

# RADIOLOGIC TECHNOLOGY ASSOCIATE OF APPLIED SCIENCE

This is a fall start program. Students must have all prerequisite course requirements completed in order to apply for the fall semester clinical part of the program.

Applications for the clinical part of the program are due in May, interviews occur in June, and students accepted to start the following fall semester.

## Mission Statement

The Radiologic Technology program provides excellence in academic programs and access to qualified students. The Radiologic Technology program provides instruction in the knowledge and skills needed to deliver entry level medical imaging. The knowledge and skills acquired will enable success and achievement for students competing in an ever changing, technologically diverse environment and will provide preparation for regional, national, and global markets. We strive, by example, to instill in each student our philosophy, civic leadership skills, an interest in life-long learning, and a commitment to service. Serving a unique blend of urban and rural health educational needs in the southeastern Yellowstone region of Montana, we will work with the community to promote intellectual and educational excellence.

## Vision Statement

The Radiologic Technology program envisions creating an inviting environment that serves students by being responsive, adaptive, and innovative through a proactive approach to present and future needs. The program's use of advanced technologies and our close affiliation with local hospitals and clinics provide a strong base for excellence in education and becoming a leader in post-secondary education.

Radiology is the art and science of using radiation to produce images of the body for use in diagnosing medical problems. This program will train students to apply modern principles of radiation exposure, radiation protection, and human anatomy and physiology to produce radiographic images. Students will learn how to manipulate x-ray equipment and to position patients to produce high quality diagnostic images. They will also learn how to assist and educate patients before, during, and after radiographic procedures.

Students will study clinical radiographic applications in a hospital radiology department. Computer skills applicable to radiographic requirements will be examined in detail. Students will also learn proper care and maintenance of patient records in accordance with applicable regulations.

Upon graduation, students will be prepared to take the certification examination administered by the American Registry of Radiologic Technologists (ARRT).

Graduates can find career positions in clinics, hospitals, physician's offices, and mobile units, as well as in research, public health, industry, and in sales of radiographic equipment. See our website at [www.msubillings.edu/careers](http://www.msubillings.edu/careers) (<http://www.msubillings.edu/careers/>) for graduate data.

## Technical Standards

Students must possess the following:

- Ability to communicate with a diverse population and the ability to be easily understood. Reading, writing, and documenting patient information accurately is required.
- Analytical skills sufficient to process information, to transfer knowledge from one situation to another, and to prioritize tasks.
- Critical thinking ability sufficient for safe, clinical judgment.

- Auditory abilities sufficient to monitor and assess patient needs; to detect and respond to alarms, emergency signals, and calls for help.
- Visual ability sufficient for observation and assessment necessary for the care of patients, processing of medical images, and operation of imaging and medical equipment.
- Tactile ability sufficient to assess patients, perform procedures, and operate equipment.
- Physical ability, flexibility, strength, and stamina sufficient to provide safe and effective care.
- Fine motor abilities sufficient to provide safe and effective care.
- Emotional and mental stability sufficient to establish therapeutic boundaries, to perform multiple tasks concurrently, and to react calmly and effectively in a stressful environment.

## Special Admission Procedures

All individuals applying for admission to the Radiologic Technology program must complete the prerequisite semester. **However, due to limited clinical space, only 12 to 14 students per year will be selected to continue in the clinical portion of the program which begins each fall semester.**

The following criteria will be used to select those Radiologic Technology students who will continue into the clinical portion of the program. The selection process is divided into two phases. Phase I will be applied to all applicants. Only the top 20-22 applicants will move to Phase II of the selection process.

### Phase I Point System

Points will be awarded for categories from the completed Radiologic Technology application form such as:

1. Grade point average in prerequisite semester courses
2. Hospital site visit and answers to site visit questions
3. Prior medical and work experience
4. Degrees and education
5. Written essay
6. Letters of reference

### Phase II Personal interviews

The personal interview portion of the selection process will involve answering a series of questions from a radiologic technology selection committee. All applicants will be asked the same questions. Follow-up questions may be asked. Only those students selected by the committee will continue in the clinical portion of the Radiologic Technology Program. The decision of the selection committee is final.

## Required Prerequisite Courses

Code	Title	Credits
AHMS 144	Medical Terminology	3
BIOH 201 & BIOH 202	Human Anatomy & Physiology I and Human Anatomy & Phys I Lab	4
CAPP 120	Introduction to Computers	3
M 114 or M 105	Extended Technical Mathematics Contemporary Mathematics	3
WRIT 122 or WRIT 121	Intro to Business Writing Intro to Technical Writing	3

## Recommended Prerequisite Courses

Code	Title	Credits
BIOH 211	Human Anatomy & Physiology II	3
PHSX 103	Our Physical World	3

## Program Learning Outcomes

Upon successful completion of this program, students will be able to:

- Employ proper positioning skills.
- Generate diagnostically useful radiographs.
- Integrate critical thinking skills in the practice of diagnostic radiography.
- Adapt routine positioning protocols to accommodate to patient conditions.
- Utilize effective oral communication skills with patients and healthcare staff.
- Apply effective written communication skills with peers and program faculty/staff.

## Required Courses

Code	Title	Credits
AHXR 101	Patient Care in Radiology	3
AHXR 108	Intro to Radiologic Physics	3
AHXR 150	Radiological Technology I	3
AHXR 151	Radiology I Positioning Lab	1
AHXR 160	Radiological Technology II	4
AHXR 161	Radiology II Positioning Lab	1
AHXR 181	Radiology III Positioning Lab	1
AHXR 195	Clinical Radiolgy Intersession	1
AHXR 195A	Radiographic Clinical I	5
AHXR 195B	Radiographic Clinical II	5
AHXR 195C	Radiographic Clinical III	9
AHXR 225	Radiobiology/Radiation Ptrctn	3
AHXR 250	Radiological Technology III	4
AHXR 260	Radiological Technology IV	2
AHXR 270	Radiographic Registry Review	2
AHXR 295A	Radiographic Clinical IV	7
AHXR 295B	Radiographic Clinical V	7
BIOH 201	Human Anatomy & Physiology I	3
BIOH 202	Human Anatomy & Phys I Lab	1
AHMS 144	Medical Terminology	3
CAPP 120	Introduction to Computers	3
COMX 106	Comm in a Dynamic Workplace	3
M 114	Extended Technical Mathematics	3
or M 105	Contemporary Mathematics	
WRIT 122	Intro to Business Writing	3
or WRIT 121	Intro to Technical Writing	
<b>Total Minimum Credits</b>		<b>80</b>

*Students should check the course descriptions for required prerequisites.*

## Required Prerequisite Courses

Code	Title	Credits
AHMS 144	Medical Terminology	3
BIOH 201 & BIOH 202	Human Anatomy & Physiology I and Human Anatomy & Phys I Lab	4

CAPP 120	Introduction to Computers	3
M 114	Extended Technical Mathematics	3
or M 105	Contemporary Mathematics	
WRIT 122	Intro to Business Writing	3
or WRIT 121	Intro to Technical Writing	

## Recommended Prerequisite Courses

Code	Title	Credits
BIOH 211	Human Anatomy & Physiology II	3
PHSX 103	Our Physical World	3

## Suggested Plan of Study

Code	Title	Credits
Prerequisite Semester		
AHMS 144	Medical Terminology	3
BIOH 201	Human Anatomy & Physiology I	3
BIOH 202	Human Anatomy & Phys I Lab	1
WRIT 121	Intro to Technical Writing	3
or WRIT 122	Intro to Business Writing	
CAPP 120	Introduction to Computers	3
M 114	Extended Technical Mathematics	3
or M 105	Contemporary Mathematics	
<b>Total</b>		<b>16</b>
First Semester (Fall)		
AHXR 101	Patient Care in Radiology	3
AHXR 108	Intro to Radiologic Physics	3
AHXR 150	Radiological Technology I	3
AHXR 151	Radiology I Positioning Lab	1
AHXR 195A	Radiographic Clinical I	5
<b>Total</b>		<b>15</b>
Intersession		
AHXR 195	Clinical Radiolgy Intersession	1
Second Semester (Spring)		
AHXR 160	Radiological Technology II	4
AHXR 161	Radiology II Positioning Lab	1
AHXR 195B	Radiographic Clinical II	5
AHXR 225	Radiobiology/Radiation Ptrctn	3
<b>Total</b>		<b>14</b>
Summer Session		
AHXR 181	Radiology III Positioning Lab	1
AHXR 195C	Radiographic Clinical III	9
<b>Total</b>		<b>10</b>
Third Semester (Fall)		
AHXR 250	Radiological Technology III	4
AHXR 295A	Radiographic Clinical IV	7
COMX 106	Comm in a Dynamic Workplace	3
<b>Total</b>		<b>14</b>
Fourth Semester (Spring)		
AHXR 260	Radiological Technology IV	2
AHXR 270	Radiographic Registry Review	2

AHXR 295B	Radiographic Clinical V	7
Total		11