



Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Respiratory Therapy Department

RTH334 Managing Artificial Respirators - JNQF Level: 7

Second Semester 2023-2024

Course Catalog

2 Credit Hours. This course is designed to provide students with the concept physiology of ventilatory support, introduction to mechanical ventilation, indications, classification, types, modes, settings, graphs and complications. Also, emphasizes initiation, management, and liberation of ventilator support.

Teaching Method: Blended

Text Book

Title	Pilbeam's Mechanical Ventilation - Physiological and Clinical Application
Author(s)	Cairo J. M.
Edition	8th Edition
Short Name	Textbook
Other Information	2024, https://www.mea.elsevierhealth.com/pilbeams-mechanical-ventilation-9780323871648.html

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref # 1	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.	Kackmarek, R.	2nd Edition	2002. ISBN-10: 0323072070, ISBN-13: 978-0323072076
Recommended for reading	Clinical Application of Mechanical Ventilation. 3rd Edition,	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
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Instructor	
Name	Mr. Ibrahim Mahmoud
Office Location	Pending
Office Hours	
Email	immahmoud@just.edu.jo

Class Schedule & Room
<p>Section 1: Lecture Time: Sun : 09:30 - 10:30 Room: M4201</p> <p>Section 2: Lecture Time: Tue : 09:30 - 10:30 Room: M4201</p>

Prerequisites		
Line Number	Course Name	Prerequisite Type
1163270	RTH327 Respiratory Therapy	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Week of Withdrawing and adding courses/Orientation	
Week 2	History and early designs of mechanical ventilation	From Textbook , From Ref # 1
Week 3	Basic Terms and Concepts of Mechanical Ventilation	C01 From Textbook
Week 4	Respiratory Failure and the Need for Ventilatory Support	C04 From Textbook , C45 From Ref # 1
Week 5	First Exam	
Week 6	Ventilator Modes	C05 From Textbook , C46 From Ref # 1
Week 7	Initial Patient Assessment /Selecting the Ventilator and the Mode	C08 From Textbook
Week 8	Initial Ventilator Settings	C06 From Textbook , C49 From Ref # 1
Week 9	Second Exam	

Week 10	Advanced Ventilator Modes	C23 From Textbook
Week 11	Ventilator Graphics	C9 From Textbook
Week 12	Effects of Positive Pressure Ventilation on the Cardiopulmonary System	C17 From Textbook
Week 13	Noninvasive Positive Pressure Ventilation	C19 From Textbook, C50 From Ref # 1
Week 14	Weaning	C20 From Textbook

Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Describe the following physical properties of ventilation such as pressure, volume, and flow events that occur during the respiratory cycle. [1PLO 1] [1L7K1]	15%	First Exam, Final Exam
Discusses the needs of ventilatory support [1PLO 1] [1L7K1]	10%	First Exam, Final Exam
Recommend the selection and initial settings for the various modes of ventilation [1PLO 1] [1L7K1]	15%	Second Exam, Final Exam
Identify types of ventilator graphics [1PLO 1] [1L7K1]	15%	Second Exam, Final Exam
Understand the physiological effects of positive pressure ventilation. [1PLO 1] [1L7K1]	15%	Final Exam
Discuss the clinical and physiological benefits of noninvasive positive pressure ventilation (NV) [1PLO 1] [1L7K1]	15%	Final Exam
List weaning criteria [1PLO 1] [1L7K1]	15%	Final Exam

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

Relationship to NQF Outcomes (Out of 100%)
L7K1
100

Evaluation	
Assessment Tool	Weight
First Exam	30%
Second Exam	30%

Final Exam	40%
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Policy	
Teaching & Learning Methods	<p>1. Objectives of the course will be achieved through class presentations, videos, and case studies.</p> <p>2. You are responsible for all material covered in the class.</p> <p>3. Please communicate any concerns or issues as soon as possible either in class, or by E-mail.</p> <p>Teaching duration:</p> <ul style="list-style-type: none"> - Duration: 16 weeks <p>Examination:</p> <ul style="list-style-type: none"> - Online exams will be conducted at JUST campus, multiple choice questions will be used in the online exams, while make-up exams will be as "written questions", after students get the permission via the policy of the university for the make-up exams.
Attendance policy:	Attendance is mandatory; students are allowed 20 % absence with/without excuses
Contact with the Instructor	<p>Via office hours, email, e-learning and office phone.</p> <p>** CONTACT VIA PERSONAL CELL PHONE IS NOT WELCOMED</p> <p>** SMOKING AND CELL PHONES ARE NOT PERMITTED</p>

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