

The X-Ray Academy of Texas

NCT X-Ray Training Program Course Syllabus

Prerequisites: HS Diploma or Equivalent

Contact Hours: 120

Weekend Course Length: 8 Weeks **Class Days:** Sat and Sun 9:00-5:00

Weekday Course Length: 3 Weeks **Class Days:** Mon - Fri 9:00-5:00

Evening Course Length: 10 Weeks **Class Days:** Mon, Tues and Wed 6:00-10:00

Training Program Director: Stacy Palmer R.T. (R)

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Office Hours: By Appointment

Phone: 214-613-9729

Course Material:

The X-Ray Academy of Texas NCT Training Guide

References:

Merrill's Atlas of Radiographic Positioning and Procedures Vol. 1 and 2; Twelfth Edition, Mosby, Inc., St Louis, MO, 2011

Course Description:

This course is intended to introduce the student to medical imaging and radiography. In addition this course is designed to provide students with the knowledge and confidence to safely and efficiently perform radiographic procedures that the Texas Department of State Health Services has not deemed to be "Dangerous or Hazardous".

Course Objective:

Upon completion of this course, the student will be able to:

1. Perform basic radiographic procedures of the upper extremities, lower extremities, chest, abdomen, ribs, cervical spine, thoracic spine, lumbar spine and cranium.
2. Operate the x-ray control panel, and; using a technique chart set the appropriate technical factors.
3. Practice radiation safety.
4. Provide the training required by the Texas Department of State Health Services to receive the NCT X-Ray License

Completion Criteria: All students must complete all assignments and be signed off on all competencies in order to complete this training program.

Final Exam: All students must obtain a grade of 70% or better in order to complete this program.

Instructional Methods: The instructor will utilize power points, videos, lectures, classroom discussion, lab activities and interactive learning. Class/lab activities are enhancements intended to increase learning.

Discharge and Readmission: It is our desire that every student completes this course of study and finds rewarding employment or career advancement. It is necessary therefore that each student participates in and takes responsibility for their learning experience.

The following behaviors cannot be tolerated:

- Violence or aggression or threats of violence or aggression, physical or verbal in nature
- Sexual harassment in any form
- Coming to class under the influence of or in possession of any illegal substance or alcohol.
- Stealing from anyone, including but not limited to other students, instructors or the facility where classes are held.
- Any illegal activity.

Any student committing any of the acts mentioned above will be immediately discharged and legal action will be taken where appropriate. No refund or substitution will be given and student will not be eligible for future readmission.

We understand that sometimes unforeseen circumstances get in the way of our plans. If a student needs to drop out of our program they may reenroll in the next available program at no additional cost. If a student fails to complete the program for academic reasons and still has the desire to continue, the student should make arrangements with the Program Director. The student will be directed to additional resources and when ready the student may reenroll at no additional cost.

This is an accelerated program and the number of hours required for graduation is set by the State of Texas. If it becomes necessary for a student to miss a class, the hours must be made up in order to complete the program. If it is not possible for the student to make up the hours with another class, it may be necessary for the student to make up the hours with the next class before a certificate can be issued.

Dangerous and Hazardous Procedures: NCT x-ray technicians are not permitted to perform procedures that the Texas Department of State Health Services has determined to be Dangerous or Hazardous. Below is an outline of prohibited procedures. For the exact list please refer to §140.516. Dangerous or Hazardous Procedures.

Dangerous Procedures

- a. nuclear medicine studies to include positron emission tomography (PET);
- b. administration of radio-pharmaceuticals; administration does not include preparation or dispensing except as regulated under the authority of the Texas State Board of Pharmacy; radiation therapy, including simulation, brachytherapy and all external radiation therapy beams including Grenz rays;
- c. computed tomography (CT) or any variation thereof;
- d. interventional radiographic procedures, including angiography;
- e. fluoroscopy; and
- f. cineradiography (including digital acquisition techniques).

Hazardous procedures

- a. conventional tomography;
- b. skull radiography, excluding anterior-posterior/posterior-anterior (AP/PA), lateral, Townes, Caldwell, and Waters views;
- c. portable x-ray equipment;

- d. spine radiography, excluding AP/PA, lateral and lateral flexion/extension views;
- e. shoulder girdle radiographs, excluding AP and lateral shoulder views, AP clavicle and AP scapula;
- f. pelvic girdle radiographs, excluding AP or PA views;
- g. sternum radiographs; and
- h. radiographic procedures which utilize contrast media;
- i. pediatric radiography *

* note: Excluding extremities, Pediatric studies must be performed with radioprotection so that proper collimation and shielding is utilized during all exposures sequences during pediatric studies. If an emergency condition exists which threatens serious bodily injury, protracted loss of use of a bodily function or death of a pediatric patient unless the procedure is performed without delay, or **if other extenuating circumstances deemed by the practitioner exist**, a pediatric radiographic procedure is also excluded. The emergency condition or extenuating circumstance must be documented by the ordering practitioner in the patient's clinical record and the record must document that a regularly scheduled MRT, LMRT, RN or physician assistant is not reasonably available to perform the procedure.

Tuition and Fees:

The discounted cost of the training program is based on the assumption that the tuition will be paid in full by the first day of class. We do understand that it is not always possible to pay the entire tuition in full by the first day of class. We do still offer a discount to students that are unable to pay in full by the first day; however it is less of a discount. The cost of the training is less if it is paid in full by the first day of class. The payment arrangements are as follows:

- A nonrefundable deposit is due upon registration
- 50% of the remaining balance is due at the halfway point of the program (**a \$25 late charge is added if this payment is not made on the day it is due**).
- The balance is due the day before the last day of class (**a \$25 dollar late fee is added if this payment is not made on the day it is due**).

All student paper work is forwarded to the Department of State Health Services as soon after completion of the course as possible. As all paperwork for the class is processed together, any student not completing the process holds up the entire packet, delaying the issuance of licenses for all students in the class. All tuition and fees must be paid before an application will be sent to the state. A \$64.00 money order is due on the last day of class.

Any student that has not paid all tuition, provided the \$64.00 money order or not completed the application will not have their paperwork included in the packet forwarded to the state. **That student's paperwork will therefore need to be processed separately and a \$50.00 processing fee will be incurred.** The Department of State Health Services requires that all paper work must be forwarded to them within 30 days of completing the program. If more than 30 days passes before completion of the paper work or payment of all tuition or fees, the course will need to be repeated in order for a license to be issued.

Course Schedule:

Subject	Eve	Days	WE
Introduction To Radiography	1	1	1
Introduction to the Equipment	2	2	2
Radiation Biology	2	2	2
Radiation Safety	2	2	2
The Tube	3	3	3
Photographic Properties of X-Ray - Contrast and Density	4	3	3
Geometric Properties - Detail and Distortion	4	3	3
Analog - The Darkroom	5	4	4
Digital Imaging	5	4	4
Image Production Factors	6	4	4
Exposure Selection	6	4	4
Introduction to Anatomy, Terminology and Positioning	7	5	5
Upper Extremities	6 and 7	6	6
Lower Extremities	8 and 9	7	7
Chest and Abdomen	10	8	8
Spine	11	9	9
Ribs and Cranium	12	10	10
Review Positioning	13-28	11-13	11-14
Final Exam and Review Positioning	29	14	15
Prepare Paperwork for the State and Receive Certificates	30	15	16

**This course outline is subject to change at the discretion of the instructor.*

Classroom Responsibilities:

Instructor

1. To be in class on time and prepared
2. To be available to students to answer questions or clarify concepts
3. To evaluate performance on class participation, assignments, tests and labs
4. To show respect to all staff and students

Students

1. To be in class on time and prepared
2. To use appropriate behavior at all times
3. Pay attention in class and review all material
4. Participate in class discussions
5. Inform instructor immediately if falling behind
6. To show respect to all staff and students
7. Inform the instructor if leaving before class is dismissed

Refund Policy:

The deposit that is due upon registration is non-refundable. Any tuition paid above the amount of the deposit is refundable as follows: If the request for a refund is made more than 30 days before the first day of class, 100% of the payment minus the deposit is refundable. If the request for a refund is made more than 10 days before the first day of class but fewer than 31 days before the first day of class then 50% of the payment minus the deposit is refundable. No refund will be issued if the request is made with fewer than 10 days until the first day of class. The request for a refund shall be in writing and submitted by mail or e-mail. If the request is sent by the post mark will be the date of the request. The request must include the name of the student requesting the refund and the class that they were to attend. It must indicate the full amount of the payment and the method by which the payment was made. If the payment was made using a debit or credit card; the cardholder's name must also be included. Appropriate refunds will be made within 30 days of the request.