

JACKSON COLLEGE  
RESPIRATORY CARE PROGRAM

**RES 120**  
**RESPIRATORY CARE**  
**TECHNIQUES III**

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**LABORATORY**  
**SYLLABUS AND ACTIVITIES**

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**Fall SEMESTER 2016**

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**REFERENCE MATERIAL**

**Required Texts:**

1. Pilbeam's Mechanical Ventilation, 5th ed., Cairo., Elsevier, 2012, ISBN 978-0-323-07207-6. (**Pilbeam**).
2. Egan's Fundamentals of Resp. Care, 10th ed., Kacmarek et. al., Elsevier, 2013, ISBN 978-0-323-08203-7. (**Egan**)
3. Equipment for Respiratory Care, 1st ed., Volsko, et. al., Jones and Bartlett, 2016, ISBN 978-1-4496-5283-8. (**Equip**)
4. Respiratory Care: Patient Assessment and Care Plan Development, 1st ed., Shelledey and Peters, Jones and Bartlett, 2016, ISBN 978-1-4496-7244-7. (**Shelledey**)
5. Clinical Manifestations and Assessment of Respiratory Disease, 6th ed., Des Jardins et. al., Elsevier, 2011, ISBN 978-0-323-05727-1. (**Des Jardins**)

**Other/Optional Reference Sources (used by program faculty)**

1. The Essentials of Respiratory Therapy, 4th ed., Kacmarek, et. al., Mosby, Inc., 2005. (**Kacmarek**).
2. 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**

The system for evaluation will consist of:

Labs:	35%
Lab Practical:	40%
Preparedness:	10%
<u>Attendance:</u>	<u>15%</u>

**Total:** **100%** to be scaled to a 100 point score, then calculated into the RES 120 grade.

- **Preparedness points** are treated in the following fashion: **-5 points** on the first and subsequent incidences where not having required materials present in lab interferes (in the lab instructor's opinion) with performing the lab. The lab instructor will on occasion check the lab materials at the beginning of the lab day. If the lab pre-class work is **NOT totally completed**, preparedness points will be deducted for that day.

- **Attendance points** are treated in the following fashion: **-5 points** for each absence which is either unexcused or is excused but not made up. **A partial loss of attendance points will result from unsatisfactory make-up efforts for a missed lab or from significant tardiness when arriving to a lab;** the extent of point loss is at the instructor's discretion.
- **No show/no call policy**, covering scheduled or announced labs, exams or quizzes and make-up tests, is the same as for RES 120 lecture. In general, if lab is missed, there will be **an automatic 5 point deduction from the final grade for that lab**, whether the lab is made up or not. This **deduction will double** for each subsequent missed lab. Also, labs that are late will be subject to a late penalty (**-5pts/day for up to 8 days late** to give a **maximum of -40 pts** for late turn-ins; labs turned in later than 8 days will lose an additional **10 pts/week**).

## **GRADING**

Points earned in the RES 120 Lab will apply towards the overall grade for the RES 120 class, final weighting of lab points will be determined by the RES 120 classroom instructor. In general, lab reports will be **due on the Monday following** the completed lab (however...If the lab material is to be tested on an imminent exam, you may wish to **submit the same day** where possible).

## **REQUIRED MATERIALS TO BE BROUGHT TO LABS**

1. the lab syllabus and all PEFs, textbooks and other material noted for the specific lab either on Page 1 of this syllabus or on the first page of the lab exercise (i.e., check the calendar and lab introduction **at least 1 full day** prior to the lab, although most will require more prep time than this)
2. RES 120 Lecture notebook
3. any lab handouts that are given out prior to lab day
4. notebook and pencil
5. calculator
6. watch with sweep second hand or stop watch feature
7. grey scrubs
8. straight edge marked in inches & cm/mm (minimum 6 inch or 15 cm)
9. colored pencils or suitable alternative

## **PREPARATION OF LABS FOR GRADING**

Each lab consists of a number of activities including: writing answers to questions, writing descriptions of skill performances, computing answers to math problems, labeling diagrams, etc.

Only lab pages with gradable work are to be turned in for evaluation by the lab instructor. Lab reports should be returned to the instructor on the Monday of the week following the scheduled performance of the lab.

Labs will be graded for











1. completeness,
2. proper format,
3. accuracy/correctness of information,
4. neatness/legibility of writing, and
5. promptness at being turned in (**-5%/day for up to 8 days** late to give a maximum of **-40%** for late turn-ins; labs turned in later than 8 days will lose an additional **10 pts/week**).

Lab pages are to be turned in

1. properly **sequenced**,
2. with the student **name** and **lab section number** on the appropriate line of the first page, and
3. pages **stapled**.

# LABORATORY SEMESTER CALENDER

*(tentative: some changes expected....)*

LABORATORY TOPIC	DATE	TEXT REFERENCES
#1 Intro to PPV and the TTL	Sept. 7	1. <b>Pilbeam</b> : Normal mechanics of ventilation (p. 4-6); Lung characteristics (p. 5-9). 2. <b>Equip: pp 300-310/310-318 (AVEA/Vela).</b> 3. PEF and Task Analysis on Ventilator Set Up and Application (#C.03)
#2 CLT and RAW measurements	Sept. 14	1. <b>Pilbeam</b> : Alarms (p. 108-109); Evaluating for Leaks (p. 133-134); Lung Characteristics and Time Constants (p. 5-9); Set Volume vs. Actual Delivered Volume (p. 38); Monitoring Airway Pressures (p. 131-133). 2. Egan 1012, 1124-1126 3. Kacmarek pp 472-478
#3 Assist/Control ventilation	Sept. 21	1. <b>Pilbeam</b> : Humidification (p. 106-108; p. 347); p. 17-27 (How Ventilators Work); Types of Breaths (p. 43); The Trigger Variable (p. 34-36); p. 65-80 (Ventilator modes). 2. <b>Equip: pp 277-300.</b> 3. PEFs #C.01 Routine Ventilator Check, #C.03 Ventilator Set Up and Application, and #C.05 Compliance
#4 IMV ventilation	Sept. 28	1. <b>Pilbeam</b> pp. 73-76, 161-165 2. Egan pp 1054-1055 3. Kacmarek pp 697-706 (IV-VI), 693-694 (II) 4. PEF and Task Analysis on IMV and Weaning (#C.07).
 <b>Acid-Base</b> Interpretation Quiz Due	Sept. 29	
#5 CPAP/PEEP	Oct. 5	1. <b>Pilbeam</b> pp.40-43, 104-106, 261-275. 2. Egan pp 975. 3. Kacmarek p 714, ch 40. 4. PEF and Task Analysis on PEEP/CPAP (#C.04).
  1 and 2 <b>Clin Sims</b> Due	Oct. 6	
#6 NPPV – P <sub>cycled</sub> (Bird Mark 7 IPPB)	Oct. 12	1. <b>Pilbeam</b> p. 65-69. 2. <b>Equip: pp 499-500 (Bird)</b> 3. RES 120 Syllabus, Unit 4, Bird Mark 7 diagrams 4. Egan chapter 39 pp 909-915 5. Kacmarek pp 650-2 6. PEF and Task Analysis on IPPB (#A.09).
#7 NPPV - P <sub>limited</sub> (BiPAP) / LTV /Ventilator Circuit Change	Oct. 19	1. <b>Pilbeam: Ch. 19.</b> 2. <b>Equip: pp 399-401 (LTV); pp. 382-384 (Philips V60).</b> 3. Egan: Ch. 42. 4. PEF and Task Analysis on Ventilator Circuit Change (#C.02).
#8 PB 7200	Oct. 26	
 <b>Oxygenation</b> Interpretation Quiz Due	Oct. 27	
#11 Ventilator Set-Up	Nov. 2	<b>Pilbeam: Ch. 6, 7, 8.</b>
  3 and 4 <b>Clin Sims</b> Due	Nov. 3	
#9 Servo	Nov. 9	<b>Equip: pp 374-381.</b>
#10 PB 840	Nov. 16	<b>Equip: pp 323-329.</b>
  5 and 6 <b>Clin Sims</b> Due	Nov. 17	
 <b>Pulm. Physiology Math</b> Quiz Due	Nov. 22	
<b>THANKSGIVING—No LAB!!</b>	<b>Nov. 23</b>	
#12 Dräger	Nov. 30	<b>Equip: pp 337-347.</b>
<b>LABORATORY PRACTICAL EXAM</b>	Dec. 7	Time TBA.....
 All 7 <b>Clin Sims</b> Due	Dec. 7	
Simulated ICU	Dec. 14	