Hello, and welcome to the information session for the Cardiovascular Interventional Radiology program at Austin Community College. My name is Adam Van Breems, I have worked with the faculty and staff in the diagnostic imaging department to design a program for radiographers interested in advancing their careers into the field of interventional cardiology. This program also supports those technologists currently working in the field who desire to prepare for the American Registry of Radiologic Technologists’ registry exam in Cardiovascular Interventional Radiography. This program was enacted to help meet the need locally and nationally for knowledgeable credentialed radiographers in cardiology.

This presentation will cover basic information about Cardiovascular Interventional Radiography, the role of the cardiovascular interventional radiographer in the healthcare team, program application, admission processes and resources for applicants and health science students. I am pleased that you are interested in this highly challenging and rewarding career field.
The Cardiovascular Interventional Radiology faculty members are Rudy Garza department chair, as well as myself, Adam Van Breems.
Our primary objective for this information session is to give a summary of the fundamental roles and responsibilities of the cardiovascular interventional radiographer upon entry into the field. We will also go over the documents and information that are required for admission into the program. Upon the conclusion of this information session you should be prepared to submit all of the documents necessary for admission to the Cardiovascular-Interventional program.
Detailed information covered in this information session can be found in the links located to the left of the information session content. If you have questions during the information session please press the pause button located in the lower left hand corner of the slide and write down your question. Contact information for health sciences and the Cardiovascular-Interventional Radiology program can be found at the conclusion of the information session, or you can click on the “contact us” link to left of the information session.
Invasive cardiology is the field of medicine that employs invasive percutaneous catheter delivery to diagnose a myriad cardiac diseases. One of the most common procedures is direct injection of the coronary arteries with contrast in order to corroborate the findings of noninvasive tests in the diagnosis of coronary artery disease. If found, lesions can often be fixed via percutaneous angioplasty and stenting.

The interventional cardiovascular radiographer is a key team member for these procedures. Cardiovascular-Interventional Technologists work with registered nurses helping prepare patients for procedures, as well as with invasive cardiologists during the procedures. Often radiographers will alternate between scrubbing in with the invasive cardiologist, and monitoring the procedure keeping a close eye on PT vitals as well as sampling hemodynamic data and performing hemodynamic calculations.

Invasive cardiologists are physicians who have undergone a 3 year internal medicine residency and a 2-3 year cardiology residency. These physicians can perform diagnostic cardiac studies. An interventional invasive cardiologist has undergone 1-2 years of additional residency training in order to fix cardiac disease processes.
Invasive cardiovascular procedures utilize ionizing radiation to image the structures of the heart via the selective injection of contrast media into the structures of interest using a small hollow plastic tube, called a catheter. Typically, the coronary arteries and the chambers of the heart are the areas of interest. Additionally, hemodynamic data is also gathered by passing a catheter into the chambers of the heart sampling pressure readings and analyzing waveform morphology. Access to the vascular system is gained through the skin and into either the arterial or venous system. After access, the catheters are placed into the respective regions of interest and imaging and hemodynamic data is gathered. In order to provide the patient with a safe clinical environment the Cardiovascular-Interventional Radiographer must possess strong communication skills, and be able to work well as a member of a multidisciplinary team. This modality is uniquely different from diagnostic imaging modalities in that after a diagnosis is made, the radiographer is then directly involved in the treatment process as they will be assisting the interventional cardiologist during the interventional phase of the procedure.
The Interventional Cardiovascular Radiographer has many responsibilities before during and after an invasive procedure. All team members are concerned with providing a safe environment for patients at all times, this means always being a patients’ advocate.

In the pursuit of patient safety and positive patient outcomes, a Interventional Cardiovascular Radiographer must ensure that all documentation is present and current prior to the procedure, to include patient labs, identification of allergies and any potential risks to the patient. If working in the scrub technologist role the Interventional Cardiovascular Radiographer prepares the patient for the procedure, establishes a sterile field and sterile procedure table, drapes the patient for the procedure and assists the cardiologist during the procedure.

Upon completion of the procedure, access site management is often left to the Interventional Cardiovascular Radiographer. If the Interventional Cardiovascular Radiographer is working in the capacity of the monitor technologist, they will ensure patient safety by monitoring vital signs. Additionally they will collect hemodynamic data and perform hemodynamic calculations using the hemodynamic monitoring computer such as valve areas, shunt calculations and cardiac outputs.
The CI program is comprised of 17 credit hours over the course of 2 semesters starting in the fall. The program is composed of a hybridized didactic portion which includes online content and lecture once a week on Tuesday evenings. For students currently employed in a cardiac catheterization laboratory there is no clinical requirement. Students who are not currently employed in a cardiac catheterization laboratory are required to participate in 768 clinical hours at various hospitals in the Austin metro area.

Clinicals will be held during the day from 6:30 a.m. until 3:30 p.m. on Monday, Wednesday, and Friday. The clinical coordinator places students at clinical sites and establishes a site rotation based on the types of procedures performed at those sites and the requirements of registry candidacy.

As you will be traveling to locations across Austin, it is necessary to have reliable transportation. Class seats are limited based on the number of students that can be safely placed at the clinical sites available.

Upon completion of the program, graduates will be prepared and eligible to take the ARRT national registry exam in Cardiovascular-Interventional Radiography. While the program offers no job placement service, students will be able to form relationships with prospective employers while on their clinical rotations.
The American Registry of Radiologic Technologists is the world’s largest organization that seeks to ensure high quality patient care in medical imaging. The ARRT tests and registers technologists and administers continuing education and ethics requirements for annual registration. If eligible, a student in the program may apply to take the credentialing examination. The student can take the examination at a designated computer center in many cities across the US.
If you have any of the following histories, it may disqualify you for a clinical rotation.

1. Registered sex offenders


3. Felony convictions

4. Felony deferred adjudications involving crimes against persons (physical and sexual abuse)
If you have any of the following histories, it may disqualify you for a clinical rotation.

5. Known or observed abuse or neglect of patients/clients/customers.
6. Observed or proven theft
7. Convictions of violent acts (misdemeanor or felony)
8. Misapplication of fiduciary property or property of a financial institution (Class A misdemeanor or felony)
9. Securing execution of a document by deception (Class A misdemeanor or felony)
10. Violence in the workplace.
11. Ineligibility for rehire

If an individual does meet one or more of these standards they may pursue a pre-eligibility application process with their licensing or registry body. If the licensing or registry body approves the individual to take the licensing or credentialing exam, the individual may participate in the clinical rotation.
The ARRT has a pre-eligibility application process. This application is available to potential students through the ARRT website. The application should be processed by a prospective student who is concerned about passing the criminal background check prior to consideration for admission. This must be performed initially to verify the prospective students eligibility to take the ARRT credentialing examination.
Health science programs have established technical standards and essential functions to ensure that students have the abilities required to participate and have the potential to be successful in all aspects of their respective programs. Students are required to perform these critical behaviors and essential functions for the Cardiovascular Interventional Radiography program as indicated.

The following technical standards and essential functions outline reasonable expectations of a student in the Cardiovascular Interventional Radiography program with a performance of common functions. The student must be able to apply the knowledge and skills necessary to function in the classroom and/or clinical situations while providing these essential competencies in Cardiovascular Interventional Radiography. These requirements apply for the purpose of ensuring that the applicant of the program is aware of program and profession characteristics.

Technical Standards and Essential Functions

- Observation
- Communication
- Motor Skills
- Intellectual
- Behavioral and Social Attribute
The student must demonstrate the following: Observation. The ability to participate actively in all demonstrations, laboratory exercise, and clinical experiences in the professional program component and to assess and comprehend the condition of all clients assigned to him/her for examination, diagnosis, and treatment. Such observation and information usually requires functional use of visual, auditory, and somatic sensations.
The visual acuity to discern small medical appliances ie. wires, balloons and stents.

The ability to see and function in a semi-dark setting, or in an environment where lights flash on and off rapidly.

The auditory acuity to hear varied tones accurately enough to follow physician directions without client compromise.
Communication:
Ability to communicate effectively in English using verbal, non-verbal and written formats with faculty, other students, clients, families and all members of the healthcare team.

Example:
The ability to communicate proficiently with patients and fellow members of the healthcare team in the English language.
Motor:
Sufficient motor ability to execute the movement and skills required for safe and effective care and emergency treatment.
Technical Standards Cont.

• **Examples:**
  - Fine motor skills to handle extremely small interventional wires, balloon catheters and stent catheters.
  - Ability to move C-arm and procedure table during invasive procedures.
  - The ability to lift and move immobile patients.

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Technical Standards Cont.

- **Intellectual:**
  Ability to collect, interpret and integrate information and make decisions.

- **Example:**
  The ability to assess physical and behavioral signs of emergent conditions displayed by clients that indicate the need for immediate medical attention.

  The ability to employ innovative methods of accommodating variations in client condition, practitioner requests, and/or equipment limitations.

  The ability to problem solve, troubleshoot and use critical thinking in order to achieve positive client outcomes.
Behavioral and Social Attributes:
Possess the emotional health and stability required for full utilization of the student’s intellectual abilities, the exercise of good judgment, the prompt completion of all academic and patient care responsibilities and the development of mature, sensitive, and effective relationships with clients and other members of the health care team.
Possess the ability to tolerate taxing workloads, function effectively under stress, adapt to changing environments, display flexibility, and learn to function in the face of uncertainties inherent in clinical settings with patients.
Possess compassion, integrity, concern for others, and motivation.

Possess the ability to demonstrate professional behaviors and a strong work ethic.
Example:
The ability to tolerate heavy workloads and stressful conditions.

The ability to respond appropriately to patients in a medical crisis.

Ability to maintain clear focus and mental stability during emergency procedures.

The ability to show compassion for patients in all stages and types of disease processes.
Qualified applicants with disabilities are encouraged to apply to the program. It is the responsibility of the student to contact the Office of Students with Disabilities if they feel they cannot meet one or more of the technical standards listed.

• However, the ability to perform all clinical competencies necessary for the ARRT registry examination may be limited due to certain health conditions. Health conditions will be evaluated to ensure student safety.
Each ACC campus offers support services for students with documented physical or psychological disabilities. Students with disabilities must request reasonable accommodations through the Office for Students with Disabilities on the campus where they expect to take the majority of their classes. Students are encouraged to do this three weeks before the start of each semester.
It is the policy of the Austin Community College Diagnostic Medical Imaging Department and the Cardiovascular Interventional Program to provide reasonable radiation protection to student Cardiovascular Interventional Radiographers occupationally exposed to radiation. In the event that a student declares pregnancy after conferring with her physician, the pregnant student must make the final decision as to the acceptance or non-acceptance of the minimal risk. Please refer to the program requirements page on the left for further information.

Another area that an applicant should carefully consider is the cost associated with attending the Cardiovascular Interventional Radiography Program. ACC tuition and fees that are charged to all students are found on the web version of the ACC semester course schedule. Health sciences students will have additional fees for labs and liability insurance, these fees have already been added in with the tuition unless otherwise stated. You can access a cost estimate sheet for the program at the program costs page.

Working while attending the Cardiovascular Interventional Radiography program may be a challenge for some students. It is highly recommended that work schedules be limited due to the time commitment required for classes, clinicals, study and preparation. Plan to spend 2-3 hours on preparation for every hour of class.

A sample of the Cardiovascular Interventional Radiography program schedule is Monday, Wednesday, and Friday will be full days in the clinical setting for both fall and spring semesters. Clinical times will be from 6:30 a.m. until 3:30 p.m. In the fall semester 3 classes will be taught Tuesday evenings beginning at 6:00 p.m. In the spring only one class will be taught on Tuesday evening.
To review detailed program information click on the application process link to the left of this presentation and go to step 1.

Successful admission to ACC does not mean that you are admitted to the CI Program.

**Application Process**

- Apply to College-Apply online at [www.austincc.edu](http://www.austincc.edu)
  - Successful admission to ACC does not mean that you are admitted to the CI Program.

- All applicants must:
  - Enroll in ACC
  - Follow the admission steps for the CI Program
Immunization information can be found in the Application Process page—step 4. Review the required immunization for the Cardiovascular Interventional Radiography program. Applications are not accepted without documentation of completed program immunizations. Some of the required immunizations can take up to four months to complete.

Do not forget to print out a copy of the verification form you will complete at the end of this presentation’s post test. You must submit a copy of the verification with your application materials.

Do not complete your criminal background check until you have been accepted into the Cardiovascular Interventional Radiography program and are notified as to the dates on which you may submit the criminal background check. It is very important that you don’t start your criminal background check prior to the date posted. This would mean submitting and paying for the criminal background check again.
Admission to Program

• Submit CI application by April 1 deadline with:
  – Copy of program required immunizations
  – Copy of transcripts, other than ACC
  – Copy of ARRT credentials
  – Information Session Verification page

The application is available on the website under application packet and in the Health Science Admissions Information Office. Submit all documentation with the application. Incomplete applications will be returned and will not be considered. All immunizations must be completed by the application deadline.

At the end of this session, you will be required to answer a few questions about the admissions process and you will need to print out the verification page at the end to submit with your application packet.
These services are available at all of the campuses. The Financial Aid Office provides grants, loans and work study opportunities to students who may otherwise be unable to attend college. There are priority deadlines for financial aid applications, if you miss the deadlines you must be prepared to use your own resources to pay for your initial expenses.
If there is anything that you still have questions about or something that was not covered, please feel free to contact the Health Sciences Admissions and Information Office.

Contact Information

• If you have further questions, contact:
  Health Sciences Admissions and Information Office

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