

# RADIOGRAPHY

St. Catherine University's radiography department is dedicated to high quality patient care and is widely respected within Minnesota's healthcare community. The department's focus on the liberal arts ensures that students will learn the communication and critical-thinking skills needed to work effectively in healthcare teams, preparing them to become leaders in their field.

St. Catherine University radiography students will develop their skills through professional courses and gain clinical experience throughout their educational program. Small class and lab sizes will ensure students get individualized attention to prepare them for their new career.

Students will learn about anatomy and physiology and human disease along with radiographic sciences. Through rigorous classroom instruction and hands-on clinical experiences, students gain a thorough understanding of radiographic procedures and patient care.

## Associate

- Radiography - AAS (<https://catalog.stkate.edu/undergraduate/health/radiography/aas/>)

### **RAD 1010 Introduction to Radiography – 2 credits**

This course provides an introduction to the profession of radiologic technology. An overview of the structure of the healthcare environment, imaging equipment, and radiation protection is included. Human diversity, professional ethics, and medicolegal issues will also be explored. Offered in the College for Adults.

**Prerequisite:** Admission to program.

**Corequisite:** RAD 1020.

### **RAD 1020 Introduction to Patient Care – 2 credits**

This course is designed to provide 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 are described, as well as infection control procedures utilizing standard precautions. The role of the radiographer in patient education is identified. Offered in the College for Adults.

**Prerequisite:** Admission to program.

**Corequisite:** RAD 1010.

### **RAD 1115 Radiographic Procedures I – 2 credits**

This course provides an introduction to radiographic procedures and evaluation of radiographs. Positioning of the chest, abdomen and extremities is included. This class includes practice and testing in the lab setting. Offered in the College for Adults.

**Prerequisite:** RAD 1010.

### **RAD 1120 Radiographic Procedures II – 2 credits**

Instruction in radiographic procedures and evaluation of radiographs continues in this class. Positioning of the spine and pelvis is included. Offered in the College for Adults.

**Prerequisite:** RAD 1115.

### **RAD 1130 Radiographic Procedures III – 2 credits**

Instruction in radiographic procedures and evaluation of radiographs continues in this class. Positioning of the skull and facial bones is included. Offered in the College for Adults.

**Prerequisite:** RAD 1120.

### **RAD 1215 Exposure I – 2 credits**

This course will provide instruction in digital imaging. Topics covered will include image processing, quality assurance, components of digital imaging, and quality control for imaging equipment. Offered in the College for Adults.

**Prerequisite:** RAD 1115.

### **RAD 1225 Exposure II – 2 credits**

This course is designed to establish a knowledge base in the construction of the x-ray tube; the factors that govern and influence the production of x-rays; and principles that govern x-ray quality and quantity. Offered in the College for Adults.

**Prerequisite:** RAD 1215.

### **RAD 1315 Introduction to Clinical – 2 credits**

This course will be taught primarily in the radiography lab (two days/week). Students will view demonstrations, practice their positioning skills, and will be tested for technical competency as well as communication skills. This course prepares students to transition to working with patients and other healthcare team members. Offered in the College for Adults. Concurrent courses: RAD 1010, RAD 1020.

### **RAD 2015 Radiation Physics – 2 credits**

This course presents the principles of radiographic physics, incorporating the principles underlying the operation of X-ray equipment. Topics include electricity, electromagnetism, equipment, and the factors affecting radiographic quality. Offered in the College for Adults.

**Prerequisite:** RAD 1225.

### **RAD 2020 Radiation Biology – 2 credits**

This course provides instruction in the principles of radiobiology and protection. It emphasizes procedures to minimize radiation exposure to patients, personnel and the general public. Historical and ethical issues will be analyzed during this course. Offered in the College for Adults.

**Prerequisite:** RAD 1225.

### **RAD 2130 Topics I – 2 credits**

This course will provide instruction in pediatric imaging, special radiographic procedures, trauma, mobile, fluoroscopy, and surgical radiography. Special imaging modalities and equipment is also included. Offered in the College for Adults.

**Prerequisite:** RAD 1130.

### **RAD 2140 Topics II – 2 credits**

This course contains a variety of topics, including pathology, diversity, and communication. Students will also start preparation for the registry exam with frequent testing. Offered in the College for Adults.

**Prerequisite:** RAD 1130.

### **RAD 2150 Topics III – 2 credits**

This course provides an in-depth synthesis of concepts related to Equipment Operation, Image Acquisition, Imaging Procedures and Patient Care. Students will continue their registry review and testing. Offered in the College for Adults.

**Prerequisite:** RAD 2140.

**RAD 2303 Clinical – 3 credits**

Each clinical practicum will build on the previous clinical courses. The focus is on continuing to develop skills to become highly skilled, compassionate, health care professionals. The clinical portion of the Radiography program will allow students the opportunity to observe, participate and demonstrate (advancing) skills in radiographic procedures and studies within the hospital and/or clinic setting as well as review, practice and simulate basic radiographic procedures and skills in the x-ray lab. The student will be able to discuss and demonstrate appropriated medicolegal ethics and the characteristics of professional behavior while engaging in professional communication techniques. Additionally, the student will establish progressions in the demonstration of positive values and a commitment to diversity, equity, and inclusion. Furthermore, the student will establish progressions in demonstrating elements of procedural performance and radiation protection, while advancing in the requisite quantity of requirements for clinical competency. Upon the completion of the students' clinical course progression, the student will demonstrate consistent progression towards clinical competence.

**Prerequisite:** RAD 1315.

**RAD 2304 Clinical – 4 credits**

Each clinical practicum will build on the previous clinical courses. The focus is on continuing to develop skills to become highly skilled, compassionate, health care professionals. The clinical portion of the Radiography program will allow students the opportunity to observe, participate and demonstrate (advancing) skills in radiographic procedures and studies within the hospital and/or clinic setting as well as review, practice and simulate basic radiographic procedures and skills in the x-ray lab. The student will be able to discuss and demonstrate appropriated medicolegal ethics and the characteristics of professional behavior while engaging in professional communication techniques. Additionally, the student will establish progressions in the demonstration of positive values and a commitment to diversity, equity, and inclusion. Furthermore, the student will establish progressions in demonstrating elements of procedural performance and radiation protection, while advancing in the requisite quantity of requirements for clinical competency. Upon the completion of the students' clinical course progression, the student will demonstrate consistent progression towards clinical competence.

**Prerequisite:** RAD2414.

**RAD 2403 Clinical – 3 credits**

This clinical practicum will build on the previous clinical courses. The focus is continuing to develop skills to become highly skilled, compassionate, health care professionals. This portion of the program allows the opportunity to participate in routine radiographic procedures and observe in many of the specialty areas of a radiology department (three days/week). Offered summer in the College for Adults.

**Prerequisite:** (Fall start) RAD 2303, (Spring start) RAD 2304.

**RAD 2404 Clinical – 4 credits**

Each clinical practicum will build on the previous clinical courses. The focus is on continuing to develop skills to become highly skilled, compassionate, health care professionals. The clinical portion of the Radiography program will allow students the opportunity to observe, participate and demonstrate (advancing) skills in radiographic procedures and studies within the hospital and/or clinic setting as well as review, practice and simulate basic radiographic procedures and skills in the x-ray lab. The student will be able to discuss and demonstrate appropriated medicolegal ethics and the characteristics of professional behavior while engaging in professional communication techniques. Additionally, the student will establish progressions in the demonstration of positive values and a commitment to diversity, equity, and inclusion. Furthermore, the student will establish progressions in demonstrating elements of procedural performance and radiation protection, while advancing in the requisite quantity of requirements for clinical competency. Upon the completion of the students' clinical course progression, the student will demonstrate consistent progression towards clinical competence.

**Prerequisite:** RAD 2304.

**RAD 2414 Clinical Radiography – 4 credits**

Each clinical practicum will build on the previous clinical courses. The focus is on continuing to develop skills to become highly skilled, compassionate, health care professionals. The clinical portion of the Radiography program will allow students the opportunity to observe, participate and demonstrate (advancing) skills in radiographic procedures and studies within the hospital and/or clinic setting as well as review, practice and simulate basic radiographic procedures and skills in the x-ray lab. The student will be able to discuss and demonstrate appropriated medicolegal ethics and the characteristics of professional behavior while engaging in professional communication techniques. Additionally, the student will establish progressions in the demonstration of positive values and a commitment to diversity, equity, and inclusion. Furthermore, the student will establish progressions in demonstrating elements of procedural performance and radiation protection, while advancing in the requisite quantity of requirements for clinical competency. Upon the completion of the students' clinical course progression, the student will demonstrate consistent progression towards clinical competence.

**Prerequisite:** RAD2303.