# Curriculum

## BS Respiratory Therapy

### FIRST YEAR

**First Semester**

| | Descriptive Title | Units |
|---|---|---|
| GEC 01 | Understanding the Self | 3 |
| GEC 02 | Readings in Phil. History | 3 |
| GEC 04 | Mathematics in the Modern World | 3 |
| GEE 05 | Environmental Science | 3 |
| RespT111 | Medical Terminology | 2 |
| Rizal | Life, Works & Teachings of Dr. J. Rizal | 3 |
| PE 1 | Physical Fitness and Wellness | 2 |
| NSTP 1 | CWTS 1 | 3 |
| CFVE 1 | CFVE 1 | 3 |
| | | **25** |

**Second Semester**

| | Descriptive Title | Units |
|---|---|---|
| GEC 03 | Contemporary World | 3 |
| GEC 05 | Purposive Communication | 3 |
| GEC 06 | Art Appreciation | 3 |
| GEC 07 | STS | 3 |
| GEE 09 | The Entrepreneurial Mind | 3 |
| RespT 121 | Human Anatomy and Physiology | 3 |
| PE 2 | Self Defense | 2 |
| NSTP 2 | CWTS 2 | 3 |
| CFVE 2 | CFVE 2 | 3 |
| | | **26** |

### SECOND YEAR

**First Semester**

| | Descriptive Title | Units |
|---|---|---|
| RespT 212 | Cardio- Respiratory Ana & Physio | 3 |
| RespT 213 | Neuroanatomy and Pathophysiology | 3 |
| RespT 214 | Fundamentals of RT 1 | 3 |
| RespT 215 | Microbiology for RT | 3 |
| GEE 06 | Philippine Pop Culture | 3 |
| GEC 09 | World Lit. and Civilization | 3 |
| Biostatistics | Biostatistics | 3 |
| Biochem | Biochemistry | 3 |
| PE 3 | Swimming with Basic Life Support | 2 |
| | | **26** |

**Second Semester**

| | Descriptive Title | Units |
|---|---|---|
| RespT 221 | Fundamentals of RT II | 5 |
| RespT 222 | Cardio-pulmonary Pathology | 3 |
| RespT 223 | Pulmonary Rehabilitation | 3 |
| RespT 224 | Patient Assessment & ECG | 4 |
| RespT 225 | Test for PFT | 3 |
| Informatics 1 | Health Informatics | 3 |
| PE 4 | Sports | 2 |
| | | **23** |

### THIRD YEAR

**First Semester**

| | Descriptive Title | Units |
|---|---|---|
| RespT 311 | Airway Management | 3 |
| RespT 312 | Cardio- Respiratory Pharmacology | 3 |
| RespT 313 | Ventilation and Gas Exchange Monitoring | 3 |
| RespT 314 | Pulmonary Disease Management | 3 |
| RespT 315 | Mechanical Ventilation | 4 |
| GEC 08 | Ethics | 3 |
| Research 01 | Introduction to Research Methods | 3 |
| | | **22** |

**Second Semester**

| | Descriptive Title | Units |
|---|---|---|
| RespT 321 | Neonatal Respiratory Care | 3 |
| RespT 322 | Pediatric Respiratory Care | 3 |
| RespT 323 | Critical Care Management & Hemodynamics | 4 |
| RespT 324 | Introduction to Polysomnography | 2 |
| RespT 325 | Management & Health Care Ethics | 3 |
| RespT 326 | Health Education for RT | 3 |
| Seminar 1 | Respiratory Care Seminar 1 | 2 |
| Research 02 | Clinical Research 1 | 2 |
| | | **22** |

**FOURTH YEAR**

**First Semester**

| | Descriptive Title | Units |
|---|---|---|
| Clin Ed. 1 | Clinical Internship 1 | 15 |
| Research 02 | Clinical Research 2 | 2 |
| | | **17** |

**Second Semester**

| | Descriptive Title | Units |
|---|---|---|
| Seminar 2 | Respiratory Care Seminar 2 | 2 |
| Clin. Ed. 2 | Clinical Internship 2 | 15 |
| | | **17** |

# COURSE DESCRIPTION - BS RESPIRATORY THERAPY

**PURPOSIVE COMMUNICATION (3 UNITS)**

This course deals with writing, speaking, and presenting for different audiences and for various purposes.

**CONTEMPORARY WORLD (3 UNITS)**

This course deals with the globalization and its impact on individuals, communities and nations, challenges, and responses.

**ART APPRECIATION (3 UNITS)**

This course deals with the nature, function, and appreciation of the arts in the contemporary society.

**WORLD LITERATURE AND CIVILIZATION (3 UNITS)**

This course is designed to familiarize the students with the various literary masterpieces around the globe reflecting their culture, values, sentiments, and ideals. It also includes the study of the similarities and differences among the major world civilizations before the modern era as well as topics on traditions of governance, arts, religion and philosophy, technology, family structure, and everyday life.

**MATHEMATICS IN THE MODERN WORLD (3 UNITS)**

This course deals with the nature of mathematics, appreciation of its practical, intellectual, and aesthetic dimensions and application of mathematical tools in daily life.

**SCIENCE, TECHNOLOGY AND SOCIETY (3 UNITS)**

This course deals with the interaction between science and technology and social, cultural, political and economic contexts which shape and are shaped by them.

**HEALTH INFORMATICS (3 UNITS)**

Health Informatics offers an overview of the field of health informatics by providing students with the fundamental knowledge of the concepts of health informatics and how technology can be used in the delivery of health care. The course is intended to increase health care professional's capacity for the design, configuration, use, and maintenance of informatics interventions that improve health care delivery.

**BIOSTATISTICS (3 UNITS)**

An introduction to biostatistical techniques, concepts, and reasoning using broad range of biomedical and public health related scenarios. Specific topics include description of data, statistical hypothesis testing and its application to group comparisons, and tools for modeling different type of data, including categorical and time-event data. Emphasis on the distinction of these methods, their implementation using statistical software, and the interpretation of results applied to health sciences research questions variables.

**UNDERSTANDING THE SELF (3 UNITS)**

This course deals with the nature and identity factors and forces that affect the development and maintenance of personal identity.

**ETHICS (3 UNITS)**

This course deals with the principles of ethical behavior in modern society at the level of the person, society and in interaction with the environment and other shared resources.

**HUMAN ANATOMY AND PHYSIOLOGY (3 UNITS)**

The course include instruction on basic structure and function of the human body, such as basic chemistry, description of cells and tissues, and functions of each body system that include integumentary, skeletal, muscular, nervous, endocrine, circulatory, lymphatic, respiratory, digestive, urinary, and reproductive systems.

**MEDICAL TERMINOLOGY (2 UNITS)**

This course is the study of the principles of medical word building to help students develop the extensive medical vocabulary used in healthcare especially in respiratory therapy field. The students will receive a thorough grounding in basic medical terminology through a study of root words, prefixes, and suffixes.

**BIOCHEMISTRY (3 UNITS)**

This course covers a broad spectrum of modern techniques and their underlying physical, chemical, and biological principle. It focuses on the survey of the structure and function of biological molecules, including carbohydrates, lipids, and proteins and relation to other life sciences.

**READINGS IN PHILIPPINE HISTORY (3 UNITS)**

This course is all about Philippine History viewed from the lenses of selected primary sources in different periods, analysis, and interpretation.

**LIFE, WORKS, AND TEACHINGS OF DR. JOSE RIZAL (3 UNITS)**

This course is designed to orient the students about the life, works and writing of the greatest hero and martyr of our nation from the day of his birth until the day of his death.

**PHYSICAL FITNESS AND WELLNESS (2 UNITS)**

This course is designed to provide students' knowledge and skills in maintaining a balanced and healthy lifestyle through various physical exercises, healthy diet, and fitness and wellness programs. This course enables the students value the benefits and of physical wellness and fitness and apply its principles in their life.

**SELF DEFENSE (2 UNITS)**

This course is designed to familiarize the students with the various techniques and strategies in protecting oneself in harmful situations. This course also provides awareness on the students the importance of psychological awareness, alertness, physical health, and endurance during difficult situations. Further, it also trains students on physical and mental training in using self-defense techniques.

**SWIMMING WITH BASIC LIFE SUPPORT (2 UNITS)**

This course deals with the fundamentals of swimming and survival skills. The students are expected to learn the basic and ADVANCED strokes and skills associated with swimming and survival techniques.

**SPORTS (2 UNITS)**

This course deals with various indoor and outdoor activities designed to arouse the student's interests and abilities to develop self-esteem, perseverance, courage, and sense of creativity which will be utilized and carried on to their lifetime endeavors. Also covers activities in which the emphasis is placed upon the development of physical skills through recreational sports essential for stress management.

**CIVIC WELFARE AND TRAINING SERVICE 1 (3 UNITS)**

This course is pursuant to Republic Act No. 9163, otherwise known as the National Service Training Act of 2001, which mandates tertiary educational institutions to incorporate in the collegiate curriculum a program aimed at "enhancing civic consciousness and defense preparedness in the youth by developing the ethics of service and patriotism.

**CIVIC WELFARE AND TRAINING SERVICE 2 (3 UNITS)**

This course is a sequel to NSTP 1 and is destined to immerse students in activities that it will arm them the capability to contribute in the upliftment of the general welfare and the quality of life of the community and the enhancement of its facilities especially those that are devoted to improving the health, environment, entrepreneurship, safety, recreation and morale of the citizen.

**CHRISTIAN FOUNDATION AND VALUES EDUCATION 1 (3 UNITS)**

This course is an overview of the Basic Christian beliefs and values grounded in the Word of God which is the Bible, and which is essential in the spiritual as well as the holistic development of every individual. This course further equips the student's positive attitudes and values toward God, their country, their family, their community, and fellowmen.

**CHRISTIAN FOUNDATION AND VALUES EDUCATION 2 (3 UNITS)**

This course is designed to provide instructions toward righteous living in the sight of God. It includes topics on moral and ethical standards that a student can use in making wise decisions for life.

**CARDIO- RESPIRATORY ANATOMY AND PHYSIOLOGY (3 UNITS)**

This introductory course will provide a solid foundation in cardiopulmonary anatomy and physiology with relevant applied physiology as it relates to the profession of respiratory care. Knowledge in this course is essential for successfully completing respiratory therapy courses.

**NEUROANATOMY AND PATHOPHYSIOLOGY (3 UNITS)**

This course provides knowledge on normal and medical-surgical conditions that may lead to transient or permanent respiratory impairment which affects the neuromuscular system. Topics included are: (a) thoracic cage and spinal column deformities (b) effects of abdominal/thoracic incision on thoracic excursions and ventilation (c) neuromuscular disorders.

**FUNDAMENTALS OF RT 1 (3 UNITS)**

This is an introductory course to establish basic clinical assessment skills needed by a respiratory care professional to initiate basic care to the patient. Patient assessment will include obtaining, evaluating, and treating abnormal findings of vital signs and pulse oximetry. The students will then learn appropriate charting methods. Low flow and high flow delivery devices for oxygen administration will also be included. The concept of utilizing therapist driven protocols and evidence-based medicine will be introduced and implemented with each therapeutic modality. Content includes gas therapy, medical gas delivery systems, medication delivery, chest physiotherapy, arterial blood gas analysis, hyperinflation techniques, airway management, and patient assessment.

**MICROBIOLOGY FOR RT (3 UNITS)**

This course covers principles of microbiology with emphasis or microorganisms and human disease. Topics include an overview of microbiology and aspects of medical microbiology, identification and control of pathogens, disease transmission, host resistance, and immunity. Upon completion, students should be able to demonstrate knowledge of microorganisms and the disease process as well as aseptic and sterile techniques.

**FUNDAMENTALS OF RT II (5 UNITS)**

This course is a continuation of Fundamentals of RT I. It is designed to continue the progression from basic respiratory care modalities to more advanced therapy and equipment. Emphasis will continue to be on understanding application to patient situations, assessment of care, and principles of operation of equipment. Relevant laboratory exercises will be included.

**CARDIO-PULMONARY PATHOLOGY (3 UNITS)**

Introduction to basic respiratory pathology and resulting abnormal physiology. The role of the respiratory therapist in management of cardio-respiratory disease entities commonly found in the general care environment, in the intensive care unit, and in the home care setting is developed. Emphasis is placed on the pathological processes.

**CARDIO- RESPIRATORY PHARMACOLOGY (3 UNITS)**

This course will provide a strong foundation of the drugs presently pertaining to the field of respiratory care. General principles of pharmacology as those applied to aerosol drug therapy, IV, and instilled drugs will be taught along with calculations of drug doses. Non-aerosol drugs such as antibiotic therapy, diuretics and cardiovascular drugs will also be covered.

**PATIENT ASSESSMENT & ECG (4 UNITS)**

Patient evaluation courses teach students how to take more advanced patient histories, conduct basic exams and perform chest examinations. It includes discussion of the basic respiratory diseases and their respective treatment methods. Integration of patient examination techniques, including patient history and physical exam, lab studies, x-ray, pulmonary function, arterial blood gases, and invasive and noninvasive hemodynamics.

**HEALTH EDUCATION FOR RT (3 UNITS)**

This course is an overview of the concepts, skills and competencies required for carrying out effective health education programs in a variety of settings. Through a combination of readings, individual and group activities and experiential learning, students will gain the knowledge, skills, and attitudes of a competent health educator.

**AIRWAY MANAGEMENT (3 UNITS)**

Study of the selection, application, maintenance, and discontinuance of various artificial airways. Emphasis will be on intubation, extubation, tracheostomy care, and suctioning.

**PULMONARY REHABILITATION (3 UNITS)**

This course deals with the rehabilitation techniques and procedures related to the practice of Respiratory Therapy. It includes discussion on chest expansion measurements and assessment, chest percussion and vibration, Postural drainage, and chest mobility exercises.

**VENTILATION AND GAS EXCHANGE MONITORING (3 UNITS)**

This course will present concepts, theories, and roles of respiratory therapists in ventilation and gas exchange monitoring. It gives emphasis on the application of equipment for the diagnosis of respiratory pathologies.

**TEST FOR PULMONARY FUNCTION TEST (3 UNITS)**

This course provides an in-depth survey of various pulmonary laboratory methods to detect the presence and degree of respiratory impairment/disease.

**MECHANICAL VENTILATION (4 UNITS)**

Student focus on the operating principles of mechanical ventilators used in critical care. Discussion on the classification, principles of operation, attachments and the flow/ pressure/volume curves generated by various ventilators. Laboratory experience in pneumatic and electronic circuits, setting the control panel, phasing the respiratory cycle, ventilator modes, alarms and troubleshooting will be emphasized.

**PULMONARY DISEASE MANAGEMENT (3 UNITS)**

A study of the pathophysiology, clinical signs and symptoms, diagnosis, management, and prognosis of acute and chronic pulmonary diseases, with an emphasis on respiratory care.

**NEONATAL RESPIRATORY CARE (3 UNITS)**

This course addresses fetal development and special problems in the adaptation of respiratory care procedures and techniques to the needs of the neonate and developing child. The processes of growth and development relating to respiratory care from the fetus to the infant will be discussed. Techniques of diagnosis and treatment will be discussed. Techniques of diagnosis and treatment will be utilized to enable the student to develop the processes needed to combine physiologic function with care modalities.

**PEDIATRIC RESPIRATORY CARE (3 UNITS)**

This course introduces concepts of pediatric disease and ventilatory management. Students will learn the pathology, pathophysiology, diagnosis, and treatment of the cardiopulmonary diseases unique to pediatric patient population.

**CRITICAL CARE MANAGEMENT AND HEMODYNAMICS (4 UNITS)**

This course will further the student’s knowledge of artificial airway management and the implementation of mechanical ventilation. Various modes and types of ventilation will be discussed. The course will conclude with the process of weaning or terminating the use of mechanical ventilation support.

The subject also deals with the basic principles of pressure measurement in the different major veins and arteries and heart chambers, the basic technological principles in the apparatus and cardiac catheters and the cardiac principles of indirect cardiac output measurements. Hazards, complications of cardiac catheterization and its corresponding preventive aspects, assessment of the pulmonary capillary wedge pressure and its correlation with other hemodynamic parameters are included.

**MANAGEMENT & HEALTH CARE ETHICS (3 UNITS)**

This course aims to provide the basic concepts and principles of ethics and management that will be utilized in managing Respiratory Care Department. The course begins with a discussion of the health care system, organization, management then it proceeds with a discussion of ethics and ethical principles as a foundation for the discussion of the Philippine Respiratory Law and the principles and concepts for the management of a Respiratory Care Department.

**INTRODUCTION TO POLYSOMNOGRAPHY (2 UNITS)**

An introduction to the profession of sleep respiratory therapy and the roles and responsibilities of the polysomnographic technologist. It includes discussion of therapeutic communication skills, patient assessment, and legal/ethical considerations of medical records and patient care are studied from a multicultural perspective. Evidence-based practice models are introduced.

**RESPIRATORY CARE SEMINAR 1 (2 UNITS)**

The course covers topics regarding the application of innovations in Respiratory Care in the treatment of cardiopulmonary impaired patients focusing on special cases encountered in the hospitals. Respiratory care protocols are a major part of the discussion in this course.

**RESPIRATORY CARE SEMINAR 2 (2 UNITS)**

A continuation of Respiratory Care Seminar 1 that deals topics regarding the application of innovations in Respiratory Care in the treatment of cardiopulmonary impaired patients focusing on special cases encountered in the hospitals. Respiratory care protocols are likewise given emphasis in this course.

**INTRODUCTION TO RESEARCH METHODS (3 UNITS)**

This course introduces the language of research, ethical principles and challenges, and the elements of the research process within quantitative, qualitative, and mixed methods approaches. Students will use these theoretical underpinnings to begin to critically review literature relevant to health services and respiratory therapy.

**CLINICAL RESEARCH 1 (2 UNITS)**

This course deals with the general principles and issues in clinical research design. These are explored through the formulation of the research objective and the research hypothesis and the specification of the study population, the experimental unit, and the response variable(s). This course provides a basis for understanding the classification of studies as experimental or observational, prospective, or retrospective, case-control, cross-sectional or cohort; this includes the relative advantages and limitations and the statistical methods used in analysis of each type.

**CLINICAL RESEARCH 2 (2 UNITS)**

This course will provide venue for the students for an individualized research project under the direction and supervision of the student's mentor and examining committee. This will form the basis for the culmination of the program of study leading to the degree, Bachelor of Science in Respiratory Therapy.

**CLINICAL INTERNSHIP 1 (15 UNITS)**

This clinical course is designed to introduce the student to all aspects of respiratory critical care. The students will work with patients in critical care with many different respiratory diseases and disorders. The students will have the opportunity to work with neonatal and pediatric patients in the critical care environment.

**CLINICAL INTERNSHIP 2 (15 UNITS)**

This course is a continuation of Clinical Internship I that is designed to introduce the student to all aspects of respiratory critical care. The students will work with patients in critical care with many different respiratory diseases and disorders. The students may also can work with neonatal and pediatric patients in the critical care environment.