

Sub.	Course Description – توصيف مقرر دراسي	الموضوع	 كلية المعرفة ALMAAREFA COLLEGE
Date		التاريخ	

Course Code & No	RSTH241		رقم المقرر ورمزه
Course Name	Respiratory Care Science I		اسم المقرر
Credit Hours	4		عدد الساعات المعتمدة
Pre-requisite	None		المتطلب السابق

General Description	توصيف عام
<p>The Respiratory Care Science I provide the fundamental of respiratory care profession principles that are necessary to understand the succeeding sciences subjects and dealing with basic respiratory equipment used in the general wards with stable patients. The student will understand the role of Respiratory Therapist in the hospital as well as different therapeutic procedures/techniques able to do, Oxygen and Aerosol Therapies as main gas for breathing, their uses, complications and indications with different Oxygen equipment with appropriate Oxygen percentage delivered. The physiology of breathing, gas laws and exchange of gas in respiratory system, students will have insights on communication, patient safety and physiology of breathing.</p>	

Course Objectives	أهداف المقرر
<p>Knowledge</p> <ul style="list-style-type: none"> • Identify the Respiratory Therapist main job (role in the Hospital in Critical and Non-critical). • Identify different areas/departments in the hospital where Respiratory Therapist can work. • Identify different diagnostic procedures Respiratory Therapist able to do. • Identify the three common temperature scales and explain how to use them. • Identify the factors that influence the vaporization of water. • List indication and contraindication for aerosol and humidity. • List types of aerosol delivery equipment • List indications and contraindications of oxygen therapy devices. • Identify electrical hazard. • Identify medical gases hazards. • Identify different sources of hospital acquired infection • Define communication. <p>Cognitive Skills</p> <ul style="list-style-type: none"> • Discuss the history of Respiratory Therapy • Discuss in Respiratory field, how students continue their education • Describe the properties that characterize the three states of matter. • Describe how heat transfer occurs among substances. • Describe how to predict gas behavior under changing conditions, including at extremes of temperature and pressure. • Describe the principles that govern the flow of fluids. • Describe how substances undergo change of state. • Explain the important of aerosol particles size for deposition 	

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<ul style="list-style-type: none"> • Differentiate between aerosol and humidity • Describe how medical gases and gas mixtures are produced. • Discuss the clinical applications for medical gases and gas mixtures. • Distinguish between gaseous and liquid storage methods • Describe what to do if a bulk oxygen supply system fails. • Differentiate between safety systems that apply to various equipment connections. • Explain the differences and use of High and Low Flow oxygen systems • Discuss self-welfare in working environment • Explain different types of communication • Discuss physicians pitfall of communication • Describe the structures of the upper respiratory tract. • Describe the structure of the trachea. • Differentiate among the various structures of the respiratory tract <p>Interpersonal Skills</p> <ul style="list-style-type: none"> • Demonstrate Team work skills • Show Leadership skills • Develop skills to accommodate and absorb criticism • Use different strategies to Avoid conflict • Demonstrate patients' rights and safety <p>Communication, Information Technology, Numerical</p> <ul style="list-style-type: none"> • Demonstrate the utilization of Proper communication channels • Show Personal professional development skills • Appraise different modern technologies and communications methods <p>Psychomotor</p> <ul style="list-style-type: none"> • Locate on a model the structures comprising the larynx. • Provide aerosol therapy to the patient as it is prescribed • Operate with proficiency equipment related to aerosol therapy. • Distinguish between gas supply systems. • Calculate the duration of remaining contents of a liquid oxygen cylinder. • Calculate the duration of remaining contents of a compressed oxygen cylinder. • Provide oxygen therapy to the patient as it is prescribed. • Calculate % relative humidity, % body humidity, and humidity deficit. • Operate with proficiency equipment related to oxygen therapy.

Course Outlines	مفردات المقرر
1. Lecture: Introduction to Respiratory Therapy 2. Lecture: Principle of Gases 3. Lecture: Humidity 4. Lecture: Aerosolize Medications 5. Lecture: Storage of Medical Gas and Therapy-part I 6. Lecture: Storage of Medical Gas and Therapy-part II 7. Lecture: Oxygen Therapy 8. Lecture: Oxygen Devices 9. Lecture: Interpretation of Clinical lab Data 10. Lecture: Patient Monitoring 11. Lecture: Students & patient Safety 12. Lecture: Sterilization 13. Lecture: Physiology of Breathing- part I 14. Lecture: Physiology of Breathing- part II	

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15. Lecture: Review	
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References	المراجع
<p>1-Required Text (Wilkins et al, Eds. Egan's Fundamentals of Respiratory Care, 9th ed. Chicago, Mosby-Yearbook, 2009.</p> <p>2-Essential References</p> <p>-Beachey, "Respiratory Care Anatomy and Physiology Foundations for Clinical Practice", 2nd ed., Elsevier .</p> <p>-Equipment Theory for Respiratory Care (4th Ed). By Gary White .</p> <p>-Laboratory Exercises for Competency in Respiratory Care. By Thomas J. Butler .</p> <p>-Respiratory Care Equipment (2nd Ed). By Richard Branson & Dean Hess.</p> <p>http://www.dorsethouse.com/features/excerpts/excgaps.html</p> <p>3-Recommended Books and Reference Material (Journals, Reports, etc) (Attach List</p> <p>4-Electronic Materials, simulation CDs</p> <p>Internet resources</p> <p>5- Other learning material such as computer-based programs/CD, professional standards/regulations</p> <p>6-Clinical Practice Guidelines of the American Association for Respiratory Care (AARC) website</p>	