NMC, Private Equity, Chief Marketing Officer (digital brands)
Ricardo Contreras – Ernst & Young, Campus Recruiter
Don Crawford – Deloitte(?), Audit Department
David Lo – California Society of CPAs, Senior Program Manager
Carlos Gutierrez – Ernst & Young, Partner - Insurance Practice
Edin Weinberg – Bell + Ivy, Creative Digital Marketing
Zach Binder – Bell + Ivy, Co-Founder & President
Tina Parsegian – Financial Analyst/Planner

Agenda

1. Welcome: Enrique Lopez, Professor Accounting
2. SMC Faculty Introductions
3. SMC Department Chair: Sal Veas, Professor Business
   * Sal noted that GTL and Admin-of-Justice programs convene separate meetings
4. Welcome from the District
   - Associate Dean of Career Technical Education (CTE): Sasha King
     - Workforce and Economic Development & Strong Workforce Program
     - Center for a Competitive Workforce (LAEDC)
     - Sasha discussed access for students; funding; interfacing with industry; students in the workforce.
5. Advisors Self-Introductions

6. Description of SMC's Accounting and Business Programs
    - General Enrollment Data
    - Fall is highest enrollment term, followed by Spring, Summer, Winter
    - Snapshot of enrollment numbers in all business courses
    - Diversity

7. **Panel Discussion** – questions and topics of discussion for advisors:

    - **Social Justice**
      Advisors discussed the following: diversity; equity; transparency in the workforce; social media; community education; intentional recruiting and retention; employee-resource groups.

    - **Covid**
      Advisors discussed the following: students should note how zoom interaction/communication is different from in-person interaction; the likelihood of remote work continuing in some capacity even after the Covid crisis has subsided; psychological impact of isolation; blurring of the lines between work and home; general social-media anxiety; Microsoft 360; productivity in the workplace is no dropping; team-building exercises should continue as appropriate; and mindfulness resources that are available for students/people.

    - *Before proceeding to ensuing discussion topics relating to curricula, Sal provided the Board with the rundown of courses noted in item 8 below

    - **Workforce skills and trends; existing and new curricula**
      Advisors did the following: affirmed the breadth and relevance of SMC's Business-Department course offerings; noted re CRM that, for the incubators who need more cost-efficient tools, there are alternatives to Salesforce; support the development of a Digital Marketing certificate; noted a trend that skilled workers have increasingly more freelance and entrepreneurship opportunities; noted a trend towards offshore business, which calls for a particular skill set; noted a trend towards earlier and earlier industry job recruiting (behooving students to job/career-hunt further in advance than historically had been the case). It was suggested that perhaps advisors could run mock some interviews with SMC students.

    - **Involvement as Board Member**
      SMC faculty and Advisors discussed various ways in which Advisors could contribute, which included a discussion about Advisors opening their doors to SMC faculty interested in professional development in industry (to assess and ensure relevance in the classroom), whether prolonged as part of a formal program or less formal, for example shadowing.

    - **Rotaract**
      Enrique informed the Board that SMC's Rotaract club continues through Covid to

be an effective vehicle for industry speakers to inform and guide students.

8. Feedback Items for advisors:
    - **Sal Veas highlighted new Programs and Classes** some of the seeds of which had been originally planted by Advisory Board Members. Each of these courses and programs was supported by the Advisory Board.
        - BUS 37 Business of Hip-Hop Industry
        - BUS 56 Understanding the Business of Entertainment
        - BUS 59 Design for Delight for the Entrepreneur
        - BUS 84 Introduction to Procurement
        - BUS 85 Project Management Global Trade and Logistics
        - Business Analytics
        - Data Analytics for Accounting
        - Digital Marketing:
            - BUS 34A Introduction to Digital Marketing
            - BUS 34B Digital Marketing Applications
            - BUS 34C Digital Marketing Analytics
            - BUS 35 Customer Relationship Management
        - **Customer Service Certificate:**
            - BUS 35 Customer Relationship Management
            - BUS 36A Customer Service in the Digital Age
            - BUS 36B Customer Obsessed Consideration in Service Management
            - BUS 36C Contemporary Skills for the Service Manager
        - Salesforce
            - Salesforce Lightning
            - Service Cloud
                - Trailblazers for the Future
            - Marketing Cloud
        - **Sustainability in Business Certificate of Achievement:**
            - BUS 7A Sustainability in Business
            - BUS 7B Sustainability Reporting
            - BUS 7C Corporate Sustainability Strategies
            - BUS 7D Global Social Impacts on 21st Century Business
        - ERP systems
            - SAP Accounting Module
            - SAP Procurement Module
        - **Human Resources Management Certificate of Achievement:**
            - BUS 72, ORGANIZATIONAL MANAGEMENT AND LEADERSHIP 3 UNITS
            - BUS 76, Human Resources Management
            - BUS 79, Bargaining and Negotiations
            - BUS XX, Compensation and Benefits
        - Noncredit Expansion

9. Closing Remarks

10. Meeting adjourned at 12:00 p.m. with thanks to all participants

Minutes taken by Nathan Khalil, faculty.

Department of Computer Science & Information Systems

Computer Information Systems Advisory Board Meeting

May 8, 2020

Attendees: Kiersten Elliott, Howard Stahl, Brenda Rothaupt, Gina Jerry, Odemaris Valdivia, Ann Marie Leahy, Eden Weinberg, Maria Leon-Vazquez, Sasha King, Nancy Cardenas, Tricia Ramos, Sue Canada, Fariba Bolandhemat, Sal Veas, John Gutierrez, Ted Dahle; Jacqueline Scott; Manuel Gonez, Antoinette Simmonds, Steven Sedky, Wayne Fernandez, Maral Hyeler

Welcome & Introductions

Welcome and thank you to our board members. All attendees introduced themselves or were introduced by the department chair.

Discussion of Current and Proposed Certificates

Howard provided an overview of the department's certificates and courses.

Brenda explained the flow of the noncredit certificates to the Entry Level Business Information Assistant to the Business Information Worker I to the Business Information Worker II.

Brenda showed the Social Media Assistant certificate and then requested feedback for a Business/CIS Digital Marketing certificate.

The board supports the department's plans to pursue a digital marketing certificate and the changes to CIS 70.

Eden: The data analytics focus would be very valuable to students. SEO is great, but students also need to be able to apply strategies based on data analytics. Other useful topics include email marketing, customer experience design and user experience design. When students have both development and design skills it is a magical combination.

Eden: Other topics to include in a digital marketing certificate are all the things you have in the social media assistant certificate but also courses that teach public relations, and advertising (such as Google ads verses Facebook ads). Students would benefit from knowing how to technically set up an ads campaign.

Ted: Product managers need to understand what the data analytics are telling them. You don't need to be the person who programs in the ad, but you do need to understand it.

Brenda asked about more information regarding business data analytics. Eden will follow up with her boss who has expertise in this area.

Discussion of Branded Certifications and Workforce Development
Certiport offers CIS-related exams in areas such as Microsoft, Adobe, and Quickbooks.

Howard and Tricia explained how SMC can utilize Perkins funds to provide vouchers to cover the Certiport testing fees for students.

Tricia recommend attending the CCW ICT Webinar on May 14. She will forward registration information to Howard. She also offered several strategies for the department to obtaining additional information on current industry trends.

Career Services Center

Ann Marie provided a jobs/salary report that provided information on careers related to our certificates and degrees.

LAOCRC/Centers of Excellence Program Application

Section I: Program Information

Program Title: Program title must match exactly as it appeared on the LMI request.
Digital Marketing Certificate

Submission Type: Is your submission a new program or are substantial changes being made to an existing program?

- ☒ New Program
- ☐ Substantial Changes

TOP Codes 509 Marketing and Distribution

Projected Start Date (mm/dd/yyyy) Fall 2021

Catalog Description Catalog Description includes program requirements, prerequisite skills or enrollment limitations, student learning outcomes, and information relevant to program goal.
The program requires four 3 unit classes. There are no prerequisites for any of the classes. The program provides students practical knowledge of digital marketing channels and how they relate to the customer experience. Students use a range of tools and resources to gain a proficiency in digital marketing campaign development, analytics and reporting, content creation, and strategy for a variety of industries and platforms. Students learn practical digital marketing and customer relationship management (CRM) applications to develop hands-on digital marketing skills critical for immediate employment.

Enrollment Completer Projections Enrollment Completer Projections are projections of number of students to earn certificate or degree annually.
50

Section II: Program Proposal Attributes

Program Award Type(s)
Check all that apply

Type of Program

☒ Certificate of Achievement: 8 to fewer than 16 semester (or 16 to fewer than 24 quarter) units (B)
☐ Certificate of Achievement: 16 or greater semester (or 24 or greater quarter) units (C)
☐ Associate of Science Degree (S)
☐ Associate of Arts Degree (A)
☐ A.A. – T Degree (Y)
☐ A.S. – T Degree (X)
☐ Noncredit Program (NIL)

Program Goal Program Goals and Objectives must address a valid transfer, occupational, basic skills, civic education, or lifelong learning purpose. Regional recommendation is only needed for programs with an occupational goal.
This is a new program as recommended by the Computer Information Systems Advisory Board. The program objective is to prepare students for careers in digital marketing industry, such as digital marketing manager, content manager and strategist, search engine marketing specialist, email marketing specialist and digital marketing analyst.

Section III: Course Unit and Hours

Total Certificate Units (Minimum and Maximum) 12

Units of Degree Major or Area of Emphasis (Minimum and Maximum)

Total Units for Degree (Minimum and Maximum)

Section IV: Course Report

Program Requirements Narrative
The certificate program requires courses in both Computer Information Systems and Marketing. Our program is unique by offering a hands-on digital marketing applications course (CIS 70); an in-depth 3 unit digital marketing analytics course (BUS 34C); and a customer relationship management course (BUS 35), in addition to a general introductory digital marketing course (BUS 34A). This content differentiation of our program will prevent the program from negatively impacting any other similar programs in the region.

Course	Title	Units	Year/Semester (Y1 or S1)
BUS 34A	Introduction to Digital Marketing	3	Y1
CIS 70/BUS 34B	Digital Marketing Applications	3	Y1
BUS 34C	Digital Marketing Analytics	3	Y1

BUS 35	Customer Relationship Managment	3	Y1/

Program Requirements Program Requirements includes course requirements and sequencing that reflect program goals.
No specific sequencing of courses required.

Section V: Supporting Documents

Please attach to the email

Section VI: Los Angeles/Orange County Region Specific Questions

District Santa Monica Community College District
College Santa Monica College
CRLC Member Patricia G. Ramos
Email ramos_patricia@smc.edu
Phone 310) 434-3311

Reason for approval request

☒ New Program
☐ Substantial Change
☐ Local Approved

Place of program in college's curriculum/similar program.
Business

List similar programs at other colleges in the Los Angeles and Orange County Region
Digital Marketing certificate - Fullerton

Annual Enrollment projects (non-duplicative)
50

Advisory Minutes
Please attach to the email.

Regional Program Recommendation: Labor Market Data Request

Please submit one LMI request per program even if the programs overlap. The LMI request will generate a Notice of Intent.

1. **In what region is your college located?**

☐ North Far North
☐ Bay
☐ Central
☐ South Central Coast
☒ Los Angeles & Orange County
☐ Inland Empire/Desert
☐ San Diego-Imperial

2. **In which college are you located?** Santa Monica College

3. **Please provide the following information so that the COE can contact you with any questions about your request.**
   Voting Member Name: Patricia Ramos
   Program Contact name: Sal Veas
   Program Contact email: veas_sal@smc.edu
   Program Contact phone number: 3104344617

4. **Is the data requested for:**
   If you are converting a Department Certificate to a Certificate of Achievement – please select "New Program recommendation".

   ☒ New program recommendation
   ☐ Program modification/review
   ☐ Exploratory purposes

5. **Please provide the Program or Certificate title that you are considering**
   (The title on this LMI request needs to match the title on the program application):

   Program or Certificate title Digital Marketing Certificate
   TOP code(s) 509

6. **Please enter the occupational title(s) students completing this program would be qualified to perform**.
   Occupation 1 Digital Marketing Manager

Occupation 2 Marketing Manager & Strategist
Occupation 3 Marketing Analyst
Occupation 4 Sales Representative
Occupation 5 Business Development Manager

7. **Please enter any additional information that would assist the COE in fulfilling your request, such as types of resources you have already consulted** (newspaper articles, industry reports, etc.) **or general plans for the program** (length, type of award, specialty focus, etc.).

Program of Study

Respiratory Care Associate in Science (AS)

Respiratory Care Practitioners are healthcare professionals that specialize in providing optimal cardiopulmonary care to patients with disorders such as asthma, pneumonia, COPD and infants with immature lungs, etc. Santa Monica College's Respiratory Care Program is a two-year, Associate of Sciences Degree program accredited by the Commission on Accreditation for Respiratory Care (CoARC). Through transforming competency-based medical education curriculum, the program prepares the respiratory care practitioner of the future to possess great medical knowledge, apply it, and be clinically competent to provide high quality care in challenging settings likely to be encountered upon entry into practice.

The SMC Respiratory Care Associate Degree program incorporates the latest respiratory equipment, high-fidelity simulators, skills laboratory and clinical experience at top-rated clinical sites in the Greater Los Angeles area. The program prepares students for National Board for Respiratory Care's (NBRC) board exams and earn the Registered Respiratory Therapist (RRT) credential, required for licensure in California. To earn the RRT credential, graduates must pass the Therapist Multiple Choice Exam (TMC) at the high threshold and the Clinical Simulation Exam (CSE).

Program Learning Outcomes:
The primary goal according to the Commission on Accreditation for Respiratory Care is to prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice as performed by registered respiratory therapists (RRTs). Program Learning Outcomes Upon completion of the program graduates will: 1. Demonstrate applied knowledge about biomedical and clinical sciences associated with the role of a new-graduate respiratory care practitioner. 2. Function as members of interdisciplinary team, exhibit interpersonal and communication skills required to interact with diverse set of healthcare professionals, patients and their families. 3. Demonstrate critical thinking, reflection and problem-solving skills consistent with the roles of a new-graduate respiratory care practitioner. 4. Exhibit ethical behavior consistent with the role of a professional respiratory care practitioner.

Area of Emphasis

Anatomy, Physiology, Chemistry, Microbiology, and Medical Terminology No recency for physiology and microbiology is required.		**Units:** 21.0
Program Prerequisites: (21 units)		
ANATMY 1 DE	Human Anatomy	4.0
CHEM 10	Introductory General Chemistry	5.0
CHEM 19	Fundamentals of General, Organic, and Biological Chemistry	5.0
HEALTH 61 DE	Medical Terminology	3.0
MCRBIO 1 DE	Fundamentals of Microbiology	5.0
PHYS 3 DE	Human Physiology	4.0

May apply to program while prerequisites are in progress, must complete with grade "C" or better before start of the program.

1st-year, Fall Semester: (15 units)		**Units:** 15.0
RC 1	Fundamentals of Respiratory Care	2.0
RC 1L	Applied Fundamentals of Respiratory Care	2.0
RC 2	Integrated Respiratory Physiology and Pathophysiology I	2.0
RC 2L	Applied Integrated Respiratory Physiology and Pathophysiology I	2.0
RC 3	Respiratory Care Therapeutics	3.0
RC 3L	Applied Respiratory Care Therapeutics	3.0
RC 4	Physician Interaction I	1.0

Once students are admitted to the program, an Education Plan is developed that must be followed.

1st-year, Winter Session: (4 units)		**Units:** 4.0
RC 5	Integrated Respiratory Physiology and Pathophysiology II	2.0

RC 5L	Applied Integrated Respiratory Physiology and Pathophysiology II	2.0

Once students are admitted to the program, an Education Plan is developed that must be followed.

1st-Year Spring Semester: (12 Units)		**Units:** 12.0
RC 6	Airway Management	2.0
RC 6L	Applied Airway Management	3.0
RC 7	Introduction to Mechanical Ventilation	2.0
RC 7L	Applied Introduction to Mechanical Ventilation	4.0
RC 8	Physician Interaction II	1.0

Once students are admitted to the program, an Education Plan is developed that must be followed.

2nd-year, Summer Session: (5 units)		**Units:** 5.0
RC 9	Intermediate Mechanical Ventilation	2.0
RC 9L	Applied Intermediate Mechanical Ventilation	3.0

Once students are admitted to the program, an Education Plan is developed that must be followed.

2nd-year, Fall Semester (14.5 Units)		**Units:** 14.5
RC 10	Advanced Life Support and ICU Monitoring	2.0
RC 10L	Applied Advanced Life Support and ICU Monitoring	3.0
RC 11	Advanced Mechanical Ventilation	2.0
RC 11L	Applied Advanced Mechanical Ventilation	2.5
RC 12	Physician Interaction III	1.0
RC 13	Neonatal and Pediatric Respiratory Care	2.0
RC 13L	Applied Neonatal and Pediatric Respiratory Care	2.0

Once students are admitted to the program, an Education Plan is developed that must be followed.

2nd-year, Spring semester: (11 units)		**Units:** 11.0
Course fields empty due to a META bug, please see attached Files for the course layout		
RC 14	Outpatient Respiratory Care	1.0
RC 14L	Applied Outpatient Respiratory Care	2.0
RC 15	Respiratory Disease Management	2.0
RC 15L	Applied Respiratory Disease Management	2.0
RC 16	Transition to Independent Practice	2.0
RC 17	Physician Interaction IV	1.0
RC 18	Computer Assisted Clinical Simulations	1.0

Once students are admitted to the program, an Education Plan is developed that must be followed.

Total Major Requirements: 61.5 Units
Total with Program Prerequisites: 82.5 Units

Program Narrative for Associate of Science Degree in Respiratory Care

Program Goals and Objectives

The one and only goal of the Santa Monica College Respiratory Care Program is "To prepare graduates with demonstrated competence in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains of respiratory care practice, as performed by registered respiratory therapists (RRTs)." CoARC Entry into Practice, Standard 3.01. SMC RC Program Learning Outcomes

Program Learning Outcomes:

Upon completion of the program graduates will demonstrate applied knowledge about biomedical and clinical sciences associated with the role of a new-graduate respiratory care practitioner, function as members of interdisciplinary team, exhibit interpersonal and communication skills required to interact with diverse set of healthcare professionals, patients, and their families. The graduate will apply critical thinking, reflection, and problem-solving skills, and exhibit ethical behavior consistent with the role of a professional respiratory care practitioner.

Catalog Description

Santa Monica College's Respiratory Care Program is a two-year, Associate of Sciences Degree program accredited by the Commission on Accreditation for Respiratory Care (CoARC). Through transforming competency-based medical education curriculum, the program prepares the respiratory care practitioner of the future to possess great medical knowledge, apply it, and be clinically competent to provide high quality care in challenging settings likely to be encountered upon entry into practice.

The SMC Respiratory Care Associate Degree program incorporates the latest respiratory equipment, high-fidelity simulators, skills laboratory, and clinical experience at top-rated clinical sites in the Greater Los Angeles area. The program prepares students for National Board for Respiratory Care's (NBRC) board exams and earn the Registered Respiratory Therapist (RRT) credential, required for licensure in California.
To earn the RRT credential, graduates must pass the Therapist Multiple Choice Exam (TMC) at the high threshold and the Clinical Simulation Exam (CSE).

PROGRAM ADMISSION REQUIREMENTS

Anatomy, Physiology, Chemistry, Microbiology, and Medical Terminology No recency for physiology and microbiology is required. **Units:** 21.0

Program Prerequisites: (21 units)

ANATMY 1	Human Anatomy	4.0
	IGETC Area 5: Physical and Biological Sciences (mark all that apply)	
	B: Biological Science	
	C: Physical or Biological Science LABORATORY	
	CSU GE Area B: Scientific Inquiry and Quantitative Reasoning (mark all that apply)	
	B2 - Life Science	
	B3 - Laboratory Sciences	
	GENERAL EDUCATION PATTERN (SMC GE)	
	Area I: Natural Science	
	CSU/UC Transfer Course	
	A. Transfers to UC (pending review)	
CHEM 10	Introductory General Chemistry	5.0
	IGETC Area 5: Physical and Biological Sciences (mark all that apply)	
	A: Physical Science	
	C: Physical or Biological Science LABORATORY	
	CSU GE Area B: Scientific Inquiry and Quantitative Reasoning (mark all that apply)	
	B1 - Physical Science	
	B3 - Laboratory Sciences	
	GENERAL EDUCATION PATTERN (SMC GE)	
	Area I: Natural Science	
	CSU/UC Transfer Course	
	A. Transfers to UC (pending review)	

CHEM 19	Fundamentals of General, Organic, and Biological Chemistry IGETC Area 5: Physical and Biological Sciences (mark all that apply) A: Physical Science C: Physical or Biological Science LABORATORY CSU GE Area B: Scientific Inquiry and Quantitative Reasoning (mark all that apply) B1 - Physical Science B3 - Laboratory Sciences GENERAL EDUCATION PATTERN (SMC GE) Area I: Natural Science	5.0
HEALTH 61	Medical Terminology	3.0
MCRBIO 1	Fundamentals of Microbiology IGETC Area 5: Physical and Biological Sciences (mark all that apply) B: Biological Science C: Physical or Biological Science LABORATORY CSU GE Area B: Scientific Inquiry and Quantitative Reasoning (mark all that apply) B2 - Life Science B3 - Laboratory Sciences CSU/UC Transfer Course A. Transfers to UC (pending review)	5.0
PHYS 3	Human Physiology IGETC Area 5: Physical and Biological Sciences (mark all that apply) B: Biological Science C: Physical or Biological Science LABORATORY CSU GE Area B: Scientific Inquiry and Quantitative Reasoning (mark all that apply) B2 - Life Science B3 - Laboratory Sciences GENERAL EDUCATION PATTERN (SMC GE) Area I: Natural Science CSU/UC Transfer Course A. Transfers to UC (pending review)	4.0

AREA OF EMPHASIS

1st-year, Fall Semester: (15 units)		**Units:** 15.0
RC 1	Fundamentals of Respiratory Care	2.0
RC 1L	Applied Fundamentals of Respiratory Care	2.0
RC 2	Integrated Respiratory Physiology and Pathophysiology I	2.0
RC 2L	Applied Integrated Respiratory Physiology and Pathophysiology I	2.0
RC 3	Respiratory Care Therapeutics	3.0
RC 3L	Applied Respiratory Care Therapeutics	3.0
RC 4	Physician Interaction I	1.0

1st-year, Winter Session:	**(4 units)**	
	Units: 4.0	
RC 5	Integrated Respiratory Physiology and Pathophysiology II	2.0
RC 5L		2.0

	Applied Integrated Respiratory Physiology and Pathophysiology II	

1st-Year Spring Semester: (12 Units)		**Units:** 12.0
RC 6	Airway Management	2.0
RC 6L	Applied Airway Management	3.0
RC 7	Introduction to Mechanical Ventilation	2.0
RC 7L	Applied Introduction to Mechanical Ventilation	4.0
RC 8	Physician Interaction II	1.0

2nd-year, Summer Session: (5 units)		**Units:** 5.0
RC 9	Intermediate Mechanical Ventilation	2.0
RC 9L	Applied Intermediate Mechanical Ventilation	3.0

2nd-year, Fall Semester (14.5 Units)		**Units:** 14.5
RC 10	Advanced Life Support and ICU Monitoring	2.0
RC 10L	Applied Advanced Life Support and ICU Monitoring	3.0
RC 11	Advanced Mechanical Ventilation	2.0
RC 11L	Applied Advanced Mechanical Ventilation	2.5
RC 12	Physician Interaction III	1.0
RC 13	Neonatal and Pediatric Respiratory Care	2.0
RC 13L	Applied Neonatal and Pediatric Respiratory Care	2.0

2nd-year, Spring semester: (11 units) **Units:** 11.0

RC 14	Outpatient Respiratory Care	1.0
RC 14L	Applied Outpatient Respiratory Care	2.0
RC 15	Respiratory Disease Management	2.0
RC 15L	Applied Respiratory Disease Management	2.0
RC 16	Transition to Independent Practice	2.0
RC 17	Physician Interaction IV	1.0
RC 18	Computer Assisted Clinical Simulations	1.0

Total: 82.5

MASTER PLANNING

The SMC Respiratory Care program supports the SMC's 2017-2022 strategic initiatives and objectives, to in addition of being the number one in transfers, also excel in career technical education. The SMC RC program supports the following initiatives and objectives. 1. Close the gaps in education outcomes among student groups, to maintain an innovative, responsive, and inclusive academic environment, curricular programs, learning strategies, and services.

2. Expand SMC's identity by enhancing and diversifying educational and career opportunities and pathways to students, develop clear pathways to completion for all programs. Expand Career Technical Education by enhancing and developing programs that meet the current and future needs of local and regional industry and business ("SMC 2017-2022 Strategic Initiatives and Objectives").

The program also supports the California Community College mission, to be "the primary system for delivering career technical education and workforce training to Californians, preparing individuals for skilled jobs in an ever-changing labor market" (Foundation for Community Colleges 5).

Lastly, to paraphrase, Cecilia Estolano, President of the California Community Colleges Board of Governors, the SMC Respiratory Care Program, will train the people that will take care of us in the future, and prepare them to have the skills they will need to meet the needs of the respiratory care force (Foundation for Community Colleges 4).

Santa Monica College, "2017-2022 Strategic Initiatives and Objectives." http://www.smc.edu/ACG/DistrictPlanningPolicies/Documents/Strategic_Planning_Task_Force/Strategic-Initiatives.pdf (http://www.smc.edu/ACG/DistrictPlanningPolicies/Documents/Strategic_Planning_Task_Force/Strategic-Initiatives.pdf) Accessed March 2, 2020.

Foundation for Community Colleges, "Vision for Success." www.foundationccc.org (http://www.foundationccc.org). Accessed March 2, 2020.

PLACE OF PROGRAM IN CURRICULUM/SIMILAR PROGRAMS

The SMC Respiratory Care Program is an allied health program within the career technological education umbrella. The only other similar program at SMC is the Nursing program. Both programs require didactic, skills lab and clinical experience to train competent graduates.

The SMC RC program is an associate degree without any stackable certificates. The program prepares graduates for National Board for Respiratory Care (NBRC) Therapist Multiple Choice (TMC) Exam and Clinical Simulation Exam (CSE). Graduates that pass both the TMC and CSE earn the Registered Respiratory Therapist (RRT) credential. Respiratory Care Practitioner licensure in California requires the RRT credential and an ASRC degree.

The program will replace the current SMC Respiratory Therapy Program that is in consortium with East Los Angeles College Respiratory Therapy Program. Per accreditation agency requirements, in order for SMC to attain standalone accreditation for the Respiratory Care Program, the consortia must be dissolved.

Similar Respiratory Care/Therapy Programs in our local area are Los Angeles valley College, East Los Angeles College, Mount San Antonio, and El Camino College. All these programs offer associate degree programs.

Estimated cost of the program

Tuition ($46/unit)	$3772
Books	$500
State Exam Prep. (optional)	$250
License & Board Appl. Fee	$650
CPR card	$50
CSRC Student Membership	$20
Scrubs (2 sets)	$60
Stethoscope	$50
Physical	$100
Malpractice insurance	$25
Background check	$80
TOTAL	$5000-6000

ENROLLMENT AND COMPLETER PROJECTIONS

The proposed enrollment will be 30 students per cohort. There will be two cohorts at any given time, one cohort of first-year students and one cohort of 30 second-year students. Each cohort will complete approximately 12 units per semester, or 24 units combined per semester. The yearly graduation rate will approximately 30 students per year.

LMI data is encouraging and was assessed first at the macro level (nation, state), then at the micro level, Los Angeles County. The job outlook for Respiratory Therapist in the nation according to the Bureau of Labor and Statics, is good, its projected to increase by 19% for the years 2019-2029. Upon closer observation of the data, RT jobs are expected to increase 10% higher than other healthcare jobs. At the state level, in California, according to the Employment Development Department, RT jobs are projected to increase by 28% for the years 2018- 2028. At the micro level, the outlook for RT jobs in Los Angeles County, according to the California Employment Development Department, is projected to increase by 27.5%

Websites accessed February 11, 2021

https://www.bls.gov/ooh/healthcare/respiratory-therapists.htm?view_full#tab-6

https://www.onetonline.org/link/localtrends/29-1126.00?st=CA&g=Go

https://www.labormarketinfo.edd.ca.gov/OccGuides/Detail.aspx?Soccode=291126&geography=0604000037

https://www.careeronestop.org/Toolkit/StateAndLocal/ProjectedEmployment.aspx?soccode=%20291126&location=90405

The workforce demands for respiratory care remain strong and the job outlook is promising. According to the Bureau of Labor and Statistics (BLS), employment growth for Respiratory Therapists for the years 2016-2026, is projected 19%. Seven percent higher compared to health diagnostic and treating practitioners, and 16% higher than for all other occupations. U.S. Bureau of Labor and Statistics-U.S. Department of Labor- February 11, 2021

https://www.bls.gov/ooh/healthcare/respiratory-therapists.htm?view_full#tab-6

At the state level, California projects employment growth for Respiratory Therapists for years 2016- 2026, at 25.3%. State of California Employment Development Department, Occupation profile- February 11, 2021

https://www.labormarketinfo.edd.ca.gov/OccGuides/Detail.aspx?Soccode=291126&geography=0604000037

At the Local level, the County of Los Angeles for years 2016- 2026 is expected to have employment growth of 27.5%. State of California Employment Development Department, Occupation profile- Accessed February 11, 2021
http://www.labormarketinfo.edd.ca.gov/aspdotnet/SupportPage/AllOccPrj.aspx?soccode=291126

Search of local jobs in the Los Angeles area, U.S. jobs shows 27positions and Indeed.com shows 380 jobs within 50 miles of Santa Monica College. The latter indicates a healthy demand for respiratory therapist and supports the Santa Monica College, Respiratory Therapy Program. Accessed February 11, 2021 https://www.indeed.com/jobs?q=respiratory+therapist&l=Los+Angeles%2C+CA&radius=50

Similar Programs at Other Colleges in Service Area

There are no community colleges within a 10-mile radius. The nearest community college is El Camino Community College at approximate 15 miles.

Other community colleges within a 50-mile radius include Los Angeles valley College, East Los Angeles College, and Mount San Antonio. These programs are similar in the length of study, clinical experience, and strong passing rates in both CRT and RRT.

Respiratory Therapists

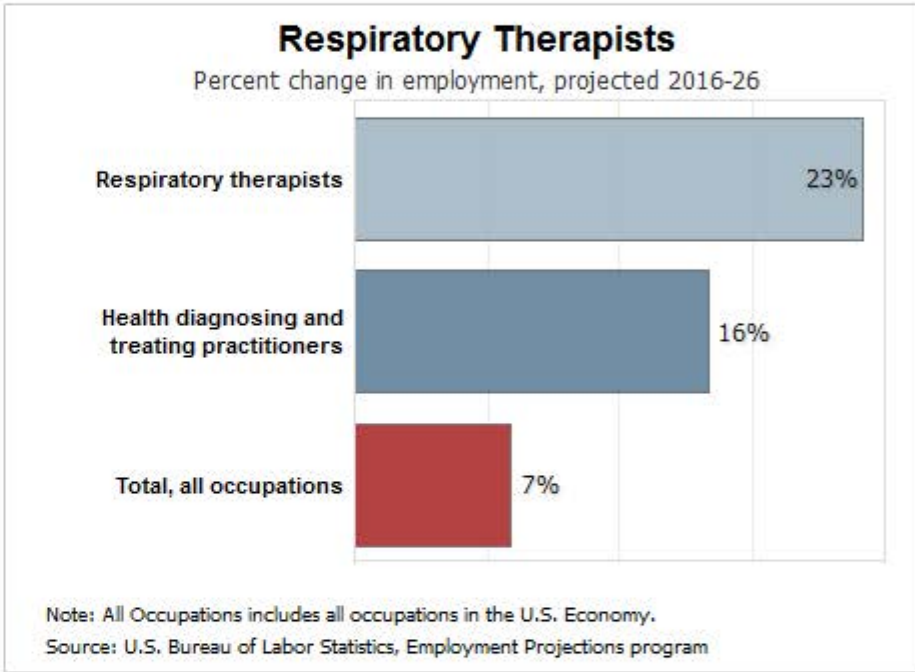
Job Outlook

About this section

Employment of respiratory therapists is projected to grow 23 percent from 2016 to 2026, much faster than average for all occupations. Growth in the middle-aged and older population will lead to an increased incidence of respiratory conditions such as pneumonia, chronic obstructive pulmonary disease (COPD), and other disorders that can permanently damage the lungs or restrict lung function. The aging population will in turn lead to an increased demand for respiratory therapy services and treatments, mostly in hospitals.

In addition, a growing emphasis on reducing readmissions in hospitals may result in more demand for respiratory therapists in nursing homes and in doctors' offices.

Advances in preventing and detecting disease, improved medications, and more sophisticated treatments will also increase the demand for respiratory therapists. Other conditions affecting the general population, such as respiratory problems due to smoking and air pollution, along with respiratory emergencies, will continue to create demand for respiratory therapists.



Note: All Occupations includes all occupations in the U.S. Economy.
Source: U.S. Bureau of Labor Statistics, Employment Projections program

Job Prospects

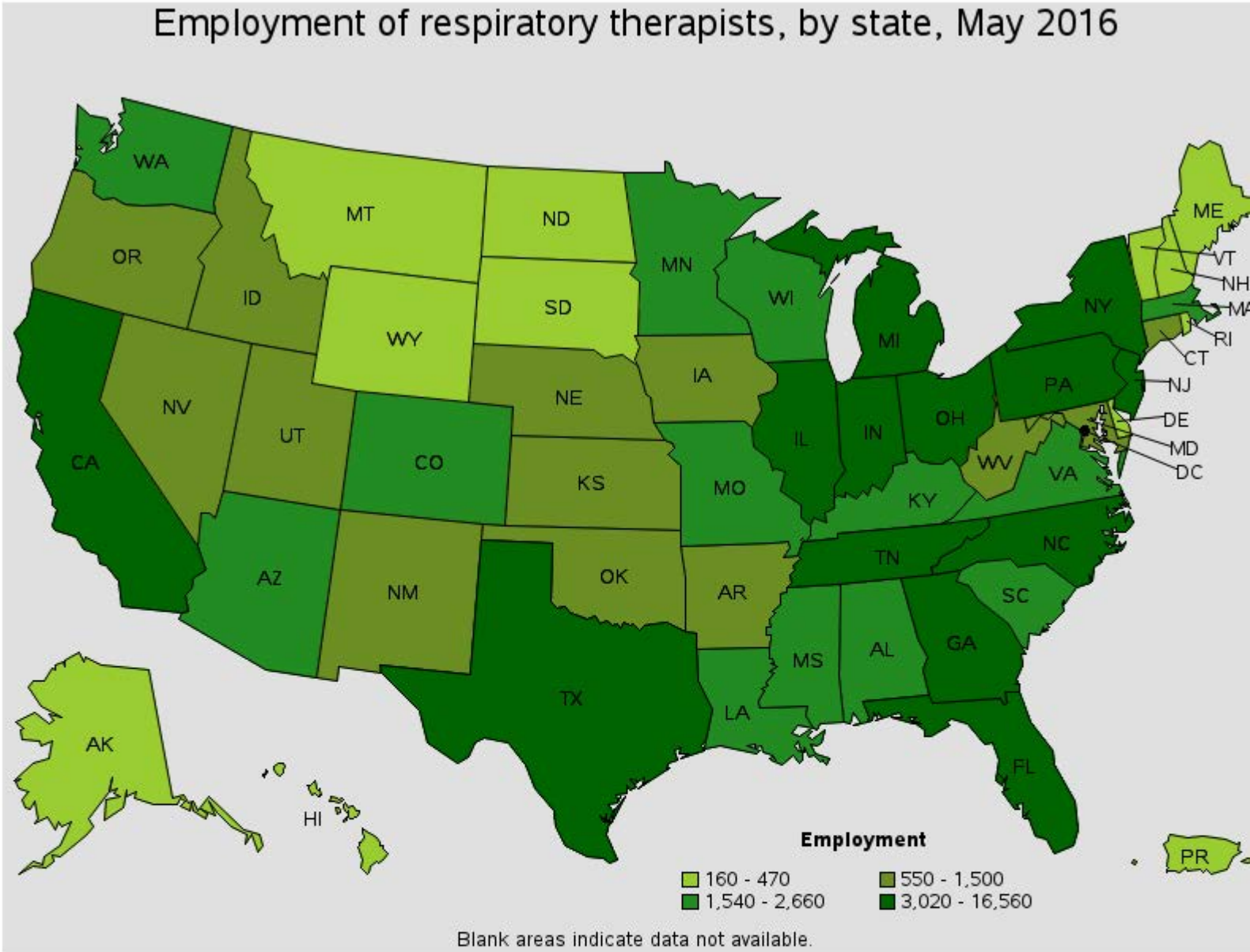
Job prospects will be best for therapists willing to travel to look for job opportunities. Some areas will be saturated with workers, and other areas (more often, rural areas) will be in need of respiratory therapists' services. Certification is generally recommended, as it may increase an applicant's competitiveness in the job market.

Employment projections data for respiratory therapists, 2016-26

Occupational Title	SOC Code	Employment, 2016	Projected Employment, 2026	Change, 2016-26		Employment by Industry
				Percent	Numeric	
Respiratory therapists	29-1126	130,200	160,600	23	30,400	xlsx
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program						

<- Pay

State & Area Data ->



States with the highest employment level in this occupation:

State	Employment (1)	Employment per thousand jobs	Location quotient (9)	Hourly mean wage	Annual mean wage (2)
California	16,560	1.04	1.15	$37.90	$78,820
Texas	11,700	1.00	1.10	$27.92	$58,070
Florida	8,590	1.04	1.16	$27.02	$56,200
Ohio	6,490	1.22	1.35	$26.04	$54,150
New York	5,840	0.64	0.71	[illegible]	$71,100

What is the Job Outlook?

Job opportunities should be good, especially for RTs with cardiopulmonary care skills or experience working with infants. Much of the increased demand will come from substantial growth in the middle-aged and elderly population—a development that will heighten the incidence of cardiopulmonary disease. Job growth will also result from the expanding role of RTs in case management, disease prevention, emergency care, and the early detection of pulmonary disorders.

Advances in inhaled medications and in the treatment of transplant patients, heart attack and accident victims, and premature infants (many of whom are dependent on a ventilator during part of their treatment) will also increase the demand for the services of respiratory care practitioners.

Projections of Employment

In California, the number of Respiratory Therapists is expected to grow faster than average growth rate for all occupations. Jobs for Respiratory Therapists are expected to increase by 17.0 percent, or 2,500 jobs between 2014 and 2024.

Estimated Employment and Projected Growth
Respiratory Therapists

Geographic Area (Estimated Year-Projected Year)	Estimated Employment	Projected Employment	Numeric Change	Percent Change	Additional Openings Due to Net Replacements
California (2014-2024)	14,700	17,200	2,500	17.0	3,500

Source: EDD/LMID Projections of Employment by Occupation

View Projected Growth for All Areas

Annual Job Openings

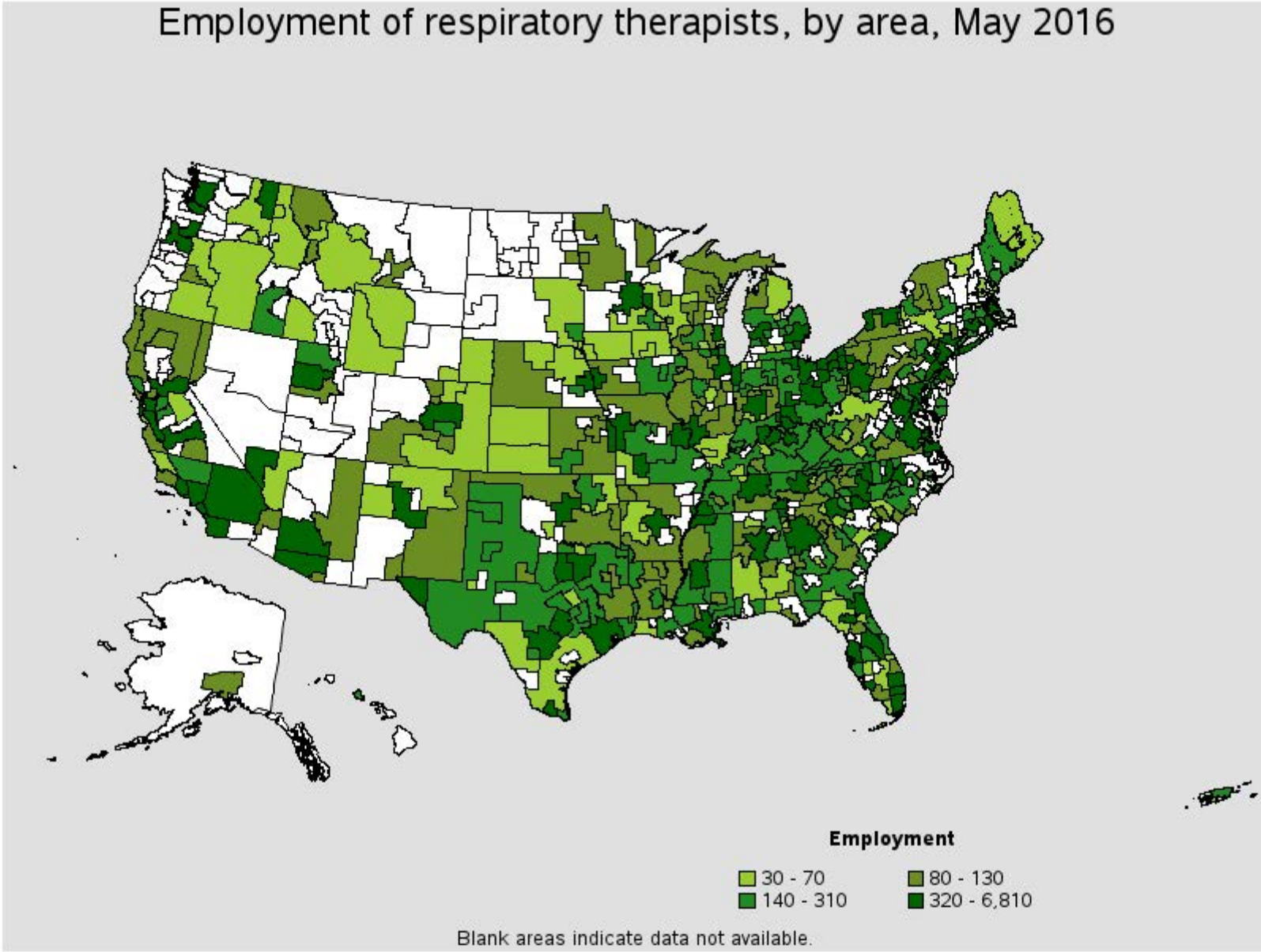
In California, an average of 250 new job openings per year is expected for Respiratory Therapists, plus an additional 350 job openings due to net replacement needs, resulting in a total of 600 job openings.

Estimated Average Annual Job Openings
Respiratory Therapists

Geographic Area (Estimated Year-Projected Year)	Jobs From Growth	Jobs Due to Net Replacements	Total Annual Job Openings
California (2014-2024)	250	350	600

Source: EDD/LMID Projections of Employment by Occupation

View Data for All Areas



Metropolitan areas with the highest employment level in this occupation:

Metropolitan area	Employment (1)	Employment per thousand jobs	Location quotient (9)	Hourly mean wage	Annual mean wage (2)
Los Angeles-Long Beach-Glendale, CA Metropolitan Division	5,250	1.24	1.38	$35.38	$73,590
New York-Jersey City-White Plains, NY-NJ Metropolitan Division	4,100	0.62	0.69	$36.32	$75,540
Chicago-Naperville-Arlington Heights, IL Metropolitan Division	3,370	0.93	1.03	$27.08	$56,330
Houston-The Woodlands-Sugar Land, TX	2,600	0.89	0.98	$28.86	$60,030
Dallas-Plano-Irving, TX Metropolitan Division	2,160	0.89	0.99	$28.25	$58,780
Atlanta-Sandy Springs-Roswell, GA	1,850	0.72	0.80	$27.51	$57,220

Respiratory Therapists Estimated Employment and Projected Growth					
Geographic Area (Estimated Year-Projected Year)	Estimated Employment	Projected Employment	Numeric Change	Percent Change	Additional Openings Due to Net Replacements
California (2014-2024)	14,700	17,200	2,500	17.0	3,500
Butte County (2014-2024)	130	150	20	15.4	30
East Bay Area (2014-2024)	1,210	1,480	270	22.3	280
Eastern Sierra Region (2014-2024)	10	20	10	100.0	
Fresno County (2014-2024)	310	370	60	19.4	70
Imperial County (2014-2024)	30	40	10	33.3	10
Inland Empire Area (2014-2024)	1,320	1,590	270	20.5	310
Kern County (2014-2024)	240	270	30	12.5	60
Los Angeles County (2014-2024)	4,350	5,120	770	17.7	1,020
Monterey County (2014-2024)	120	140	20	16.7	30
North Coast Region (2014-2024)	110	130	20	18.2	30
Northern Counties Region (2014-2024)	80	100	20	25.0	20
Sacramento Metro Area (2014-2024)	760	890	130	17.1	180
San Benito and Santa Clara Counties	880	1,110	230	26.1	210

State of California
Employment Development Department

About EDD | Find a Job | File & Manage a Claim | Employer Services | EDD News

http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/occExplorerQSDetails.asp?menuChoice=occexplorer&printerFriendly=TRUE&soccode=291126&geogArea=0604000037&socTitle=Respiratory+Therapists&zipCode=&zipRadius=25

Respiratory Therapists
(SOC Code : 29-1126)
in Los Angeles County

Assess, treat, and care for patients with breathing disorders. Assume primary responsibility for all respiratory care modalities, including the supervision of respiratory therapy technicians. Initiate and conduct therapeutic procedures; maintain patient records; and select, assemble, check, and operate equipment.

Employers are usually looking for candidates with a Associate degree .

Los Angeles County is the same as Los Angeles-Long Beach-Glendale Metro Div.

Occupational Wages [Top]

Area	Year	Period	Hourly Mean	Hourly by Percentile		
				25th	Median	75th
Los Angeles-Long Beach-Glendale Metro Div	2017	1st Qtr	$35.83	$30.57	$35.97	$42.27

View Wages for All Areas About Wages

Occupational Projections of Employment (also called "Outlook" or "Demand") [Top]

Area	Estimated Year-Projected Year	Employment		Employment Change		Annual Avg Openings
		Estimated	Projected	Number	Percent	
Los Angeles County	2014 - 2024	4,350	5,120	770	17.7	179

View Projections for All Areas About Projections

Job Openings from JobCentral National Labor Exchange [Top]

Possible Licenses Required and Issuing Authority

[Top]

License Title	License Authority
Respiratory Care Practitioner	Department of Consumer Affairs Respiratory Care Board of California http://www.rcb.ca.gov

About Licenses

Industries Employing This Occupation (click on Industry Title to View Employers List)

[Top]

Industry Title	Number of Employers in Los Angeles County	Percent of Total Employment for Occupation in State of California
General Medical and Surgical Hospitals	336	66.7%
Outpatient Care Centers	2,656	6.5%
Nursing Care Facilities	821	6.1%
Employment Services	1,694	5.9%
Other Hospitals	52	4.3%
Home Health Care Services	1,567	3.2%
Offices of Physicians	12,542	3.0%
Residential Mental Health Facilities	4	1.0%

About Staffing Patterns

C. Employer Survey/Other Evidence of Need

Employer Survey/Other Evidence of Need Questions **Richard Hernandez**	**Method- Via Telephone**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• LACUSC	LACUSC
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• 40 positions LAC USC next year	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• Yes, but currently coming through registry until they have one year of clinical experience	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• YES	

Employer Survey/Other Evidence of Need Questions Donna Matalon	Method- Via Telephone	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• Providence Tarzana Medical Center	• YES
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Yes	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• Yes, minimum qualifications ASRT and RRT credential	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• YES	

Employer Survey/Other Evidence of Need Questions **Rowena Gandionco**	**Method- Via Telephone**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• Providence St. Joseph Burbank	• YES
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Yes, few openings in NICU and ICU	• Plan to continue trend • Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification • • BSRT preferred	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements • Goes through recruiter	

Employer Survey/Other Evidence of Need Questions Janice Garcia	Method- Via Telephone	
6. How many employers were surveyed and how many responded	Surveyed	Responded
	• Beverly Hospital	• Yes
7. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level	
8. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Expanding scope of practice for RTs to start doing PICC lines	• Turnover, retirees
9. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification • • BSRT preferred	
10. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• YES	

Employer Survey/Other Evidence of Need Questions Sherryn Tico	Method- Via Telephone	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• KP Downey	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Plan to expand hospital wing, will add ICU beds	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification • • BSRT preferred	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements • Internal employees get preferential employment	

Employer Survey/Other Evidence of Need Questions **Anthony Hidalgo**	**Method- Via Telephone**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• Garfield Medical Center	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Anticipates openings	• Anticipates openings due to staff retiring and turnover
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements	

Employer Survey/Other Evidence of Need Questions Michael O'connor	Method- Via Telephone	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• Glendale Adventist Medical Center	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Not this year, using registry until able to justify to administration	• Yes, currently short staffed, anticipates hiring within five years. • Also, some retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification •	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• YES, as long the applicant has met the requirements	

Employer Survey/Other Evidence of Need Questions **Anthony Innabi**	**Method- In person**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• California Hospital	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level • NICU	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Yes, in fact, just hired four staff	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification • • BSRT preferred	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements •	

Employer Survey/Other Evidence of Need Questions **Jeff Davis**	**Method- In person**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• UCLA Ronald Reagan	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level -Per diem •	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Has openings now	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification • • BSRT preferred	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements •	

Employer Survey/Other Evidence of Need Questions **Drew Martenson**	**Method- In person**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• White Memorial Medical Center	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level -Per diem •	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• No openings now	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements	

Employer Survey/Other Evidence of Need Questions **Stephanie Summerville**	**Method- In person**	
1. How many employers were surveyed and how many responded	Surveyed	Responded
	• LAC+USC Adults	• Yes
2. The specific title(s) of the positions covered by the survey	Respiratory Care Practitioner • Entry level	
3. How many openings the employer anticipates, due to separations and new jobs (growth), in the next full year and over the next full five years?	1-year	5-year
	• Has openings now, requires 2 years of experience	• Turnover, retirees
4. Whether the employer believes the applicant program as described would qualify students for the specific positions?	Yes	No
	• ASRT minimum qualification	
5. Whether the employer would preferentially hire students who have completed the program?	Yes	No
	• As long the applicant has met the requirements	

The workforce demands for respiratory care remain strong and the job outlook is promising. According to the Bureau of Labor and Statistics (BLS), employment growth for Respiratory Therapists for the years 2016-2026, is projected 23%. Seven percent higher compared to health diagnostic and treating practitioners, and 16% higher than for all other occupations. U.S. Bureau of Labor and Statistics-U.S. Department of Labor- December 19, 2017. https://www.bls.gov/ooh/healthcare/respiratory-therapists.htm#tab-6

At the state level, California projects employment growth for Respiratory Therapists for years 2014-2024, at 17%. State of California Employment Development Department, Occupation profile- December 19, 2017. http://www.labormarketinfo.edd.ca.gov/cgi/databrowsing/occExplorerQSDetails.asp?searchCriteria=Respiratory+Therapy&careerID=&menuChoice=occexplorer&geogArea=0601000000&soccode=291126&search=Explore+Occupation

At the Local level, the County of Los Angeles is expected to have employment growth of 17.7%. State of California Employment Development Department, Occupation profile- December 19, 2017. http://www.labormarketinfo.edd.ca.gov/aspdotnet/SupportPage/AllOccPrj.aspx?soccode=291126

Doing a search of local jobs in the Los Angeles area, U.S. jobs shows 27positions and Indeed.com shows 179 jobs within 50 miles of Santa Monica College. The latter indicates a healthy demand for respiratory therapist and supports the Santa Monica College, Respiratory Therapy Program. https://us.jobs/results.asp?jobcategory=29112600&rd1=50&zc1=90405 . Accessed 19 December 2017. https://www.indeed.com/jobs?q=respiratory+therapist&l=Los+Angeles%2C+CA&radius=50. Accessed 19 December 2017.