



COLLEGE OF RADIOLOGIC TECHNOLOGY

COURSE DESCRIPTION
GENERAL EDUCATION COURSES

Respectfully endorsing the course description of the Bachelor of Science in Radiologic Technology under the College of Radiologic Technology of the UPH-Dr. Jose G. Tamayo Medical University (formerly University of Perpetual Help-Medicine and Health Sciences)

ENGLISH 1 (Grammar and Composition 1) - 3 Units
(3 Lecture hours/week)
Duration: 54 hours per semester

Review of the principles of grammar with emphasis on the parts of speech as a basic elements of English sentence structure. Mastery of the basic the basic sentence patterns help establishes correct speaking and writing patterns. Constructive reading of literacy selection in integrated with oral and written works. The course also includes reading and comprehensive exercise to improve the reading ability of the students to comprehend the printed page.

ENGLISH II (Grammar and Composition II) – 3 Units
(3 Lecture hours/week)
Duration: 54 hours per semester

A comprehensive and exhaustive self-learning kit designed for the students of the sentence. The book is conceived in the modern pedagogical concept of the professor is a facilitator rather than the sole imparted of knowledge. Content wise, the books take care of the three aspects of language. The oral phase as developed in the language habit drills, the written phase as extensively developed in the exercise for the sentence as well as for the paragraph taken also from the classes.

PHILLIT2 (Philippine Literature) – 3 units
(3 Lecture hours/week)
Duration: 54 hours per semester

The course deals with the study of literature of Filipinos written in English from pre-Spanish period up to the present with much emphasis in the contemporary writers and their works.

LOGIC (Logic and Critical Thinking)- 3 Units
(3 Lecture hours/week)
Duration: 54 hours per semester

This is a course in correct reasoning. Its deals with the method of principles of inferential thinking and their application to every subject that calls for them and their practical application to everyday life.

HISTORY (Philippine History and Culture)- 3 Units
(3 Lecture hours/week)
Duration: 54 hours per semester

The course deals with the panoramic presentation of the achievements of the Filipino from the prehistoric to the present time as gathered from oral and written accounts, shared

beliefs, and archeological findings. Emphasis is on a single stream of indigenous heritage that branched out into streams of colonial and outside foreign influences merging into a single stream, a flowing current brought about by new surge of nationalism. Visit to historical places, museums, archeological diggings and film showing must supplement traditional lectures and discussion methods to give the students the opportunity to understand and appreciate their history and culture better.

SOCIOLOGY AND ANTHROPOLOGY WITH POPULATION EDUC.- 3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

This course deals with the fundamental concepts of sociology, group behavior, social stratification and institutions and how this element affects the lives of men. Focus is made on Philippine society as the frame of reference of the study.

It also deals with the study of the rationale of the Family Planning Program in the Philippines, policies and programs, thrusts, and the factors influencing the effectiveness and processes used in factual information and facilitating the development of positive attitudes and patterns of behavior in relation of family planning.

POLGOV- (Politics and Governance with Philippine Constitution)- 3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

This course traces the development of the political and other allied institution in the Philippines since Barangayanic days to the present form and systems. Emphasis should be placed on understanding the present form of government, which is blend between the parliamentary and presidential forms based on the culture and discussion, stress should be made from the predominant features of the constitution, stewardship, command responsibility and accountability.

HEALTH ECONOMICS- (Health Economics with Taxation and Agrarian Reform)-3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

The course focuses on concepts, principles, and techniques of resource utilization for the production of services in the health care delivery system. This course also offers fundamental concepts/ideas about economics in the Philippines and its relevance to local economy. A study of the rationale of agrarian reform program and taxation and a discussion on the specific programs and policies of the past and present Philippine Government as these relate to the pursuance of development efforts.

MATH 1 (College Algebra) - 3 units

(3 Lecture hours/week)

Duration: 54 hours per semester

This course deals with the basic concepts of algebra such as, real numbers system, algebraic expressions, special products and factoring, rational algebraic expression, exponents radicals, linear and quadratic equations, inequalities and determinants.

BASSTAT 1 (Basic Statistics) – 3 units

(3 Lecture hours/week)

Duration: 54 hours per semester

The application of statistics to population analysis includes measures of central tendency, projective techniques, and data presentation and testing. The use of computer programs for statistical analysis and presentation is covered.

COMPUTER – (Fundamental Skills and Word Processing)-3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

This course is designed to equip the students with an adequate knowledge necessary for the understanding and appreciation of computers as data processing tools and of the fundamental concepts of electronic data processing. It aims to provide adequate computer literacy to students who are only beginning to learn and understand the highly technical fields of computer science. The prepared course of study is ideally suited for teaching those who have no previous knowledge or exposure to computers.

PHILOSOPHY OF MAN- 3 units

(3 lecture hours/week)

Duration: 54 hours per semester

The course deals with the analysis and discussion of the nature of man.

RIZAL – (Rizal. Life and Work of Rizal) - 3 Units

(3 lecture hours/week)

Duration: 54 hours per semester

This course deals with the life and works of our national hero, Dr. Jose Rizal. This course give much importance to Noli Me Tangere and its sequel. The El Filibusterismo aside from his other writings in verse and letters.

ZOOLOGY – (General Zoology) - 5 Units

(3 Lecture hours/week, 6 Laboratory hours/week)

Duration : 54 hours per semester; 108 hours per semester

The general introduction to zoology, the course covers the general principles of animal biology such as the finer structures of the body and their organization into special system that carry on the essential life function, heredity, distribution, evolution, and the classification and naming of animals.

The study of chemistry is concerned with the change resulting from an action of one substance upon another that results in the formation of a new substance. Through chemistry, we become familiar to the composition and the uses inanimate materials both natural and artificial.

PHYSICS 1 (College Physics) – 5 units

(3 Lecture hours/week, 6 Laboratory hours/week)

Duration : 54 hours per semester; 108 hours per semester

The course provides an understanding of the nature of Physics and its role in everyday life. A basic condition in the understanding or study of physics is the idea of energy, what it takes, how it affects matter, and how matter affects it, and how it can be changed from one form to another.

PSYCHOLOGY 1 (GENERAL PSYCHOLOGY) - 3 Units

(3 Lecture hours/week)

Duration : 54 hours per semester

This course provides background knowledge of principles through which human behavior maybe understood. It includes the study of man as an organism, the development of his behavior and how he reacts to forces and conditions in his environment. It covers the study of perceptions, imagination, attention, thinking, reasoning, emotions, motives, adjustment, mental health and personality.

FILIPINO 1 (Communication Arts 1) – 3 units

(3 Lecture hours/week)

Duration : 54 hours per semester

It deals with the fundamentals of Filipino grammar and composition and its application on every genre of communication. It also serves as a tool for further comprehension on the literary and practical application of the Filipino language.

FILIPINO 2 (READING AND WRITING IN DIFFERENT DISCIPLINES- 3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

This course pertains to proper communication, verbally and in writing. This will focus on the style, clarity, and stance and beauty of communication. It will also deal with the proper and effective way of sentence construction, vocabulary, manner of pronunciation and diction in communication.

MASINING NA PAGPAPAHAYAG – 3 units

(3 Lecture hours/week)

Duration: 54 hours per semester

This course is a study of the principles and process of creative communication in Filipino. It focuses in discovering freely the ability to show effective talent in discourse in form of writing and verbal communication about topics in the community locally and globally.

HUMAN ANATOMY & PHYSIOLOGY - 5 units

(3 Lecture hours/week; 6 Laboratory hours/week)

Duration : 54 hours per semester; 108 hours per semester

This course deals with the study of the human structure and functions of organ systems. The course includes; the definition of anatomical terms and basic physiologic processes, the description of the anatomical and functional correlations in living things which explains the physical and chemical basis of the origin, development and progression of life, and the description of the normal responses to alterations in both internal and external environmental changes to achieve homeostasis.

MEDICAL TERMINOLOGY – 2 Units

(2 Lecture hour / week)

Duration : 36 hours per semester

This course is intended for students whose field of concentration requires a comprehensive knowledge if possible, even mastery of the medical terminology. The course consists of an intensive study of the medical terms both in writing and speaking.

DEPARTMENT ADMINISTRATION, ETHICS, AND JURISPRUDENCE – 3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

Deals with the organization, function, supervision, and budgetary outlay of a radiological facility and the accepted ethical principles and legal aspects of the profession. Discussions include management and human resource administration of a radiological facility, supervision, laws and regulations governing the practice of radiologic technology, professional ethics, relevant medical jurisprudence and other legal and ethical concerns.

PATIENT CARE MANAGEMENT- 3 Units

(2 Lecture hours/week; 3 Laboratory hours/week)

Duration: 36 hours per semester; 54 hours per semester

Study of the elements of patient care and management as they relate to radiography.

COMMUNITY AND PUBLIC HEALTH – 5 Units

(3 Lecture hours/week; 6 Laboratory hours/week)

Duration : 54 hours per semester; 108 hours per semester

This course deals with concepts and principles in the provision of basic health promotion/maintenance and disease prevention at the community level. This course also aims to prepare graduates to become competent primary health care setting and proper referral of cases requiring special treatment.

ELEMENTS OF RESEARCH

(3 Lecture hours/week)

Duration : 54 hours per semester

Principles and methods in research and its application to Radiologic Technology focused on developing a research protocol.

RESEARCH WRITING- 3 Units

(3 Lecture hours/week)

Duration: 54 hours per semester

The basic principles in preparing a technical paper for presentation and discussion in scientific forum and/or for publication.

PHYSICAL EDUCATION 1 - (CALISTENICS AND GYMNASTICS) – 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

Basic movement skill for body mechanics, self-testing skill and basic motor skills, perceptual and manipulate skills and other movement activities for the improvement and maintenance of the health and physical fitness.

PHYSICAL EDUCATION 2 - (FOLK DANCING) – 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

This course covers the fundamental in Philippine national dances, rhythmic activities, fundamental position of feet and arms, dance terms, dance steps, stem combinations, simple combinations, simple folk dance and theory and techniques of teaching rhythmic activities and Philippine folk dance.

PHYSICAL EDUCATION 3 – (SWIMMING) – 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

The fundamental skill in swimming including mastery of techniques especially the different strokes.

PHYSICAL EDUCATION 4- (GAMES AND RECREATION) – 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

The development of fundamental skills and the mastery of rules and techniques in playing group sports. Deals with the conduct and practice of group games and team sports.

CHRISTIAN LIVING 1- (THE IDENTITY AND DIGNITY OF THE PERPETUALITE)

-2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

FCL1 is the introductory course in the UPHSJ & D Filipino Christian Living Program. It defines and explains the Catholic Faith inspiration of the founders, which became the pillar of the Philosophy, Vision and mission of the institution. The discussions include the Eight Perpetualite Values, the Logo, the Perpetualite Hymn and the Perpetualite Pledge. The first part covers the identity of the University and the second part covers the identity of the Perpetualite. It also introduces the students to the initiation sacraments of Baptism, Confirmation, and the Holy Eucharist. The experiential methodology is highlighted in the discussion on Filipino good manners and right conduct.

CHRISTIAN LIVING 2- (THE PERPETUALITE: A MAN OF GOD)- 2 units

(2 Lecture hours/week)

Duration : 36 hours per semester

FCL2 focuses on the nature of man's relationship to God to his fellowmen. It deals with Salvation History and the importance of love as the basic elements in being a man God. It highlights the basic principles of morality and the celebration of the sacraments of healing such as the reconciliation, penance and anointing of the sick.

CHRISTIAN LIVING 3- (THE PERPETUALITE: CALLED TO PERFECTION)- 2

Units

(2 Lecture hours/week)

Duration : 36 hours per semester

FCL3 is about the Perpetualite as an achiever. The highest quality of performance is developed in him as way of life. Thus, his achievement starts here at school in his academic life to be continued later in his professional life, and in everything that he will do in life. It includes areas of perfection, lone, marriage and family, communion sacraments and good manners and right conduct.

CHRISTIAN LIVING 4 – (THE PERPETUALITE: MAN FOR OTHERS)- 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

FCL 4 works on the premise that the Perpetualite is basically a social being. He lives on society of which he is very much a part. That society is basically here in his country. But this country is a part of a greater whole, the community of nations, thus, a Perpetualite should love his country, yet he should also be concerned of the realities outside of it. Furthermore, it highlights the natures of man's relationship to God through his fellowmen. It discusses man's role in the church especially in responding to the call of love and service for others. It includes social doctrine, solidarity, good governance, peace, good manners and right conduct.

CHRISTIAN LIVING 5 - THE PERPETUALITE: A FILIPINO CHRISTIAN LEADER

- 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

This course is a continuation of the discussion and commitment building to the UPHS Perpetualite Values. Specifically, its focus is on how the value of Filipino Christian Leadership could help develop the Perpetualite become a Christian Leader. Emphasis is also given on the "leadership character" of the Perpetualite as it helps him in nation building.

CHRISTIAN LIVING 6 -(THE PERPETUALITE: A MINISTER OF LIFE)- 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

A Perpetualite basically a lover of life. He has to promote life realizing that is a gift from God. Thus a true and authentic Perpetualite is also a Minister of Life, hence, he should possess the virtue of care, love and respect for all living things.

Credit: 2 units; 2 hrs lec/week

CHRISTIAN LIVING 7- (THE PERPETUALITE: A CHARACTER AND NATION BUILDER)- 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

FCL7 leads to a realization that a Perpetualite is basically a character and nation builder. But before he becomes a nation builder, he should build first himself. Thus he should have a thorough understanding of himself and of his identity. Furthermore, he should possess and practice the values that are ingredients to nation building such as the values of peace and development, love, solidarity and social justice.

CHRISTIAN LIVING 8- (THE PERPETUALITE: A HELPER OF GOD)- 2 Units

(2 Lecture hours/week)

Duration : 36 hours per semester

FCL8 is the fulfillment of the entire FCL program. It moves the Perpetualite to actualize virtues/values to be acquired loving and helping others. As helper of God, he should be a living witness of total service to others. He should possess the character of true Helper of God such as humility, obedience, love and dedication to help others especially the lost and the least in the community.

NSTP 1 – (NATIONAL SERVICE TRAINING PROGRAM 1) - 3 Units

(3 lecture hours/week)

Duration: 54 hours per semester

The course deals with the program component or activities contributory to the general welfare and betterment of life for the members of the community or the enhancement of its facilities, especially those devoted to improving health, education, environment, entrepreneurship, safety, recreation and moral of the citizen and other social welfare services.

NSTP 2- (NATIONAL SERVICE TRAINING PROGRAM 2 – 3 Units

(3 lecture hours/week)

Duration: 54 hours per semester

This course tackles community organizing, assessment, program planning and implementation. The aim is promoting each individual participated both by teachers and students concern to alleviate their knowledge and enhance their skills in handling situations particularly their environmental issues and problems. The opportunity to come up with solutions that will provide them of good health and better community for sustainable development. The unit of cooperation and exposure among organizers to their community will provide them the actual management planning and implementation of the program.

**MARIFEL O. SISON, RRT, MAEd-HSE
Dean**



COLLEGE OF RADIOLOGIC TECHNOLOGY

COURSE DESCRIPTION
RADIOLOGIC TECHNOLOGY MAJOR COURSES

INTRODUCTION TO RADIOLOGIC TECHNOLOGY WITH SCIENCE TECHNOLOGY AND SOCIETY - 3 units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Prologue to Radiologic Technology education and practice which will provide an understanding on the scope, outputs and practices of radiological in general and Radiology technology in particular. This course also deals on the interaction of science and technology and their impact to society and environment.

RADIOLOGIC PHYSICS, EQUIPMENT AND MAINTENANCE 1-3 Units

(2 Lecture hours/week; 3 Laboratory hours/week)

Duration: 36 hours per semester; 54 hours per semester

An introduction to the basics of electricity, electromagnetism, motors, generators, transformers and rectifiers. Discussions include mathematical review, units of measure, structure of matter, electrostatics, current, electricity and magnetism.

RADIOLOGIC PHYSICS, EQUIPMENT AND MAINTENANCE II- 3 Units

(2 Lecture hours/week; 3 Laboratory hours/week)

Duration: 36 hours per semester; 54 hours per semester

Study of the physical principles of radiation, its characteristics, properties, interaction with matter, and application in radiology sciences. This is aimed to familiarized students with the circuitry of an x-rat unit, x-ray tube, x- ray production, nature of x-rays, inverse square law, half-value layer, as well as to detect defects interfering with the proper function of the equipment and the fundamentals of preventive maintenance.

RADIOGRAPHIC TECHNIQUE, FILM PROCESSING AND ANALYSIS 1-3 Units

(2 Lecture hours/week; 3 Laboratory hours/week)

Duration: 36 hours per semester; 54 hours per semester

An understanding of the principles involving action of x-rays on film emulsion and intensifying screens, processing chemicals, the various systems and accessories involved in the conversion of latent image into visible radiographic image following sequential steps in manual and automatic processing, processor operation and maintenance, and learn the skill necessary to critique radiographic image with emphasis in recognizing processing faults with the aid of radiographs and laboratory exposure experiments. Discussions include processing room design and accessories and regulatory requirements.

RADIOGRAPHIC TECHNIQUE, FILM PROCESSING AND ANALYSIS II - 4 Units

(3 Lecture hours/week; 3 Laboratory hours/week)

Duration: 54 hours per semester; 54 hours per semester

Deals with radiographic imaging and the production of quality radiographs through proper selection, computation, generalization, and application of various technique factors and

accessory devices. Discussions include factors affecting radiographic density, contrast, geometric detail, visibility and distortion of detail, and technique conversion factors with the aid of radiographs and laboratory experiments.

RADIOLOGIC POSITIONING AND RADIOLOGIC PROCEDURE – 7 Units

(4 Lecture hours/week; 9 Laboratory hours/week)

Duration: 72 hours per semester; 162 hours per semester

Study of the general foundation of positioning technique to obtain radiographic demonstration of anatomical structure of interest as well as specialized radiographic examinations of the different body structures and organs without contrast media. This includes anatomic radiographic positioning terms, source-image-receptor distance and tube-film alignment, positioning principles, radiographic landmarks, exposure techniques, structure demonstrated and evaluation criteria of examination of the different organ and body structures. Clinical competency is accomplished through positioning demonstration and return demonstration.

RADIOLOGIC CONTRAST EXAMINATIONS – 3 Units

(2 Lecture hours/week; 3 Laboratory hours/week)

Duration: 36 hours per semester; 54 hours per semester

Study of specialization radiographic examination with application of contrast media to enhance and/or visualize different organs and body structure of interest. This includes types of contrast media. Its characteristics and properties, indications and contradictions, and mode of administration; patient preparation and types of examinations of the gastrointestinal tract, genitourinary system, central nervous system, vascular system and other contrast examination.

RADIOLOGIC PATHOLOGY- 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of various pathologic conditions and its effect on radiology procedures, techniques, and overall radiographic image.

RADIOGRAPHIC ANATOMY AND PHYSIOLOGY- 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study the structure and function of the human body with radiographic correlation.

RADIOBIOLOGY AND RADIATION PROTECTION – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of the effects of ionizing radiation on biological matters, the principles of radiation protection as well as agencies and institution mandated to regulate and monitor the safe use of radiation and radioisotope in medicine.

COMPUTERIZED TOMOGRAPHY SCAN (CT SCAN) – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of principles involved in diagnostics imaging modalities that produce cross-sectional, transaxial, coronal and sagittal images of the human body.

MAGNETIC RESONANCE IMAGING (MRI) – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of principles involved in a diagnostic imaging modality that produces cross-sectional, transaxial, coronal and sagittal images of the human body.

INTERVENTIONAL RADIOLOGY – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Deals with the study of the principles involved in Digital Subtraction Angiography and Interventional Radiography; the parameters of imaging and equipment employed in these subspecialties.

ULTRASONOGRAPHY – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of the physical foundation of Ultrasound and its application to medical diagnosis.

RADIOTHERAPY – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of the precise application of ionizing radiation in the treatment of neoplastic growth, a complete and effective treatment plan as well as patient care of oncology cases.

NUCLEAR MEDICINE – 3 Units

(3 Lecture hours/ week)

Duration : 54 hours per semester

Study of the principles and instrumentation in Nuclear medicine and its diagnostic and therapeutic applications.

VENIPUNCTURE – 2 Units

(2 Lecture hours/ week)

Duration : 36 hours per semester

To provide the students an opportunity to develop a fundamental concept of the skills needed to competently, proficiently, safely perform intravenous contrast media administration.

QUALITY ASSURANCE AND QUALITY CONTROL IN MEDICAL IMAGING- 3 units

(2 lecture hours/week; 3 laboratory hours/week)

Duration: 36 hours per semester; 54 hours per semester

Study of organized effort in radiological facility to promote quality patient care and management and to make certain consistent production of high standards of quality radiographic images with minimum exposure to patient and personnel.

SEMINAR - 3 units

(3 lecture hours/week)

Duration; 54 hours per semester

This course deals with the study of the advancement and technological innovations in the field of radiological sciences, to include physics update, educational concerns and issues and opinions of interest in the field through journal and article review, case presentations, symposia, and seminars.

CLINICAL EDUCATION 1 JUNIOR INTERNSHIP (5-1/2 months /Hospital Training)
(1,056hours) - 18 units

CLINICAL EDUCATION 2 SENIOR INTERNSHIP (5-1/2 months/Hospital Training)
(1,056 hrs) - 18 units

The Radiologic Technology Internship Program consists of at least eleven (11) months of service divided into Junior and Senior Internship periods of five (5-1/2) months each. The program requires the Radiologic Technology Interns to be assigned to various hospitals of the school. Satisfactory completion of the Internship Program is a requirement for graduation..

The Radiologic Technology Intern undertakes to perform or assist in at least three hundred eighty five (385) radiographic examinations in general radiographic examinations, and a minimum of fifty (50) procedures/cases in Radiotherapy, Nuclear Medicine, Ultrasound, Computed Tomography, Magnetic Resonance Imaging and Vascular/Interventional procedures during the entire clinical internship period.

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Dean