

Chapter 1 : Radiology Continuing Education | RT CE Credits from Philips Learning Center

What Radiologic and MRI Technologists Do. Radiologic technologists, also known as radiographers, perform diagnostic imaging examinations, such as x rays, on www.nxgvision.com technologists operate magnetic resonance imaging (MRI) scanners to create diagnostic images.

Radiologic technologists are the medical personnel who perform diagnostic imaging examinations and administer radiation therapy treatments. They are educated in anatomy, patient positioning, examination techniques, equipment protocols, radiation safety, radiation protection and basic patient care. The radiologic technologists who specialize in radiation therapy, which is the delivery of high doses of radiation to treat cancer and other diseases, are radiation therapists and medical dosimetrists. Registered radiologic technologists are known as "R. To remain registered, they must earn continuing education credits. Radiologic Technologists on the Medical Imaging Team Radiologic technologists who perform imaging examinations are responsible for accurately positioning patients and ensuring that a quality diagnostic image is produced. They work closely with radiologists, the physicians who interpret medical images to either diagnose or rule out disease or injury. For the images to be interpreted correctly by the radiologist, the imaging examination must be performed properly by a radiologic technologist. Radiologic technologists often specialize in a particular diagnostic imaging area: Bone Densitometry Technologists use a special type of x-ray equipment to measure bone mineral density at a specific anatomical site usually the wrist, heel, spine or hip or to calculate total body bone mineral content. Results can be used by physicians to estimate the amount of bone loss due to osteoporosis, to track the rate of bone loss over a specific period of time, and to estimate the risk of fracture. Cardiac Interventional and Vascular Interventional Technologists use sophisticated imaging techniques such as biplane fluoroscopy to help guide catheters, vena cava filters, stents or other tools through the body. Using these techniques, disease can be treated without open surgery. Computed Tomography Technologists use a rotating x-ray unit to obtain "slices" of anatomy at different levels within the body. A computer then stacks and assembles the individual slices, creating a diagnostic image. With CT technology, physicians can view the inside of organs - a feat not possible with general radiography. Magnetic Resonance Technologists are specially trained to operate MR equipment. The technologist applies a radiofrequency pulse to the field, which knocks the atoms out of alignment. When the technologist turns the pulse off, the atoms return to their original position. Mammographers produce diagnostic images of breast tissue using special x-ray equipment. Under a federal law known as the Mammography Quality Standards Act, mammographers must meet stringent educational and experience criteria in order to perform mammographic procedures. Nuclear Medicine Technologists administer trace amounts of radiopharmaceuticals to a patient to obtain functional information about organs, tissues and bone. The technologist then uses a special camera to detect gamma rays emitted by the radiopharmaceuticals and create an image of the body part under study. The information is recorded on a computer screen or on film. Quality Management Technologists use standardized data collection methods, information analysis tools and data analysis methods to monitor the quality of processes and systems in the radiology department. They perform processor quality control tests, assess film density, monitor timer accuracy and reproducibility and identify and solve problems associated with the production of medical images. Radiographers use radiation x-rays to produce black-and-white images of anatomy. The images are captured on film, computer or videotape. X-rays may be used to detect bone fractures, find foreign objects in the body, and demonstrate the relationship between bone and soft tissue. The most common type of x-ray exam is chest radiography. Sonographers use sound waves to obtain images of organs and tissues in the body. It emits high-frequency sound waves that pass through the body, sending back "echoes" as they bounce off organs and tissues. Special computer equipment converts those echoes into visual data. The radiation therapist and the medical dosimetrist are members of the radiologic technology profession. Medical Dosimetrists determine how much radiation will be delivered to a tumor site. Under the supervision of a medical physicist, they calculate and generate radiation dose distributions in accordance with the treatment plan developed by the radiation oncologist. Medical dosimetrists use their knowledge of physics, anatomy and radiobiology to design

optimal treatments that apply an effective dose to the targeted area while sparing normal tissue that surrounds it. As the radiation strikes human tissue, it produces highly energized ions that gradually shrink and destroy the nucleus of malignant tumor cells. Radiation therapists are highly skilled medical specialists educated in physics, radiation safety, patient anatomy and patient care. They typically see each of their patients three to five days a week throughout a four- to seven-week treatment plan. Radiologists are physicians who earn a four-year doctoral degree to become an M.D. They then complete a four-year residency in diagnostic radiology or radiation oncology. More than 90 percent of radiologists go on to become certified by the American Board of Radiology, indicating that they have passed a standardized national examination in radiology. Diagnostic radiologists specialize in the interpretation of medical images such as MR scans, CT scans, radiographs, nuclear medicine scans, mammograms and sonograms. Radiologists may specialize in fields such as neuroradiology, angiography, cardiovascular-interventional radiology, pediatric radiology or nuclear medicine. Radiation oncologists are physicians who specialize in the treatment of cancer. Then, they work with a medical dosimetrist to calculate how much radiation will be delivered. The radiation therapist is the medical professional who carries out the treatment plan by delivering targeted radiation to the tumor site. Examples of these treatments include angioplasty, thrombolysis, atherectomy, embolization of bleeding vessels and occlusion of brain aneurysms. Interventional radiologists perform these procedures under the guidance of x-rays, magnetic resonance or other imaging methods.

Chapter 2 : Radiologic Technology

Occupational Employment and Wages, May Radiologic Technologists. Take x rays and CAT scans or administer nonradioactive materials into patient's blood stream for diagnostic purposes.

They work alongside clinicians and doctors to ensure that the physicians receive necessary diagnostic imaging required to administer treatment. They also work with with patients in a friendly, compassionate manner as they get the equipment poised to shoot at the proper angles while causing the least amount of discomfort possible. The radiology technologist also ensures that the film is developed properly and presents clear, usable information for the medical professionals using it to help make treatment decisions. They are also responsible for labeling the film and categorizing it. Additionally, the radiology technician is expected to follow organizational standards and practices to ensure patient safety; radiological equipment can be dangerous if used incorrectly, and the technician must follow all procedures to make sure ensure patient safety during these diagnostic procedures. They must also follow standards related to patient confidentiality. Radiology technologists normally receive technical or vocational school education for this job. Additionally, there are a variety of certifications required for technicians, and these certifications and accompanying testing must be periodically renewed and kept up to date. Radiology techs may work a variety of hours. In clinics, for example, the technician may work regular business hours; in a hospital setting, they may work shifts during or outside of regular business hours. Review and evaluate film and images to determine if images are satisfactory for diagnostic purposes. Explain process and position patient for scan; adjusting restriction devices; moving and adjusting equipment to set exposure factors. Use radiation safety measures and protection devices for government regulations and patient safety. As a trained technologist, operate radiology equipment to produce images of the body for diagnostic purposes under direction of a physician. Plan your career path. Drag job titles to investigate a particular path and click on a link to see where particular career can lead. At the upper end, Radiology Technologists who move into a Radiology Manager role can end up with a hefty increase in pay. Radiology Technologist Job Listings Popular Skills for Radiology Technologist This chart shows the most popular skills for this job and what effect each skill has on pay. Radiology Technologists report using a pretty varied skill set on the job. Most notably, skills in Bone Density, mammography, Computed Tomography, and Magnetic Resonance Imaging are correlated to pay that is above average, with boosts between 3 percent and 19 percent. Skills that pay less than market rate include Orthopedics. Average total compensation includes tips, bonus, and overtime pay. Pay Difference by Location.

Chapter 3 : Radiologic Technology - West Georgia Technical College

Many radiologic technologists specialize in a particular area of medical imaging, such as mammography or computed tomography (CT scans). Preparation for this profession is offered in hospitals, colleges and universities, vocational-technical institutes and the U.S. Armed Forces.

Several methods of medical imaging are used by a radiologic technologist, including X-rays, ultrasound, positron emission tomography PET scans , and magnetic resonance imaging MRI. Technologists work in tandem with the treating physician and radiologist in the examination of images. Radiologic technicians may work an eight- or twelve-hour shift during the day, but some are also needed for evening or overnight hours in emergency rooms. Most positions are on a full-time basis, although some can be part-time. One to two years of relevant experience is also usually needed. Many employers also require the technologist to be registered with the American Registry of Radiologic Technologists. Strong communication skills are also necessary, as technologists will be regularly communicating with the patient and his or her family. Radiologic technologists will also be required to handle multiple cases at the same time. Review and evaluate film and images to determine if images are satisfactory for diagnostic purposes. Explain process and position patient for scan; adjusting restriction devices; moving and adjusting equipment to set exposure factors. Use radiation safety measures and protection devices for government regulations and patient safety. As a trained technologist, operate radiology equipment to produce images of the body for diagnostic purposes under direction of a physician. Plan your career path. Drag job titles to investigate a particular path and click on a link to see where particular career can lead. At the upper end, Radiologic Technologists who move into a Physician Assistant role can end up with a hefty increase in pay. As Radiologic Technologists progress in their field, many go on to become Radiology Technologists. Radiologic Technologist Job Listings Popular Skills for Radiologic Technologist This chart shows the most popular skills for this job and what effect each skill has on pay. Survey results imply that Radiologic Technologists deploy a substantial tool kit of skills at work. Most notably, skills in Interventional Radiology, mammography, Bone Density, and Fluoroscopy are correlated to pay that is above average, with boosts between 8 percent and 16 percent. Average total compensation includes tips, bonus, and overtime pay. Pay Difference by Location.

Chapter 4 : Radiologic Technology | Florida Department of Health

We would like to show you a description here but the site won't allow us.

Academia - Education role. Clinical Management - Clinical managerial role which can be varied; may include managing audits, rotas, department budgets, etc. Clinical Research - Research role. Medical Physics - Multidisciplinary role ensuring the correct calibration of and most efficient use of diagnostic equipment. Radiation Protection - A managerial role concerned with monitoring the level of ionising radiation absorbed by anyone who comes into contact with ionising radiation at their site. Reporting Radiography - A clinical role involved with interpretation of radiographs and various other radiological media for diagnosis. Education and role variation[edit] This article is missing information about country specific radiographer roles and educational requirements. Please expand the article to include this information. Further details may exist on the talk page. October Belgium[edit] This webpage will describe the registration process to work as a diagnostic radiographer in Belgium, in particular Flanders. A diploma of a specific professional Bachelor is a requirement for registration and recognition. You have a diploma of your healthcare profession and want to practice your profession in Belgium. Or your diploma is equivalent in a country of the EEA and you are a European national. With the specific application are several documents needed, they must be translated into Dutch by an official translation agency as a sworn translator. A covering letter A copy of your diplomas, certificates or other evidence of your professional training The official programme of your training A copy of your identity card or passport A certificate of good character issued by the competent authorities of the Member State of origin or the Member State where you last resided. This certificate must be less than three months old. Only the original is valid. A certificate of professional good behaviour issued by the professional organisation involved. If your diploma is not in conformity with the European directive, please send certificates of work experience. Following recognition, the Federal Public Service Health will send you a visa. This visa gives you approval to exercise the healthcare profession in Belgium. Only after qualifying do radiographers in Germany fulfil the requirements to practise as a fully qualified MTR. Applications for registration with qualifications outside of this are considered on an individual basis; typically this includes most international applicants. Set up under the Health and Social Care Professionals Act , CORU is used to protect the public by promoting high standards of professional conduct, education, training and competence through statutory registration of health and social care professionals. For New Entrants, Existing Practitioners and International Professionals who hold approved qualifications, completion of the application form online via www. The user must create an account on the CORU website and fill in all their personal information including details of their qualification, professional status and their career history. Section 38â€” Persons who are commencing practice of their profession in the Republic of Ireland Section 91â€” Persons who during the 5 year period prior to the opening of the register have been practising their profession in the Republic of Ireland for a period of not less than 2 years. If you have not been practising your profession for two or more years, you may be subject to Return to Practice requirements period of updating Those who hold an international qualification and are interested in working in Ireland. These applicants must apply to have their qualification recognised which will be discussed below and then complete registration as described 2. Once the online process is complete, you must print out the additional information which includes, a Garda vetting form, proof of professional practice and a statutory declaration form. Along with certified copies of any documents that are required. All completed documents must be returned to CORU once they are complete. To certify a copy, you are required to bring the original and a copy of the particular document to a Solicitor, Commission or for Oath, Peace Commissioner or Notary Public. The document must include a stamp from the solicitor or other nominated person to ensure that the documents you submit are true copies of the originals. University or educational certificates are exceptions to this. Following completion of the steps provided above, you must demonstrate that you are fit and proper to practice as a professional in Ireland. You must read, understand and agree to obey the Code of Professional Conduct and Ethics. Along with this, you may have to undergo a language test to prove to the Registration Board that you have adequate knowledge of the English

language to practice as a professional in Ireland. Completion of an eVetting Invitation Form is also required. CORU will not process your registration application until all the required documents are received. All documents must be completed and submitted within 30 days of completing the online application or your case will be disregarded. The course is B. Hons Radiography and its duration is of four years. On completion of the course, the graduate will have the conditions to be eligible for registration with the Council for Professions Complementary to Medicine [52]. A foreign radiographer can work in Malta should the necessary documentation and competencies have been obtained and presented. Radiographers working in Malta should abide by the rules of the host country and the title of radiographer will be used. The application form includes the insertion of personal details of the individual along with the description of qualifications and the University which granted the qualifications. The individual has to declare whether he or she is registered with another Health Care Profession Register in Malta. Application Form Original or authenticated copies of the following documents English versions: Birth and marriage if applicable certificates. Identification document such as ID or Passport. Recent Police Conduct certificate. Letters of Reference in English. A recent six months verification certificate of current registration and good standing with the Council you are registered with. Curriculum Vitae in English. In cases where the professional qualification acquired was not obtained from an Accredited Institution in Malta, a letter is to be submitted, issued from the Malta Qualifications Recognition Information Centre (MQRIC), certifying that the Institution from where the qualification was obtained is equivalently accredited and indicate the level of qualification in accordance to the Malta Qualifications Framework. Should the radiographer have a substantial difference between their professional qualifications and those required by CPCM, the radiographer has the right to provide further evidence of competence including professional experience or CPD, otherwise, the CPCM board should offer the applicant the possibility to do an aptitude test or adaptation period as chosen by the applicant.

Nepal is still struggling to improve and manage conventional radiological examinations. Rana and Dr Asta Bahadur Shrestha. The first health related training program began in at the Nepal Rajkiya Ayurved School; the Civil Medical School was later established in The post graduate M. Radiotherapy was first introduced at Maternity Hospital in utilising radium needle treatment. Nepal became a member of IAEA in Since onwards diploma level radiography courses have been conducted across the country by the Council for Technical Education and Vocational Training (CTEVT) and other affiliated institutions. In Nepal there are vocational health training institutes however only 15 are conducting radiological technological education. Until recently, therapeutic radiography courses have not been taught in Nepal; radiation therapists are predominantly trained abroad. This was mandatory under the Law on Paramedic professions. A voluntary register has been set up in consultation with the Health Care Inspectorate: The purpose of the Paramedics Quality Register is to guarantee the quality of professional practice. Through the registration and re-registration once in five years it becomes visible for patients, health insurers etc. Despite the fact that the quality register is not compulsory according to the law, many hospitals are obliged to do it. The hospitals are obliged to provide good quality care. Health insurers also attach great value to the Paramedics Quality Register because they are also required to provide good care.

Enrollment[edit] Radiographers who are in possession of a valid Certificate of Competence, diploma of certificate and endorse the code of professional conduct of the professional association, can be enrolled in the Paramedics historical register. The official registration of the radiographer satisfies the educational requirements in the General Administrative Order (AMvB) ex. By registration, the radiographer continues to be traced by, for example, the Health Care Inspectorate (IGZ) and the professional associations. Other organizations also intend the Quality Register Paramedics. Re-enrollment[edit] To be in the Paramedics Quality Register the radiographer needs to request re-registration every five years. The first period of five years is determined on the basis of the diploma date. In case of re-registration, the radiographer must meet the requirements for that period. The start date of the period is the local quality criteria. The quality criteria are set every five years by the Paramedics Quality Register, paramedical professional associations. To ensure that the requirements for the patient and the client-oriented exercises and expertise-enhancing activities are safeguarded for the quality of the professional practice. The quality criteria are set up in such a way that paramedics can meet the quality requirements with the set range of expertise-enhancing activities. Nigeria[

edit] In Nigeria , these professionals are generally referred to as Radiographers or Medical Radiographers to differentiate them from Industrial Radiographers. Radiographers must complete a 5-year undergraduate BSc and a compulsory one year paid internship program in a hospital after graduation before attaining a full licensing by the Radiographers Registration Board of Nigeria. The board also registers Radiotherapists who have undergone the initial 5 year Radiography program before proceeding to the Radiotherapy training. They are also on the verge of adopting an official professional title of "RadR" or "Rr" As of [update]. Radiographers in Nigeria normally proceed for a Masters programme and a PhD programme in the profession. There is a recent rise in the number of radiographers available in the country unlike the situation of shortage between - The radiologist is also in charge of specific Fluoroscopic cases where the radiographer assists only with positioning and image acquisition. This practice is quite different in private owned diagnostic centres; in some cases a radiography technologist NOT a BSc. Radiographer handles every examination in the Radiography department. Many radiographers, however, do not particularly involve themselves in these movements as working in a private establishment is more lucrative. Some hospitals however have an understanding between the Radiology head a Radiologist and the Chief Radiographer where all radiographers are directly answerable to their Chief, and not the HOD. Upon completion, graduates are qualified X-Ray Technicians and can commence clinical practice. As a result, all of these titles are protected titles within the United Kingdom and can not be used by any persons who has not undertaken formal study and registered with the Health and Care Professions Council HCPC. In order to practice Radiography in the United Kingdom candidates must now successfully obtain a pass in a degree level program from an accredited institution. Degrees are offered by universities across the UK and last for at least 3 years in England, Wales and Northern Ireland; and 4 years in Scotland. They specialise in the acquisition of radiographs of General Practitioner referred GP patients, outpatients, Emergency Department ED referred patients and inpatients.

Chapter 5 : Radiologic Technologist Hourly Pay | PayScale

Written by experts, this second edition helps develop the skills needed to perform quality mammography - the critical step to successful diagnosis, treatment, and prevention of breast cancer.

Chapter 6 : Rad Tech CE, ASRT, ARRT® CE, Category A Credits | Radiology Continuing Education

At Radiology & Imaging, the professional conducting your imaging exam is a radiologic technologist. A radiologic technologist is a specially trained and licensed medical professional who performs diagnostic imaging examinations and may also administer radiation therapy treatments.

Chapter 7 : Mammography Program | Kapi'olani Community College

A radiologic technician plays a key role in the diagnosis and treatment of diseases within the body. Several methods of medical imaging are used by a radiologic technologist, including X-rays.

Chapter 8 : Radiology Technologist Hourly Pay | PayScale

Radiologic technologists often specialize in a particular examination technique, such as mammography or bone densitometry. These professionals can also assist oncology teams in delivering.

Chapter 9 : Radiology X-ray Continuing Education CE Courses & Credits

There are 13 credential options you can pursue through ARRT using one of three pathways. While all pathways share the same ethics and examination requirements, they have different education requirements.