

COLLINS CAREER TECHNICAL CENTER RADIOLOGIC TECHNOLOGY
PROGRAM
COURSE DESCRIPTIONS & SEQUENCE

GENERAL EDUCATION COURSES
TO BE COMPLETED PRIOR TO APPLICATION

****All General Education courses must be completed with a 'C' or better****

AH 204 LEGAL & ETHICAL ISSUES IN HEALTH OCCUPATIONS - (3 credit hours)

Legal and Ethical Issues in Health Occupations provides allied health students with knowledge and references on legal issues in health care, ethical issues and common areas of liability and litigation. This course covers issues in both administrative and medical records, clinical laboratory, medical equipment, patient care and conflict management. This class focuses on legal and ethical dilemmas to aid the health care professional developing critical thinking skills to resolve issues commonly encountered in the workplace

AH 151 MEDICAL TERMINOLOGY – (3 credit hours)

Building a medical vocabulary where the student learns the fundamental word parts that make up the language of healthcare then explores how these word parts are used to construct more complex terms with each unit focusing on a separate body system. The student will be able to recognize and analyze the new terms encountered in this course throughout his/her career in the allied health field.

BIOL 257 INTRODUCTORY ANATOMY & PHYSIOLOGY – (3 credit hours)

Covers the general features of the anatomy of the human body and the general aspects of physiology. Form and function are related throughout.

Pre-requisites – Admission into the Radiologic Technology Program.

BIOL 260 APPLIED HUMAN ANATOMY (4 credit hours)

This course is designed for the student to acquire a basic working knowledge of the functional structure of the human body. It is designed for students in pursuit of professional health programs such as nursing, med tech, dietetics, cardiac rehab, and physical therapy assistant.

COM 125 INTERPERSONAL COMMUNICATIONS - (3 Credits hours)

This course is designed to give students the interpersonal skills to communicate effectively in the workplace. It will help build and enhance communication skills through active listening, verbal and nonverbal communication, managing conflict, critical thinking, understanding diversity and the effects of culture, and understanding how the imbalance of power can lead to difficulties within a workplace.

ENL 111 WRITTEN COMMUNICATIONS – (3 credit hours)

Course designed to improve the students' writing, listening, and interpersonal communication skills by writing essays and discussing concepts correlating with the oral communication content. Group discussion will be utilized.

MAT 145 APPLICATIONS IN ALGEBRA – (3 credit hours).

Algebraic applications needed by technicians including equation solving, inequalities, functions, quadratic equations, systems, logarithmic functions, graphing and statistics.

SCI 110 INTRODUCTORY PHYSICS – (4 credit hours).

This course is to introduce non-science majors to applications of physics in life, emphasizing conceptual understanding of basic principles in classical and modern physics that includes critical thinking and problem solving exercises. The problem solving exercises will not require memorization of formulas but rather the understanding and application of them.

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CORE CLASSES FOR RADIOLOGIC TECHNOLOGY PROGRAM

*All Radiography Core courses must be completed with a 'B' or better**

RT 201 INTRODUCTION TO RADIOLOGY - 48 Hours (3 credit hours).

Content is designed to provide an overview of the foundations in radiography and the practitioner's role in the health care delivery system. Principles, practices and policies of the health care organization(s) will be examined and discussed in addition to the professional responsibilities of the radiographer. Also, the basic concepts of patient care, including consideration for the physical and psychological needs of the patient and family. Routine and emergency patient care procedures will be described, as well as infection control procedures utilizing standard precautions. The role of the radiographer in patient education will be identified.

Pre-requisites – Admission into the Radiologic Technology Program.

RT 204 RADIOGRAPHIC PROCEDURES I – 48 Hours (3 credit hours).

Content is designed to provide a knowledge base necessary to perform standard radiographic procedures along with the application to special studies. Consideration will be given to the production of images of optimal diagnostic quality. Laboratory experience will be used to complement the didactic portion of Radiographic Positioning I.

Pre-requisites - Admission into the Radiologic Technology Program.

RT 204L RADIOGRAPHIC PROCEDURES LAB I – 96 Hours (3 credit hours)

Laboratory experience is used to complement the didactic portion of Radiographic Positioning I.

Pre-requisites - Admission into the Radiologic Technology Program.

RT 202 CLINICAL PRACTICE I – 288 Hours (6 credit hours)

Introductory clinical practice to include the design of the radiology department to include paperwork, desk procedures, transport, filing, and successfully completed laboratory check-off.

Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, syntheses and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences will be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well-being of the patient preparatory to, during and following the Radiologic procedure.

Pre-requisites – Orientation at Clinical Sites and maintenance of a B or better in preceding coursework.

RT 207 PHYSICS AND IMAGING I– 32 Hours (2 credit hours)

Content is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. Film and electronic imaging with related accessories will be emphasized. Knowledge of radiographic, fluoroscopic, mobile and tomographic equipment requirements and design will be included. The content will also provide a basic knowledge of quality control. Class demonstrations/labs are used to demonstrate application of theory.

Pre-requisites – Completion of Semester I with a B or better.

RT 203 ETHICS AND LAW –32 Hours (2 credit hours)

Content is designed to provide a fundamental background in ethics. The historical and philosophical basis of ethics, as well as the elements of ethical behavior, will be discussed. The student will examine a variety of ethical issues and dilemmas found in clinical practice. An introduction to legal terminology, concepts and principles will also be presented. Topics include misconduct, malpractice, legal and professional standards and the ASRT scope of practice. The importance of proper documentation and informed consent is emphasized.

Pre-requisites – Completion of Semester I with a B or better.

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RT 208 RADIOGRAPHIC PROCEDURES II –48 Hours (3 credit hours)

Content is designed to provide a knowledge base necessary to perform special radiographic procedures along with the application to special studies. Consideration will be given to the production of images of optimal diagnostic quality.

Pre-requisites – Completion of Semester I with a B or better.

RT 208L RADIOGRAPHIC PROCEDURES LAB II – 96 Hours (3 credit hours)

Laboratory experience is used to complement the didactic portion of Radiographic Positioning II.

Pre-requisites – Completion of Semester I with a B or better.

RT 212 PHYSICS AND IMAGING II – 48 Hours (3 credit hours)

Content is designed to establish a knowledge base in factors that govern and influence the production and recording of radiographic images. Film and electronic imaging with related accessories will be emphasized. Knowledge of radiographic, fluoroscopic, mobile and tomographic equipment requirements and design will be included. The content will also provide a basic knowledge of quality control. Class demonstrations/labs are used to demonstrate application of theory.

Pre-requisites – Completion of Semester I with a B or better.

RT 205 CLINICAL PRACTICE II –256 Hours (5 credit hours)

Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, syntheses and evaluation of concepts and theories in the performance of radiologic procedures. Through structured sequential competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences will be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well-being of the patient preparatory to, during and following the Radiologic procedure.

Pre-requisites – Successful completion of Semester I with a B or better.

RT 214 DIGITAL IMAGING – 48 HOURS (3 credit hours)

Content is designed to provide knowledge of base necessary to perform digital imaging procedures along with the application to special studies. Consideration will be given to the production of digital images of optimal diagnostic quality.

Pre-requisite- Completion of Semester II with a B or better.

RT 222 RADIOGRAPHIC PROCEDURES III –48 hours (3 credit hours)

Content designed to provide a knowledge base necessary to perform special radiographic procedures along with the application to special studies. Consideration will be given to the production of images of optimal diagnostic quality.

Pre-requisites – Completion of Semester II with a B or better.

RT 213 RADIOGRAPHIC PATHOLOGY –48 Hours (3 credit hours)

Content is designed to introduce theories of disease causation and the pathophysiologic disorders that compromise healthy systems. Etiology, pathophysiologic responses, clinical manifestations, radiographic appearance and management of alterations in body systems will be presented.

Pre-requisites – Completion of Semester II with a B or better.

RT 206 RADIATION PROTECTION/ RADIOBIOLOGY –48 Hours (3 credit hours)

Content is designed to present an overview of the principles of radiation protection including the responsibilities of the radiographer for patients, personnel and the public. Radiation health and safety requirements of federal and state regulatory agencies, accreditation agencies and health care organizations are incorporated. An overview of the principles of the interaction of radiation with living systems is discussed. Radiation effects on molecules, cells, tissues and the body as a whole are presented. Factors affecting biological response are presented, including acute and chronic effects of radiation.

Pre-requisites – Completion of Semester II with a B or better.

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RT 210 CLINICAL PRACTICE III – 384 Hours (8 credit hours)

Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, syntheses and evaluation of concepts and theories in the performance of Radiologic procedures. Through structured sequential competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences will be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well-being of the patient preparatory to, during and following the Radiologic procedure.

Pre-requisites – Completion of Semester II with a B or better.

RT 209 RADIOLOGIC PHARMACOLOGY – 32 HOURS (2 credit hours)

Study of the general principles of pharmacology, including drug types, methods of administration, dosage, effects, indications, contraindications, and regulation. Drug groups related to respiratory care are emphasized, including bronchodilators, wetting agents, mucolytics, antibiotics, muscle relaxants, corticosteroids, and antibiotics.

Pre-requisites – Completion of Semester III with a B or better

RT 217 QUALITY ASSURANCE - 32 Hours (2 credit hours)

Content will provide a basic knowledge of quality control and the factors that govern and influence the production and recording of radiographic procedures.

Pre-requisites – Completion of Semester III with a B or better

RT 218 ADVANCED IMAGING PROCEDURES – 48 Hours (3 credit hours)

Content will provide the student with an introduction to advanced imaging modalities, to include computed tomography, MRI, ultrasound, nuclear medicine, and radiation oncology.

Pre-requisites – Completion of Semester III with a B or better.

RT 219 REGISTRY REVIEW – 96 hours (6 credit hours)

Content is designed to provide students with a comprehensive review of the five areas covered in the national ARRT examination. The areas covered are Patient Care, Image Production and Evaluation, Radiographic Procedures, Radiation Protection, and Equipment Operation and Quality Control.

Pre-requisites – Completion of Semester III with a B or better.

RT 215 CLINICAL PRACTICE IV –256 Hours (5 credit hours)

Content and clinical practice experiences shall be designed for sequential development, application, critical analysis, integration, syntheses and evaluation of concepts and theories in the performance of Radiologic procedures. Through structured sequential competency-based assignments in clinical setting, concepts of team practice, patient-centered clinical practice and professional development shall be discussed, examined and evaluated. Clinical practice experiences will be designed to provide patient care and assessment, competent performance of Radiologic imaging and total quality management. Levels of competency and outcomes measurement shall ensure the well-being of the patient preparatory to, during and following the Radiologic procedure.

Pre-requisites – Completion of III with a B or better.