Jordan University of Science and Technology

Faculty of Applied Medical Sciences

Respiratory Therapy Department

RTH336 Managing Artificial Respirators Practical - JNQF Level: 7

Second Semester 2023-2024

Course Catalog
1 Credit Hours. The practical division of the theoretical material will cover a several competences of ventilators description, circuits and testing, basic and advanced modes, setup, initiation, waveform interpretation, troubleshooting, NIV, weaning criteria and extubation.
Teaching Method: On Campus

Text Book	
Title	Laboratory Excercises for Competency in Respiratory care
Author(s)	Bulter T. J.
Edition	3rd Edition
Short Name	TextBook
Other Information	2013,ISBN 978-0-8036-2679-9

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref # 1	Pilbeam's Mechanical Ventilation - Physiological and Clinical Application	Cairo, J. M.	8th Edition	2024, https://www.mea.elsevierhealth.com/pilbeams-mechanical-ventilation-9780323871648.html
Ref # 2	EGAN'S Fundamentals of Respiratory Care	Kacmarek R. M., Stoller J. K., Heuer A. J.	12th Edition	2021, https://www.elsevier.com/books/egans-fundamentals-of-respiratory-care/kacmarek/978-0-323-51112-4
Recommended for reading	Essentials of Mechanical Ventilation.	Kacmarek R.	2nd Edition	2002. ISBN-10: 0323072070, ISBN-13: 978-0323072076
Recommended for reading	Clinical Application of Mechanical Ventilation	Chang D.	3rd Edition	2005. ISBN-10: 1401884587, ISBN-13: 978-1401884857

Recommended for reading	Rapid Interpretation of Ventilator Waveforms	Waugh, Jonathan, and Vijay Deshpande	2nd Edition	2006. ISBN-10: 0131749226, ISBN-13 978-0131749221

Instructor	
Name	**Mr. Ibrahim Mahmoud**
Office Location	Pending
Office Hours	
Email	immahmoud@just.edu.jo

Class Schedule & Room

Section 1:
Lecture Time: Sun : 10:30 - 12:30
Room: LAB

Section 2:
Lecture Time: Tue : 10:30 - 12:30
Room: LAB

Section 3:
Lecture Time: Sun : 12:30 - 14:30
Room: LAB

Section 4:
Lecture Time: Sun : 14:30 - 16:30
Room: LAB

Section 5:
Lecture Time: Tue : 14:30 - 16:30
Room: LAB

Section 6:
Lecture Time: Tue : 12:30 - 14:30
Room: LAB

Tentative List of Topics Covered

Weeks	Topic	References
Week 1	Week of Withdrawing and adding courses/Orientation	
Week 2	Ventilator Description	**C38,C39** From **TextBook**
Week 3	Circuit and Humidifier and Ventilator testing.	**C38,C39** From **TextBook**
Weeks 4, 5	Ventilator Initiation: Modes & settings (Including alarms)\ CMV and SIMV.	**C40,C41** From **TextBook**
Week 6	Modes & settings \ Advanced modes	**C40,C41** From **TextBook**
Week 7	Revision	

Week 8	Midterm Exam	
Weeks 9, 10	Ventilator graphics analysis	**C42** From **TextBook**, **Appendix C,page 544;C09** From **Ref # 1**
Weeks 11, 12	Troubleshooting the Patient Ventilator System	**C19** From **Ref # 1**
Week 13	NIV, CPAP & BiPAP	**C37** From **TextBook**
Week 14	Weaning criteria and extubation	**C43** From **TextBook**
Week 15	Revision	
Week 16	Final Exam	

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	**Course Outcome Weight (Out of 100%)**	**Assessment method**
Perform assemble, disassemble, and change ventilator circuits. [1PLO 1, 1PLO 5] [1L7K1, 1L7S1, 1L7S2, 1L7S3]	20%	Quizzes, Discussion & interaction, Midterm Exam, Final Exam
Manipulate different ventilator modes and settings [1PLO 1, 1PLO 2, 1PLO 3, 1PLO 4, 1PLO 5] [1L7K1, 1L7S1, 1L7S2, 1L7S3]	20%	Quizzes, Discussion & interaction, Midterm Exam, Final Exam
Analyze data from ventilator graphics. [1PLO 1, 1PLO 5] [1L7K1, 1L7S1, 1L7S2, 1L7S3, 1L7C2]	20%	Quizzes, Discussion & interaction, Final Exam
Modify settings according to specific patient status. [1PLO 1, 1PLO 2, 1PLO 3, 1PLO 4, 1PLO 5] [1L7K1, 1L7S1, 1L7S2, 1L7S3, 1L7C4]	20%	Quizzes, Discussion & interaction, Final Exam
List weaning criteria and the acceptable values for ventilator discontinuation. [1PLO 1, 1PLO 2, 1PLO 3, 1PLO 4, 1PLO 5] [1L7K1, 1L7S1, 1L7S2, 1L7S3, 1L7C1, 1L7C2]	20%	Quizzes, Discussion & interaction, Final Exam

Relationship to Program Student Outcomes (Out of 100%)						
PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6	PLO 7
32	12	12	12	32		

Relationship to NQF Outcomes (Out of 100%)						
L7K1	L7S1	L7S2	L7S3	L7C1	L7C2	L7C4
21.33	21.33	21.33	21.33	3.33	7.33	4

Evaluation	
Assessment Tool	**Weight**
Quizzes	10%

Discussion & interaction	10%
Midterm Exam	40%
Final Exam	40%

Policy	
Teaching & Learning Methods	1. Objectives of the course will be achieved through class presentations, videos, hands on practice,and case studies, 2. You are responsible for all material covered in the class. 3. Please communicate any concerns or issues as soon as possible either in class, or by E-mail. Teaching duration: - Duration: 16 weeks Examination: - Paper based exams and quizzes, and paractical exams will conducted in lab.
Attendance policy:	- Students are expected to attend all the labs. - Unexcused absences of more than 20% of the required attendance will deserve a fail in this course. - In a case of excused absence e.g. illness or emergency, students should contact the course coordinator immediately. And a formal written excuse from the physician should be submitted by the student in a case of illness, otherwise the absence will be considered unexcused. - In case of absence on the date of exam(s), students will not be allowed to set for a makeup exam unless they have got an approval from the deanship of AMS for this regard. - Student are intented to follow dress of code according to policy

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