



Northampton Community College  
Radiography Program

## Clinical Overview and Program Highlights

An integral, demanding, and rewarding part of the Radiography Program at Northampton Community College is clinical education (1,560 hours). Clinical education is divided into a total of five (5) courses.

The assigned clinical education sites provide facilities for the student to learn to competently and proficiently perform a full range of radiographic procedures on children, adults, and the elderly.

### Accreditation

The NCC Radiography Program is accredited by the:

**Joint Review Committee on Education in Radiologic Technology (JRCERT)**

20 North Wacker Drive, Suite 2850

Chicago, IL 60606-3182

312-704-5300

[www.jrcert.org](http://www.jrcert.org)

### Assignments to a Clinical Site

If you are accepted into the Radiography Program, you will be placed in one of our ten, major affiliate hospitals. We will try to place you as close to your home as possible and also take into consideration specific requests that you may have. However, at times there are relatively high numbers of acceptances from a specific geographical area. As a result, we may not be able to place you in a clinical site as close to home as possible or grant specific requests. Instead, in an effort to be as fair as possible, first preference will be given to those applicants who have the highest scores which were determined in the application process.

### Sequence of Clinical Education Courses

The Radiography Program's clinical education courses are sequential in nature as follows:

#### Clinical Practice I (First-year, Fall Semester):

During the first, three-weeks, the first-year students remain on the NCC (Bethlehem/Main) campus in order to receive instruction on the following topics prior to entering their respective clinical sites in September:

- Radiation protection
- Handling emergency situations
- Ethical behavior
- Interaction with the patients
- Communicable diseases, procedures, and the use of universal precautions (isolation)
- Lifting and moving techniques

Learning is assessed by:

- Practical examinations for lifting and moving techniques
- Testing

After the first, three-weeks, of on-campus preparation, the students go to their assigned clinical education sites on Tuesdays and Thursdays for the remainder of the semester.

The students will log the procedures in which they have assisted and will perform a specified number of competency evaluations.

### **Clinical Practice II (First-year, Spring Semester):**

When the semester begins, around January 16th, the students continue the Tuesday and Thursday clinical education schedule for the remainder of the semester.

The students present their first image critiques (major, minor, and surprise), continue to log procedures, and perform competency evaluations.

### **Clinical Practice III (First-year, Summer Sessions I and II):**

The course begins with the opening of Summer Session I and ends with the conclusion of Summer Session II. There is a one-week intensive seminar during the first-week of the summer sessions concluding with online testing the same week.

The student returns to clinical education during the second-week of the (first) summer session where they participate in the clinical setting Monday-Thursday for 10 hours per day for a maximum of forty (40) hours in any one week. Each day consists of not more than 9.5 hours of clinical with a 30 minute lunch break. If the normal break time at a site is longer, the clinical practice time must be reduced in order to maintain the 10 hour per day limit. When the student has reached 360 hours of clinical time (38 days at 9.5 hrs, 39 days at 9.25 hrs etc.), which should occur after approximately the first week in August, they may utilize the time remaining until the official end of the Summer II Session for any needed make-up time.

There is one (1) week of middle shift (approx. 2:00 p.m. – 12:00 a.m.) rotation. The purpose is to broaden the clinical experience with a different patient cross section and do more trauma-type procedures.

The students continue to practice procedures, perform competency evaluations, and do image critiques (major, minor, and surprise). The students often “bank” competency evaluations ahead for the Fall semester. The constant repetition of the radiographic procedures during the summer months helps the students become more competent and proficient. There is a significant and very noticeable improvement in the student’s abilities and confidence over the summer.

There is a two day rotation in CT so that the students have a good understanding of the modality due to its capabilities and widespread usage in imaging.

There is no clinical scheduled on Memorial Day or July 4<sup>th</sup>.

The students are never assigned to didactic classes or clinical practice for more than forty-hours in any one-week.

### **Clinical Practice IV (Second-year, Fall Semester):**

The students are assigned to their clinical education sites for three-days per week (Mondays, Wednesdays, and Fridays). **Beginning this semester, students rotate to a different clinical site.** Students that had been going to larger hospitals rotate to smaller hospitals and students at smaller hospitals report to larger facilities.

The students continue to practice, log procedures, perform competency evaluations, do image critique evaluation presentations, and complete three proficiency evaluations. The three proficiency evaluations are randomly assigned to the students by the Clinical Instructor(s) or Clinical Education Coordinator in order to ensure that the students are maintaining their skills post-competency.

### **Clinical Practice V (Spring Semester, Second-year):**

When the semester begins, around January 16th, the students resume their clinical education rotations at their second clinical site. The schedule continues on Mondays, Wednesdays, and Fridays for the remainder of the semester.

The students continue to practice, log procedures, perform competency evaluations, do image critique evaluation presentations, and complete three proficiency evaluations.

There are three days of **Student Choice** rotations when students can spend time in a specialty modality. The purpose/goal of the rotations is to help the students decide if they would like to pursue further education in

any one of the specialty areas in radiology after they have completed the radiography program. Or, if the students self-identify a weakness in a routinely scheduled area, they may wish to further practice their skills in that area in order to gain more competency/proficiency. Ultimately, the choice is up to the student according to their needs or desires.

At the conclusion of Clinical Practice V, if all program requirements have been met, the student is eligible for May graduation.

### **Six (6)-week Extension of Clinical Practice V**

The six (6)-week extension is mandatory for those students who are unable to complete all their clinical education requirements on time. The extension consists of forty-hours per week of clinical experience in order to complete unmet course requirements, e.g. competency evaluations. Even if the student completes everything during the first-week of the six (6)-week extension, he or she is required to stay for the remainder of the six (6)-weeks in order to gain more proficiency.

Upon successful completion of this extension, and consequently meeting the program graduation requirements, the student should be eligible to sit for the American Registry of Radiologic Technologist's (ARRT) certification examination.

### **Advanced Skills Internship**

As part of the College's Community Education Offerings (Center for Business and Industry, Healthcare Education) current year (May) Radiography graduates are offered the opportunity to participate in a voluntary Advanced Skills Internship (ASI) in the following areas:

- Bone Densitometry (BD)
- Computed Tomography (CT)
- Interventional Radiography (IR)
- Magnetic Resonance Imaging (MR)
- Mammography (M)
- Surgery (OR)

The goal of the ASI is to help the students gain clinical practice in a particular specialty area (imaging modality) and often serves as a "stepping stone" into the specialty area. It includes approximately 232 hours of clinical practice, competency evaluations, image/film critiques, technologist evaluation and the Mentor's evaluation. An application and additional fee is required and **selective admission** is determined by the Radiography Department based on the availability of clinical openings. Clinical openings vary from year to year based on facility staffing and other considerations.

**Note:**

ASI (pass/fail) requirements for completion:

- Competency evaluations
- Image critique evaluation presentation
- 3 technologist evaluations
- Mentor's evaluation

After all the ASI requirements have been met, a certificate of recognition for completion is awarded to the intern.

Since the ASI is not a component of the NCC Radiography Program, the students are eligible to sit for their Radiography certification examination regardless of ASI completion status.

## Program Information Highlights

### American Registry of Radiologic Technologists (ARRT) Certification Examination for Radiographers

Upon satisfactory completion of both the didactic (classroom) and clinical education courses, the graduate is eligible to sit for the certification examination offered by the ARRT.

Passing the registry examination certifies that the graduate is a registered radiographer and he or she can write the initials RT(R) after his or her name.

### Conviction of a Misdemeanor and/or Felony

After acceptance into the Radiography Program, a criminal background check for each student (State, FBI & Child Abuse) is required as stipulated by both the College and the affiliated hospitals.

Accepted students who submit a report reflecting “no record” (no conviction) can consider themselves as “**fully**” accepted into the Radiography Program.

There are affiliation agreements between the hospitals and the College that mandates that the hospitals be informed of any criminal record of incoming students. The clinical sites have the right to deny access to any student with a criminal record based on their institution’s criteria.

If there is a criminal record, the student will be **conditionally accepted** until a decision is made by the Allied Health Review Committee and the assigned Hospital. The Allied Health Review Committee will require a written explanation from the applicant describing the offense that led to the conviction. Upon receipt of the statement, the Allied Health Review Committee will consider the report and make a recommendation to the Program Director regarding the applicant’s acceptance into the program. Anyone with incidents that have not been adjudicated or anyone on probation are not accepted into the program. Conditional applicants will be notified of their status within 3 days following the committee’s review. The applicant may appeal the decision in writing within 5 working days of the decision to the Vice President for Academic Affairs whose decision is final.

However, the hospital’s criteria (same as the criteria for hiring an employee) may be more stringent than the College’s. A hospital decision to deny clinical access would override that of the Allied Health Review Committee.

***If, for any reason, an applicant is denied clinical placement based on their criminal record their acceptance into the Radiography Program will be rescinded.***

However, even if an applicant with a criminal record is accepted into the Radiography Program, it would be prudent for the fully accepted student to do the **ARRT pre-certification application**, found on the [www.arrt.org](http://www.arrt.org), website. This will ensure that the ARRT considers them eligible to sit for the certification examination. The ARRT has the final say as to who may or may not sit for the national ARRT certification examination.

## **"Essential Functions" of a Radiographer**

The following is a list of the everyday functions that a radiographer needs to be able to perform at the hospitals or outpatient facilities.

Please read the essential functions and decide if you are able to perform them. If you cannot, you may want to re-consider radiography as a career choice for you.

**After acceptance** into the Radiography Program, if you have a documented disability, we will make every effort to provide **reasonable accommodations** for you. If reasonable accommodations cannot be made and/or the **patient would be placed at risk**, your acceptance to the Radiography Program would have to be rescinded.

### **1. Observational skills:**

Examples:

- Assess the patient's needs.
- Able to discern the information that is needed for the procedure at hand.
- Recognize the need for prompt medical attention in a variety of settings and locations.
- Discern the details, density, and contrast of a radiographic image in order to determine if it is optimal for the radiologist's interpretation.
- Distinguish among the chromatic colors.
- Be able to use peripheral vision.
- Judge the distance of objects and the spatial relationship of objects at different distances.
- Detect changes in equipment operation (i.e., overheating, incorrect meter readings).
- Secure the correct chemical container and/or medication.

### **2. Communication skills:**

Examples:

- Communicate with other health care providers.
- Perceive the patient's oral communication with the ear
- Be able to hear sounds of a high pitch (e.g., patient's monitoring equipment).
- Be able to hear sounds of a low pitch (e.g., patient's breathing patterns).
- Perceive the patient's nonverbal communication.
- Secure information (i.e., questioning of the patient).
- Communicate promptly and effectively in English both verbally and in writing.
- Communicate with the patient and the public on a level that they are able to comprehend.
- Communicate effectively, using medical terminology, with the physician and other health personnel.
- Respond to directives from others related to patient care and emergency situations.
- Display compassion, empathy, integrity, concern for others, interest, and motivation.
- Obtain pertinent information from the patient's chart.
- Obtain information that is requested by the physician in order to make a diagnosis.
- Document in writing, through knowledge of the medical terms, good grammar, and spelling, information needed on the patient's requisition for an optimum diagnosis by the radiologist.
- Document the vital sign findings for the use of other health care personnel.
- Interact with others in a respectful, professional manner especially in stressful situations.

### 3. **Motor skills:**

Examples:

- Tolerate physically taxing workloads.
- Safely lift from a lower to a higher position a minimum of 50 pounds and occasionally as much as 75 pounds.
- Be able to carry an object weighing as much as 25 pounds in order to transport it from one place to another.
- Be able to draw, drag, haul, or tug an object(s) weighing more than 100 pounds or the patient's weight.
- Be able to push an object(s) with steady force in order to thrust forward, downward, or outward weighing more than 100 pounds or the patient's weight.
- Be able to stoop/bend, squat, crouch, kneel, crawl, climb, and reach above shoulder level.
- Sufficient gross and fine motor coordination to respond promptly, manipulate equipment, and ensure patient safety.
- Perceive the attributes of an object(s) such as size, shape, temperature, or texture by touching with the skin, particularly that of the fingertips.
- Elicit information from a patient by diagnostic maneuvers (i.e., palpation).
- Safely manipulate and use controls (i.e., the x-ray tube that is located up to six feet from the radiographic/fluoroscopic room floor).
- Be able to use the fingers/hands in repetitive actions such as picking, pinching, writing, firm grasping, and twisting/turning.
- Skillfully use precision instruments.
- Maintain an upright, erect position with the entire body supported by the feet for as long as 7 hours during the work day.
- Function efficiently while wearing lead protective apparel.
- Safely perform procedures.
- Utilize the equipment needed to obtain temperature, pulse, respiration, and blood pressure.
- Enter data into the computer.

### 4. **Cognitive functions:**

Examples:

- Ability to adapt to a crisis situation, flexible schedules, and/or change in environment.
- Function effectively under stressful conditions.
- Concentrate on the task at hand.
- Visually concentrate and/or focus thoughts or efforts for long periods of time.
- Exercise independent judgment and discretion in the safe technical performance of medical imaging procedures.

## Selective Admission's Process/Procedure

### Primary consideration:

Those applicants who submit their application on or before the **February 1<sup>st</sup> deadline** will be given primary consideration for acceptance into the Radiography Program.

Remember to submit the following to the **Admissions Office** at the Bethlehem (Main) campus no later than **February 1<sup>st</sup>**:

- All **official** high school and college transcripts (**both high school and college**) – validation of prerequisites will be made by Admissions
- **"Career Assessment Form"**
- Pre-clinical (RDXD) students at NCC — file a Clinical/Core Readiness form
- General Studies students at NCC — file a change of major to Radiography
- Applicants not currently enrolled at NCC – complete a College application listing Radiography as your major

If your file is incomplete, missing documents/forms, you will not be considered for an invitation to an information session/interview required for acceptance into the Radiography Program.

If you want to validate that all the required paperwork has been submitted, you should **call the Admissions Office** at **610-861-5500**.

### Competitive candidates:

Competitive candidates (admissions requirements: <http://northampton.edu/radiography-program>) will receive an invitation to the **mandatory** Information/Interview Sessions during the spring semester. Meeting the minimum requirements does not mean that you will be extended an invitation to be interviewed. The number of applicants invited to the interviews depends on the volume of the applicant pool.

### To be the most competitive candidate:

Competitive applicants have completed most, if not all, of the general core courses. The core courses are: Human Anatomy & Physiology I & II, English I & II, Introduction to Communication, College Algebra (or Introductory Statistics), Introduction to Psychology & a free elective (3 credits, 100 level or higher). Applicants are selected for interview sessions based on their GPA and grades on their completed core courses as well as specific High School courses. If you have not taken Anatomy & Physiology I & II and the Math requirement, it is suggested you get them done first. They are weighted more than the other general core courses since they form a foundation for the program course work.

High School applicants are evaluated based on their High School grades, level of their coursework and any dual enrollment courses. Promising High School applicants will be considered for a limited number of "Pre-Clinical" seats. The Pre-clinical program is essentially a three year plan where new high school graduates are accepted on a provisional basis and take the general core courses during the first year. Providing the specified coursework and grade criteria has been met, Pre-clinical students begin the program the second year.

### Transfer of coursework from other Radiography Programs:

The transfer of Radiography specific coursework must be considered by the Program Director. In addition to providing course specific information, the applicant will be required to take a challenge exam.

**Decisions for acceptance:** Decisions for acceptance into the Radiography Program are typically made the first week of **April**.

## Typical Classroom and Clinical Education Schedules – Subject to Change

**Note:** Start times for clinical practice may vary anywhere from **6:00 a.m. – 9:00 a.m.** depending on the area of rotation and the scheduling for radiographic / fluoroscopic examination / procedures.

### Sample First-Year, Fall Semester Radiography Program Schedule

Time	Monday	Tuesday	Wednesday	Thursday	Friday
8:00 – 8:30	<b>*Rad Procedures I Lab</b>	<b>Clinical Practice  Hospital</b>	<b>*Rad Procedures I Lab</b>	<b>Clinical Practice  Hospital</b>	<b>Intro to Rad Imaging</b>
8:30 – 9:00					
9:00 – 9:30					
9:30 – 10:00					
10:00 – 10:30					
10:30 – 11:00	<b>Intro to Rad Imaging</b>		<b>Rad Procedures I Lecture</b>		<b>Rad. Procedures I Lecture</b>
11:00 – 11:30					
11:30 – 12:00					
12:00 – 12:30					
12:30 – 1:00	<b>Funds. Of Rad Sci</b>				
1:00 – 1:30					
1:30 – 2:00					<b>*Rad Procedures I Lab</b>
2:00 – 2:30	<b>*Rad Procedures I Lab</b>		<b>*Rad Procedures I Lab</b>		
2:30 – 3:00					
3:00 – 3:30					
3:30 – 4:00					
4:00 – 4:30					
4:30 – 5:00					
5:00 – 5:30					

**Key: \*1 of the 5 options for lab**



**Sample  
First-Year, Spring Semester  
Radiography Program Schedule**

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
8:00 – 8:30	<b>*Level II Rad Procs. Lab</b>	<b>Clinical Practice  Hospital</b>	<b>*Level II Rad Procs. Lab</b>	<b>Clinical Practice  Hospital</b>	<b>*Level II Rad Procs. Lab</b>
8:30 – 9:00					
9:00 – 9:30					
9:30 – 10:00					
10:00 - 10:30					
10:30 - 11:00					
11:00 - 11:30	<b>Level II Rad Procs. Lecture</b>		<b>Level II Rad Procs. Lecture</b>		<b>Level II Rad Procs. Lecture</b>
11:30 - 12:00					
12:00 - 12:30					
12:30 - 1:00					
1:00 – 1:30	<b>Imaging Equip &amp; Rad. Prod.</b>		<b>Imaging Equip &amp; Rad. Prod.</b>		<b>Imaging Equip &amp; Rad. Prod.</b>
1:30 – 2:00					
2:00- 2:30	<b>*Level II Rad Procs. Lab</b>		<b>Sectional Anatomy</b>		<b>*Level II Rad Procs. Lab</b>
2:30 – 3:00					
3:00 – 3:30					
3:30 – 4:00					
4:00 – 4:30					
4:30 – 5:00					
6:00 – 6:30					
6:30 – 7:00					
7:00 – 7:30					
7:30 – 8:00					
8:00 – 8:30					
8:30 – 9:00					

**Key: \*1 of 5 options for lab**

**Sample  
First-Year, Summer Sessions  
Radiography Program Schedule**

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
7:00 – 8:00	<b>*Clinical Practice</b>	<b>Clinical Practice</b>	<b>Clinical Practice</b>	<b>Clinical Practice</b>	
8:00 – 9:00					
9:00 – 10:00					
10:00 - 11:00					
11:00 - 12:00					
12:00 - 1:00					
1:00 – 2:00					
2:00- 3:00					
3:00 – 4:00					
4:00 – 5:00					

**\*Clinical Practice III:** 40-hours per week with never more than 40-hours scheduled in any one week  
(4) 10 hour days per week Monday-Thursday (9.5 hours + lunch)

Includes both Summer Sessions (I & II), without a break in between the sessions:

- First week – seminar on campus (Bethlehem/Main) with online testing on Friday of the same week
- One week of middle shift (approx. 2:00 p.m.-12:00 a.m.)
- Memorial Day & July 4<sup>th</sup> are scheduled holidays, no clinical
- Start times vary according to the assigned rotational area

**Sample  
Second-Year, Fall Semester  
Radiography Program Schedule**

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>	
8:00 – 8:30	<b>Clinical Practice</b>	<b>Pathology for Radiographers</b>	<b>Clinical Practice</b>	<b>Pathology for Radiographers</b>	<b>Clinical Practice</b>	
8:30 – 9:00		<b>Hospital</b>		<b>Digital Imaging and Analysis</b>		<b>Digital Imaging and Analysis</b>
9:00 – 9:30				<b>Radiation Biology</b>		<b>Radiation Biology</b>
9:30 – 10:00						
10:00 - 10:30						
10:30 - 11:00						
11:00 - 11:30						
11:30 - 12:00						
12:00 - 12:30						
12:30 - 1:00						
1:00 – 1:30						
1:30 – 2:00						
2:00- 2:30						
2:30 – 3:00						
3:00 – 3:30						
3:30 – 4:00						
4:00 – 4:30						
4:30 – 5:00						

**Sample  
Second-Year, Spring Semester  
Radiography Program Schedule**

<b>Time</b>	<b>Monday</b>	<b>Tuesday</b>	<b>Wednesday</b>	<b>Thursday</b>	<b>Friday</b>
<b>8:00 - 8:30</b>	<b>Clinical Practice</b>	<b>Senior Review Lab (Meets 5 times in the semester)</b>	<b>Clinical Practice</b>	<b>Advanced Imaging</b>	<b>Clinical Practice</b>
<b>8:30 - 9:00</b>					
<b>9:00 - 9:30</b>	<b>Hospital</b>		<b>Hospital</b>		<b>Hospital</b>
<b>9:30 - 10:00</b>					
<b>10:00 - 10:30</b>				<b>Senior Review Lecture</b>	
<b>10:30 - 11:00</b>					
<b>11:00 - 11:30</b>					
<b>11:30 - 12:00</b>					
<b>12:00 - 12:30</b>					
<b>12:30 - 1:00</b>					
<b>1:00 - 1:30</b>					
<b>1:30 - 2:00</b>					
<b>2:00 - 2:30</b>					
<b>2:30 - 3:00</b>					
<b>3:00 - 3:30</b>					
<b>3:30 - 4:00</b>					
<b>4:00 - 4:30</b>					
<b>4:30 - 5:00</b>					

**Clinical Practice V:**

Includes:

- Three (3) days of **Student Choice Rotation**
- **6-week extension:** as needed basis, when clinical education requirements are not completed