



Jordan University of Science and Technology
Faculty of Applied Medical Sciences
Anesthesia Technology Department

ANET342 Intensive Care - JNQF Level: 7

Second Semester 2023-2024

Course Catalog

3 Credit Hours. This course provides an overview of the principles and practices of critical care for anesthesia technicians. It covers topics such as hemodynamic monitoring, mechanical ventilation, fluid and electrolyte management, shock and sepsis, organ failure, and ethical issues in critical care. The course also includes practical skills training in the use of various equipment and devices used in critical care settings.

Teaching Method: On Campus

Text Book

Title	The Anesthesia Technologist's Manual
Author(s)	Emily Guimaraes , Matthew Davis , Jeffrey R. Kirsch MD , Glenn Woodworth MD
Edition	2nd Edition
Short Name	Ref # 1
Other Information	

Course References

Short name	Book name	Author(s)	Edition	Other Information
Ref #2	Morgan and Mikhail's Clinical Anesthesiology	David C. Mackey, John D. Wasnick, and John F. Butterworth	6th Edition	

Instructor

Name	Dr. Mahmoud Altawalbih
Office Location	-
Office Hours	
Email	mhaltawalbih@just.edu.jo

Class Schedule & Room
Section 3: Lecture Time: Mon, Wed : 14:30 - 16:00 Room: SB13

Prerequisites		
Line Number	Course Name	Prerequisite Type
1173410	ANET341 Medical Problems And Their Management	Prerequisite / Study
1173310	ANET331 Anesthesia Equipment And Supplies li	Prerequisite / Study

Tentative List of Topics Covered		
Weeks	Topic	References
Week 1	Syllabus review. Course overview. Introduction to Critical Care .	From Ref # 1 , From Ref #2
Weeks 2, 3, 4	? Hemodynamic Monitoring: ? Basic concepts of hemodynamics ? Indications and contraindications for hemodynamic monitoring ? Types and components of hemodynamic monitoring systems ? Arterial, central venous, and pulmonary artery catheters ? Cardiac output and other derived parameters ? Complications and troubleshooting of hemodynamic monitoring	From Ref # 1 , From Ref #2
Weeks 5, 6	? Mechanical Ventilation: Basic concepts, indication vs. contraindication, modes and settings, safety, weaning, complications and troubleshooting. ? Acute respiratory failure and acute respiratory distress syndrome	From Ref # 1 , From Ref #2
Weeks 7, 8	? Fluid and Electrolyte Management: Basic concepts, assessment and monitoring, types and indications, electrolytes disorders and replacement, complications. ? Renal failure, acute kidney injury and renal replacement therapy	From Ref # 1 , From Ref #2
Weeks 9, 10	? Organ Failure: Definition and classification of organ failure ? Shock and Sepsis: Definition and classification of shock, Pathophysiology diagnosis, Management of shock. ? Definition and criteria of sepsis ? Pathophysiology and diagnosis of sepsis ? Sepsis management, bundles, and protocols.	From Ref # 1 , From Ref #2
Week 11	? Acute liver failure and hepatic support	From Ref # 1 , From Ref #2
Weeks 12, 13	? Acute neurological failure and neuroprotective measures	From Ref # 1 , From Ref #2

Week 14	Ethical Issues in Critical Care ? Definition and principles of medical ethics ? Ethical decision making and conflict resolution ? Informed consent and advance directives ? Withholding and withdrawing life-sustaining treatment ? Palliative and end-of-life care ? Organ donation and transplantation	From Ref # 1, From Ref #2
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Mapping of Course Outcomes to Program Outcomes and NQF Outcomes	Course Outcome Weight (Out of 100%)	Assessment method
Apply scientific knowledge and skills that underpins critical care anesthesia with the competency standards [1PLO 2, 1PLO 4, 1PLO 5] [1L7S1, 1L7S2, 1L7C4]	30%	
Apply knowledge of human pathophysiology across the continuum of care to safely and effectively provide critical care that addresses actual and potential disease and treatment-related health needs [1PLO 1, 1PLO 2, 1PLO 4, 1PLO 5] [1L7K1, 1L7S1, 1L7S2, 1L7S3, 1L7C4]	40%	
Act to promote teamwork, wellbeing, and collaboration with the interprofessional team and to achieve desired patient outcomes team [1PLO 1, 1PLO 3, 1PLO 5, 1PLO 6] [1L7S1, 1L7S3, 1L7C2, 1L7C3, 1L7C4]	30%	

Relationship to Program Student Outcomes (Out of 100%)					
PLO 1	PLO 2	PLO 3	PLO 4	PLO 5	PLO 6
17.5	20	7.5	20	27.5	7.5

Relationship to NQF Outcomes (Out of 100%)						
L7K1	L7S1	L7S2	L7S3	L7C2	L7C3	L7C4
8	24	18	14	6	6	24

Evaluation	
Assessment Tool	Weight
First Exam	25%
Second Exam	25%
Final Exam	40%
Class Activities and participation	10%

Policy

Academic conduct	<p>Statement on Professionalism Professional behavior is expected of students at all times. Attitude and professional behavior are a minimum criterion for passing this class. Examples of unprofessional behavior include but are not limited to: missing classes, tardiness, lack of attention for a speaker, talking to others during the lecture, leaving a lecture before its completion without prior authorization of the instructor, working on other class material during class, and sleeping during class.</p> <p>Attendance: Class attendance is mandatory to develop scholarly discussion and argumentation skills. If you cannot attend class, you must submit appropriate documentation with an excused absence request. JUST policy requires the faculty member to assign ZERO (Grade: 35) if a student misses 10% of the classes that are not excused.</p> <p>Cheating: The standards of JUST policy will be applied: المادة 7 : اذا ضبط الطالب أثناء الإمتحان أو الإختبار متلبساً بالغش فتوقع عليه العقوبات التالية مجتمعة أ. اعتباره راسياً في ذلك الإمتحان أو الإختبار ب. الغاء تسجيله في بقية المساقات المسجل لها في ذلك الفصل ج. فصله من الجامعة لمدة فصل دراسي واحد وهو الفصل التالي للفصل الذي ضبط فيه</p> <p>Cell phone: The use of cellular phones is prohibited in classrooms and during exams. The cellular phone must be switched off in classrooms and during exams. ?</p> <p>Make-up Exam: Make-up exams are entitled for students who miss the exam with accepted legal or medical excuse endorsed by the instructor within 24 hours after the scheduled exam (Please review university regulation for more details)</p> <p>Feedback: Communication of concerns, complaints, questions, and/or feedback are appreciated and are important for improving the students learning experience. Please use the professional channels to address any issue or concern (ie., e-mail)</p>
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