

UNIVERSITY OF SOUTH ALABAMA
COLLEGE OF ALLIED HEALTH PROFESSIONS
DEPARTMENT OF CARDIORESPIRATORY CARE

CRC 332 - Diagnostic and Intermittent Respiratory Care
Spring 2018

4 Semester hours

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DESCRIPTION: This course will focus on cases involving patients receiving basic respiratory care modalities including oxygen and aerosol therapy, airway care, pharmacology, and intermittent therapy. Diagnostic issues include pulmonary function testing and arterial blood gas analysis. Students will discuss the pathophysiology and health promotion/disease prevention aspects of each case. Relevant laboratory exercises will be conducted. Web enhanced.

COURSE GOALS: Students will incorporate a small group session method of Problem-Based learning into their learning styles. Students will learn through this method a systematic approach to information gathering, incorporation of new material (as described above), and decision-making.

COURSE CONTENT: Cases will be introduced that will promote cognitive knowledge and psychomotor skills in:

- A. chronic obstructive pulmonary disease
- B. atelectasis
- C. restrictive lung disease
- D. oxygen therapy
- E. pharmacology
- F. aerosol therapy
- G. arterial blood sampling and analysis
- H. patient assessment
- I. pulmonary function testing
- J. hyperinflation therapy
- K. asthma
- L. pneumonia
- M. lung carcinoma
- N. end of life/palliative care
- O. suctioning

CONDUCT OF THIS COURSE:

Each section will be facilitated by a faculty member. Each case will consist of three group discussions of the case, a lab/enrichment lecture time (as needed) and an examination, following the schedule below. Case flow will follow the pattern described in the PBL handbook. We will study 5 cases, typical of the types of patients you will see in clinical. At the end of each group discussion, the whole class will meet to confirm learning issues.

EVALUATION:

1. **Content examinations**, designed to assess the student's cognitive knowledge. These examinations will be based on the learning issues specified by the students in their small groups and in the content areas specified in the PBL handbook at the various levels of organization. See also the question areas listed here in the syllabus.
2. A **facilitator assessment of student performance (FASP)**, in which the facilitator and students will evaluate the students' participation in the small group.
3. An **individual process assessment (IPA)**, which will evaluate the student's independent clinical reasoning skills and approach to the patient.
4. **Laboratory skills exercises**, designed to assess the students' skills in performing respiratory care procedures.

A written examination will be administered after each case is concluded, the sum of which will constitute approximately 50% of the grade. A comprehensive final examination will be administered, which will constitute approximately 20% of the final grade. The FASP evaluation is 10% of the final grade and the IPA is 20% of the final grade.

OFFICE HOURS:

You may feel free to consult with the instructors whenever they are in their offices and not busy with another person. Feel free to make an appointment if you desire.

CLASS ATTENDANCE:

The PBL attendance policy is in the PBL student handbook. Attendance is expected, unless the facilitator is previously notified. When online resources are available, students are expected to make use of them to enhance their knowledge of the topic. A grade of F* will be assigned in cases where the student does not officially withdraw, but fails to attend, or fails to complete assignments, or who fails to participate in class activities. It will be used when, in the opinion of the instructor, completed assignments or course activities are insufficient to make normal evaluation of academic performance possible.

ELECTRONIC DEVICES

Electronic devices such as smart phones and computers may be used during group discussion to refer to learning issues, FYIs, etc., but not for personal emails and other personal communications

STUDENTS WITH DISABILITIES:

In accordance with the Americans with Disabilities Act, students with bonafide disabilities will be offered reasonable accommodation. The Office of Special Student Services (OSSS) will certify a disability and advise faculty members of reasonable accommodations. If you have a specific disability that qualifies you for academic accommodations, please notify me and provide

certification from Disability Services in the Office of Special Student Services. The Office of Special Student Services is located in Room 270 of the Student Center (460-7212).

CHANGES IN COURSE REQUIREMENTS

Since all classes do not progress at the same rate, the instructor/professor may wish to modify the above requirements or their timing as circumstances dictate. For example, the instructor may wish to change the number and frequency of exams, or the number and sequence of assignments. However, the students must be given adequate notification. Moreover, there may be non-typical classes for which these requirements are not strictly applicable in each instance and may need modification. If such modification is needed, it must be in writing and conform to the spirit of this policy statement.

ACADEMIC DISRUPTION

The University of South Alabama's policy regarding Academic Disruption is found in The Lowdown, the student handbook.

<http://www.southalabama.edu/lowdown/academicdisruption.shtml>: Disruptive academic behavior is defined as individual or group conduct that interrupts or interferes with any educational activity or environment, infringes upon the rights and privileges of others, results in or threatens the destruction of property and/or is otherwise prejudicial to the maintenance of order in an academic environment. We expect students to be cordial, courteous and respectful of faculty members and fellow students.

STUDENT ACADEMIC CONDUCT POLICY

The University of South Alabama's policy regarding Student Academic Conduct Policy is found in The Lowdown <http://www.southalabama.edu/lowdown/academicconductpolicy.shtml>: The University of South Alabama is a community of scholars in which the ideals of freedom of inquiry, freedom of thought, freedom of expression, and freedom of the individual are sustained. The University is committed to supporting the exercise of any right guaranteed to individuals by the Constitution and the Code of Alabama and to educating students relative to their responsibilities.

If a student violates these standards, they may be asked to leave.

- Students enrolled in online courses are expected to adhere to the Academic Conduct Policy. In particular, students are expected to complete their own coursework and not provide unauthorized information or materials to another student.

ONLINE WRITING SUPPORT

- Information about the University Writing Center eTutoring can be found online at <https://www.southalabama.edu/writing>

COUNSELING AND TESTING SERVICES

Counseling and Testing Services provides a variety of free and confidential services for students. For further information regarding this resource go to www.southalabama.edu/counseling or call the office at 460-7051.

REFERENCES:

Kacmarek et al, Eds. Egan's Fundamentals of Respiratory Care, 11th ed., Elsevier.

Taber's Cyclopedic Medical Dictionary, FA Davis.

Cairo, Mosby's Respiratory Care Equipment, 9th ed. Elsevier.

White GC. Basic Clinical Lab Competencies for Respiratory Care, 5th ed., Cengage.

Heuer, et. al. Clinical Assessment in Respiratory Care, 7th ed. Elsevier

Beachy W. Respiratory Care Anatomy and Physiology 3rd ed., St. Louis, Mosby, 2013.

DesJardins T, Burton GC. Clinical Manifestations and Assessment of Respiratory Disease, 7th Ed.

Gardenhire. Rau's Respiratory Care Pharmacology 9th ed. Elsevier.

Clinical Practice Guidelines of the American Association for Respiratory Care.

Internet resources, as defined by the class members.

Questions that may occur on exams for all cases:

What are the etiology, pathophysiology, symptoms, medical therapy and physical/laboratory/radiographic examination findings of any identified disease/disorder?

What are the indications, contraindications, equipment, hazards and procedures for any identified respiratory therapy?

For any identified equipment: how is it selected and assembled, what troubleshooting might be required, how is the patient taught to use it, how is therapy conducted with it evaluated?

What diagnostic tests are used and how are they conducted?

What are the indications, names, actions, side effects/hazards, and doses for medications, depending on how we classify them?

What are the basic science issues?

What are the health promotion/disease prevention issues and what is the role of the RT?

Spring 2018 PBL groups

<u>Group 1</u>	<u>Group 2</u>
Alharbi	Alhazmi
Larson	Lowrey
Parker	Wright
Enfinger	Riley
Gray	Harris
Allehaibi	Campbell
Powell	Norton
	Nasher

Book assignments: bring these books or the e-version to each group session

Book	Group 1	Group 2
Egan's Fundamentals	Alharbi	Alhazmi
Cairo equipment	Larson	Nasher
White Lab	Parker	Wright
Wilkin's assessment	Enfinger	Norton
DesJardins disease	Gray	Harris
Rau Pharmacology	Powell	Riley
<u>And</u> Beachey A&P	Allehaibi	Nasher

Use your smart device for a dictionary

Schedule Spring 2018
1/8/17-2/19/18

Group 1 meets in the lab
Groups 2 meets in the conference room
Lectures and exams in classroom

<u>Day</u>	<u>Date</u>	<u>Time</u>		<u>Topic</u>	<u>References</u>
Mon	1/8	8-12 1-3	Groups 1&2	PBL & CRC332 Orientation Johannsen case discussion	DesJardins ch 27
Tue	1/9	8-10 10-12		lung cancer & suction lecture lab (nursing skills lab)	Egan's 733-741; ch 28
Wed	1/10	8-10	Groups 1&2	Johannsen case discussion	
Fri	1/12	8-10 10-12	Groups 1&2	Johannsen case discussion Review/discussion	
Mon	1/15			ML King birthday holiday	
Tue	1/16	8-10 10-12 1-3	Groups 1&2	Johannsen Exam Asthma lecture Barton Case discussion	Egan's 535-544 DesJardins ch 13
Wed	1/17	8-10 10-12	Groups 1&2	Barton case discussion Lecture: PFT calibration, lung volumes, plethysography, Raw, diffusion	Egan ch 20; DesJardin ch 3 Wilkins p 178-195
Th	1/18	8-10		AT USAMC PFT lab; part of CRC 345 Group 1; 10-12 Group 2	
Fri	1/19	8-10 10-12	Groups 1&2	Barton case discussion Lecture: 6 min walk, CP stress, FE _{NO} , FE _{CO} , bronchial challenge	Wilkins p 195-206
Mon	1/22	8-10	Groups 1&2	Bieber case discussion	
Tue	1/23	8-10 10-12		Barton Exam COPD lecture	Egan's 526-535; 545 DesJardins ch 12
Wed	1/24	8-10	Groups 1&2	Bieber case discussion	GOLD (online) ch 1-4
Fri	1/26	1-3 f/b	Group 1&2	Bieber case discussion Review/discussion	
Mon	1/29	8-10	Group 1&2	Stewart case discussion	

Tue	1/30	8-10	Bieber exam		
		10-12	COPD exacerbation lecture		GOLD (online) ch 5 & 6
Wed	1/31	8-10	Groups 1&2	Stewart case discussion	
		10-12	Lecture: Pulm rehab., O ₂ titration w/exercise, overnight SpO ₂		Egan ch 55
Fri	2/2	8-10	Groups 1&2	Stewart case discussion	
		10-12	Review/discussion		
Mon	2/5	8-10	Groups 1&2	Albatross case discussion	DesJardins ch 44
Tue	2/6	8-10	Stewart exam		
Wed	2/7	8-10	Groups 1&2	Albatross case discussion	
Th	2/8	1:30-3:30	Review/discussion		
Fri	2/9	8-10	Groups 1&2	Albatross case discussion	
		10-12	CAD lecture		
Mon	2/12	8-10	Albatross exam		
Mon	2/19	7:30-10:00		Final exam	