

Respiratory Therapy

CVRS110: Cardio-vascular Diagnostics I

Respiratory Therapists work in critical care areas, operating rooms, wards and diagnostic areas of health care facilities to deliver health care to adults, children, and newborns with cardiopulmonary disorders. The technology that the Respiratory Therapist works with is broad, ranging from basic gas delivery equipment and diagnostic instruments to complicated microprocessor controlled life support equipment. The Respiratory Therapist must learn the basic principles of operation, proper usage, and application to the patient for each instrument.

Cardiovascular Diagnostics evaluate patients' heart and blood systems to aid in the diagnosis of disease and to guide patient management. It is a required skill for Respiratory Therapists (RT) to perform a variety of tests and assessments to monitor the heart and its characteristics. It is performed in a variety of situations, over a wide range of patient care areas and for a multitude of reasons in an effort to identify health care needs. The application of technology through invasive and non-invasive monitoring and cardiac testing to assess cardiovascular function is one of the cornerstones of Respiratory Therapy.

Successful completion of this course will prepare the Student Respiratory Therapist (SRT) for the clinical portion of the program where these skills will be performed with patients. The student will have the background knowledge, skills and attitudes to achieve the specific competencies outlined in the National Competency Profile (NCP). These will be achieved by performance of the stated competencies in simulated patient environments.

RSRS111: Respiratory Care Procedures I

Respiratory Therapists work in critical care areas, operating rooms, wards and diagnostic areas of health care facilities to deliver respiratory care to adults, children and newborns with cardiorespiratory disorders. The equipment that the respiratory therapist works with is broad; starting with gas and vacuum delivery equipment and moving on to oxygen, therapy. In order to safely and knowledgeably operate this equipment, the Respiratory Therapist must learn the basic principles of operation, use and patient application of each device. The therapist must then apply the proper device using basic respiratory care procedures.

This course is the first of a series titled "Respiratory Care Procedures". In semester 1, the students will develop skills in the use of medical gas delivery devices. The course begins with a review of the basic mathematical, chemical and physical principles of gases, including fluid properties, characteristics of gases and gas laws. The structure of gas cylinders and associated safety systems is studied in depth. Other storage and delivery systems, including liquid systems and compressors are also discussed. The structure of gas delivery devices, associated safety systems, and gas analysis is studied in depth. A brief introduction to electrical concepts and safety concludes the theoretical portion of the fall semester of the course.

APRS110: Human Anatomy & Physiology I

This foundation course, Human Anatomy & Physiology I (APRS110), will introduce the basic principles of anatomy and physiology with those of biochemistry and biophysics. Beginning with the cell, the course will progress through various organ systems emphasizing the relationship between structure and function. The interrelationships between body systems and how all systems help to maintain normal homeostasis will be emphasized.

BAIP113: Foundations of Interprofessional Collaboration I

Foundations of interprofessional communication and teamwork provides the learner with the context for patient centered collaborative practice and effective team development within the interprofessional model and will introduce various modes of effective communication and reflective practice to support continuous professional development. In this course the learner will have an opportunity to develop skills for effective feedback, conflict resolution and verbal and nonverbal communication. The use of a variety of instructional strategies are intended to help learn with, from and about each other and other's professional roles and to advance the understanding of intra and inter professional relationships.

BPRS110: Basic Professional Skills

This course will broaden your understanding of working within a professional team in the health care environment and provide you the opportunity to acquire clinical skills vital to the delivery of collaborative patient-centered care. Through academic knowledge and laboratory experiences, you will develop essential clinical competencies required for the profession of respiratory therapy.

You will learn how to ensure a safe working environment through the study of infection prevention and control techniques and, body mechanics. Other course content includes patient management through study and measurement of vital signs, transportation of patients, the use of isolation and sterile techniques, and the administration of medications. Learners will also have the opportunity to begin the practice of self reflection as a health care professional.

RSRS121: Respiratory Care Procedures II

Respiratory Therapists work in critical care areas, operating rooms, wards and diagnostic areas of health care facilities and in patient homes to deliver respiratory care to adults, children and newborns. The equipment that the respiratory therapist works with is broad. The therapist must learn the basic principles of operation, safe usage, and application to the patient for each device. The therapist must then apply the proper device using basic respiratory care procedures. This course is the second of three in a series titled Respiratory Care Procedures. In this course, students will develop skills in the application and delivery of medical gases, humidification and medication via inhalation. An in-depth understanding of the physics, devices, and their application to the patient in specific scenarios is expected and assessed.

BARS120: Basic Airway Management

Learners will learn theory and skills for providing safe and effective airway maintenance. Establishing and maintaining a secure and patent airway is key to providing effective assisted ventilation. Emphasis will be placed on areas of practice related to manual ventilation equipment and techniques, orotracheal suctioning techniques, basic airway management equipment including various artificial airways, laryngoscopes, and adjunctive equipment. Learners will learn basic airway management techniques (intubation, extubation, and tube security and maintenance), and advanced techniques for the management of a difficult airway including specialty tubes, fiberoptic techniques, surgical airway techniques, and protocols.

PFRS121: Pulmonary Diagnostics

Respiratory therapists assess patient's pulmonary function every day using various methods. In this course learners will learn several specific test methods that measure patients' lung function including volumes and flow rates and metabolic rate. During the labs, there is an opportunity to practice many of these tests with peers. Learners will also

become familiar with different methods of obtaining sputum samples for diagnostic purposes, including bronchoscopy and sputum induction.

CRRS120: Cardio-pulmonary Physiology

The study of anatomy and physiology provides the Respiratory Therapist with knowledge that can be applied to pulmonary medicine in evaluating and avoiding potential difficulties in clinical practice. This course is designed to provide the student with additional education in respiratory, cardiovascular and renal anatomy and physiology. In addition, this course will introduce students to arterial blood gas interpretation. Understanding the rationale for presentation of abnormal blood gases requires that a student have a sound basis in normal anatomy and physiology. Ultimately, this course will prepare the student for future studies in pathophysiology and the treatment of disease.

PVRS121: Pulmonary Ventilation I

This course looks at the underlying theories, concepts and practical applications of mechanical ventilation. The content covered in this course is the foundation from which the students can subsequently learn about mechanical ventilators and how to safely use them to mechanically ventilate patients. Successful completion of this course will ensure the Student RT (SRT) has the basic skill sets and knowledge to perform, interpret, provide and optimize pulmonary ventilation for the adult population in a didactic and simulated clinical setting.

BAIP124: Foundations of Interprofessional Collaboration II

Interprofessional practice has become a preferred mode of team based practice in health care nationally and internationally. This course provides an overview of the ethical, societal and personal factors that influence and impact health. The role of the health care provider and the dynamics of the provider/patient relationship will be examined from a critical perspective. This course will also address the historical perspective of the Canadian healthcare model and the move towards collaborative practice. The first step towards interprofessional practice is a solid foundation of your role and scope of practice, ethics, boundaries, patient advocacy and regulatory guidelines. A variety of instructional strategies are intended to help us learn with, from and about each other to advance our understanding of intra- and interprofessional practice.

MDRS230: Disease Management I

This course is part one in a twopart series on the management of disease. The focus of the course is not solely on the pathology of disease and the pharmaceutical treatment, but a more holistic view of the diagnosis and management of respiratory diseases.

RSRS 231: Respiratory Care Procedures III

This course has been developed from the perspective of pulmonary rehabilitation. As such, you will follow the potential progress of a patient through the components of a rehabilitation program including assessment, development and implementation of a treatment plan for continuing respiratory care through to discharge from rehabilitation to home and/or palliative care wrapping up with end of life care. As the last of three courses for respiratory care procedures it builds on content from RSRS 111 and RSRS 121. It also builds on ventilation management concepts and pulmonary function/non-invasive monitoring from PVRS121 and PFRS120..

During this course. Learners will use their skills in communication and history taking to complete a patient assessment including complete cardio-respiratory assessment with/without ambulatory oximetry. Learners will continue to build

diagnostic testing abilities adding interpretation of chest x-rays obtaining sputum samples through induction and bronchoscopy. Therapeutic skills will be expanded through development of treatment plans that include bronchial hygiene, home oxygen, long term ventilation and end-of-life care.

PVRS230: Pulmonary Ventilation

Respiratory Therapists work in critical areas, operating rooms, wards, and diagnostic areas of health care facilities to deliver health care to adults, children and newborns with cardiopulmonary disorders. Mechanical ventilators are a mainstay of life support in these areas. There are numerous ventilators in use today, ranging from older pneumatically operated machines to microprocessor controlled machines. In order to safely and knowledgeably operate this equipment, the Respiratory Therapist must learn the basis principles of operation, and how to use and apply each instrument to particular patients. In this course, areas of ventilation that will be covered include positive pressure ventilation (non-invasive and invasive), and various forms of non-conventional ventilation used in the acute care setting.

RMIP231: Research

This course offers an examination of contemporary issues relevant to interprofessional education and research as applied in health and education settings. The course uses conceptual foundations of interprofessional education as a framework for articulating applied practice and research. Learners will engage in multiple education modalities for the purposes of obtaining competency in distinguishing high quality research, analyzing the steps involved in conducting a literature review and developing a research proposal. Research directions for interprofessional education and practice will be articulated in light of exiting literature and identified needs for the construction of future knowledge.

SPRS 241: Specialty Practice II

In Specialty Practice II, students will study the anatomy and physiology, pathologies and diagnostic and treatment strategies for neonatal and pediatric patients. The course content includes pregnancy, labour and delivery as related to cardio respiratory function. Special topics include maternal anesthesia.

This course integrates the specific concepts of respiratory therapy instrumentation and mechanical ventilation previously studied and applies them to the specialty areas of neonatology and pediatrics. Specialty Practice II is designed to address the equipment specific to maintaining infant cardio-respiratory function. Clinical simulations and practical laboratories will facilitate the integration of skills in the course.

An appropriate knowledge level in anatomy and physiology is essential for comprehension of the various neonatal and pediatric disorders, and for future competency in the understanding and application of therapeutic modalities within this specialty area in the clinical setting.

MDRS 240: Disease Management II

This course is part two in a two-part series on the management of disease. The focus of the course is not solely on the pathology of disease and the pharmaceutical treatment, but a more holistic view of the diagnosis and management of cardiac, neurological and other conditions in patients who require the assistance of a respiratory therapist.

IPCL 252: Interprofessional Collaborative Clinical Simulation

This course is designed to build upon previous interprofessional foundational courses and to further develop your interpersonal and interprofessional competencies required in the simulated and clinical practice. Themes of Communication and Feedback, Quality and Safety and Ethical Patient Care are the foci of this course. Using a variety of simulation-based learning modalities (e.g., online, video debrief, standardized patients, small group), you will practice using communication strategies and models to support ethical patient-centred care and interprofessional practice.

As well, we will use a variety of tools and models developed and/or used by the MSR Israel Center for Medical Simulation at the Sheba Medical Center including the MSR Debriefing Model. MSR is one of the world's foremost centers for patient safety and education and considered an international leader in simulation enhanced education. MSR describes simulation-based health education as a complement to cognitive learning and offers students a safe environment to learn from errors without risk of harming real patients. This learning modality enables controlled proactive exposure of students to regular and complex clinical/health scenarios; as well as opportunities for team learning, an important contributing factor enhancing patient safety. You will learn how to model your professional role within a collaborative interprofessional team while planning to optimize ethical patient care and safety.

SPRS 240: Specialty Practice I

Respiratory Therapists work in critical care areas including the operating rooms to deliver health care to adults, children and newborns with cardiopulmonary disorders. Mechanical ventilators, monitoring, and technology are a mainstay of life support in these areas.

This course incorporates 3 distinct components of anesthesia: airway management, instrumentation, and case management, which includes pharmacology. The course starts with a review of basic airway management and continues with the application of these concepts in anesthesia. Then, anesthesia equipment is discussed in detail, starting with an introduction to basic gas supply and physics and following with its application to the pre-operative and peri-operative setting.

Anesthesia monitoring systems and the process of monitoring a patient during general and regional anesthesia is integrated into the discussion during the second section and then all concepts including the management of the patient pre-operatively and intra-operatively concludes with the understanding of anesthesia pharmacology. Clinical simulations and practical laboratories facilitate the integration of all components of the course.

LSIP250: Leadership in Health Care

This on-line course is designed to provide you with the opportunity to discuss pertinent theories of leadership with your colleagues in order to develop leadership skills in relation to your participation in health care teams. It will provide you with a broad overview of current theories, principles and perspectives on the leadership role in an Interprofessional environment. Dialogue, discussion & participation in the online discussion forums will enable you to enhance your understanding of your role in the multiple dimensions of leadership.

SNRS 251: Specialty Clinical Simulation

This 12 week course is designed to prepare the student for entry into the clinical environment. Each week students will be assigned to simulated patient cases in a variety of "simulated clinical environments" that are typical for Respiratory Therapists. The environments will include the Adult Intensive Care Unit, Wards/Emergency Department, Sub-Acute Care, Pulmonary Function Testing, Pediatrics and the Operating Room. Students will be expected to review relevant didactic course material in preparation for each environment.

The course will be divided into three 4 week blocks. Each block will expose students to 3 different "environments". Each week students will attend plenary sessions that will introduce patient cases for that week. Based upon the material presented, students will review appropriate didactic materials on their own and during scheduled class time. The students will then take turns rotating through each of the 3 environments in small groups. On-going peer and instructor evaluation and/or de-briefing sessions are expected to occur within these sessions to provide students with continuous feedback.

CPRS250: Clinical and Simulation Practice

Course description under revision.

CLRS360: Clinical Practice I

The clinical education component for the Respiratory Therapy Program consists of 2 courses, CLRS360 (Clinical Practice I) and CLRS370 (Clinical Practice II). Each course is 15 weeks long within a 30 week clinical year of Respiratory Therapy education in a hospital or clinical setting. Students will begin in either CLRS360 or CLRS370 depending on scheduling arrangements, and proceed through various clinical rotations to achieve course requirements. They will switch courses at the start of the next semester until both courses are complete to finish the clinical year. There will be 1 week of base site clinical orientation before the start of the student clinical schedule.

In CLRS360, students will have the opportunity within an interprofessional team, to provide and manage respiratory care for patients in the adult intensive care unit, the operating room, the wards and emergency department, the rehabilitation/longterm care unit, as well as the pulmonary function laboratory. Evaluation emphasis will be placed on safety, professionalism, performance of clinical competencies, and various performance assessment tasks such as oral presentations and written examinations.

CLRS370: Clinical Practice II

In CLRS370, students will have the opportunity within an interprofessional team, to provide and manage cardiorespiratory care for patients in the adult intensive care unit, the adult wards and emergency department, neonatal and pediatric environments. Evaluation emphasis will be placed on safety, professionalism, performance of clinical competencies, and various performance assessment tasks such as oral presentations and a summative written examination.