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MEDICAL IMAGING A.S. DEGREE PROGRAMS

FALL 2011 PROGRAM

Program Summary
The Medical Imaging Program prepares students in four different Associate in Science Degree options:

- The full-time **Cardiac Sonography Option** – 24 months in duration
- The full-time **General Sonography Option** – 24 months in duration
- The full-time **Medical Radiography Option** – 21 months in duration
- The part-time **Medical Radiography Option** – 35 months in duration

The program prepares students for entry-level positions in the respective fields. Graduates are eligible to apply to take the American Registry of Radiologic Technologists Exam (Medical Radiography) or the American Registry of Diagnostic Medical Sonography Exam (Sonography Options). Medical Radiography graduates are also eligible to apply to take the Massachusetts State Licensing Examination.

Admissions Process
Applications with all supporting documents will be accepted from October 1, 2010 through January 7, 2011 in room B203 (Admissions and Registration Counter in the main lobby) during the following hours: Monday 9-6, Tuesday 9-4, Wednesday 9-6, Thursday 11-4, and Friday 9-3. You must meet with an admissions counselor to confirm completion of all prerequisites. **Only students who meet with an admissions counselor and complete an Internal Application for Healthcare Programs will be reviewed for admission into the Medical Imaging Programs. Applications received by mail will not be accepted. THERE WILL BE NO EXCEPTIONS MADE.**

You must submit proof that you have completed all the *pre-requisites outlined below when you submit your application.* (Supporting documents include: high school transcript/GED, college transcript(s), and a completed Massachusetts Community College In-State Tuition Eligibility Form). Incomplete applications will not be accepted.

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PRE-REQUISITES ARE:

- ☐ **MAT 192 or higher**
- ☐ **BIO 203** - **Anatomy/Physiology I/Lab** (A&P I must have been taken within the last 5 years). BHCC requires BIO101, BIO108 or BIO195 as a prerequisite for BIO203.

Both of the above courses must be completed with a grade of "C" or above to qualify.

- ☐ Achieve a score of **10.0 or above in Reading Comprehension** (RDG) on the Computerized Placement Test (CPT).
- ☐ **Attend a *mandatory* Medical Imaging Information Session**. (Sessions are arranged by the Medical Imaging Department each semester.)

OTHER DOCUMENTS REQUIRED FOR APPLICATION TO MEDICAL IMAGING PROGRAMS INCLUDE:

- ☐ A completed admissions application. New and transfer students should select General Concentration: Pre-Cardiac Sonography; General Concentration: Pre-General Sonography; General Concentration: Pre-Medical Radiography; or General Concentration: Pre-Medical Radiography as their major.
- ☐ A high school diploma or GED certificate
- ☐ Massachusetts Community College In-State Tuition Eligibility Form

IMPORTANT FINAL STEP

- ☐ **Complete an Internal Application for Healthcare Programs**–Upon completion of all of the above items, meet with an admissions representative in Room B203 (Admissions and Registration Counter in the main lobby) to fill out an Internal Healthcare Program Application. Only after completing this form will you be eligible for review for this program. Incomplete applications will not be accepted.

Do not mail applications. Applications received by mail will not be accepted.

Following the application process, top-scoring applicants for each option will be invited to interview with the Medical Imaging Admissions Committee.

If pre-requisites are not yet completed, applicants may apply to one of the following programs: General Concentration: Pre-Cardiac Sonography; General Concentration: Pre-General Sonography; General Concentration: Pre-Medical Radiography; or General Concentration: Pre-Medical Radiography

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Interested in Medical Imaging?

IMPORTANT QUESTIONS TO ASK YOURSELF AS YOU EXPLORE Medical Imaging careers..

- Have I researched the different careers in Medical Imaging?
- Do I like using computers and working with new technology?
- Have I visited a hospital to observe the work of a technician in the Imaging department?
- Do I enjoy working with people? This would include persons on a medical care team and patients at all levels of illness, working with people of all cultural and economic backgrounds.
- Do I find subjects such as human anatomy and physics interesting?
- Do I like reading about the latest advances in medical care? Do I enjoy reading technical information?
- Am I committed to achieving high grades which will result in a high GPA? Do I have good study skills, particularly good reading and critical thinking skills?
- Am I considering Medical Imaging only because I like working with computers?
- If accepted into an Imaging program, will I have the time management skills to incorporate the academic program requirements into my life obligations?

(Please be aware that all the Medical Imaging academic programs will have classes that meet during the fall, spring, and summer semesters. (Cardiac Sonography and General Sonography options are considered full-time day programs of study. However, Medical Radiography has both a full-time and a part-time option*)

CAREER POSSIBILITIES IN MEDICAL IMAGING:

In almost all of these jobs, you'll learn to use computers to acquire and manipulate images.

Radiographers use radiation (x-rays) to produce black-and-white images of anatomy. Upon graduation medical radiography students are prepared for entry-level work in general radiography. However, with experience graduates may elect to continue their professional growth by advancing into specialty modalities such as CT, MRI, Mammography or Interventional Procedures." **Computed Tomography (CT)** uses a rotating x-ray to look at "slices" of anatomy within the body which aids physicians in examining the inside of organs. **Magnetic resonance imaging (MRI)** is another diagnostic technique that is most commonly used to image the brain, spine, thorax, vascular system and musculoskeletal system. **Mammography** is diagnostic imaging of breast tissue, and Interventional Procedures include studies such as angiography and angioplasty.

Sonographers use sound waves to obtain images of organs and tissues in the body. Sonography is a diagnostic medical procedure that can be used to examine many parts of the body, such as the abdomen, breasts, female reproductive system, prostate, heart, and blood vessels. **Cardiac Sonographers** perform diagnostic procedures that detect heart disease, heart attack, and vascular disease that can lead to stroke.

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WHAT IMAGING PROFESSIONALS SAY THEY LIKE & DISLIKE

The best way to research the Imaging profession is to "shadow" or observe technicians as they work. You are also required to attend a Medical Imaging information session where you can learn about the field. It may also be helpful to read about the different types of jobs within the Imaging profession as you explore your career options. Consider the following summary of likes and dislikes identified by actual technicians working in their field (adapted from DISCOVER program – BHCC Career Office)

LIKES	DISLIKES
• Working with patients	• Lifting and moving heavy patients
• Giving tests that are painless and harmless	• Standing for long periods of time
• Good pay	• Possibility of evening and weekend work
• Challenges you may face in the workplace	• Being on call
• Possibility of evening and weekend work	• Emergencies and last minute schedule changes
• Good advancement opportunities	• High cost of insurance

SAMPLE of PROGRAM courses

Cardiac Sonography
(full-time days)

- Patient Care in Medical Imaging
- Intro to Ultrasound
- Echo (4 semesters)
- Ultrasound Instrumentation
- Vascular Ultrasound
- Interpretation (2 semesters)
- Related Pharmacology
- Advanced Interpretation
- College Writing I and II
- Anatomy and Physiology I and II
- Concepts/Applications
- **Cardiac Sonography Clinical** (3 semesters)

General Sonography
(full-time days)

- Patient Care in Medical Imaging
- Intro to Ultrasound
- Ultrasound Instrumentation
- Cross-Sectional Anatomy
- Abdominal Ultrasound
- Ultrasound Scanning Protocols & Pathology
- Principles of Gynecology
- Associated Procedures in DMS
- Diagnostic Instrumentation
- Principles of Obstetrics
- Sonographic Subspecialties
- Advanced General Sonography
- College Writing I & II
- Anatomy and Physiology I & II
- Behavioral Science Elective
- Concepts/Applications
- **General Sonography Clinical** (4 semesters)

Medical Radiography
(full-time day & part-time evening program)

- Patient Care in Medical Imaging
- Intro to Medical Radiography
- Positioning I, II & III
- Pharmacology of Radiology
- Radiation Protection
- CT/ Cross Sectional Anatomy
- Advanced Medical Radiology Seminar
- College Writing I & II
- Anatomy and Physiology I & II
- Concepts/Applications
- Principles of Sociology
- **Medical Radiography Clinical*** (5 semesters)

* during the part-time evening program Clinical 4 and 5 are during the day)

RESOURCES TO GET MORE INFORMATION

Bunker Hill Community College Career Center (Room: M101- *for current students only*):
Our professional staff of career counselors is available to assist in career exploration. Office also has DISCOVER, a computer based career program that overviews different careers and has short videos on certain career choices.

Requirements are subject to change
Revised April 5, 2010

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RELATED BOOKS

Opportunities in Medical Imaging Careers by Clifford J. Sherry

Patient Care in Radiography by Ruth Ann Ehrlich, Ellen Doble McCloskey, and Joan A. Daly

Clinical Sonography: A Practical Guide by Roger C Sanders

RADIOLOGY CAREER WEBSITES

Careers in Radiology
http://www.radiologyinfo.org/content/careers/careers_diag.htm#technologist

US Dept. of Labor, Occupational Outlook Handbook
http://www.bls.gov/oco/print/ocos105.htm

Who Are Radiologic Technologists? (American Society of Radiologic Technologists)
http://www.asrt.org/content/RecruitmentandRetention/RecruitmentTools/Career_Brochure.aspx
http://www.asrt.org/content/RecruitmentandRetention/Profiles/Profiles.aspx

Career Ladder Beyond The Entry Level Staff Radiographer
http://www.tmcc.edu/x-ray/career.asp

GENERAL and CARDIAC SONOGRAPHY CAREER WEBSITES

Ultrasound Careers http://www.ultrasoundcareers.org/why.html

US Dept. of Labor, Occupational Outlook Handbook
General Sonography http://www.bls.gov/oco/print/ocos273.htm
Cardiac Sonography http://www.bls.gov/oco/print/ocos100.htm

Association of Medical Ultrasound http://www.aium.org/

American Society of Echocardiography at www.asecho.org

What is Sonography? (Society of Diagnostic Medical Sonography) http://www.sdms.org/public/career.asp