



HOWARD
COMMUNITY COLLEGE

You Can Get There From Here.

RADIOLOGIC TECHNOLOGY
AT
HOWARD COMMUNITY
COLLEGE

November 2011

Radiologic Technology

Howard Community College began the Radiologic Technology Associate of Applied Science Degree Program during the summer of 2008. Admission to the clinical portion of the program is selective with a specific number of clinical seats available. Admissions policies and procedures for the program's clinical component are reviewed in this booklet. Please be sure you have the most recent version of this publication.

Students interested in Radiologic Technology should work closely with the Office of Admissions and Advising and select “Radiologic Technology” as their learning program (learning program code 238) on HCC’s Standard Application. Further information is available by visiting or contacting the office directly (RCF-242; alliedhealth@howardcc.edu; 443-518-4230; TTY users dial 711 for the Maryland Relay) or on the Office of Admissions and Advising's website at www.howardcc.edu/admissions. A link for the office’s hours can be found on the right-hand side of this web page. Information sessions will also be available throughout the year, and will also be announced on the web.

Radiologic Technology is a limited-enrollment, selective admissions program. Students who meet the qualifications for admission to the clinical portion of the program are not automatically guaranteed a seat for the clinical year in which they initially apply; however, a waiting list will be maintained. We encourage students to consider declaring a second major, such as General Studies, General Studies-Science Emphasis, or Pre-Allied Health in order to be able to continue toward a degree at Howard Community College.

Please note that all proposed procedures, dates, costs and requirements are subject to change.

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FREQUENTLY ASKED QUESTIONS

WHAT IS RADIOLOGIC TECHNOLOGY?

Radiologic Technology is a medical specialty (within the general field of Radiologic Science) which uses ionizing and non-ionizing radiation to produce images of the tissues, organs, bones and vessels that comprise the human body. These images can be recorded on film or displayed on a video monitor. As opposed to Radiation Therapy, which is used in the treatment of disease, Radiologic Technology produces images which enable the physician to examine virtually any part of the human body.

WHAT IS A RADIOLOGIC TECHNOLOGIST?

A radiologic technologist (RT) or radiographer operates the equipment used to produce radiographic images for the diagnosis of diseases. A radiographer uses his or her understanding of radiation, physics and human anatomy and physiology to produce high quality, permanent medical images through accurate positioning and the use of advanced technical and patient care skills. The images the radiographer produces are read or interpreted by a physician to diagnose injury and disease. To be an effective RT or radiographer, a student must acquire knowledge of radiologic technology theory and develop his or her skills as a radiographer under the direct supervision of a registered radiographer. Education for the radiography student integrates classroom, laboratory and clinical training.

WHAT IS THE EMPLOYMENT OUTLOOK FOR RADIOLOGIC TECHNOLOGISTS?

Most programs prepare students for entry-level employment as radiologic technologists or radiographers in a variety of settings including hospitals, clinics, medical offices, imaging centers, mobile imaging companies, research centers, government agencies, commercial sales and marketing and industry.

CAN RADIOLOGIC TECHNOLOGISTS ADVANCE FURTHER IN THE FIELD AFTER RECEIVING THE RT DEGREE AND CERTIFICATION?

With additional education and clinical experience, registered radiologic technologists can specialize in computer tomography (CT), magnetic resonance imaging (MRI), mammography, interventional radiography, sonography and other special procedures. All specialty imaging areas offer advanced certification exams given by the American Registry of Radiologic Technologists (ARRT). RTs are eligible to sit for advanced imaging exams one year after their initial certification.

Students wishing to advance their education level can also pursue a bachelor's degree in areas of liberal arts, management, business and education. Students may also pursue certification in radiation therapy, ultrasound or nuclear medicine with additional training at an accredited school. Certified radiologic technologists are eligible to apply for admission to HCC's Advanced Cardiovascular Imaging and Interventional Therapies Program. Graduates of this program may apply to take the examination in Cardiovascular-Interventional Technology to become a Cardiovascular Radiologic Technologist (CVRT) and a Registered Cardiovascular Invasive Specialist (RCIS). (Please note: Howard Community College also offers Cardiovascular Technology degree and certificate programs.)

ARE CERTIFICATE OPTIONS AVAILABLE IN THE RADIOLOGIC TECHNOLOGY PROGRAM?

The only program option is the college's A.A.S. degree program.

GENERAL PROGRAM INFORMATION

All students must apply for general admission to the college, selecting Radiologic Technology Associate of Applied Science (A.A.S.) as their learning program; program code 238. They should enroll in any prerequisite courses that may be required. Admission to the radiologic technology program's clinical coursework is selective, and is based on the number of seats available. If there are more applicants than available seats, a lottery will be held to seat the class. Legal residents of Howard County have limited priority.

REQUIRED COURSEWORK

To obtain the A.A.S. degree, students must complete:

- Fifteen credits of prerequisite course work
- Four credits of co-requisite course work
- Nine credits of specified general education core courses
- Forty-six credits of radiologic technology clinical courses

PROGRAM LENGTH

Students who attend full-time may be able to complete all general education and radiologic technology curriculum requirements in three years, including the clinical portion of the program. Once accepted into the clinical part of the program, students must take two years of rad tech course work, beginning in the summer and including summer and winter semesters in addition to major semesters. Students can expect to spend at least twenty-one hours per week in class and clinicals, and twelve to fifteen hours outside of the classroom studying. Students who transfer in all or most of their general education and prerequisite classes may be able to complete the program in less than three years; other students may take longer.

CLINICAL PROGRAM

The clinical portion of the radiologic technology program takes two years to complete. Lectures are typically scheduled during the daytime, but could also include evening meetings. The clinical schedule depends upon clinical site availability and course requirements; clinicals may be held in a variety of geographic locations during the daytime, evening and/or weekend.

Instruction in the clinical segment of the program is a combination of lecture, demonstration and laboratory activities. Students receive a comprehensive introduction to the major components of radiation biology and protection, which is reinforced throughout the entire curriculum. Students' knowledge and practical ability increase as they progress through the curriculum. During laboratory sessions, students practice positioning, equipment manipulation, patient transfer and vital sign assessment. They also perform various experiments to demonstrate the principles of radiographic exposure and quality assurance during testing procedures. Lectures and clinical education are further supplemented by a variety of required textbooks.

Over the course of the program, students rotate through different clinical education centers and sites which offer the students a full range of radiologic procedures to assist them in demonstrating and acquiring clinical competencies. Students are supervised at these sites by clinical instructors and on-site radiographers. These individuals are responsible for providing instruction and guidance to students throughout the clinical program.

Students will be placed at selected sites on a rotating basis. Students will also practice clinical skills with on campus x-ray equipment that produces ionizing radiation referred to as "campus-energized" equipment.

CURRICULUM

GENERAL EDUCATION COURSEWORK

The Radiology Technology A.A.S. degree program requires the completion of specific General Education Core courses, in addition to prerequisite and clinical coursework. General Education Core courses are not subject to any time limits. **Please note: science courses taken elsewhere with online labs may not transfer to HCC.**

General Education Core Courses Required for Radiologic Technology

Course	Course Name
ENGL-121	College Composition I: Expository Writing
PSYC-101	General Psychology
Arts & Humanities Core	Literature, Arts or Humanities Core Course

Please note: Although it is not required, it is highly recommended that students entering the program successfully complete all of their general coursework prior to beginning the clinical program to ease the course load in subsequent semesters. It is to the student's advantage to avoid taking additional courses while taking clinical coursework in the radiologic technology program.

PREREQUISITE & CO-REQUISITE COURSEWORK

HCC's Radiologic Technology degree program has prerequisite coursework that must be completed as a requirement of admission within specific time periods prior to applying for and being admitted to the clinical portion of the program.

PREREQUISITE COURSES

Students must successfully complete the following prerequisite courses **by February 15** to be considered for selection to the clinical portion of this program. All prerequisite courses must be completed with a grade of C or higher; students must earn a grade of A or B in *at least one* of the three prerequisite **SCIENCE** courses.

Course	HCC Course Number	Time Limit	Requirement
College-Level Math Core (Algebra-based)	MATH-141, 143 or higher	none	Prerequisite
General Biology <i>or</i> Microbiology	BIOL-101 <i>or</i> BIOL-107 <i>or</i> BIOL-200	10 years*	Prerequisite
Anatomy & Physiology I	BIOL-203	5 years*	Prerequisite
Anatomy & Physiology II	BIOL-204	5 years*	Prerequisite
Technical Physical Science	PHYS-101	10 years*	Co-requisite

CO-REQUISITE COURSEWORK FOR RADIOLOGIC TECHNOLOGY

Students applying for the clinical program are required to complete **PHYS-101 (Technical Physical Science)** with a grade of C or higher. This course is required as a co-requisite for the clinical program. Students who do not complete this course by the end of the Spring term must take PHYS-101 along with RADT-101 in the Summer if admitted to the clinical portion of the program.

***TIME LIMITS ON SCIENCE COURSES**

General Biology *or* Microbiology and Physics must be completed no more than ten years prior to beginning the first clinical Rad Tech course at HCC. If one or both of these courses are over ten years old, prior to applying to the Radiologic Technology program, you will need to successfully retake the expired course or otherwise demonstrate current knowledge – for example, via available HCC proficiency or challenge exams, CLEP exams, etc. If your Anatomy & Physiology (BIOL-203 and 204) courses are over five years old, you must either successfully retake the expired course(s) prior to applying to the Radiologic Technology program, or take the HCC competency exam to demonstrate mastery of this material. To be eligible for the

competency exam, a student's original course must have been completed with a grade of C or higher at an accredited institution; the course content must be equivalent to HCC's content. Upon passing the competency exam(s), credit will be granted for a student's original Anatomy & Physiology course(s). Students must submit the "Request to Take Anatomy & Physiology Competency Exams" form, available at the Office of Admissions and Advising, or online: www.howardcc.edu/admissions; select Important Forms.

CREDIT FOR PRIOR LEARNING

Students may receive credit at HCC for prerequisite and General Education courses completed at another accredited college or university, provided the course content is equivalent to HCC coursework. Students should complete and submit the Transcript Evaluation Request Form along with official copies of all college transcripts. This form is available in the Office of Admissions and Advising (RCF-242) and online at www.howardcc.edu/admissions; select Important Forms. Students submitting foreign transcripts are required to complete additional procedures and are encouraged to meet with an allied health advisor.

ADMISSIONS REQUIREMENTS AND PROCEDURES

Because the Radiologic Technology program is a selective admissions program, there are several steps required for admission. Before registering for courses at HCC, you must first be officially admitted to the college. General admission to the college is completed by submission of:

- HCC's Standard Application for Admission (available in paper format and online)
- \$25.00 college application fee
- Proof of home address
- Proof of immigration status, if applicable (original documents are required)

Completing this process results in general admission to HCC, but *does not* automatically guarantee admission to the clinical portion of the Radiologic Technology degree program.

Radiologic Technology is designated as a Health Personnel Shortage Incentive Grant Program (subject to change). Students who declare Rad Tech as their learning program are currently entitled to in-county tuition rates. Legal residents of Maryland may obtain this benefit by providing verification of their legal address with their application. Other procedures apply for non-Maryland residents. (Please note: International citizens in the United States on **F1** visas may not apply for admission to the Rad Tech program; students with *most* other immigration statuses may apply.) Though all legal residents of Maryland enjoy this tuition benefit, Howard County residents have initial preference for admission. State laws and policies regarding the Health Manpower Grant program and related tuition benefits are subject to change.

APPLICATION PROCESS

STEP 1:

Apply for general admission to Howard Community College. Declare Program Number 238 (A.A.S. Degree in Radiologic Technology) as your learning program on HCC's Standard Application. *Since this is a selective admissions program and you are not automatically guaranteed a seat in the clinical portion of the program, we encourage you to consider declaring a second major of either General Studies, General Studies-Science Emphasis, or Pre-Allied Health in order to be able to continue toward a degree at HCC.*

STEP 2:

Attend a Radiologic Technology Information Session at HCC. Dates will be posted on our website: <http://www.howardcc.edu/admissions/apply/alliedhealth/InfoSessions.html>.

STEP 3:

Meet individually with an HCC allied health admissions advisor to review the admissions process and required course work. For more information, you may contact HCC's Office of Admissions and Advising.

STEP 4:

Submit to HCC an *official* copy of your high school transcript, GED diploma, or Maryland External Diploma to verify high school completion, along with *official* copies of college transcripts from each institution previously attended (if applicable). Students must also submit a Transcript Evaluation Request Form along with any high school and college transcript(s). **Please turn in two weeks prior to the February 15 deadline.** This form is available in the Office of Admissions and Advising (RCF-242) and online: www.howardcc.edu/admissions; select Important Forms. Students submitting foreign transcripts are required to complete additional procedures and are encouraged to meet with an allied health advisor. All transcripts, including high school transcripts, **must** be received by February 1.

STEP 5:

Demonstrate eligibility for ENGL-121 (College Composition I: Expository Writing) by:

- Taking the English Placement Exam and placing into ENGL-121; **or**
- Successfully completing ENGL-121 (or equivalent) at another institution; **or**
- Achieving specific scores on the SAT or ACT exams; **or**
- Successfully completing developmental English courses required as a result of your scores on HCC's English Placement Exam.

STEP 6:

Submit a **Supplemental Application for Radiologic Technology Clinical Coursework** during the application period of **September 15 – February 15**. Applications will be available in the Office of Admissions & Advising, as well as on the web at: www.howardcc.edu/admissions. A \$25 supplemental application fee and two proofs of residency (see current application) must be submitted as well.

APPLICATION DEADLINE

The supplemental application for the Radiologic Technology A.A.S. degree program **must** be submitted to the Office of Admissions and Advising (RCF-242) between September 15 and February 15. **Please note: The February 15 deadline is final, and is strictly upheld. Students who are mailing in their applications are strongly urged to do so using the U.S. option of "return receipt requested".** The date on which your supplemental application is submitted has *no bearing* on your acceptance into the program as long as it is submitted by the deadline date. All transcripts and a Transcript Evaluation Request Form must be received by **February 1**.

SELECTION PROCESS

All applicants must have their prerequisite classes completed by February 15 and we will only consider Spring finishers if the class is not filled. This is a change in the past policy that allowed applicants to complete their prerequisites during the Spring term.*

A lottery will be held to select applicants for the clinical portion of the Radiologic Technology program, whenever the number of qualified new applicants exceeds the number of available seats. Applications may only be submitted between September 15 – February 15. All prerequisite coursework **must be completed by February 15** in order for a student to be eligible for the lottery.

Howard County residents are selected first; in-state, out-of-county residents are selected next; out-of-state residents are selected next; international citizens (F-1 students are not currently eligible to apply) are selected next. Once all seats have been filled, remaining qualified applicants will be assigned a waiting list number. If seats become available after the deadline for admitted students to register, waiting list students will be admitted into the program. The waiting list will be maintained for the subsequent clinical year.

CRIMINAL BACKGROUND CHECK AND DRUG SCREENING

All students enrolled in clinical portions of HCC’s allied health programs will be required to obtain a background check and drug screening as required for clinical placement. Policies and procedures for the drug screening are currently being developed. The criminal background check must be completed through the authorized services of Pre-Check, Inc. Please note that students are responsible for the cost of these screenings. The timeline for ordering this background check is very specific; students should *not* order this background check *until instructed to do so by a college official*.

The criminal background check will only need to be completed one time, as long as the student maintains continuous enrollment in the program. Students who incur any break in the sequence of study will be required to obtain a new criminal background check through Pre-Check, Inc., upon readmission or re-enrollment. *Students without a current criminal background check will not be eligible to participate in clinical courses.*

Clinical agencies grant approval or disapproval for the student to attend clinicals at that site based on their standards for the background check and drug screening. Clinical agencies have the right to deny access to any student whose results do not meet their acceptable minimum standards. *Students who have been deemed ineligible by the agencies affiliated with the course may not be able to progress to completion in the selected program of study.*

PROGRAM COSTS

For the 2011-2012 school year, in-county tuition is \$119/credit. The Consolidated Fee is \$19.93/credit. Course costs below include in-county tuition, consolidated fees and course fees. Figures are **estimates** only and are subject to change. Students will incur additional costs for any necessary developmental English and/or math courses, as well as for books each semester.

HCC Standard Application	\$25
Rad Tech Clinical Application	\$25
Criminal Background Check and Drug Screening	\$50
Uniform and Equipment	\$150
Prerequisite Science/Math Courses (19 credits)	\$2900
General Education Courses (9 credits)	\$1300
Clinical Courses (approximately 46 credits)	\$7200
Approximate Total Cost	\$11,650

PAY FOR COLLEGE

HCC offers financial assistance to allied health students through a variety of sources. Students may apply for financial aid from federal and state agencies. Financial aid from these sources includes grants, loans, and work study programs. To determine eligibility for these funds, students must complete both the Free Application for Federal Student Aid (FAFSA) and HCC's financial aid application by the priority deadline, March 1. Students may also apply for scholarships directly through HCC and the state of Maryland.

HCC recognizes that interested students may need more information about paying for college. The college has many services to help students manage college costs, including financial aid and a tuition payment plan. To find out more please visit our Paying for College website at: <http://www.howardcc.edu/pay>.

ADDITIONAL REQUIREMENTS FOR SELECTED APPLICANTS

Students must fulfill additional requirements after being selected for the clinical program. **Failure to complete these requirements may result in forfeiture of the clinical seat.**

Selected students must:

- **Attend a *mandatory* orientation in the Spring, prior to the start of the program.** (Students on the waiting list may also be required to attend this session.) During the orientation students will receive information on the Rad Tech curriculum, clinical sites, health certifications/CPR requirements and the criminal background check.
- **Submit the Health Examination Form.** Once a physician validates that the candidate meets the technical standards of good physical health, which are essential to the performance of radiography duties and responsibilities, and the department receives and concurs with the physician's certification, the candidate will be considered to have met the technical standard requirement.
- **Complete the American Heart Association's CPR for Health Care Providers.** This CPR certification must be valid throughout the duration of the clinical program.
- **Order a criminal background check through the services of PreCheck, Inc.** Students are responsible for ordering and paying for the background check and must submit a receipt. The timeline for ordering this background check is very specific; students should *not* order this background check until instructed to do so by a college official.
- **Purchase uniforms and other equipment.** Admitted students will receive information at orientation regarding the requirements for uniforms and basic equipment.

Please note that all proposed procedures, dates, costs and requirements are subject to change.

**RAD-TECH PROGRAM PLANNING SHEET
RADIOLOGIC (X-RAY) TECHNOLOGY A.A.S.
Program Number 238**

Catalog Year: 2011-2012

GENERAL EDUCATION CORE

Course Number	General Education Core	Credits Required	Credits Earned	Planning
ENGL-121	College Composition I: Expository Writing	3		
Arts & Humanities	Arts and Humanities Core Course (one course from either Literature, Arts or Humanities)	3		
PSYC-101	General Psychology	3		
BIOL-101 or BIOL-107	General Biology I or Fundamentals of Microbiology	4		Prerequisite
BIOL-203	Anatomy & Physiology I	4		Prerequisite
MATH-141	College Algebra (or higher)	3		Prerequisite

REQUIRED COURSES RELATED TO MAJOR

Course Number	Required Course	Credits Required	Credits Earned	Planning
BIOL-204	Anatomy & Physiology II	4		Prerequisite
PHYS-101	Technical Physical Science	4		Co-Requisite
RADT-101	Introduction to Procedures	4		Summer
RADT-111	Radiologic Procedures I	4		Fall
RADT-112	Clinical Radiography I	4		Fall
RADT-121	Radiologic Procedures II	3		Spring
RADT-122	Clinical Radiography II	4		Spring
RADT-123	Imaging Equipment and Modalities	3		Spring
RADT-212	Clinical Radiography III	6		Summer
RADT-231	Radiologic Procedures IV	4		Fall
RADT-232	Clinical Radiography IV	6		Fall
RADT-251	Radiation Biology & Protection	2		Spring
RADT-252	Clinical Radiography V	6		Spring
<i>Total Core Credits - minimum of 20 required for degree completion. Students are responsible for fulfilling all graduation requirements, including a 2.0 cumulative GPA in all coursework completed at HCC.</i>			Total Credits	74

Prerequisites for the Radiologic Technology program are based on the following:

- Completion of BIOL-101 or 107, BIOL-203 and BIOL-204 with grades of C or higher; at least one of these courses must be completed with a B or better; and completion of Math-141 (or higher) with a grade of C or higher

In addition:

- Anatomy and Physiology courses must be completed within five years prior to the first radiology course; if course work exceeds the five year limit, a student may take an exam(s) to demonstrate knowledge or retake the course
- BIOL-101 or 107 and PHYS-101 must be completed within ten years prior to the first radiology course
- **PHYS-101 must be completed along with the first radiology course if not completed prior to beginning the program**
- A grade of C or higher is required in all science, math and radiology courses

Contact the Office of Admissions and Advising to register for an Information Session regarding the Radiologic Technology Program

