



### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
GENERAL BIOCHEMISTRY	HLT 201	2	-	2	2	Third	-

**Course Instructor Name:** TBA

**E.mail:** TBA

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

The course will prepare the students to understand the structure, properties, and functions of biological macromolecules (carbohydrates, proteins, lipids and nucleic acids). 2. Nomenclatures of enzymes and its functions and role in chemical reactions. 3. Study of functions of minerals and vitamins in the body. 4. Introduction to hormones and its functions. Overview on bioenergetics and metabolism.

#### (2) Course Objectives:

- Define macromolecule types and functions
- Understand the macromolecules structures.
- List the actions of enzymes and factors affecting them.
- Recall the main function and deficiency syndromes of vitamins and minerals.

#### (3) Course Contents:

- Introduction to biochemistry
- Cellular organelles
- Acid base balance / Buffers
- Carbohydrates structure and function
- Amino Acids & Proteins structure and function
- Introduction to Enzymes
- Lipids structure and function
- Nucleic acids structure and function

المرفقات :

التاريخ :

الرقم :



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- Introduction to vitamins
- Introduction to hormones
- Introduction to minerals
- Introduction to metabolism

**(4) Course Teaching Strategies**

Lectures

**(5) Assessment Criteria:**

Quiz: 5%  
Midterm: 30%  
Presentation: 10%  
Attendance: 5%  
Final Theory: 50%

**(6) Text Book:**

Harpers Biochemistry. R.K Murray. 1996 Essentials of Biochemistry for Medical Students  
Leininger Principles of Biochemistry Lippincott's Illustrated Reviews of Biochemistry

**(7) Reference Books:**

Saudi Digital Library (SDL)

المرفقات :

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Respiratory care science I	RES 211	2	2	2	2	5	

**Course Instructor Name:** Dr. BEDOR ALKHATHLAN

**E.mail:** BKHATHLAN@jazanu.edu.sa

**Office Hours:** SUNDAY 10-12

**Lecture Time:** MONDAY 8-12

(1) **Brief Course Description:**

This is an introductory course designed to provide students with a foundational understanding of respiratory care principles and practices. This course covers basic respiratory care procedures, and the role of respiratory therapists in healthcare settings. Students will learn to assess and manage patients with respiratory disorders, utilize respiratory care equipment, and apply therapeutic techniques to improve patient outcomes.

(2) **Course Objectives:**

The main objective of this course is to provide students with a comprehensive understanding of basic respiratory care principles. By the end of the course, students will have acquired the knowledge and skills necessary to effectively administer appropriate therapies and ensure patient well-being.

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**(3) Course Contents:**

- Introduction to RC and history
- Gas Law and Basic Physics (Session one)
- Gas Law and Basic Physics (Session Two)
- Storage and Delivery of Medical Gases
- Proper handling and safety considerations for the storage and delivery of medical gasses
- Oxygen Therapy
- Low flow Oxygen Therapy & High flow Oxygen Therapy
- Hyperbaric Oxygen Therapy and Mixed Gas Therapy
- Clinical Application & Evaluation of Oxygenation (session one)
- Clinical Application & Evaluation of Oxygenation (session two)
- Noninvasive Monitoring: pulse Oximetry
- Noninvasive Monitoring: Capnometry
- Humidity Therapy
- Aerosol therapy and its role in respiratory care, including knowledge of different methods of administration and equipment
- Airway management (Manual resuscitation bag) & Airway management (Oropharyngeal airways)

**(4) Course Teaching Strategies**

Theory and practical

**(5) Assessment Criteria:**

Quiz: 5%  
Midterm Examination Theory: 20%  
Quizzes: 10%  
Final Exam Practical: 20%  
Absent and Behavior Weekly: 5%  
Final exam (Theory): 40%

**(6) Textbook:**

1. Kacmarek RM, Stoller JK, Heuer AJ. Egan's fundamentals of respiratory care ebook. Elsevier Health Sciences; 2019 Dec 18.
2. Cairo JM. Mosby's Respiratory Care Equipment-E-Book. Elsevier Health Sciences; 2021 Nov 12.

المرفقات:

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**(7) Reference Books:**

Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach. Edition: 5th.  
White, Garry C. ISBN-13: 978-1435453654 ISBN-10: 1435453654.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Medical Terminology	RES251	2	-	2	2	3	-

Course Instructor Name: Dr. Bedor Alkhatlan

E.mail: bkhathlan@jazanu.edu.sa

Office Hours: SUNDAY 10-12

Lecture Time: Sunday 1-2 PM

#### 1) Brief Course Description:

The course is designed to help the student acquire knowledge necessary for basic understanding of medical terminology. The rules of construction of terms are emphasized, and analysis of complex terms is presented to give their meaning, and to aid in learning to define and spell medical words correctly. The course content is arranged by body system to allow students to master the component parts of medical words as they directly relate to terminology of a body system, basic anatomical terminology, diseases and procedures of the various body systems. This course provides students with the building blocks of medical terminology required for future respiratory Therapy practice.

#### (2) Course Objectives:

Help the student acquire knowledge necessary for basic understanding of medical and respiratory therapy terminology and abbreviations taking into consideration international patient safety goals.

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### (3) Course Contents:

- Medical Terminology course outline and introduction
- Medical Terminology related to Integumentary System
- Medical Terminology related to Cardiovascular System
- Medical Terminology related to blood
- Medical Terminology related to Respiratory System (session one)
- Medical Terminology related to Respiratory System (session two)
- Medical Terminology related to Musculoskeletal System
- Medical Terminology related to Nervous System (session one)
- Medical Terminology related to Nervous System (session two)
- Medical Terminology related Lymphatic systems
- Medical Terminology related to Immune Systems (session one)
- Medical Terminology related to Immune Systems (session two)
- Medical Terminology related to Digestive System (session one)
- Medical Terminology related to Digestive System (session two)

### (4) Course Teaching Strategies

Theory and practical

### (5) Assessment Criteria:

Quizzes: 10%  
Midterm theory: 30%  
Assignment: 20%  
Final theory: 40%

### (6) Textbook:

1. Medical Terminology Systems, by Barbara A. Gyls, Edition: 7<sup>th</sup>, (2012). ISBN-13: 978-0803635753. ISBN-10: 080363575.

### (7) Reference Books:

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Islamic culture	SLM102	2		2	2	3	

#### (1) وصف المقرر المختصر

هذا المقرر يتناول جملة من القيم الإسلامية وخصائص الإسلام وبعض ما يتعلق بأخلاقيات المهنة من حيث مفهومها وأهميتها ومقوماتها، والأخلاق المهنية في الإسلام المحموده والمذمومة، وجهود المملكة العربية السعودية في مكافحة الفساد

#### (2) أهداف المقرر

أن يعرف الطالب القيم العليا والإسلام، وخصائص القيم والأخلاق الإسلامية، مع بيان للأخلاق الحميدة وطرق تعزيزها، والأخلاق المذمومة وطرق معالجتها، وأن يتعرف على جهود المملكة العربية السعودية في تعزيز النزاهة ومكافحة الفساد

#### (3) محتوى المقرر

- قيم الأسلام
- خصائص القيم والأخلاق بالأسلام
- الأخلاقيات المحموده بالمهنة
- الأخلاقيات المذمومه بالمهنة وسبل مواجهتها

#### (4) استراتيجيات تدريس المقرر

نظري

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#### (5) معايير التقييم

اختبار منتصف الفصل: 40%  
الاختبار النهائي: 60%

#### (6) الكتاب الدراسي

1. كتاب الثقافة الاسلاميه (2) أعداد مجموعه من أعضاء هيئة التدريس بقسم الدراسات الإسلامية

#### (7) الكتاب الثانوي

1. دراسات في النظام الخلقي بين الإسلام والنظم الوضعية ، أزد مفرح بن سلمان القوسي.
2. أخلاقيات المهنة في الإسلام وتطبيقاتها في أنظمة المملكة العربية السعودية. د عصام بن عبد المحسن الحميدان.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Introduction to Human Anatomy	Anat 220	2	2	3	2	third	106 Bio-4

**Course Instructor Name:** Dr. Alaa Abou-Elhamd

**E.mail:** aabou-elhamd@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

Introduction to major component of human body. Digestive system: anatomy of Cardiovascular system: anatomy of heart & blood circulation, Respiratory system: anatomy. Renal system: anatomy of urinary system. Genital system male& female: anatomical structure. Endocrine glands: definition, pituitary gland (Thyroid, Adrenal, Pancreas, testes, ovaries). Nervous system: brain& spinal cord, sympathetic and parasympathetic nerves. Skeletal and muscular system

#### (2) Course Objectives:

The objective of this course is to present the basic principles and sufficient knowledge of fundamental concepts in the anatomical structure of different body organ systems (digestive system-cardiovascular system-respiratory system, renal and genital system- nervous system-endocrine glands-skeletal and muscular systems)

#### (3) Course Contents:

1. Introduction to the human body structural organization, anatomical terminology, terms of positions (directional terms), movement, body regions and cavities.
2. The Skeletal System
3. Appendicular skeleton
4. The Muscular system
5. The Nervous System

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6. The Digestive System
7. The Cardiovascular System
8. The Genital (Reproductive) System:
9. The Renal System
10. The Endocrine System

**(4) Course Teaching Strategies**

Lectures  
Laboratory/Studio

**(5) Assessment Criteria:**

Quiz 1 and 2: 10%  
Mid-theoretical: 20%  
Worksheet: 10%  
Final Practical: 20%  
Final Theoretical: 40%

**(6) Textbook:**

1. The Johns Hopkins Atlas of Human Functional Anatomy: Leon Schlossberg Ross and Wilson (Anatomy and Physiology in health and illness). Waugh, A. and Allison Grant, A.9th ed. Elsevier limited.

**(7) Reference Books:**

1. Elaine Marieb, N. and Katja Hoeln: Human Anatomy and Physiology (last ed.) S.R Snell applied anatomy.

المرفقات :

التاريخ :

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## Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Introduction to Ethics in the Health Professions	PHCL 243	2	-	2	2	3	-

**Course Instructor Name:** TBA

**E.mail:** TBA

**Office Hours:** TBA

**Lecture Time:** TBA

### (1) Brief Course Description

This interprofessional ethics course involves teaching of rudimentary knowledge and skills in ethical theory and reasoning, professional ethics, interprofessional approach to health care decision-making, goals of health care, illness experience, and other topics of concern.

### (2) Course Objectives:

The course is designed to offer the students a foundational knowledge in the field of professional ethics. The main goal is to provide students the knowledge and skills responsible for developing professional behavior that will enable them to address competently and resolve the ethical and socio-cultural issues that they may confront during their training and professional practice.

The main learning outcomes of the course are:

- 1-Gain knowledge on the professional ethics and decision-making process.
- 2-Compare & contrast the various ethical situations and dilemmas faced in healthcare.
- 3-Understand the concepts and principles of professional ethics.
- 4-Discuss the ethical decision-making in different situations.
- 5-Understand different perspectives on ethics/morality/law.

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(3) **Course Contents:**

- Introduction to Professional & Medical Ethics
- Health Care Providers duties toward their profession, colleague and community
- Health Care Providers duties toward their patients
- Patients' Rights and Responsibilities
- Ethics of Financial Affairs in the Healthcare Field
- Privacy & Confidentiality
- Ethical Issues in Research
- Ethics of Dealing with Emergency Situations
- Ethics of Dealing with Life-Threatening and Incurable Diseases
- Ethics of Public Health & Health Promotion
- Students' Presentation as the assignment

(4) **Course Teaching Strategies**

- Lectures
- Discussion

(5) **Assessment Criteria:**

- Midterm
- Attendance
- Final theory
- Assignment

(6) **Textbook:**

\*Code of Ethics for Healthcare Practitioners. The Saudi Commission for Health Specialties Department of Medical Education & Postgraduate Studies, 2014

\*Professionalism and Ethics; Handbook for Residents, A Practical Guide. The Saudi Commission for Health Specialties Department of Medical Education & Postgraduate Studies, 2015

(7) **Reference Books:**

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## Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Basic Microbiology	HLT 203	2	1	3	2ed	4th	BIO 105-4

**Course Instructor Name:** TB

**Email:** TBA

**Office Hours:** TBA

**Lecture Time:** TBA

### (1) Brief Course Description

Basic Microbiology course is designed for students with some background in biology whose career path intersect or involves dealing with microbes. This course introduces the basic principles of microbiology, examining the microbes that inhabit our planet and our body and their effects on individuals' health. Students will analyze the impact of microbiology on our lives and the means to control and understand microbial growth and spread.

### (2) Course Objectives:

- Introduction to Microbiology, classification, and impact of Microorganisms on our life.
- The significance of controlling microorganisms' growth and spreading.
- The microbial structure and importance of each part in its pathogenicity.
- A basic knowledge of some of the basic diagnostic methods used in clinical Microbiology.
- Introduced to some essential antimicrobial agents and antibiotic resistance and how they occur.

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**(3) Course Contents:**

- Introduction to Microbiology and Microorganisms Safety rule in Microbiology laboratory and Instrumentations
- Microbial Taxonomy and Classification Microbiological media & preparation / Sterile and aseptic techniques
- Control of Microbial growth and spread. Isolation of pure culture, Simple staining, and Microscopy.
- Microbial structure Special stain & Biochemical tests of Gram-positive bacteria
- Basic nutritional, Chemical and physical requirements isolation and Identification of Gram-Negative Bacteria
- Normal Flora of human body
- Gram Negative Biochemical Tests.
- Microbial pathogenicity and opportunistic pathogen
- Isolation and Identification of fungi
- Introduction to Parasitology and parasitic infections
- Food Microbiology & Food borne pathogens. Isolation and Identification of Bacteria / Fungi
- Host-Pathogen interaction Antibiotic Susceptibility Test
- Antimicrobial agents Antibiotic Susceptibility Test
- Introduction to Microbiology and Microorganisms Safety rule in Microbiology laboratory and Instrumentations

**(4) Course Teaching Strategies**

**(5) Assessment Criteria:**

Mid-term theory exam: 20%  
Lab continuous assessment: 20%  
Practical Final exam: 20%  
Theory exam: 40%

**(6) Textbook:**

- a. Harvey, R.A. AND Cornelissen, C.N. (2012). Microbiology, 3rd edition. Lippincott Williams and Wilkins.

**(7) Reference Books:**

- c. Brooks, G.F., Butel, J.S. and Morse, S.A. (2001). Medical Microbiology. Twenty-second edition.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Patient Assessment	RES 221	3 hrs.	2hrs.	5	2 <sup>nd</sup>	Level 4	Nil

**Course Instructor Name:** Dr. Nagla Abdalghani

**E.mail:** .nabdalghani.@jazanu.edu.sa

**Office Hours:** 2hrs/week

**Lecture Time** 08:00 - 10:50 AM / 11:00- 12:50

(1) **Brief Course Description:** This course develops skills in physical assessment, patient evaluation, and interpreting clinical data, essential for Clinical Practice. Topics include bedside assessment, cardiopulmonary evaluation, and patient monitoring

(2) **Course Objectives:**

By the end of this course, students should be able to:

1. Conduct patient interviews, take histories, and perform physical exams.
2. Analyze ECGs, chest X-rays, and other diagnostic tests for clinical diagnosis.
3. Apply appropriate respiratory treatments and manage emergencies.

(3) **Course Contents:**

- 1) Preparing for patient encounter T
- 2) The Medical History and the Interview /T
- 3) Cardiopulmonary history T/P
- 4) Assessing the patient's Vital Signs T/P (Part 1)
- 5) Physical examination Part
- 6) Basic of the ECG / ECG Interpretation and exercises
- 7) Basic diagnostic imaging technique for the RT CXR, Fluoroscopy CT,

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- 8) Diagnostic imaging interpretation
- 9) Laboratory work up in patient assessment

**(4) Course Teaching Strategies:**

Lectures in the ordinary classroom, simulations, and role-playing, group activities and peer feedback, discussion and case presentation

- (5) Assessment Criteria:** Continuous assessment through quizzes (MCQ), Problem-based case scenarios, and Peer Reviews in Assess hands-on skills in physical examination and patient assessment

**(6) Textbook:**

- A. Wilkins' Clinical Assessment in Respiratory Care, 7e. Al Heuer, Craig L. Scanlan. ISBN-13: 978-0323100298 ISBN-10: 0323100295 Edition: 7<sup>th</sup>.
- B. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach by Gary C. White ISBN-13: 978-1435453654 ISBN-10: 1435453654 Edition: 5<sup>th</sup>.
- C. Hutchison's Clinical Methods: An Integrated Approach 23e; ISBN-13: 978-0702040917 ISBN-10: 0702040916 Edition: 23<sup>rd</sup>.

**(7) Reference Books:**

Wilkins' Clinical Assessment in Respiratory Care, 7e. Al Heuer, Craig L. Scanlan. ISBN-13: 978-0323100298 ISBN-10: 0323100295 Edition: 7<sup>th</sup>

1. <https://canvas.instructure.com/login>
2. Cardiovascular System Anatomy & Physiology -  
<http://www.le.ac.uk/pa/teach/va/anatomy/case1/frmst1.html>
3. Respiratory physiology:  
[http://www.usc.edu/dept/biomed/bme403/Section\\_1/Index.html](http://www.usc.edu/dept/biomed/bme403/Section_1/Index.html)
4. Guidelines on Nurse and Midwife Initiated Diagnostic Investigations:  
<http://www.nswnma.asn.au/wp-content/uploads/2013/07/Guidelines-on-Nurse-and-Midwife-Initiated-Diagnostic-Investigations.pdf>

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Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Cardiopulmonary anatomy and physiology	RES 222	2	2	3	2	4	ANAT 220-3

**Course Instructor Name:** Ayman Samman

**E.mail:** Asamman@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

**(1) Brief Course Description**

This course is designed to provide students with general knowledge, to be employed in their practice. Students involved in this course are expected to, integrate knowledge base from the anatomy and physiology theory courses, and develop clinical practices with health care provider's team.

**(2) Course Objectives:**

The main purpose of this course is to study of cardiopulmonary anatomical parts and function, and to understand the deep details of ventilation mechanics, gas diffusion, and control of breathing.

**(3) Course Contents:**

- Syllabus; general overview
- Anatomy of the upper respiratory system
- Anatomy of the lower respiratory system and tracheobronchial airways
- Anatomy of the thorax and thoracic cavity
- Ventilation mechanics – Static ventilation
- Ventilation mechanics – Dynamic ventilation
- Ventilatory patterns
- Midterm exam + Gas Laws & Diffusion of pulmonary gases

المرافقات :

التاريخ :

الرقم :

المملكة العربية السعودية – جازان ص.ب : 114 هاتف : 013295000

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- Gas Laws & Diffusion of pulmonary gases
- Gas transport; Oxygenation assessment and shunting
- Overview to Pulmonary Function Measurements
- Ventilation-Perfusion Relationships
- Regulation and control of breathing
- Anatomy & physiology of the circulatory system
- Anatomy & physiology of the circulatory system
- Overview to Arterial Blood Gas classification and interpretation

**(4) Course Teaching Strategies**

Theory and Laboratory

**(5) Assessment Criteria:**

Assignments: 5%

Lab activities: 10%

Midterm Theory: 20%

Objective structured practical final exam: 20%

Final Theory: 40%

**(6) Text Book:**

1. Robert M. Kacmarek. Egan's Fundamentals of Respiratory Care, 12th Edition. Mosby. ISBN-13: 0323811217. ISBN-10: 0323811213
2. Terry Des Jardins. Cardiopulmonary Anatomy & Physiology: Essentials of Respiratory Care, 6th Edition. ISBN-13: 978-0840022585. ISBN-10: 0840022581

**(7) Reference Books:**

1. Terry Des Jardins. Workbook for Des Jardins' Cardiopulmonary Anatomy & Physiology, 6th Edition; ISBN-13: 978-0840022615. ISBN-10: 0840022611

المرفقات :

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Respiratory care science II	RES 212	2	2	2	2	4	RES211

**Course Instructor Name:** Dr. Bedor Alkhathlan

**E.mail:** bkhathlan@jazanu.edu.sa

**Office Hours:** SUNDAY 10-12

**Lecture Time:** MONDAY 8-12

#### (1) Brief Course Description

Respiratory Care Science II builds upon the foundational knowledge and skills acquired in Respiratory Care Science I, advancing students' understanding of respiratory care techniques and patient management. This course delves deeper into complex respiratory care practices, critical care, and the management of chronic respiratory conditions. Emphasis is placed on advanced assessment techniques, therapeutic interventions, and the use of sophisticated respiratory care equipment.

#### (2) Course Objectives:

To advance students' knowledge and skills in respiratory care by exploring complex respiratory conditions, critical care techniques, and advanced therapeutic interventions, preparing them for comprehensive patient management and the utilization of advanced respiratory care technologies in diverse clinical settings.

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**(3) Course Contents:**

1. Soap Notes, RT Protocols
2. Bronchial hygiene therapy (CPT, PD, Percussion, Vibration) (Session one)
3. Bronchial hygiene therapy (CPT, PD, Percussion, Vibration) (Session Two)
4. Lung Expansion Therapy 4 5. Intermittent Positive-Pressure Breathing (IPPB)
6. Continuous Positive Airway Pressure
7. Establishing An Artificial Airway (Session one)
8. Establishing An Artificial Airway (Session two)
9. NT, Endotracheal, and tracheal Suctioning
10. Airway Maintenance & Troubleshooting Airway Emergencies
11. Home Sleep Monitors
12. Bronchoscopy
13. Chest Tubes

**(4) Course Teaching Strategies**

Theory and practical

**(5) Assessment Criteria:**

- Quiz: 5%
- Midterm Examination Theory: 20%
- Quizzes: 10%
- Final Exam Practical: 20%
- Absent and Behavior Weekly: 5%
- Final exam (Theory): 40%

**(6) Textbook:**

1. Kacmarek RM, Stoller JK, Heuer AJ. Egan's fundamentals of respiratory care ebook. Elsevier Health Sciences; 2019 Dec 18.
2. Cairo JM. Mosby's Respiratory Care Equipment-E-Book. Elsevier Health Sciences; 2021 Nov 12.

**(7) Reference Books:**

1. Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach. Edition: 5th. White, Garry C. ISBN-13: 978-1435453654 ISBN-10: 1435453654.

المرفقات:

التاريخ:

الرقم :



### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Infection prevention and control	IPC 336-1	1	-	1	2	4th	-

**Course Instructor Name:** TBA

**E.mail:** TBA

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

Health care associated infections (HAIs) pose a significant challenge to patient safety for both patients and health care providers in all health care settings. This course focuses on the prevention and control of HAIs across various environments. Students will learn effective strategies to minimize the occurrence of HAIs while delivering health care services, gaining essential knowledge on infection prevention techniques that enhance patient safety and improve overall health outcomes.

#### (2) Course Objectives:

- 1 -Infection control teamwork and committee at different levels
- 2 -Infectious disease terms, processes and basic infection control activities, cleaning, disinfection and sterilization practices
- 3 -Support services and Environmental infection control
- 4 -Specific infection control practices and antimicrobial stewardship
- 5 -Infection prevention and control aspects of employee health.

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(3) **Course Contents:**

- Introduction to HAIs Definition, problem statement, socioeconomic impact
- Infectious disease epidemiology
- Infection Control Program- roles and responsibilities of committee,
- Infection control program committee, role of staff in reducing HAIs
- Basic Principles in Environmental cleaning, disinfection and sterilization
- practices in health care settings
- Prevention of nosocomial infections- Standards /Universal precautions
- Preventing HAIs in healthcare workers Infections- Vaccination and post
- exposure prophylaxis
- Biomedical waste management - Environmental control measures

(4) **Course Teaching Strategies**

Lectures / Group discussions

(5) **Assessment Criteria:**

Assignment: 20%

Midterm exam: 30%

Student Discipline & Behavior: 5%

Final theory examination: 50%

(6) **Textbook:**

Infection Control and Applied Epidemiology: Principles and practice. St. Louis: Mosby-Yearbook, Inc.

(7) **Reference Books:**

IFIC Book, Information resources in infection control -6th edition

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Chest Radiography	RES 323	1 hr.	2 hrs.	2 hrs.	2 <sup>nd</sup>	Level 5	Nil

**Course Instructor Name:** Dr. Naif Majrashi

**E.mail:** nmajrashi@jazanu.edu.sa

**Office Hours:** 2hrs/week

**Lecture Time** 08:00 - 10:50 AM / 11:00- 12:50

(1) **Brief Course Description:** This course teaches respiratory therapy students the fundamentals of thoracic imaging, with a focus on clinical image interpretation. Students will understand the significance of thoracic imaging for patient care and learn key techniques such as chest X-rays, CT scans, ultrasound, and MRI. Through lectures, hands-on practice, and clinical sessions, they will develop skills for accurate image interpretation and informed decision-making to enhance patient outcomes.

(2) **Course Objectives:**

This course offers students an understanding of the essential concepts of radiographic pathology related to chest imaging techniques, including X-ray, CT, MRI, and ultrasound.

By the end of the course, students will:

1. Understand the basic principles of various chest imaging modalities.
2. Recognize key radiographic pathologies to inform respiratory therapy.
3. Evaluate radiographs systematically to assess the effectiveness of prescribed care.
4. Apply a problem-solving approach based on imaging findings.
5. Use appropriate skills for accurate radiological evaluations.
6. Practice ethically and communicate effectively in both oral and written forms.

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**(3) Course Contents:**

- 1) Interpretation of normal chest x-ray (CXR) - T 2hrs / P 4hrs
- 2) Lung parenchymal diseases - T 4hrs / P 8hrs
- 3) Pleural abnormalities - T 2hrs / P 4hrs
- 4) Mediastinal and hilar abnormalities - T 1hrs / P 2hrs
- 5) Diaphragm and chest wall abnormalities - T 1hrs / P 2hrs
- 6) Tubes and devices - T 1hrs / P 2hrs
- 7) CT chest types and disease patterns - T 1hrs / P 2hrs
- 8) MRI chest types and disease patterns - T 1hrs / P 2hrs

**(4) Course Teaching Strategies:** Lectures in the ordinary classroom, Video and Multimedia Presentation. Through a checklist in the lab, group activities and peer feedback, Lab Discussion and case presentation, Problem-solving Brainstorming

**(5) Assessment Criteria:** Continuous assessment through quizzes (MCQ), Problem-based case scenarios, Oral and practical evaluation, Course evaluation survey through the “edugate”

**(6) Text Book:**

- A. Chest Radiology 7th edition by James C. Reed
- B. Chest X-Ray Made Easy, 4th Edition
- C. By Jonathan Corne, MA, PhD, MB BS, FRCP and Maruti Kumaran, MD, FRC ISBN: 978-0-7020-5499-0

**(7) Reference Books:**

Chest X-Ray Made Easy, 4th Edition

By Jonathan Corne, MA, PhD, MB BS, FRCP and Maruti Kumaran, MD, FRC ISBN: 978-0-7020-5499-0

1. <https://www.mdlinx.com/radiology/journals.cfm>
2. <https://www.jacr.org/>
3. <https://www.auntminnie.com/index.aspx?sec=def>

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Blood Gas Analysis	RES324	1	2	2	3	5	HLT201-2

**Course Instructor Name:** Dr. Ayman Samman

**Email:** [asamman@jazanu.edu.sa](mailto:asamman@jazanu.edu.sa)

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

This course examines the basic principles of chemistry and physics related to blood gases and the physiology of respiration. The interpretation, collection and sampling of blood gases, and non-invasive measurements, are examined with particular emphasis on clinical applications.

#### (2) Course Objectives:

The main purpose of this course is to understand the applications of blood gas analysis in clinical situations, the assessment of care and the principles of equipment operation.

- **Course Contents:**
- Syllabus week; General Overview
- Introduction to arterial blood gas analysis
- ABG sampling technique, site selection criteria
- Arterial cannulation, arterial line, capillary sampling
- ABG sampling errors
- Hemoximetry and non-invasive measurements
- External respiration, oxygen transport, and internal respiration

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- Midterm exam + Case study discussion
- Blood gas classification and interpretation
- Blood gas classification and interpretation
- Oxygenation assessment, hypoxemia and shunting
- Venous blood gas sampling
- Regulation of acids-bases and electrolytes
- Acid-base disorders and management

### (3) Course Teaching Strategies

Theory and Laboratory

### (4) Assessment Criteria:

Evaluation and continuous assessment: 5%  
Assignments: 5%  
Case Discussions: 10%  
Midterm Theory: 20%  
Objective structured practical final exam: 20%  
Final Theory: 40%

### (5) Textbook:

Malley, W. J.. Clinical Blood Gases: Assessment and Intervention. 2nd Edition. Philadelphia: Elsevier Saunders Company, 2005. ISBN: 072168422X

### (6) Reference Books:

1. Mosby's Respiratory Care Equipment, (9th Ed.), Cairo, J.M. (2014), Elsevier Mosby, St. Louis, MO
2. Respiratory Care Clinical Competency Lab Manual, (5th Ed.), Gary C White

المرفقات :

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
RES313	Pulmonary Function Testing	2	1	3	3	5	-

**Course Instructor Name:** Dr. Abdullah Alsulayyim

**E.mail:** alsulayyim@jazanu.edu.sa

**Office Hours:** By appointment

**Lecture Time:** Tuesday 08:00 a.m. – 09:50 a.m. (Theoretical)

Tuesday 10:00 a.m. – 11:50 a.m. (Practical)

(1) **Brief Course Description:** This course is designed to describe the practical performance and physiologic basis of specialized clinical respiratory measurement. These tests include determination of functional residual capacity and thoracic gas volume, pulmonary gas transfer, compliance, resistance and maximal intrapulmonary pressures. Quality control procedures relevant to the pulmonary function laboratory are also detailed.

(2) **Course Objectives:**

Upon successful completion of this subject, students should:

1. Describe the equipment and the testing methods used in determination of functional residual capacity, thoracic gas volume, pulmonary gas transfer, compliance, resistance and maximal intrapulmonary pressure measurements
2. Describe the calibration procedures and minimum equipment specifications for instruments used in the specialized clinical respiratory tests described above
3. Appreciate the influence of equipment characteristics on the accuracy of physiological measurements attained by these methods

المرفقات:

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4. Identify the rationale governing minimum patient performance criteria for each of the specialized clinical respiratory tests described above
5. Define the parameters measured and their physiologic significance for each of the tests
6. Describe the process of quality control specific to each of the specialized clinical respiratory tests described above
7. Perform the specialized clinical respiratory tests described above
8. Indicate the appropriate use of these clinical testing methods as aids in the assessment of respiratory disease
9. Describe quality control processes and their application in clinical respiratory testing laboratories
10. Use statistics in monitoring laboratory quality assurance.

(3) Course Contents:

- Introduction to course syllabus + Indication for Pulmonary Function Testing
- Spirometry
- Pre-and post-bronchodilator studies
- MVV & Diffusing Capacity Tests
- Body Plethysmography
- Lung Volume, Airway Resistance
- Gas Distribution Tests & Cardiopulmonary Exercise Tests
- Bronchoprovocation & Peak flow
- Pulmonary Function Test Equipment

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(4) Course Teaching Strategies

1. Lecture/discussions/case studies.
2. Audio-visual aids, and PowerPoint presentations.
3. Text and supplemental reading assignments.
4. Hands-on laboratory experience relating to equipment and procedures.

(5) Assessment Criteria:

Exam	Theory	Practical	Total
Exam 1	20	0	20
Course work			15
Student discipline & behavior			5
Final Exam	40	20	60
Semester			100

(6) Text Book:

1. Mosby's Respiratory Care Equipment, (9<sup>th</sup> Ed.), Cairo, J.M. (2014), Elsevier Mosby, St. Louis, MO.
2. Egan's Fundamentals of Respiratory Care, (10<sup>th</sup> Ed.), Kacmarek, R.M, Stoller J.K., Albert, H.J. (2013), Elsevier Mosby, St. Louis, MO.
1. Ruppel's Manual of Pulmonary Function Testing, 10e Carl Mottram ISBN-13: 978-0323085052 ISBN-10: 0323085059 Edition: 10th

(7) Reference Books:

1. Pulmonary Function Tests in Clinical Practice ISBN-13: 978-1848822306 ISBN-10: 1848822308
2. [www.nbrc.org/examinations/nps](http://www.nbrc.org/examinations/nps)

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## Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Practical	Credit			
Clinical Practice I	RES332	-	6	3	3	5	RES212

**Course Instructor Name:** Dr. KHALED ALQAHTANI

**Email:** KALI@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

### (1) Brief Course Description

Course general Description: This course provides respiratory therapy students with the essential knowledge and practical skills to deliver safe, effective patient care. Through hands-on labs and assessments, students will demonstrate competency in areas such as basic life support, infection control, patient safety, communication, documentation, assessment techniques, oxygen therapy, humidification, and aerosol therapy.

### (2) Course Objectives:

To equip students with the essential knowledge and practical skills needed to safely and effectively deliver respiratory care to patients across a variety of healthcare settings.

### (3) Course Contents:

1. Basic life support certificate
2. Infection control check off
3. Patient safety, communication, and (documentation i.e. SOAP format) check off
4. Patient assessment check off
5. Oxygen therapy low & high flow systems
6. Humidification therapy
5. Aerosol therapy
6. Manual resuscitation + oropharyngeal airways insertion

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- 7. Case scenarios
- 8. Check offs completion

**(4) Course Teaching Strategies**

LAB +Hospital Rotations

**(5) Assessment Criteria:**

Lab sheets: 15%  
Project: 30%  
Midterm: 25%  
Absent behavior: 5%  
Final exam (Practical): 25%

**(6) Textbook:**

Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach. Edition: 5th.  
White, Garry C. ISBN-13: 978-1435453654 ISBN-10: 1435453654

**(7) Reference Books:**

Cairo JM. Mosby's Respiratory Care Equipment-E-Book. Elsevier Health Sciences; 2021 Nov 12.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Respiratory Care Pharmacology	RES 341	3	-	3	Third	5th	-

**Course Instructor Name:** Dr. Rahimullah Siddiq

**Email:** rmohammedyousef@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

This course is designed to cover Introduction to Respiratory Pharmacology, Routes of drug administration and Calculations, Administration of aerosol agents, Nervous system (ANS), Sympathomimetics and Parasympatholytics, Xanthines, Mucolytics and Surfactants, Corticosteroids and NSAID's, Antiinfective agents, Antimicrobials. Students will utilize critical thinking through the use of case studies and simulations in respiratory care.

#### (2) Course Objectives:

The main objective of the course on respiratory pharmacology is to equip learners with a comprehensive understanding of the subject, including drug administration routes, pharmacological dosage calculations, differentiation of various medications, and identification of appropriate respiratory therapies for specific diseases.

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**(3) Course Contents:**

1. Basic Principles of Pharmacology
2. Routes of drug administration and Calculations
3. Administration of aerosol agents
4. Inhaled Pulmonary Vasodilators
5. Nonsteroidal Antiasthma Drugs
6. Sympathomimetics
7. Parasympathomimetics
8. Xanthines
9. Mucolytics and Surfactants
10. Corticosteroids and NSAID
11. Anti-infective agents and Antimicrobials

**(4) Course Teaching Strategies**

Lectures / Group discussion

**(5) Assessment Criteria:**

Quiz 1: 5%  
Quiz 2: 5%  
Quiz 3: 5%  
Midterm: 30%  
Absent behavior: 5%  
Final exam (Theory): 50%

**(6) Textbook:**

GOODMAN & GILMAN'S THE PHARMACOLOGICAL BASIS OF THERAPEUTICS  
Fishman's Pulmonary Diseases and Disorders, 4th Edition. ISBN-13: 978-0071457392 ISBN-10: 0071457399.

**(7) Reference Books:**

Essentials of Medical Pharmacology, Sixth Edition by KD TRIPATHI.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Cardiopulmonary Disease I	RES 325	3	-	3	3	5	RES222

**Course Instructor Name:** Dr. Ayman Samman

**E.mail:** [asamman@jazanu.edu.sa](mailto:asamman@jazanu.edu.sa)

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

The course content includes pathophysiology, clinical signs and symptoms, diagnosis, therapy, and prognosis of acute and chronic cardiopulmonary conditions. In addition, as part of the respiratory care program, students will learn critical thinking skills through case and simulation-based studies. The course will teach students how to distinguish between obstructive and restrictive lung diseases, as well as cardiopulmonary emergencies. The student will be prepared to handle emergency situations related to his or her field of study.

#### (2) Course Objectives:

The goal is to provide respiratory therapists with a comprehensive understanding of various cardiopulmonary diseases, enabling them to differentiate between cardiac and respiratory disorders. Additionally, it aims to equip them with knowledge of respiratory management protocols tailored to each condition, in alignment with national standards.

المرفقات :

التاريخ :

الرقم :

المملكة العربية السعودية – جازان ص.ب : 114 هاتف : 013295000

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**(3) Course Contents:**

- Syllabus week; General overview
- Documentation – Patient records & Treatment Plans
- Therapist-driven protocol programs
- Bronchial Asthma
- COPD – Chronic bronchitis & Emphysema
- COPD – Chronic bronchitis & Emphysema
- Bronchiectasis
- Case Discussion and Presentation
- Midterm Exam + Cystic Fibrosis
- Cystic Fibrosis
- Lung abscess
- Pneumonia
- Tuberculosis
- Fungal infections

**(4) Course Teaching Strategies**

Lectures

**(5) Assessment Criteria:**

Quizzes: 5%  
Midterm theory: 30%  
Attendance & Discipline: 5%  
Case study, discussion and presentation: 10%  
Final theoretical examination: 50%

**(6) Text Book:**

1. Terry Des Jardins. Clinical Manifestations & Assessment of Respiratory Disease, 6th Edition. ISBN-13: 978-0323057271 ISBN-10: 0323057276.

**(7) Reference Books:**

1. Kacmarek, R. M., Stoller, J. K., & Heuer, A. (2016). Egan's fundamentals of respiratory care. 10th Ed. Elsevier Health Sciences.

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**Course Description**

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Epidemiology	AMS 342	2	2	2	Third	6th	-

**Course Instructor Name:** Dr. Alaa Alhazmi

**E.mail:** alaaalhazmi@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

**(1) Brief Course Description**

In this introductory course, students will learn and apply basic concepts of epidemiology to multiple domains of public health. We will illustrate and practice using epidemiology to better understand, characterize, and promote health at a population level.

**(2) Course Objectives:**

This course is designed to covers the full range of disease occurrence and mode of transmission including genetic and environmental causes for both infectious and noninfectious diseases. It provides students with the basic tools necessary to design, carry out and used in identifying, preventing, and controlling the diseases and interpret the results to aware the society and improve public health.

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**(3) Course Contents:**

1. Introduction to epidemiology and control of infectious disease
2. Concept of infectious cycle, period of communicability
3. Preventive measures, general and specific
4. Managing infectious disease, incidents and outbreaks
5. Surveillance system, investigation and control disease
6. Sterilization and disinfection
7. Infectious disease, Prevention, control and special programs
8. Community infection control
9. Healthcare associated infection and sterilization
10. Risk to and from healthcare workers
11. Risk factors, periodic screening and screening test

**(4) Course Teaching Strategies**

- Lectures
- Seminar
- class discussions

**(5) Assessment Criteria:**

Quiz: 5%  
Seminar/Presentation : 5%  
Assignment:10%  
Midterm Examination: 30%  
Final Examination: 50%

**(6) Textbook:**

Communicable disease control handbook, 2nd edition; Jeremy Hawker, Norman Begg, Iain Blair, Ralf Reintjes and Julius Weinberg, Blackwell Publishing, Inc., 350 Main Street, Malden, Massachusetts 02148-5020, USA

**(7) Reference Books:**

Principles of Epidemiology, 3rd edition; .US. Department of Health and Human Services, Centers for Disease Control and Prevention (CDC) Office of Workforce and Career Development Atlanta, USA 2. Concepts of Epidemiology An integrated introduction to the ideas, theories, principles and methods of epidemiology, Raj S. Bhopal, Oxford University Press, New York

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## Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Practical	Credit			
Clinical Practice II	RES 332	-	6	3	Third	6th	RES331

**Course Instructor Name:** Dr. Khaled Alqahtani

**Email:** Kali@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

### (1) Brief Course Description:

This course focuses on the fundamentals of the respiratory care profession, providing students with practical training in a wide range of respiratory interventions. Topics covered include inhalation devices, chest physiotherapy techniques, and therapeutic approaches such as incentive spirometry, PEP mask therapy, and flutter valve therapy. Students will also gain proficiency in critical procedures like endotracheal suctioning, intubation, and extubation. Additionally, they will develop skills in interpreting arterial blood gas (ABG) results and chest X-rays. The course prepares students to deliver effective respiratory care in diverse clinical settings, ensuring the well-being of patients with respiratory conditions.

### (2) Course Objectives:

This course provides training in a wide range of interventions, including inhalation devices, chest physiotherapy techniques, and various therapies. Students will also learn critical procedures such as endotracheal suctioning, intubation, and extubation. Additionally, they will develop skills in interpreting arterial blood gas (ABG) results and chest X-rays. By the course's end, students will be proficient in delivering effective respiratory care across diverse clinical settings.

المرفقات:

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**(3) Course Contents:**

- Dry-Powder Inhaler
- Pressurized Metered Dose Inhaler
- Chest Physiotherapy
- PEP Mask Therapy
- Flutter Valve Therapy/ Acapella®
- Adjunctive Breathing Techniques
- Incentive Spirometry
- Intubation
- Extubation
- Endotracheal suctioning
- CXR
- ABG

**(4) Course Teaching Strategies**

Return demonstration + hospital rotations

**(5) Assessment Criteria:**

Return demonstration (check offs): 45%

Absent behavior: 5%

Final exam (OSCE): 50%

**(6) Textbook:**

Basic Clinical Lab Competencies for Respiratory Care: An Integrated Approach.

Edition: 5th. White, Garry C. ISBN-13: 978-1435453654 ISBN-10: 1435453654.

**(7) Reference Books:**

Cairo JM. Mosby's Respiratory Care Equipment-E-Book. Elsevier Health Sciences; 2021 Nov 12.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Research Methodology	GSC352	2 hours	-	2 hours	3th	6	-

**Course Instructor Name:** Dr. Abdulelah Aldhahir

**E.mail:** [aaldhahir@jazanu.edu.sa](mailto:aaldhahir@jazanu.edu.sa)

**Office Hours:** Sunday 10:00 to 14:00

**Lecture Time:**

#### (1) Brief Course Description

This course offers an overview of research methodology including basic concepts employed in quantitative and qualitative research methods. This includes identifying and justifying the research problem, formulating achievable research objectives, reviewing the literature, specifying the appropriate study design, designing of the study questionnaire, identifying study population and sample size estimation, identifying methods of data collection, understanding the highest standards of research ethics, statistical analysis, interpretation and dissemination of the results.

#### (2) Course Objectives:

The purpose of this course is to provide students with the opportunity to improve their skills in writing research articles and other academic texts including thesis writing, essays, and academic reports.

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**(3) Course Contents:**

By the end of this course students should be able to:

- 1- Describe basic concepts in research and its purposes.
- 2- Demonstrate and justify research problems and formulate achievable objectives.
- 3- Conduct an effective and comprehensive literature review.
- 4- Select the appropriate study design and sampling strategy.
- 5- Identify the study population and calculate the sample size.
- 6- Identify methods of data collection and decide on study tools.
- 7- Determine the proper statistical models required for data analysis.
- 8- Interpret and disseminate the results and findings.
- 9- Understanding the highest standards of research ethics,.

**(4) Course Teaching Strategies**

- Lecture-based presentation
- Group discussion
- Practice work
- peer reviews (students assess work by their peers and provide feedback to each other.

**(5) Assessment Criteria:**

- Midterm theory
- Practical lab manual
- Assignment
- Student behavior & attendance
- Final theory

**(6) Text Book:**

- Creswell, J. W. 2013. Research design: Qualitative, quantitative, and mixed methods approach (4th Ed.). Thousand Oaks, CA: Sage.

**(7) Reference Books:**



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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Mechanical Ventilation	RES 314	3	2	4	3	6	RES313

**Course Instructor Name:** Dr. Ali Hakamy

**E.mail:** . aohakamy@jazanu.edu.sa

**Office Hours:**

**Lecture Time**

**(1) Brief Course Description**

This course will introduce the students to the delivery of mechanical ventilation by learning the terminology of basic and advanced mode indication, settings, monitoring, alarms, nutrition, sedation, weaning physical principles and physiologic concepts associated with the application of mechanical ventilation, home mechanical ventilation, Equipment operation, function and troubleshooting will be investigated in the lab and clinical setting.

**(2) Course Objectives:**

1. Define the terms associated with mechanical ventilation.
2. Identifies the variables and components of mechanical ventilation.
3. Explains pressure gradients as they relate to human physiology.
4. Describes trigger mechanisms that initiate mechanical ventilation.
5. Summarizes the differences between volume ventilation and pressure ventilation.
6. Distinguishes the purposes of volume ventilation and pressure ventilation.
7. Distinguishes the root causes of the different types of respiratory failure.
8. Plans the use of mechanical ventilation to treat respiratory failure
9. Combines mechanical ventilation knowledge, assessment data, and disease knowledge to artificially ventilate patients.

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(3) **Course Contents:**

- Basic Terms and Concepts of Mechanical Ventilation
- How ventilators work
- How a breath is delivered
- How a breath is delivered
- Establishing the Need for Mechanical Ventilation
- Selecting the Ventilator and the Mode (Midterm exam)
- Selecting the Ventilator and the Mode
- Initial Ventilator Settings
- Ventilator Graphics
- Troubleshooting and problem solving
- Weaning and Discontinuation from MV

(4) **Course Teaching Strategies**

- Lectures
- Solving problems
- Homework
- Dialogue and discussions
- Using computers and software to analyze data
- Experimental studies and their outcome

(5) **Assessment Criteria:**

Exams and quizzes  
Practical Exam (OSPE)

(6) **Text Book:**

Mechanical Ventilation Physiological and Clinical Applications by Susan P. Pilbeam and Jim  
Cairo ISBN number 13 978-0-323-03236-0

(7) **Reference Books:**

DesJardins T, Burton GC. (2011). Clinical Manifestations and Assessment of  
Respiratory Disease

المرفقات :

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Cardiopulmonary Disease II	RES 326	3	-	3	3	6	-

**Course Instructor Name:** Dr. Ayman Samman

**E.mail:** Samman@jazanu.edu.sa

**Office Hours:** TBA

**Lecture Time:** TBA

#### (1) Brief Course Description

The course content includes pathophysiology, clinical signs and symptoms, diagnosis, therapy, and prognosis of acute and chronic cardiopulmonary conditions.

In addition, as part of the respiratory care program, students will learn critical thinking skills through case and simulation-based studies. The course will teach students how to distinguish between obstructive and restrictive lung diseases, as well as cardiopulmonary emergencies.

The student will be prepared to handle emergency situations related to his or her field of study.

#### (2) Course Objectives:

It is the instructor's intent to provide respiratory therapists with a fundamental understanding of various cardiopulmonary diseases, along with the ability to distinguish between cardiac and respiratory disorders, as well as to provide different respiratory management protocols tailored to each, that are compatible with national protocols.

##### ○ Course Contents:

- Syllabus week; Pulmonary Vascular Diseases –
- Pulmonary Vascular Diseases –Pulmonary edema ch.20
- ARDS (acute respiratory distress syndrome) – Ch. 27

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- Pulmonary hypertension & pulmonary embolism Ch. 20
- Trauma – Flail chest- Ch.21
- Pneumothorax – 22 (Part I)
- Pneumothorax – 22 (Part II)
- Kyphos-scoliosis – Ch. 23, 24 26 + MID term
- Pleura & Chest Wall Disease – Effusion & Empyema Part I
- Pleura & Chest Wall Disease – Effusion & Empyema Part II
- Lung Cancer–
- Interstitial Lung Diseases – Ch. 25.+ QUIZ 2
- Neurologic disorders – GBS part 1 Ch. 28
- Neurologic disorder Myasthenia gravis, part 2 Ch. 29

**(3) Course Teaching Strategies**

Lectures

**(4) Assessment Criteria:**

An open book, solve a problem based on a case study: 5%  
Midterm exam: 30%  
Attendance: 5%  
Quiz: 10%  
Final exam: 50%

**(5) Textbook:**

1. Terry Des Jardins. Clinical Manifestations & Assessment of Respiratory Disease, 6th Edition. ISBN-13: 978-0323057271 ISBN-10: 0323057276.

**(6) Reference Books:**

1. Kacmarek, R. M., Stoller, J. K., & Heuer, A. (2016). Egan's fundamentals of respiratory care. 10th Ed. Elsevier Health Sciences.

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Lab	Credit			
Respiratory Care in Alternative Settings	RES 417	2	1	3 hours	4th	7	

**Course Instructor Name:** Dr. Abdulelah Aldhahir

**E.mail:** [aaldhahir@jazanu.edu.sa](mailto:aaldhahir@jazanu.edu.sa)

**Office Hours:** Sunday 10:00 to 14:00

**Lecture Time:** Tuesday Theory 08:00 to 10:00

Tuesday Practical 15:00 to 17:00

#### (1) Brief Course Description

A study of pulmonary rehabilitation and other settings with an emphasis on basic concept of PR, therapeutic intervention in PR, and special consideration in PR and other settings.

#### (2) Course Objectives:

1. State the definition and general goals of pulmonary rehabilitation programs.
2. Identify the indications, contraindications, and potential hazards associated with pulmonary rehabilitation.
3. Describe how to evaluate and select patients for pulmonary rehabilitation.
4. Describe pulmonary rehabilitation program design including format and content.
5. List the educational content to be addressed in a pulmonary rehabilitation program.
6. Describe the rationale for exercise conditioning and psychosocial support of patients with chronic pulmonary disease .
7. Describe the implementation of a pulmonary rehabilitation program including staffing, facilities, scheduling, class size, equipment, and costs.
8. Describe the outcome measures that can be used to evaluate pulmonary rehabilitation programs.

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**(3) Course Contents:**

- 1 -Pulmonary Rehabilitation: History and Definition
- 2 -Selection and Assessment of the Patient with COPD
- 3 -Dyspnea: Assessment and Management
- 4 -Education in Pulmonary Rehabilitation
- 5 -Education in Pulmonary Rehabilitation
- 6 -Therapeutic Oxygen
- 7 -Therapeutic Oxygen
- 8 -Physical and Respiratory Therapy for the Medical and Surgical Patient
- 9 -Cardiopulmonary Exercise Testing
- 10 -Chapter 14 Nutritional Assessment and Support
- 11- Chapter 21 Outcome Assessment
- 

**(4) Course Teaching Strategies**

- Lecture
- Group discussion
- Audio visual aid
- Case Study

**(5) Assessment Criteria:**

- Quizzes
- Seminars / Assignments / Presentations
- Discipline & Behaviour
- Theory Examinations
- Written examination
- Practical Examination

**(6) Text Book:**

1. Pulmonary Rehabilitation: Guidelines to Success, 4th Edition Hodgkin. ISBN 978 0323045490
2. Guidelines for Pulmonary Rehabilitation Programs, 4th Edition. AACVPR ISBN 978-0736096539
- Egan's Fundamentals of Respiratory Care, 10th Edition Stoller. ISBN 978-0323082037

**(7) Reference Books:**

1. Blackboard system - <https://lms.jazanu.edu.sa/webapps/login/?action=login>
2. Respiratory Therapy Files - <http://www.respiratorytherapyfiles.net/>
3. American Association for Respiratory Care - <http://www.aarc.org/>
4. The National Board for Respiratory Care - <http://www.nbrc.org/Pages/default.aspx>



### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisite
		Theoretical	Tutorial	Credit			
Research Writing	GSC353-2	2 hours		2 hours	4th	7	GSC

**Course Instructor Name:** Dr. Abdulelah Aldhahir

**E.mail:** [aaldhahir@jazanu.edu.sa](mailto:aaldhahir@jazanu.edu.sa)

**Office Hours:** Sunday 10:00 to 14:00  
**Lecture Time:** Tuesday 13:00 to 15:00

#### Brief Course Description (1)

This course offers basic knowledge to students on how to write a research paper with improved technical writing skills. This course is also to provide knowledge about reporting observational/experimental research, writing up to the date literature review, clear results and critical discussion and conclusions.

#### Course Objectives: (2)

The purpose of this course is to provide students with the opportunity to improve their skills in writing research articles and other academic texts including thesis writing, essays, and academic reports.

#### Course Contents: (3)

- Introduction to research writing? (Research types, steps, and methods)!
- Introduction (How to write a good introduction?)
- Materials and Methods
- Ethics and ethical approval
- Results
- Data analysis
- Discussion and conclusion
- Referencing styles and critical appraisal
- Additional materials

المرفقات:

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#### Course Teaching Strategies (4)

- Lecture-based presentation
- Seminars (small groups focusing on some subjects)
- Writing assignments
- peer reviews (students assess work by their peers and provide feedback to each other.)

#### Assessment Criteria: (5)

- Quiz 1
- Mid-term theory examination
- Quiz 2
- Oral Presentation
- Four short assignment 4 (4\*10=40)
- Student behavior & attendance

#### Text Book: (6)

- Swales, J. M. and Feak, C. B. (2012) Academic Writing for Graduate Students. Third edition. Ann Arbor: University of Michigan Press (415 pages).
- Graff, G, and Birkenstein, C. They Say, I Say: The Moves that Matter in Academic Writing. 4th edition, Norton, 2018.
- Matthews, J. R. et al., Successful scientific writing: a step-by-step guide for the biological and medical sciences. Second edition, 2000.

#### Reference Books: (7)

المرفقات:

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## Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Advanced Mechanical Ventilation	RES 416	2	1	3	4	7	RES 314

**Course Instructor Name:** Dr. Abdullah Alsulayyim

**E.mail:** alsulayyim@jazanu.edu.sa

**Office Hours:** By appointment

**Lecture Time :**

**Section (40):** Monday 10:00 a.m. – 11:50 a.m. **(Theoretical)**

**Section (43):** Wednesday 10:00 a.m. – 11:50 a.m. **(Theoretical)**

Monday 08:00 a.m. – 09:50 p.m. **(Practical) section (36)**

Wednesday 08:00 a.m. – 09:50 p.m. **(Practical) section (42)**

Wednesday 1:00 p.m. – 02:50 p.m. **(Practical) section (45)**

### (1) Brief Course Description

This course will introduce the students to the delivery of mechanical ventilation by learning the terminology of basic and advanced mode indication, settings, monitoring, alarms, nutrition, sedation, weaning physical principles and physiologic concepts associated with the application of mechanical ventilation, home mechanical ventilation, Equipment operation, function and troubleshooting will be investigated in the lab and clinical setting

### (2) Course Objectives:

Upon successful completion of this subject, students should be able to:

1. Define the terms associated with mechanical ventilation.

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2. Identifies the variables and components of mechanical ventilation.  
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3. Explains pressure gradients as they relate to human physiology.
4. Describes trigger mechanisms that initiate mechanical ventilation.
5. Summarizes the differences between volume ventilation and pressure ventilation.
6. Distinguishes the purposes of volume ventilation and pressure ventilation.
7. Distinguishes the root causes of the different types of respiratory failure.
8. Plans the use of mechanical ventilation to treat respiratory failure
9. Combines mechanical ventilation knowledge, assessment data, and disease knowledge to artificially ventilate patients.

(3) Course Contents:

- Introduction and review of final consideration in ventilator setup
- Methods to improve ventilation
- Methods to improve oxygenation
- Advanced troubleshooting and problem solving
- Advanced mode of ventilation I
- Advanced mode of ventilation 2
- Management of adult patients on ECMO
- Special techniques in ventilatory support

المرفقات:

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- Nutritional support for ventilated patients
  - Patient-Ventilator Synchrony
  - Sedation, analgesia, and paralysis for mechanically ventilated patients
  - Long term ventilation
  - Review of non-invasive ventilation
  - Review of invasive ventilation
- (4) **Course Teaching Strategies**
1. Lecture/discussions/case studies.
  2. Audio-visual aids, and PowerPoint presentations.
  3. Text and supplemental reading assignments.
  4. Hands-on laboratory experience relating to equipment and procedures

(5) **Assessment Criteria:**

Exam	Theory	Practical	Total
Exam 1	20	0	20
Course work			15
Student discipline & behavior			5
Final Exam	40	20	60
Semester			100

المرفقات:

التاريخ:

الرقم :

المملكة العربية السعودية - جازان ص.ب: 114 هاتف: 013295000  
cnhs@jazanu.edu.sa : تحويل: 4004-4040 البريد الإلكتروني



Kingdom of Saudi Arabia  
Ministry of Education  
Jazan University  
Respiratory Therapy Program

المملكة العربية السعودية  
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جامعة جازان  
برنامج العلاج التنفسي

كلية التمريض والعلوم الصحية College of Nursing and Health Sciences

(6) **Textbook:**

1. Mechanical Ventilation Physiological and Clinical Applications by Susan P. Pilbeam and Jim Cairo ISBN number 13 978-0-323-03236-0
2. Clinical Application of Mechanical Ventilation by Chang, D.W. ISBN# 9780827382855 Edition: 4th
3. Workbook For Mechanical Ventilation Physiological and Clinical Applications by Susan P. Pilbeam and Jim Cairo ISBN# 978-0-323-03296-4

(7) **Reference Books:**

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Neonatal and pediatric respiratory care	RES 415	3	-	3	4	7th	RES 326

**Course Instructor Name:** Dr. Ali Hakami

**E.mail:** Aohakamy@jazanu.edu.sa

**Office Hours:** TBA  
**Lecture Time:** TBA

#### (1) Brief Course Description

This course introduces the student to neonatal and pediatric respiratory care. The course covers fetal lung development, anatomy and physiology, neonatal development, pathology, CPR, acid base monitoring.

#### (2) Course Objectives:

Develops clinical knowledge in the pathophysiology of pediatric and neonatal cardiopulmonary diseases and neonatal and pediatrics therapeutic modalities, mechanical ventilation, and emphasizes specific technical procedures that differ from the adult patient.

#### (3) Course Contents:

- Fetal cardiopulmonary development
- Neonatal Respiratory Pathology
- Neonatal Respiratory Pathology & neonatal respiratory disease
- Neonatal cardiovascular problem- Congenital Heart Defects
- Pediatric Respiratory System: Basic Anatomy & Physiology
- Pediatric Respiratory diseases

المرفقات :

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(4) **Course Teaching Strategies**

Lectures and group discussions

(5) **Assessment Criteria:**

Attendance & Discipline: 5%

Midterm theory: 30%

Presentation: 15%

Final Theory: 50%

(6) **Textbook:**

Neonatal And Pediatric Respiratory Care 4th Ed.; by Brian K.Walsh

(7) **Reference Books:**

Kacmarek RM, Stoller JK, Heuer AJ. Egan's fundamentals of respiratory care e-book.  
Elsevier Health Sciences; 2019 Dec 18.

المرفقات :

التاريخ :

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## Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Advanced Mechanical Ventilation	RES 416	2	1	3	4	7	RES 314

**Course Instructor Name:** Dr. Abdullah Alsulayyim

**E.mail:** alsulayyim@jazanu.edu.sa

**Office Hours:** By appointment

**Lecture Time :**

**Section (40):** Monday 10:00 a.m. – 11:50 a.m. **(Theoretical)**

**Section (43):** Wednesday 10:00 a.m. – 11:50 a.m. **(Theoretical)**

Monday 08:00 a.m. – 09:50 p.m. **(Practical) section (36)**

Wednesday 08:00 a.m. – 09:50 p.m. **(Practical) section (42)**

Wednesday 1:00 p.m. – 02:50 p.m. **(Practical) section (45)**

### (1) Brief Course Description

This course will introduce the students to the delivery of mechanical ventilation by learning the terminology of basic and advanced mode indication, settings, monitoring, alarms, nutrition, sedation, weaning physical principles and physiologic concepts associated with the application of mechanical ventilation, home mechanical ventilation, Equipment operation, function and troubleshooting will be investigated in the lab and clinical setting

### (2) Course Objectives:

Upon successful completion of this subject, students should be able to:

1. Define the terms associated with mechanical ventilation.

2. Identifies the variables and components of mechanical ventilation.

: الرقم



3. Explains pressure gradients as they relate to human physiology.
4. Describes trigger mechanisms that initiate mechanical ventilation.
5. Summarizes the differences between volume ventilation and pressure ventilation.
6. Distinguishes the purposes of volume ventilation and pressure ventilation.
7. Distinguishes the root causes of the different types of respiratory failure.
8. Plans the use of mechanical ventilation to treat respiratory failure
9. Combines mechanical ventilation knowledge, assessment data, and disease knowledge to artificially ventilate patients.

**(3) Course Contents:**

- Introduction and review of final consideration in ventilator setup
- Methods to improve ventilation
- Methods to improve oxygenation
- Advanced troubleshooting and problem solving
- Advanced mode of ventilation I
- Advanced mode of ventilation 2
- Management of adult patients on ECMO
- Special techniques in ventilatory support
- Nutritional support for ventilated patients
- Patient-Ventilator Synchrony

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- Sedation, analgesia, and paralysis for mechanically ventilated patients
- Long term ventilation
- Review of non-invasive ventilation
- Review of invasive ventilation

(4) Course Teaching Strategies

1. Lecture/discussions/case studies.
2. Audio-visual aids, and PowerPoint presentations.
3. Text and supplemental reading assignments.
4. Hands-on laboratory experience relating to equipment and procedures

(5) Assessment Criteria:

Exam	Theory	Practical	Total
Exam 1	20	0	20
Course work			15
Student discipline & behavior			5
Final Exam	40	20	60
Semester			100

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(7) **Reference Books:**

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Lab	Credit			
Clinical Practice III	RES 433		6	3 hours	4th	7	RES 332

**Course Instructor Name:** Dr. Abdulelah Aldhahir

**E.mail:** [aaldhahir@jazanu.edu.sa](mailto:aaldhahir@jazanu.edu.sa)

**Office Hours:** Sunday 10:00 to 14:00

**Lecture Time:** Thursday 15:00 to 17:00

#### (1) Brief Course Description

The Clinical Practice III course provides students with a hands-on experience in a clinical setting related to the understanding of mechanical ventilation principles and practices for patients with respiratory diseases. Covering topics such as non-invasive ventilation (CPAP, BiPAP), ventilator initiation, mode establishment, parameter adjustment, circuit changes, patient assessment and management, system care, and discontinuation, this course equips students with the knowledge and skills to effectively utilize mechanical ventilation techniques for patients with various respiratory conditions.

#### (2) Course Objectives:

By the end of the Clinical Practice III course, students will have gained the knowledge and skills necessary to apply both invasive and non-invasive mechanical ventilation principles and practices in a clinical setting for patients with various respiratory diseases..

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**(3) Course Contents:**

- Non-invasive ventilation (CPAP)
- Non-invasive ventilation (BiPAP)
- Ventilator Initiation
- Establishing of MV and modes of ventilation
- Adjustment of ventilation
- Ventilator circuit change
- Ventilated Patient Assessment & Management
- Patient Ventilator System Care and Maintenance
- Discontinuation of Mechanical Ventilation
- Case study

**(4) Course Teaching Strategies**

- Discussion
- Problem Based Learning
- Case Study Presentation, Demonstration
- case scenarios

**(5) Assessment Criteria:**

- Practical Activity
- Absent and behaviour
- Case Study
- Final practical exam

**(6) Text Book:**

- Persing G. Respiratory Care Exam Review-E-Book. Elsevier Health Sciences; 2019 Nov 5.

**(7) Reference Books:**

المرفقات :

التاريخ :

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Critical Care	RES 427	2hrs	-	2hrs	4 <sup>th</sup>	7 <sup>th</sup>	

**Course Instructor Name:** Dr. Nagla Abdaghani

**E.mail:** nabdalgaahni@jazanu.edu.sa

**Office Hours:** 2hrs/week

**Lecture Time** 13:00-

- Brief Course Description:** This course trains learners on critical cases, including traumatic, surgical, and ICU-admitted medical cases, with a focus on acute cardiopulmonary diseases, chest trauma, and shock syndromes. It covers clinical skills for critical conditions in ICUs and CCUs.
- Course Objectives:**
  - Educate on emergency cardiopulmonary care and trauma.
  - Prepare for emergency, ICU, and critical care roles.
  - Teach EKG interpretation for cardiac issues and arrhythmias.
  - Cover shock syndromes, hemodynamic monitoring, and post-cardiac care.
  - Provide palliative care for respiratory cancers and manage serious respiratory viruses.
- Course Contents:**

Introduction to the basics of normal ECG & ECG interpretation

Arrhythmias

The most common Cardiovascular Emergencies

Shock Syndromes & Shock Management Part I

ALI & ARDS

Hypoxemic and Hypercapnia Respiratory Failure

The most common medical and non-medical causes of Respiratory Emergencies.

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**(4) Course Teaching Strategies:**

1. Ongoing Assessment through OSCEs and practical evaluation.
2. Case-Based Learning and Simulation-Based Instruction
3. Discussions in groups, flipped classrooms, and regular classes

**(5) Assessment Criteria:**

1. Practical exams and simulations.
2. Written exams and case studies.
3. OSCEs for clinical skills.
4. Peer and self-assessments.

**(6) Text Book:**

1. Caroline N."Nancy Caroline's Emergency Care in the Streets" Sixth Edition (Hardcover) Jones & Bartlett Publishers; 6 edition (March 2, 2007) ISBN-10: 0763729078; ISBN-13: 978- 0763729073.
2. Amanda Blaber "Foundation of paramedic practice: a theoretical perspective" First Edition (2008), Mc Graw Hill; open university press, ISBN-10:0335222890; ISBN-13: 9780-3335222896.
3. Davidson, A. C., & Treacher, D. T. (2002). Respiratory Critical Care. London, Arnold Publication.
4. Heuer, A. J., & Scanlan, C. L. (2013). Wilkins' Clinical Assessment in Respiratory Care. 7th Ed. Elsevier Health Sciences.
5. Kacmarek, R. M., Stoller, J. K., & Heuer, A. (2016). Egan's fundamentals of respiratory care. 10th Ed. Elsevier Health Sciences.
6. DesJardins T, Burton GC. (2011). Clinical Manifestations and Assessment of Respiratory Disease. 6th Ed. Elsevier Health Science.

**(7) Reference Books:**

Marino's The ICU Book: Print + Ebook with Updates (ICU Book (Marino). ISBN-13: 978-1451121186 ISBN-10: 1451121180 Edition: Fourth, North American Edition.

**(8) <https://www.merckmanuals.com/professional/critical-care-medicine>**

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Healthy Lifestyle	AMS 433	2	-	2	4	8th	-

**Course Instructor Name:** TBA

**E.mail:** TBA

**Office Hours:** TBA

**Lecture Time :** TBA

#### (1) Brief Course Description

This course discusses the principles of how to lead a healthy lifestyle, and how to promote the health of individuals.

#### (2) Course Objectives:

This course is designed to provide thorough knowledge about facts and habits that are part of healthy living. The students will be able to list healthy changes for personal health choices, identify areas around the school where healthy habits are promoted or where more support for good health is needed, and brainstorm ways they can influence healthy habits.

#### (3) Course Contents:

Introduction of the Course & Definition of health  
Health Education  
Health promotion and Ottawa Charter  
Health Promotion and Behavior Change  
Approaches to Health promotion.  
A Model for Program Planning in Health Promotion  
Theories of Health Promotion  
Health and environment

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**(4) Course Teaching Strategies**

Lectures and group discussions

**(5) Assessment Criteria:**

Quizzes: 10%  
Assignment: 20%  
Midterm exam: 20%  
Final exam: 50%

**(6) Textbook:**

Bartholomew Eldridge, L. K., Markham, C. M., Ruiter, R. A. C., Fernández, M. E., Kok, G., & Parcel, G. S. (2016). Planning health promotion programs: An Intervention Mapping approach (4th ed.). Hoboken, NJ: Wiley.

**(7) Reference Books:**

Health promotion planning and educational and environmental approach, second edition, Lawrence W.Green and Marheshal W.Kreuter

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### Course Description

Course Title	Course Code	Number of Study Hours			Year	Level	Prerequisites
		Theoretical	Tutorial	Credit			
Neonatal & Pediatric mechanical ventilation	RES418	2	1	3	4	8	

**Course Instructor Name:** Dr. Abdullah Alsulayyim

**E.mail:** alsulayyim@jazanu.edu.sa

**Office Hours:** By appointment

**Lecture Time :** Thursday 08:00 a.m. – 09:50 a.m. (Theoretical)  
Thursday 10:00 a.m. – 11:50 a.m. (Practical)

#### (1) Brief Course Description

This course introduces the student to neonatal and pediatric respiratory care. The course covers fetal lung development, anatomy and physiology, neonatal development, pathology, CPR, acid base monitoring.

#### (2) Course Objectives:

Develops clinical skills in the management of pediatric and neonatal critical care patients. Includes specialized learning experiences in therapeutic modalities, mechanical ventilation, and emphasizes specific technical procedures that differ from the adult patient.

#### (3) Course Contents:

Introduction & Syllabus+ NRP

oxygen therapy and humidification + Resp care

Neonatal and pediatric non-invasive MV

Surfactant replacement therapy

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Invasive MV

High Frequency ventilation

ECMO

Pediatric basic life & support Pediatric Advanced Life Support

neonatal and Pediatric medication

#### (4) Course Teaching Strategies

- Demonstration and working on ventilator machine in Lab.
- Simulation Lab.
- Audio-visual Materials /Multimedia
- Case studies and Group discussion.
- Presentations.
- Problem-based learning.
- Collaborative learning/Team work/Project.

#### (5) Assessment Criteria:

- |                                   |          |
|-----------------------------------|----------|
| 1. Midterm Exam.                  | 20 Marks |
| 2. Student discipline & behavior. | 5 Marks  |
| 3. Course work                    | 15 Marks |
| 4. Final Practical.               | 20 Marks |
| 5. Final Theory.                  | 40 Marks |

#### (6) Text Book:

Neonatal And Pediatric Respiratory Care 4th Ed.; by Brian K. Walsh (Links to an external site.) ISBN - 10: 145575319X, ISBN - 13: 9781455753192

#### (7) Reference Books:

- [www.hopkinsmedicine.org/respcare/neonatal.html](http://www.hopkinsmedicine.org/respcare/neonatal.html).
- [www.nbrc.org/examinations/nps](http://www.nbrc.org/examinations/nps).

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