

# **BACONE COLLEGE**

Billie R. Tower

**Bachelor of Science in Medical Imaging  
(BSMI)**

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**Bacone College**  
**Radiologic Sciences**  
**Bachelor of Science in Medical Imaging**  
An Online Degree Completion Program

Medical imaging is an exciting and dynamic field of study, which employs radiation generating machines and associated equipments to produce images of internal body structures. These images contain the vital information needed by the physician for patient diagnosis.

Bacone College baccalaureate degree in Medical Imaging is a non-clinical-based, degree-completion program, designed for credentialed, practicing, medical imaging professionals. The program combines on-line with limited traditional classroom delivery methods. This combination offers the flexibility needed by practicing professionals to expand their educational horizon. The program offers certified professionals, who hold an associate degree from a JRCERT accredited institutions of higher learning (in radiologic technology or in any medical imaging science) an opportunity to complete the BS degree in three or more semesters. Prospective students who meet admission requirements will be admitted unconditionally while those who have deficiencies may be granted provisional admission to enable them complete the requirements before starting the program.

### **Career Opportunities**

Surveys project that employment in radiation sciences will grow faster than the average for other US occupations by year 2010 and beyond, as a result of the growing US population, increasing longevity, and the increasing demand for medical imaging and therapeutic services. Job growth in medical imaging is also attributed to increasing emphasis or shift towards outpatient care. Technological innovations and advances in medical imaging now permit the performance of more (and delicate) procedures outside the hospital environment, in outpatient clinical settings. As more health care institutions, outpatient clinics, and imaging centers open up, medical imaging professionals holding higher degrees, and those skilled in the art of management and supervision, will be needed to manage and supervise employees at these facilities.

Presently, there are limited number of medical imaging professionals trained at the BS degree level. The majority of imaging professionals are trained at the associate degree and certificate levels. Medical imaging professionals who hold a BS degree experience faster career advancement than those holding a certificate or the associate degree. Bacone College bachelor of Science degree in Medical Imaging will enable program graduates to enhance their career in administration, management, and supervision of employees in medical imaging departments. It will also give professionals interested in college teaching the opportunities to pursue and enhance their career in the academic arena. A Bachelor of Science degree in Medical Imaging will also prepare professionals to pursue more advanced degree programs in radiation sciences and other disciplines.

## Admission Requirements

To qualify for unconditional admission, prospective students must:

1. Hold an associate degree in medical imaging or radiation sciences (Nuclear Medicine, Radiography, Sonography, Echocardiography, Cardiovascular Technology, or Radiation therapy.
2. Submit official transcripts from all colleges attended
3. Achieve a minimum of 2.50 overall GPA on a 4.00 scale
4. Provide current evidence of professional certification by recognized credentialing agencies or proof that you are registry eligible.
5. Submit application for admission to Bacone College and the BS program in Medical Imaging. Applications may be completed online.

All application material should be submitted to Bacone College admissions office.

<b>Curriculum Overview</b>	<b>Credit Hrs.</b>
<b>A. *General Education Core</b>	<b>36</b>
<b>B. **Liberal Arts Guided Electives</b>	<b>9</b>
<b>C. Credit for Associate Degree in Radiation Sciences</b>	<b>37</b>
<b>D. Bachelor Degree, Medical Imaging, Major Core 33 hrs.</b>	
i. MDI 3113 Principles of Medical Imaging Sciences	3
ii. MDI 3213 Digital Imaging Principles	3
iii. MDI 3323 Advanced Radiobiology and Radiation Protection	3
iv. MDI 3413 Quality Management In Health Care	3
v. MDI 4113 Public Health Services in Contemporary Society	3
vi. MDI 4123 Medical Imaging Administration & Supervision	3
vii. MDI 4213 Clinical Instruction and Mentoring	3
viii. MDI 4223 Medical Imaging Seminar	3
ix. MDI 4313 Introduction to Research	3
x. MDI 4323 Special Studies in Medical Imaging	3
xi. MDI 4324 Advanced Human Anatomy, Physiology, & Pathophysiology	4
<b>E. Area of Concentration/Guided Electives (Upper Division) (Administration, Management, Supervision, or Education)</b>	<b>9</b>
<b>Total</b>	<b><u>125</u></b>

**Although the BS degree in Medical Imaging requires a total of 124 credit hours to complete, most graduates of JRCERT accredited institutions may have fulfilled items A, B, and C above. These students would only be required to complete the Major Core (D) and the Area of Concentration (E), a total of 42 credit hours, for the BS degree in Medical Imaging.**

A student may complete the **Area of Concentration/Guided Elective Courses (E)** at Bacone College, or with permission, at any accredited college or university and transfer the credits to Bacone College. A minimum of three semesters are required to complete the BS degree program, and the student must achieve and maintain a minimum GPA of 2.50 (on a 4.00 scale) in order to continue course work and graduate. Upon successful completion of all degree requirements, the student will receive the Bachelor of Science degree in Medical Imaging

**\*General Education Core                      Credit Hours**

English Composition I and II	6
Speech/Logic	3
Religion	3
Natural Science	4
U.S. History	3
Logic/Speech	3
Health Education	2
Math	3
Introduction to Major	3
American Indian Studies	3
Aesthetic/Social Science	<u>3</u>
<b>Total</b>	<b>36</b>

**\*\*Liberal Arts Guided Electives              Credit Hours**

Political Science/Sociology	3
Literature	3
Art or Theatre	<u>3</u>
<b>Total</b>	<b>9</b>

**BS Degree in Medical Imaging  
Course Sequence**

**First Semester**

MDI 3113	Principles of Medical Imaging Sciences	3	
MDI 3213	Digital Imaging Principles and Evaluation	3	
MDI 4113	Public Health Services in Contemporary Society	3	
MDI 4223	Medical Imaging Seminar	3	
	Area of Concentration/Guided Elective	3	
	<b>Total</b>	<b>15</b>	

**Second Semester**

MDI 3323	Advanced Radiobiology and Radiation Protection	3	
MDI 4123	Medical Imaging Administration & Supervision	3	
MDI 3413	Quality Management In Health Care	3	
MDI 4313	Introduction to Research	3	
	Area of Concentration/Guided Elective	3	
	<b>Total</b>	<b>15</b>	

**Third Semester**

MDI 4213	Clinical Instruction and Mentoring	3	
MDI 4323	Special Studies in Medical Imaging	3	
MDI 4324	Advanced Human Anatomy, Physiology, & Pathophysiology	4	
	Area of Concentration/Guided Elective	3	
	<b>Total</b>	<b>13</b>	

## Course Descriptions

<b>MDI 3113</b>	<b>Principles of Medical Imaging Sciences</b>	<b>3 Hour</b>	
An expanded and detailed overview of the underlying principles of medical imaging sciences and associated modalities, including historical developments of the profession			
<b>MDI 3213</b>	<b>Digital Imaging Principles</b>	<b>3 Hours</b>	
An introduction to the basic principles of digital imaging with emphasis on digital radiography, computed radiography, digital fluoroscopy, Picture Archiving and Communication Systems (PACS), Radiology Information System (RIS), Hospital Information System (HIS) and associated equipments, Prerequisite: MDI 3113			
<b>MDI 3323</b>	<b>Advanced Radiobiology and Radiation Protection</b>	<b>3 Hours</b>	
A detailed study of the effects of ionizing radiation on human at the atomic, molecular, cellular, tissue, systemic, and organismic levels, with emphasis on radiation protection principles and practice. MDI 3113			
<b>MDI 3413</b>	<b>Quality Management In Health Care</b>	<b>3 Hours</b>	
A study of the concepts of quality control, quality assurance, and total quality management in medical imaging and healthcare institutions. Course will emphasis techniques and guidelines for designing, implementing, evaluating, and improving quality management practices in healthcare and medical imaging departments.			
<b>MDI 4113</b>	<b>Public Health Services in Contemporary Society</b>	<b>3 hours</b>	
A study of the history and development of public health services, with emphasis on the regulation, financing, supply, demand, and the methods of delivering health services in contemporary society.			
<b>MDI 4123</b>	<b>Medical Imaging Administration &amp; Supervision</b>	<b>3 Hours</b>	
A study of the principles of organization, management, and leadership, as they pertain to the administration and supervision of a medical imaging department. Prerequisite: MDI 3113			
<b>MDI 4213</b>	<b>Clinical Instruction and Mentoring</b>	<b>3 Hours</b>	
An introduction to the principles and practice of clinical education through discussion of relevant educational philosophies. Purpose is to stimulate participants' involvement in the teaching, supervising, and mentoring of medical imaging students in a clinical environment.			
<b>MDI 4223</b>	<b>Medical Imaging Seminar</b>	<b>3 Hours</b>	
A course that provides a forum for the discussion, exploration, and analysis of current issues and trends in the medical imaging profession. Seminar discussions encompass diagnostic, therapeutic, clinical education, administrative, management, supervisory and other issues. Prerequisite: MDI 3113 and MDI 4113			

<b>MDI 4313</b>	<b>Introduction to Research</b>	<b>3 Hours</b>	
An introduction to basic quantitative and qualitative research design and methods used to investigate phenomena in medical imaging and allied health professions. Prerequisite: MDI 3113.			
<b>MDI 4323</b>	<b>Special Studies in Medical Imaging</b>	<b>3 Hours</b>	
A course that gives participants the opportunity to investigate a phenomenon or conduct a detailed literature survey on a given topic or area of interest in the medical imaging and allied health professions. Prerequisite: MDI 4313			
<b>MDI 4324</b>	<b>Advanced Human Anatomy, Physiology, &amp; Pathophysiology</b>	<b>4 Hours</b>	
A study of regular and cross-sectional anatomy, in addition to normal physiology and pathophysiology of selected body systems			

**BACONE COLLEGE  
APPLICATION FOR ADMISSIONS  
HEALTH SCIENCES**

This supplemental application, physical requirements and disclosure statement must be submitted to the Office of Admissions for candidacy into the School of Health Sciences.

**Please check the academic program you are applying for:**

- \_\_\_\_\_ Radiography (Priority deadline February 1)
- \_\_\_\_\_ Sonography (Priority deadline February 1)
- \_\_\_\_\_ Medical Imaging (BS) (deadline two weeks before start of semester)

Please list your academic credentials relating to the School of Health Sciences programs.

<u>Degree or certification</u>	<u>School Name</u>	<u>Date of Graduation</u>
_____	_____	_____
_____	_____	_____

If additional space is needed, please attach a separate page.

**Have you taken any of the following courses? (High school or College level)**

<b>Math:</b>	Intermediate Algebra	When: _____	Where: _____	Grade: _____
	College Algebra	When: _____	Where: _____	Grade: _____
<b>Science:</b>	Anatomy & Physiology I and II (must be within the last 5 years)	When: _____	Where: _____	Grade: _____
		When: _____	Where: _____	Grade: _____
	Biology	When: _____	Where: _____	Grade: _____
	Chemistry	When: _____	Where: _____	Grade: _____
<b>Other:</b>	_____	When: _____	Where: _____	Grade: _____
	_____	When: _____	Where: _____	Grade: _____
	_____	When: _____	Where: _____	Grade: _____

**If you feel that your scholastic performance to date is not a true indication of your ability, please use the space below to explain.**

**Please list any health related experience that you have. (Indicate the length of work at each position, if applicable).**

**Why do you wish to pursue a degree from the School of Health Sciences at Bacone?**