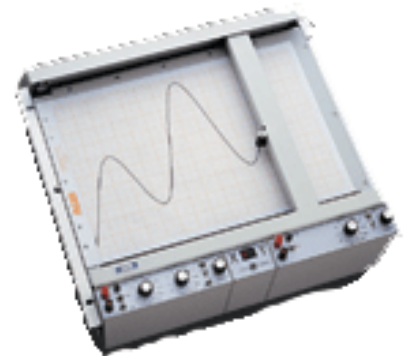
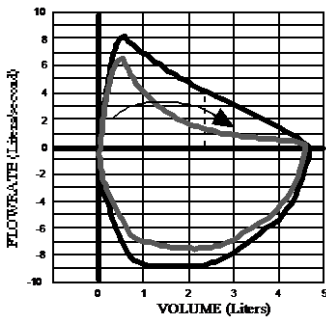
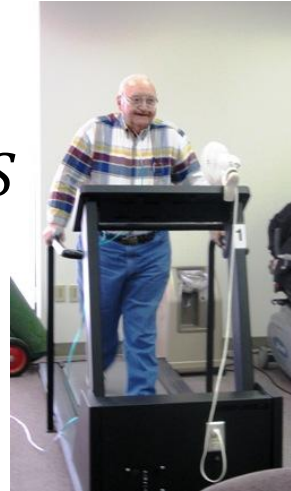


JACKSON COLLEGE
RESPIRATORY CARE PROGRAM



RES 204
Diagnostic Theory
LECTURE SYLLABUS
Winter SEMESTER 2017



INSTRUCTOR:
OFFICE:
CELL PHONE:
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Outline of Instruction

Division:	Allied Health	Area:	Respiratory Care
Course Number:	RES 204	Course Name:	Diagnostic Theory
Prerequisite:	RES 120 Respiratory Care Techniques III RES 125 Clinical Practice II RES 126 Cardiopulmonary Pathophysiology II		
Credits:	3		

Course Description/Purpose

This course covers pulmonary function testing and blood gas analysis equipment and procedures in the laboratory and clinical settings. It also includes an emphasis on the interpretation of test results from this equipment. Ventilator graphics, an extension of PFT graphics, and their interpretations will be presented. Additionally, equipment and procedures in common use in the areas of ABG laboratories, cardiopulmonary stress testing, pulmonary rehabilitation and pulmonary home care will be presented.

Major Units

1. Intro to PFTs: Forced Spirometry
2. Residual Volume Determination, DL_{CO} Testing, and Intro to Flow-Volume Loops
3. Bronchial Reactivity, Airway Resistance, and Distribution of Ventilation Tests
4. Interpretation of Laboratory and Ventilator Based PFT Results and Graphics
5. Interpretation of Ventilator Based PFT Results (Ventilator Graphics)
6. Blood Gas Laboratory Equipment and Quality Control
7. Cardiopulmonary Stress Testing and Rehabilitation Programs
8. Pulmonary Home Care Activities and Equipment

Educational/Course Outcomes

The course goals and objectives incorporate specific Associate Degree Outcomes (ADOs) established by the JCC Board of Trustees, administration, and faculty. These goals are in concert with four-year colleges, universities, and reflect input from the professional communities we serve. ADOs guarantee students achieve goals necessary for graduation credit, transferability, and professional skills needed in many certification programs. The ADOs and course objectives addressed in this class include the following:

- Cognitive** Each student will be expected to:
- o Analyze multiple patient scenarios and interpret spirometrically acquired data for presence/absence of common pulmonary pathologies. **ADO7**

Academic Honesty Policy: If there is any suspicion of academic dishonesty, JC's Academic Honesty Policy will be followed and appropriate action will be taken, up to and including assigning a **failing grade** for the paper, project, report, exam, or the course itself (whichever is deemed necessary). To see the policy, visit: <https://www.jccmi.edu/wp-content/uploads/StudentCodeOfConduct.pdf>.

Incomplete Policy: (Excerpt from JC Policy) "A student may request an incomplete from the instructor. The incomplete will be granted only if the student can provide documentation that his or her work up to that point is sufficient in quality, but lacking in quantity, due to circumstances beyond the student's control. Furthermore, a written plan for making up the missing work within one semester must be completed by the student. Final determination of whether an incomplete will be given is the instructor's decision."

Classroom expectations: There are three expectations that will be enforced in the classroom:

1. First, attendance is very important to successfully learn and retain lecture information. Therefore attendance in class all day, every day is expected and encouraged. According to the **JC Respiratory Care Program Student Handbook**, student responsibilities include "taking an active role in the learning process", and one cannot do this if you are not there and participating in discussion and class activities. The student will be responsible for contacting the instructor to obtain any make up material needed as a result of the absence. In order to facilitate preparation of such materials, the student will probably best contact the instructor as much in advance as possible via email or phone prior to class time if there is any expected absence or any makeup material needed. Then the student will need to contact the instructor after the absence to arrange to pick up any missing materials. It is the student's responsibility to gather such material, so going to the instructor and asking for any handouts or materials is the student's responsibility. Also, having a fellow student from whom the student can get class notes is for the student to arrange. The instructor will not go over the material with a student as an outside of class activity.

- In addition, the **JC Respiratory Care Program Student Handbook** will be followed closely pertaining to classroom behavior. As stated in the Handbook, "Responsibilities borne by the student in maintaining an optimal learning environment include treating other students, instructors, respiratory therapists, and co-workers (e.g. nurses) with the respect afforded to fellow health care professionals." Mutual respect between the instructor and all students is expected at all times. Disrespect and other disruptive behaviors which inhibit the teaching and learning to which the entire class is entitled will not be tolerated. Any incidents will be handled in keeping with the disciplinary policy spelled out beginning on p. 16 of the **JC Respiratory Care Program Student Handbook**, and appropriate action taken up to and including **class expulsion**.
- Thirdly, assignments or take home quizzes are expected to be handed in on the appropriate due date (which shall be **one week** from when they are given out in class). In general, assignments that are late will be subject to a late penalty (10 points deducted from the final grade for that assignment per week until all point value is lost).

Getting Extra Help: (Besides visiting me during office hours)

It can be very frustrating when you do not understand concepts and are unable to complete homework assignments. However, there are many resources available to help you with your study of respiratory care.

- CENTER FOR STUDENT SUCCESS:** Tutors (plus additional services for academic success) can be accessed by calling **796-8415** or by stopping by the **Center for Student Success Bert Walker Hall, Room 138**. Arrange to get regular assistance from a tutor. Students requiring special assistance (including those affected by the Americans with Disabilities Act) should contact the Center for Student Success. This is the first step in acquiring the appropriate accommodations to facilitate your learning.
- STUDY GROUP:** Find a study partner or a study group. Sometimes it helps to work through problems with another person.
- JETNET:** There will be material posted there to help students.
- EMAIL, TEXT or CALL:** The best and quickest way to get a hold of me, besides attending class, of course.
- Redo problems** from tests and homework assignments, particularly ones that you got wrong or have trouble understanding. Ask if you need help.

OFFICE HOURS-(SUBJECT TO CHANGE WITH PRIOR NOTICE)

Class meeting times: Monday: 1 -4 PM
 Office hours: Monday: 9:00A to 10:30A and 4P to 5:30P
 Additional time made by appointment

REFERENCE MATERIAL: **Textbook Zero:** All texts are available in digital format from the book store / many online sources.

Required Texts:

- Ruppel's Manual of Pulmonary Function Testing, 10th ed., Mottram., Elsevier, 2013, ISBN 978-0-323-08505-2. (**Ruppel**)
- Egan's Fundamentals of Resp. Care, 10th ed., Kacmarek et. al., Elsevier, 2013, ISBN 978-0-323-08203-7. (**Egan**)
- Respiratory Care: Patient Assessment and Care Plan Development, 1st ed., Shelledy and Peters, Jones and Bartlett, 2016, ISBN 978-1-4496-7244-7. (**Shelledy**)
- Equipment for Respiratory Care, 1st ed., Volsko, et. al., Jones and Bartlett, 2016, ISBN 978-1-4496-5283-8. (**Equip**)
- Clinical Manifestations and Assessment of Respiratory Disease, 6th ed., Des Jardins, Elsevier, 2011, ISBN 978-0-323-05727-1. (**Des Jardins**)
- Syllabus, Calculator, ruler (during PFT units).

Other/Optional Reference Sources (used by program faculty)

- Pilbeam's Mechanical Ventilation, 5th ed., Cairo., Elsevier, 2012, ISBN 978-0-323-07207-6. (**Pilbeam**).
- The Essentials of Respiratory Therapy, 4th ed., Kacmarek, et. al., Mosby, Inc., 2005. (**Kacmarek**).
- Rau's Respiratory Care Pharmacology, 8th ed., Gardenhire, Elsevier, 2012, ISBN 978-0-323-07528-2. (**Rau**).

NOTE: (**Bold Name**) represents how this text will be referred to when cited in unit outlines.

EVALUATION

If an accommodation is needed due to a documented disability—physical, learning, or otherwise—contact the Center for Student Success in **Bert Walker Hall, Room 138** (796-8415). Accommodations may be provided depending on the disability.

Course points are derived from class attendance, exams and a comprehensive final exam. Most testable material for unit and final exams are listed in unit objectives and questions, and the oral review questions from relevant task analyses, but can also be based on relevant review questions from any prior RES classes, and may include additional material as covered in class outlines and lecture. Additional quizzes may be assigned in addition to those scheduled.

Exams: There are three Scheduled exams that contribute to the RES204 class (this does not include clinic exam)

Final Exam: There is one final exam scheduled at the end of the semester.

Assignments: Occasional quizzes and a class presentation

The system for evaluation will consist of:

Assignments	10%
Exams	70%
Final Exam	20%

A no show/no call for any scheduled or announced exam/quiz may result in a test grade of zero. Notification of a desire to schedule a make-up test is to be received **prior** to the time of the original exam in order to be routinely eligible for a makeup exam. ***If taken the same day as decided by the instructor, there is no penalty, as long as there has been prior notice given.*** This must be arranged with the instructor in advance. I may be notified directly by phone, text, or via voice-mail message at (734) 735-3120. ***All second make-up exams lose 10 points (10%) from that exam grade, a subsequent make-up exam loses 20 points, and a third requested make-up loses 30 points.***

Cell phones are to be set so as not to disrupt normal classroom communications; i.e., no cell phone ringing should be detectable faculty or students. For each incidence of detectable cell phone activation, 5 points will be deducted from the student's final total points earned. You may excuse yourself if an urgent call is expected or you feel that it needs to be taken immediately, but your phone should be set on vibrate or with the ringer lowered in such an extreme case. Please do not abuse this privilege.

GRADING

To pass RES 204 the final course average score must be $\geq 76\%$.

Grading Scale for All Respiratory Care Courses:

4.0 = 93 - 100	2.5 = 80 - 83	1.0 = 68 - 72
3.5 = 89 - 92	2.0 = 76 - 79	0.5 = 64 - 67
3.0 = 84 - 88	1.5 = 73 - 75	0.0 = Below 64

Students will be expected to complete an **evaluation of the course on-line** in JetNet at the conclusion of the semester.

RES 205 Clinical will occupy the first part of class time in RES 204. This will include turning in paperwork, clarifications and other communication that will assist with clinic learning.

Week	Date	Topic
1	Jan 16	Introduction to course/ review of 205 and 204 syllabi; Lecture Ventilator graphics/ Lab values
2	Jan 23	Basic Spirometry PFT's, ATS general considerations for lung function
3	Jan 30	QC/ Spirometry
4	Feb 6	Exam 1 Lung volumes and gas distribution tests (N ₂ washout and He dilution) and closing volumes Presentation title identified and declared to instructor
5	Feb 13	D _L CO & Bronchoprovocation, CXR
6	Feb 20	Cardiopulmonary stress testing
Break	Feb 27	Semester Break
7	Mar 6	Exam 2- LTACs
8	Mar 13	Pulmonary Rehabilitation
9	Mar 20	Home Care
10	Mar 27	Exam 3 Smoking Cessation
11	April 3	Asthma education
12	April 10	<i>TBA presentations due</i>
13	April 17	<i>research class presentations</i>
14	April 24	FINAL EXAM Units 1-3 cumulative and Unit 4