

Name of Book	Block 2
Name of Elective	Breathing Life: Essentials of Oxygen Therapy in Clinical Practice
Location of hospital Lab or research facility	Dept. of Anesthesiology
Name of internal preceptor (s)	Dr. Shikha Gupta
Name of external preceptor (if applicable)	-
Learning objectives of elective	a) Understanding Oxygen physiology and blood gas physiology b) Clinical and laboratory assessment of hypoxaemia and hypercapnia c) Understand the indications of oxygen therapy and Writing the prescription for oxygen therapy. d) Systems used to supply oxygen. 1. Specific indications and correct applications of different oxygen delivery devices with their benefits. 2. Humidification techniques during oxygen therapy. 3. Non-invasive and invasive Ventilation 4. Demonstrate the of the various oxygen delivery devices on a manikin/patient. e) Adequacy and effectiveness of oxygen therapy and monitoring required for a patient receiving oxygen therapy f) Criteria for weaning and discontinuation of oxygen therapy g) Understand the adverse effects of supplemental oxygen / Oxygen toxicity. h) Oxygen therapy in patients with specific medical conditions, particularly COPD.
Number of students that can be accommodated in this elective	4
Pre-requisites for elective	Knowledge of basic physiology of oxygenation and oxygen therapy
Learning resources for students	a. Basics of Anaesthesia by Robert K Stoelting and Ronald D Miller b. LEE's Synopsis of Anaesthesia by R.S.Atkinson c. Access to departmental library
List of activities of student participation	a) Attend lectures and academic activities in anaesthesia department

	b) Choosing the correct oxygen delivery device according to the given case scenario. c) Apply oxygen delivery device onto the patient under supervision d) Monitoring of the patient on oxygen therapy. e) Observing the patients on non-invasive and invasive ventilation in the post operative anaesthesia care and ICU. f) Daily follow up of patients assigned for observing and weaning off from mechanical ventilation. g) Present at least two cases of patients requiring oxygen therapy.
Portfolio entries required	a) Case records of two fully worked up patients in PACU/ICU on oxygen therapy (Initiation, monitoring and weaning). b) Daily log of patients seen and activities participated.
Log book entry required	Satisfactory, completion of manuscript with “M” grade
Assessment	a) Attendance b) Day-to-day participation in departmental activities c) Performance of assigned tasks and portfolio entries d) Presentation of 2 worked up cases regarding oxygen therapy and its management in the department. e) Exit test- MCQ’s and short answer questions
Other comments	

Breathing Life: Essentials of Oxygen Therapy in Clinical Practice

Introduction: Oxygen therapy is a fundamental medical intervention designed to support patients experiencing respiratory distress or low oxygen saturation due to various acute and chronic conditions. By improving oxygen levels in the body, this therapy plays a crucial role in alleviating symptoms and preventing complications associated with hypoxemia.

This elective module, ***Breathing Life: Essentials of Oxygen Therapy in Clinical Practice***, provides a comprehensive exploration of oxygen therapy in clinical settings, covering its physiological principles, indications, benefits, and potential risks. Participants will gain insights into different types of oxygen therapy, the equipment used, and the selection of appropriate delivery methods based on patient needs. Special emphasis will be placed on individualized oxygen prescription, particularly in conditions like Chronic Obstructive Pulmonary Disease (COPD), where improper oxygen administration can lead to adverse outcomes.

Through interactive learning and case-based discussions, participants will develop the knowledge and skills necessary to administer oxygen therapy safely and effectively, ensuring optimal patient outcomes.

Module Objectives: By the end of this module, participants will:

- Understand the fundamental physiological principles underlying oxygen therapy.
- Identify different oxygen delivery systems used in hospital settings.
- Recognize indications for oxygen therapy and select appropriate delivery interfaces.
- Assess the adequacy and effectiveness of oxygen therapy using clinical and technological monitoring tools.
- Understand patient-specific considerations, particularly in conditions like COPD, where oxygen therapy must be carefully managed.
- Learn to mitigate potential risks and complications associated with oxygen therapy.

Learning Outcomes: Upon completing this module, participants will be able to:

- Demonstrate a clear understanding of oxygen therapy principles, including physiology, equipment, and interfaces.
- Apply evidence-based guidelines to safely and effectively administer oxygen therapy.
- Assess oxygen therapy adequacy and make necessary adjustments based on patient responses.
- Recognize and manage potential risks and complications of oxygen therapy.
- Successfully complete a post-test evaluation to validate their competency.

This module is designed to enhance your knowledge and practical skills in oxygen therapy, empowering you to provide better respiratory care and improve patient outcomes.