

Curriculum

Classes include both clinical application and classroom studies. During the Junior year students spend three days (M, W, F) participating in classroom studies and the other two days (T, Th) in the clinical setting. Senior students spend three days (M, W, F) in the clinical setting and the other two days (T, Th) participating in classroom studies. The clinical rotations include evening and weekend hours; however, no student will be scheduled more than 10 hours per day and combined clinical/classroom hours will not exceed forty hours per week.

Current required pre-requisite courses are:

	ENG 101 Rhetoric and Composition I	(3 credit hours)
	ENG 102 Rhetoric and Composition II	(3 credit hours)
	MAT 113 College Algebra**	
or	MAT 109 Elementary Statistics	(3 credit hours)
	PSY 101 Introduction to Psychology	(3 credit hours)
	CMN 101 Introduction to Speech**	
or	CMN 104 Interpersonal Communication	(3 credit hours)
	BIO 101 General Biology	(4 credit hours)
	BIO 275 Anatomy & Physiology I	(4 credit hours)
	BIO 276 Anatomy & Physiology II	(4 credit hours)
	FYE 101 Blazing Your Trail	(1 credit hour)

OFT 281 Medical Terminology (3 credit hours)

CSC 106 Introduction to Computers (3 credit hours)

** Preferred course - either course would meet the prerequisite requirement.

All required prerequisite courses must be completed in order to apply.

Total credit hours from required pre-requisite courses 34 credit hours

Courses taken at another institution *may* meet these requirements. It is the prospective student's responsibility to contact the Admissions Office at JWCC to see which courses transfer and to find out all current requirements that must be met in order to be granted the AAS Degree upon completion of our program.

Link: John Wood Community College: www.jwcc.edu

Junior Year

First (Fall) Semester

Introduction to Radiologic Science (3 credit hours)

Radiographic Exposure I (3 credit hours)

Methods of Patient Care I (3 credit hours)

Image Analysis I (1 credit hour)

Radiographic Anatomy I (3 credit hours)

Radiographic Procedures I (3 credit hours)

Clinical I (4 credit hours)

Second (Spring) Semester

Imaging Equipment (3 credit hours)

Radiographic Exposure II (3 credit hours)

Methods of Patient Care II (3 credit hours)

Image Analysis II (1 credit hour)

Radiographic Anatomy II (3 credit hours)

Radiographic Procedures II (3 credit hours)

Clinical II (4 credit hours)

Senior Year

Third (Fall) Semester

Physics for Radiographic Science I (2 credit hours)

Radiation Protection (2 credit hours)

Radiographic Pathology I (2 credit hours)

Image Analysis III (1 credit hour)

Radiographic Anatomy III (2 credit hours)

Radiographic Procedures III (2 credit hours)

Clinical III (5 credit hours)

Fourth (Spring) Semester

Physics for Radiographic Science II (2 credit hours)

Radiation Biology (2 credit hours)

Radiographic Pathology II (2 credit hours)

Image Analysis IV (1 credit hour)

Radiography Registry Review (2 credit hours)

Clinical IV (5 credit hours)

Total credit hours from School of Radiologic Technology courses **70 credit hours**

Total credit hours transferred to JWCC towards AAS degree **31 credit hours**

The Blessing Hospital Radiology Department serves inpatients and outpatients 24 hours a day, 7 days a week and offers a full range of services utilizing digital and computerized radiography equipment. Students enrolled in the Blessing Hospital School of Radiologic Technology will rotate through the following areas throughout the course of the program:

Orientation/First Semester

- General
- Diagnostic Center
- Fluoroscopy
- Transporting - Department & ED
- Quincy Medical Group
- Emergency Department
- Bedside
- Office
- Surgery
- Hannibal Regional Hospital

Second - Fourth Semesters

- General
- Fluoroscopy/Urinary/Tomography
- Bedside
- Emergency Department
- Nights (12:30 - 9:00)
- Surgery
- Diagnostic Center
- Weekends (2 per semester)
- Ultrasound
- Nuclear Medicine
- Radiation Therapy
- Magnetic Resonance Imaging
- Computed Tomography
- Special Procedures
- Heart Cathetrization
- Quincy Medical Group
- Illini Community Hospital
- Hannibal Regional Hospital
- Mammography/DEXA (optional rotation)

The students are given a set of objectives each semester. These objectives must be completed and turned in two weeks after rotating through each area.

Course Descriptions

Introduction to Radiologic Science

This course is designed to acquaint the incoming student with the hospital, the Radiology Department and the environment of health care. Students receive information concerning hospital and departmental administration and policies directly related to them. You are given information regarding credentialing and licensure, professional organizations and the need for continuing education. This course also introduces students to the technical aspects of Radiologic Technology. Very important pieces to this course include medical terminology; radiation protection directed to the students' personal protection, protection for the patients and for all other members of the hospital staff; and research regarding the various modalities within the field of Radiology.

Radiographic Exposure I & II

Radiographic Exposure provides the necessary knowledge and understanding of factors that govern and influence the quality of the radiographic image. Radiographic Exposure I provides lectures, discussions and demonstrations if possible in the following areas: properties of x-ray, types of ionizing radiation, radiation concepts of matter and energy, the x-ray tube, distortion, filtration, scatter radiation as well as the prime factors and how each one affects the radiographic image. Students will also learn technique formulas to aid in exposure calculations/adjustments.

Radiographic Exposure II builds off of the information taught in Radiographic Exposure I. During this course the students are provided lectures, discussions and demonstrations if possible regarding: characteristics of radiographic film, radiographic density and contrast, exposure latitude, recorded detail, beam limitation devices, attenuation of the x-ray beam, grids, intensifying screens, processing solutions and procedures, and sensitometry. Students will learn more technique formulas to aid in exposure calculations/adjustments.

Clinical I, II, III & IV

The clinical component provides our students the opportunity to combine theoretical and practical knowledge with cognitive, psychomotor and affective skills to help them develop competence in the procedures set forth by our program.

Methods of Patient Care I & II

These courses are designed to provide the basic concepts of patient care including consideration for the physical, psychological, and educational needs of the patient and family. Additionally, these courses instill the necessary skills used in caring for routine and emergency patients during radiologic procedures. In Methods of Patient Care I the student is educated on: safety, patient transfers, patient positioning, infection control, surgical asepsis, medical ethics, professional roles, behaviors, attitudes and communication; vital signs, dealing with acute situations and/or special medical devices and how to perform mobile radiography in the special units.

Methods of Patient Care II builds off of the information taught in Methods of Patient Care I. During this course the students will be educated on patient care considerations for pediatric and geriatric patients, contrast media and patient care during urinary, biliary and gastrointestinal procedures, pharmacology for radiographers, medication administration, theory and practice of IV cannulation (venipuncture), and basic electrocardiogram monitoring. Students will also learn about interventional procedures as well as patient care considerations for other imaging modalities.

Imaging Equipment

This course establishes basic knowledge of equipment routinely utilized to produce diagnostic images to include fluoroscopic, digital (CR & DR), tomographic, CT and MRI equipment. The student will be introduced to the fundamental principles of computer technology and computer applications in the radiologic sciences related to image capture, display, storage and distribution. Lectures related to MRI, digital radiography and quality assurance are also incorporated into this course. The Imaging Equipment course also includes a lecture and demonstration related to CT and CT imaging of the abdomen and brain. CT images are integrated into the lecture.

Image Analysis I & II

This course is designed to provide a basis for analyzing radiographic images. Image Analysis I includes quizzes for evaluation of parameters for acceptability of chest, skeletal and abdominal images.

Image Analysis II is a continuation of Image Analysis I and is designed to provide continued experience for analyzing radiographic images. Image Analysis II includes quizzes and tests for evaluation of the parameters of acceptability for chest, skeletal, abdominal (to include urinary and gastrointestinal images), spine and pelvis imaging.

In both Image Analysis I & II discussions regarding problem-solving techniques and factors controlling image characteristics will be held. Actual images are incorporated into the curriculum for analysis.

Image Analysis III & IV

These courses are a continuation of Image Analysis I & II. They are designed to provide continued experience for analyzing radiographic images. Image Analysis III includes quizzes and tests for evaluation of the parameters of acceptability for all chest and bony thorax, skeletal, abdominal (to include urinary and gastrointestinal images), spine, pelvis and cranial imaging.

Image Analysis IV is a continuation of Image Analysis III and is designed to provide continued experience for analyzing radiographic images. Included are quizzes and tests for the evaluation of the parameters of acceptability for all diagnostic imaging.

In both Image Analysis III & IV discussions regarding problem-solving techniques and factors controlling image characteristics will be held. Actual images are incorporated into the curriculum for analysis.

Radiation Protection

This course provides the knowledge of radiation, how radiation interacts with matter as well as the concepts regarding protection practices for the worker, patients and the general public. The latest information concerning regulations and guidelines from advisory agencies is also discussed.

Radiographic Procedures I, II & III

These courses provide a basis for analyzing radiographic images and cover imaging standards and problem-solving techniques. All factors affecting image quality are discussed and actual images are included for analysis. Students practice all procedures in the simulated lab and complete a return demonstration prior to performing examinations on patients under the supervision of a registered Radiologic Technologist.

Radiographic Procedures I begins with an explanation of the basic rules and terminology used in radiographic positioning. In this course demonstrations regarding procedures related to the chest, abdomen, and upper extremity is provided. Students also begin to receive instruction regarding the lower extremity near the end of the course.

Radiographic Procedures II resumes with students continuing to learn how to perform procedures related to the lower extremity. Additionally, demonstrations regarding procedures related to the urinary system, gastrointestinal system, and vertebral column are taught during this course. Near the end of the course students are introduced to imaging procedures of the bony thorax.

Radiographic Procedures III begins with the students learning the rest of the procedures related to the bony thorax as well as procedures related to the female reproductive system. Demonstrations covering all cranial procedures to include the skull, facial bones, and sinuses is also included in this course.

Radiographic Anatomy I & II & III

These courses provide students with in depth knowledge of the various systems of the body by discussing how each one works and the different structures within each system. Actual bones and models of anatomical parts are used as visual aids throughout all three of these courses to enhance student learning.

Radiographic Anatomy I begins with an explanation of the skeletal system and joints. In this course, lectures regarding the anatomy related to the chest, abdomen and upper extremity is provided. Students also begin to receive information regarding the lower extremity near the end of the course.

Radiographic Anatomy II resumes lectures concerning the lower extremity. The anatomy related to the urinary system, gastrointestinal system, bony thorax and vertebral column is also taught during this course.

Radiographic Anatomy III provides lectures covering all cranial anatomy. Additionally, lectures pertaining to mammography, the male and female reproductive systems, cardiovascular system and the circulatory system are also provided.

Radiation Biology

In this course, students are provided with an overview of the cell and cell division. In addition to this, the principles of cell-radiation interaction, the effects of radiation on the cells and the factors affecting cell response are presented. Acute and chronic effects of radiation are also reviewed.

Radiographic Pathology I & II

These courses are designed to provide an introduction to the concepts of disease. Pathology and disease as it relates to the various anatomical systems and radiographic procedures are discussed.

Physics for Radiographic Science I & II

These courses are intended to provide the students with knowledge of basic radiation physics. Students will be utilizing mathematical equations in order to apply concepts learned throughout these courses.

Physics for Radiographic Science I reviews the fundamental units, atoms and sources of ionizing radiation. This course also discusses radioactivity, particulate radiation, electromagnetic energy, electrostatics, and electrodynamics.

Physics for Radiographic Science II examines concepts of magnetism, electromagnetism, the x-ray imaging system, rectification, x-ray production and emission and also reviews information regarding the component of the x-ray tube, heat units and cooling charts.

Radiography Registry Review

This course provides students the opportunity to review all information that has been taught throughout the program. This course will help prepare the students to sit for the national registry certification examination administered by the American Registry of Radiologic Technologists (ARRT) and will include the following: review assignments, review games, standardized tests, mock registries and information regarding the application process for the ARRT certification examination. Students will also receive information regarding state licensure, how to write a resume, and tips for interviewing. Also included in the course is information regarding professional organizations and continuing education requirements for radiologic technologists over which students are required to write a summarization paper. Additionally, students prepare a resume and attend the ISSRT Annual Conference.

Program Faculty

The Blessing Hospital School of Radiologic Technology faculty is comprised of a Program Director, Clinical Coordinator and Clinical Instructors. In addition, Staff Technologists, Radiologists and Nurses lend their expertise and guidance and may appear as guest lecturers throughout the 24 month program.

Grading Policy

Academic grades for each course will be derived from the following items: quizzes, assignments, chapter exams and final exams. Some courses also incorporate presentations, written papers or projects into the final course grades. Students should refer to each course syllabus to determine how final grades are calculated.

Clinical grades are factored in the following manner each semester:

- Semester clinical competency evaluation scores = 40% of overall clinical grade

- Semester objectives being turned in and on time = 10% of overall clinical grade
- Semester performance evaluations = 50% of overall clinical grade

Final grades are documented on the student's final transcript each semester. A copy of the transcript is given to the students at the end of each semester with the original document retained as a permanent part of the student's file.

The grading scale Blessing Hospital School of Radiologic Technology uses for both academic and clinical course work is listed below:

- 93-100.....A
- 85-92.....B
- 77-84.....C
- 70-76.....D
- Below 70.....F

A 5% deduction is applied for all late academic assignments.

As is stated in the Student Handbook, students must maintain a "C" average in every academic course as well as in the clinical component of the program.

Confidentiality and Release of Information

All information regarding any student in the Blessing Hospital School of Radiologic Technology will be kept in confidence in accordance with the Family Educational Rights and Privacy Act (FERPA). Information, records or transcripts of any student in the Blessing Hospital School of Radiologic Technology may be released only upon receipt of written permission from the student.

Program Benefits

Program breaks are scheduled by the Program Director. The following breaks are scheduled for students:

- Fall Break (1 week)
- Winter Break (1 1/2 weeks)
- Spring Break (1 week)
- Summer Break (2 weeks between Junior and Senior year)

Students are not scheduled for clinical rotations or class on major holidays.

Counseling is available for academic or clinical areas of concern.

Employee Assistance Program is available for up to 5 sessions of professional counseling.

Housing is not provided by the program, however, every effort will be made to assist the student in finding satisfactory and available housing.

Cafeteria is available at the 11th Street Campus - a Cafeteria Discounts is available on certain items with student name badge.

Students enrolled in the program are allowed time off in the event of the loss of a loved one.

Annual Testing/Immunizations provided to students at no cost on an annual basis: Flu shot, TB Mask Fittings and TB Skin Testing.

Computer Lab and Library Resources are available.

Lockers for personal belongings are available.

Parking, free of charge.
