Community College of Philadelphia

Diagnostic Medical Imaging Program

Clinical Expectations and Evaluations Manual 2023 – 2024

Effective September 2023 (supersedes and replaces any previous version)

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DISCLAIMER

Content of this manual is subject to change at the discretion of the Program Director, Clinical Coordinator and Faculty. Should changes be required, they will not be made capriciously, but for valid and necessary reasons.

Navigation Instructions

This clinical manual is a unified hyperlinked document which is navigable via the interactive table of contents. All hyperlinked appendices are bolded throughout the manual and listed in sequential order on the last page. The appendices are inserted in sequential order at the end of the manual. To view an appendix document while reading the manual, click on the **bolded appendix name**. This will take you to the appropriate page to view the document.

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Introduction

Purpose

The purpose of this manual is to provide a comprehensive overview of clinical education expectations and evaluation methods. The information in this document shall serve as a guide for students, faculty and preceptors **in addition to the program policy manual and clinical course syllabi.**

Clinical Officials

Program Clinical Coordinator

The program Clinical Coordinator manages all aspects of clinical education, including correlation with didactic education, clinical rotation scheduling, clinical instruction, evaluation, assessment and advisement. The Clinical Coordinator works closely with the Program Director, College Clinical Faculty and Clinical Preceptors to ensure effective clinical education practices.

College Clinical Faculty

College Clinical Faculty is responsible for clinical instruction and evaluation of the students. Scheduled faculty visits occur each semester at each clinical affiliate. Clinical Faculty is an integral part of student evaluation and assessment and ensures program polices are adhered to in the clinical education setting.

Clinical Preceptors

Each clinical affiliate has one or more JRCERT recognized Clinical Preceptors. These individuals provide students with instruction, supervision and evaluation in the clinical education setting. The Clinical Preceptors work closely with the staff technologists to support the program policies, procedures and student progress.

Student Levels

Level I Student
Level I students are in the first year of the Program. Students begin by first observing and assisting with patient care activities and imaging procedures in the clinical setting, and then move to a more active role as they complete initial competencies learned in the classroom and laboratory setting. During year one of the program, students need to be directly supervised the majority of the time.

Level I student clinical courses include the following:
Fall Year I - Clinical Education I (DMI 196)
Spring Year I - Clinical Education II (DMI 197)
Early Summer Year I - Clinical Education III (DMI 198)

Level II Student
Level II students are in the second year of the Program. Students receive classroom and laboratory instruction for the remaining patient care activities and imaging procedures. Students work more independently and continue to refine skills previously demonstrated. Student confidence and competence increases and indirect supervision is generally required.

Level II student clinical courses include the following:
Late Summer Year II – Clinical Education IV (DMI 199)
Fall Year II - Clinical Education V (DMI 297)
Spring Year II - Clinical Education VI (DMI 298)
Early Summer Year II - Clinical Education VII (DMI 299)

Clinical Assignments

Upon Program commencement, students are assigned to one of the following primary clinical affiliates:

Bryn Mawr Hospital
130 S. Bryn Mawr Avenue
Bryn Mawr, PA 19010

Corporal Michael J. Crescenz VAMC
3900 Woodland Avenue
Philadelphia, PA 19104

Jefferson Frankford Hospital
4900 Frankford Avenue
Philadelphia, PA 19124

Jefferson Torresdale Hospital
10800 Knights Road
Philadelphia, PA 19114

Lankenau Medical Center
100. E. Lancaster Avenue
Wynnewood, PA 19096

Methodist Hospital
2301 S. Broad Street
Philadelphia, PA 19145

Paoli Hospital
255 W. Lancaster Avenue
Paoli, PA 19301

Penn Presbyterian Medical Center
51 N. 39th Street
Philadelphia, PA 19104

Pennsylvania Hospital
800 Spruce Street
Philadelphia, PA 19107

Riddle Hospital
1068 W. Baltimore Pike
Media, PA 19063

Scheduled clinical hours will be between 7:00 a.m. and 5:00 p.m. Hours may vary per clinical rotations to ensure appropriate staff supervision. Students will be provided with a detailed schedule prior to the start of each semester. Students will be in clinical no more than eight hours per day and will have a **one-hour lunch break** between the hours of 11:00 a.m. and 1:00 p.m.

Students may be assigned to an alternate clinical affiliate in the event a rotation is not offered. This will ensure equal opportunities to all students and the completion of clinical competency requirements.

The following sites serve as secondary clinical affiliates:

The Children's Hospital of Philadelphia
34th Street and Civic Center Boulevard
Philadelphia, PA 19104
Pediatric/level I trauma rotation for all students

Main Line Health Broomall
1991 Sproul Road
Broomall, PA, 19008
Urgent care rotation for all students

Penn Medicine Rittenhouse (Tuttleman)
1840 South Street
Philadelphia, PA 19146
Pennsylvania Hospital rotation; separate recognition due to proximity

Parking and public transportation is available for all clinical affiliates.

The DMI Program seeks to provide students with valuable clinical education experiences. The addition or removal of clinical education settings may occur at the discretion of program officials.

Orientation to the Clinical Setting

During the first semester of the program (late summer term), students will complete a clinical orientation with program faculty. Additionally, during the College break before the first fall semester, students are required to attend hospital orientation (1.5 days total) at their assigned clinical site. Orientation at any alternate site will take place on the first day of the rotation with an assigned Clinical Preceptor. **See Appendix A – New Student Hospital Orientation Guide**

Competency Requirements

In accordance with the ARRT's 2021 approved Radiography Didactic and Clinical Competency Requirements, students are required to document compliance with the following:

- 10 Mandatory General Patient Care Procedures
- 36 Mandatory Imaging Procedures
- 15 Elective Imaging Procedures (selected from a list of 34 procedures)
    - 1 elective must be from the head section
    - 2 electives must be from the fluoroscopy studies section

Evaluation Process
Expectations regarding competency requirements for each clinical course will be provided in the course syllabus. The program follows a competency-based curriculum and semester requirements ensure students stay on a successful path to completion. Competency may only be evaluated by the Program Director, Clinical Coordinator, Clinical Faculty or Clinical Preceptors
See Appendix B – Competency Eligibility Timeline

Simulations
During the final two weeks of the program (DMI 299), select imaging procedures may be simulated with Program Faculty. The Program Director and Clinical Coordinator will determine the appropriateness for such simulations based on clinical affiliate workflow and student schedules. Fluoroscopic, trauma, mobile, surgical and pediatric procedures are ineligible for simulation. **See Appendix C – ARRT Radiography Competency Requirements**

Scheduling Sequence

Throughout the DMI program, students will complete seven clinical education courses. Primarily, students will be scheduled in clinical rotations which will allow them to obtain the volume and variety of experiences required to be competent in all Radiographic procedure requirements.

In addition to these rotations, students will complete a one-week (3-4 day) introductory rotation through the following advanced imaging modalities: CT, DEXA, Interventional Radiology, Mammography, MRI, Nuclear Medicine, Radiation Therapy and Ultrasound.

Policy regarding the placement of students in Mammography clinical rotations to observe and/or perform breast imaging: All students, male and female, will be offered the opportunity to participate in mammography clinical rotations. The program will make every effort to place a male student in a mammography clinical rotation if requested; however, the program is not in a position to override clinical setting policies that restrict clinical experiences in mammography to female students. Male students are advised that placement in a mammography rotation is not guaranteed and is subject to the availability of a clinical setting that allows males to participate in mammographic imaging procedures. The program will not deny female students the opportunity to participate in mammography rotations if clinical settings are not available to provide the same opportunity to male students.

The DMI Program's policy regarding student clinical rotations in mammography is based on the sound rationale presented in a position statement on student mammography clinical rotations adopted by the Board of Directors of the Joint Review Committee on Education in Radiologic Technology (JRCERT) at its April 2016 meeting.
See Appendix D – JRCERT Mammography Position Statement

All students will also complete a three-week pediatric rotation at CHOP prior to program completion. During the final two semesters of the program, students may choose up to two elective rotations in the advanced imaging modality of their choice. Each elective rotation is two-weeks (6-8 days) in length.

The following section includes details for each clinical course, including relevant rotations.

DMI 196 (Clinical Education I) – Fall Year I
During Clinical Education I, students are introduced to the radiology department and hospital environment. Students begin the course by observing department routines and procedures. After classroom and laboratory instruction, students move into a more active role assisting and performing patient care activities and imaging procedures under appropriate supervision. Students will report to clinical on Tuesday and Thursday for 14 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography and portable radiography. Each rotation will be two to three weeks (4-6 days) in length.

DMI 197 (Clinical Education II) – Spring Year I
During Clinical Education II, students become more comfortable with the radiology department and hospital environment. Students continue to observe department routines and procedures relevant to classroom and laboratory activities. After classroom and laboratory instruction, students move into a more active role assisting and performing patient care activities and imaging procedures under appropriate supervision. Students will report to clinical on Tuesday and Thursday for 14 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography, portable radiography and surgical radiography. Each rotation will be two to three weeks (4-6 days) in length.

DMI 198 (Clinical Education III) – Early Summer Year I
During Clinical Education III, students will gain a more confident persona when performing patient care activities and imaging procedures learned in previous semesters. Students will report to clinical Monday through Thursday for 7 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography, portable radiography and surgical radiography. Each rotation will be one to two weeks in length (4-8 days). Additionally, students will begin introductory rotations through the advanced imaging modalities of CT, DEXA, IR, Mammography, MRI, Nuclear Medicine, Radiation Therapy and Ultrasound. Each intro rotation will be one-week in length and students will spend no more than two out of the seven weeks in advanced modalities.

DMI 199 (Clinical Education IV) – Late Summer Year II
During Clinical Education IV, students are considered level II and will begin working more independently under appropriate supervision when performing studies in which they have been deemed competent. Students will continue to refine skills in patient care activities and imaging procedures. Students will report to clinical Monday through Thursday for 7 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography, portable radiography and surgical radiography. Each rotation will be one to two weeks in length (4-8 days). Additionally, students will continue introductory rotations through the advanced imaging modalities of CT, DEXA, IR, Mammography, MRI, Nuclear Medicine, Radiation Therapy and Ultrasound. Each intro rotation will be one-week in length and students will spend no more than two out of the seven weeks in advanced modalities.

DMI 297 (Clinical Education V) – Fall Year II
During Clinical Education V, students will continue to work on the completion of clinical competency requirements. Students usually require indirect supervision when performing general diagnostic procedures and patient care activities completed in previous semesters. Students will report to clinical on Monday, Wednesday and Friday for 14 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography, portable radiography and surgical radiography. Each rotation will be one to two weeks (3-6 days) in length. Introductory rotations through the advanced imaging modalities of CT, DEXA, IR, Mammography, MRI, Nuclear Medicine, Radiation Therapy and Ultrasound will conclude this semester. Each intro rotation will be one-week in length and students will spend no more than four out of the fourteen weeks in advanced modalities.

DMI 298 (Clinical Education VI) – Spring Year II
During Clinical Education VI, students will continue to work on the completion of clinical competency requirements. Students usually require indirect supervision when performing general diagnostic procedures and patient care activities completed in previous semesters. Students will report to clinical on Monday, Wednesday and Friday for 14 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography, portable radiography and surgical radiography. Each rotation will be one to two weeks (3-6 days) in length. Students will also complete a three-week pediatric rotation. Elective rotations through the advanced imaging modalities of Cardiac Cath, CT, DEXA, IR, Mammography, MRI, Nuclear Medicine, Radiation Therapy and Ultrasound will begin this semester. Each elective rotation will be two-weeks in length.

DMI 299 (Clinical Education VII) – Early Summer Year II
Clinical Education VII is the final clinical component of the program. Students demonstrate continued competency and increased proficiency. The majority of procedures are performed under indirect supervision as students refine their entry-level skills. Students will report to clinical Monday through Thursday for 7 weeks. Clinical rotations include general inpatient, general outpatient, emergency room/trauma radiography, fluoroscopy, orthopedic radiography, portable radiography and surgical radiography. Each rotation will be one to two weeks in length (4-8 days). Elective rotations through the advanced imaging modalities of Cardiac Cath, CT, DEXA, IR, Mammography, MRI, Nuclear Medicine, Radiation Therapy and Ultrasound will conclude this semester. Each elective rotation will be two-weeks in length. Completion of all ARRT requirements, exit evaluations and terminal competencies will take place this semester.

Rotation Expectations

General Clinical Expectations
(*in accordance with the ASRT Radiography Curriculum*)

1. Discuss ethics and the characteristics of professional behavior.
2. Apply professional communication techniques.
3. List the radiography practice standards.
4. Demonstrate positive values and a commitment to diversity, equity, and inclusion.
5. Explain the elements of procedural performance and radiation protection.
6. Recognize the requirements for clinical competency.
7. Differentiate the equipment used in various imaging concentrations.
8. Discuss the dose differences between imaging and radiation therapy doses.
9. Compare and contrast the various methods of image creation.
10. Explain the basic indications and contraindications for various imaging concentrations.
11. List the educational and certification requirements for different imaging concentrations.
12. Discuss the image appearance and principles of operation for equipment used in various imaging concentrations.

Cardiac Catheterization Elective Rotation Expectations

1. List pathological conditions that would justify a cardiac angiogram.
2. Observe the pre-procedure patient assessment and preparation: patient ID process, history obtainment, review of lab results, pertinent prior studies, and ECG.
3. Review the procedure plan and checklist that becomes the patient record.
4. Participate in room and tray preparation for procedures.
5. Identify supplies used: catheters, guide wires, stents, ablation tools, etc.
6. Properly prepare a sterile tray for a procedure.
7. Demonstrate an appropriate method for adding additional sterile items to an existing sterile field/tray.
8. Demonstrate an appropriate method for dressing in a sterile gown & gloves, head cover, mask, eye shield, and shoe covers.
9. Describe, in detail, the Seldinger technique for artery access.
10. Demonstrate an appropriate method of protecting oneself from contamination when passing another person while dressed in sterile apparel.
11. Identify imaging equipment: C-arm, control panel, imaging rate, digital recording features, and applications.
12. Practice appropriate radiation safety.
13. Explain the differences between various procedures observed: left heart, right heart, and coronary.
14. Distinguish between diagnostic and therapeutic procedures.
15. Identify projections used to demonstrate coronary arteries.
16. Explain the use of the power injector, contrast media used, and flow rates.
17. Observe the post-procedure patient management and follow-up.
18. State the reason for applying pressure to the puncture site following catheter removal and minimum amount of time required for pressure to be applied.

Computed Tomography (CT) Rotation Expectations

1. Identify the CT equipment: gantry, table, operator's console, contrast injector, etc.
2. Observe differences between conventional x-ray and computerized tomography.
3. Explain the difference between scan and display function.
4. Describe various protocols employed in CT.
5. List the pathological conditions or indications which would justify having a CT scan of the head
6. List the pathological conditions or indications which would justify having a CT scan of the abdomen and/or pelvis.
7. Participate in room preparation prior to the patient's arrival.
8. Identify the types of contrast media used in CT.
9. Explain which procedures require contrast media.
10. Record patient history including allergy history.
11. Ask the patient the appropriate questions necessary for contrast media administration.
12. Demonstrate the ability to set-up a power injector for contrast media injection.
13. Practice venipuncture skills.
14. Assist the technologist during contrast injection.
15. Describe the importance of breathing techniques used in CT.
16. Identify gross anatomy of the head, chest or abdomen on cross-sectional CT scans.
17. Explain safety measures and emergency shut-down procedures used in CT.
18. Perform enhanced and unenhanced scans with direct supervision of staff technologists.

Dual-Energy X-ray Absorptiometry (DEXA) Rotation Expectations

1. Identify the DEXA equipment.
2. Set up the room for a scan.
3. Understand indications for and the purpose of DEXA scans.
4. Explain the DEXA scanning procedure to a patient.
5. Describe the differences between osteoporosis and osteopenia.
6. List common risk factors for osteoporosis.
7. Describe the anatomical areas scanned during DEXA.
8. Describe scan contraindications and compensation methods.
9. Describe the importance of accurate patient positioning.
10. Assure all radiopaque artifacts have been removed from the patient.
11. Position a patient for a lumbar spine scan with assistance from the technologist.
12. Position a patient for a hip scan with assistance from the technologist.
13. Properly set-up the computer for scanning of the patient.
14. State the information provided by the DEXA scan.
15. Explain the difference between T and Z scores.

Interventional Radiology (IR) Rotation Expectations

1. Identify the x-ray equipment & various supplies used in IR (e.g. catheters, guide wires, vessel dilators).
2. Participate in room preparation prior to patient arrival, including tray prep.
3. Explain and practice sterile technique (gloving, gowning, maintaining sterile tray).
4. Demonstrate an appropriate method for adding items to a sterile tray.
5. Demonstrate an appropriate method for dressing in sterile attire (gown, gloves, head cover, mask, eye shield, and shoe covers).
6. Demonstrate an appropriate method of protecting oneself from contamination when passing another person while dressed in sterile apparel.
7. Explain patient preparation for each procedure observed, including informed consent.
8. Explain use of the power injector and types of contrast media used.
9. Describe various interventional procedures and distinguish between diagnostic and therapeutic procedures.
10. Explain the difference among various procedures observed.
11. Describe how venous access studies differ from arteriograms.
12. List pathological conditions that would justify an angiogram.
13. Locate & record a patient's femoral or pedal pulse.
14. Describe the importance of assessing extremity skin color and temperature.
15. Appropriately shave, scrub, and drape the injection site in a sterile fashion.
16. Describe, in detail, the Seldinger technique for artery access.
17. Assist physician performing the Seldinger technique.
18. Operate the x-ray equipment while giving all appropriate patient instructions.
19. Explain the use of the power injector, contrast media used, and flow rates.
20. Fill the power injector with the indicated contrast media & set flow rate.
21. Observe the post-procedure patient management and follow-up.
22. State the reason for applying pressure to the puncture site following catheter removal and minimum amount of time required for pressure to be applied.

Mammography Rotation Expectations

1. Identify the major components of Mammography equipment.
2. Clean and set-up the exam room prior to each procedure.
3. Obtain a patient history and assure completion of appropriate forms.
4. Explain the importance of reviewing previous mammograms.
5. Explain the differences between screening and diagnostic exams.
6. Explain a screening mammogram to a patient.
7. Display an empathetic attitude and answer questions in an appropriate manner.
8. Observe the technologist perform visual and physical breast inspection.
9. Properly manipulate the equipment (rotation, localizers, compression, etc.)
10. Observe and assist in the positioning of standard and special projections of the breast (CC, MLO, etc.).
11. Describe the purpose of needle localization.
12. Describe a stereotactic procedure.
13. Provide patients with information on how they will receive their exam results.
14. Observe and assist in the performance of quality control procedures.
15. Identify basic anatomy on a mammographic image.
16. Evaluate images for proper positioning and display of pertinent anatomy.
17. Identify obvious pathology on mammographic images.

Magnetic Resonance Imaging (MRI) Rotation Expectations

1. Explain and practice safety measures necessary when working in MRI.
2. Identify the major components of MRI equipment.
3. Identify various coils and their uses.
4. Identify the MRI safety zones.
5. Explain the strength of the magnets used in MRI.
6. Identify the major differences between MRI and Radiography with regard to equipment, procedures and patient care.
7. Explain the importance of an accurate patient history prior to MRI imaging.
8. Identify metallic objects which should be removed from patients.
9. Describe how an image is obtained and formed in MRI.
10. Practice venipuncture skills.
11. Describe the types of contrast media used in MRI.
12. Distinguish between T1 and T2 weighted images.
13. Identify X, Y and Z planes of the patient.
14. Identify gross anatomy on an MRI scan.

Nuclear Medicine Rotation Expectations

1. Identify the major components of Nuclear Medicine equipment.
2. Describe the function of a gamma camera.
3. Describe PET imaging and the advantages of PET fusion studies.
4. List clinical indications for various Nuclear Medicine studies.
5. Describe the hand and body check as it pertains to nuclear medicine
6. Explain the purpose and rationale for hot lab procedures.
7. Explain use of lead shielding, syringe shielding and latex gloves in nuclear medicine.
8. Explain use of radiation detectors in nuclear medicine.
9. Explain dose calibration.
10. Describe routes of radiopharmaceuticals for specific organs.
11. Explain patient/operator safety regarding elimination of isotope from the body.
12. Compare and contrast Nuclear Medicine studies with conventional imaging procedures.
13. Describe modes of scanning: time, counts, and dynamics.
14. Describe forms of immobilization used in nuclear medicine.

Pediatric Rotation Expectations

1. Recognize change in patient/technologist interaction based upon patient age.
2. Discuss the importance of parent communication in pediatric radiography.
3. Identify assorted immobilization devices unique to pediatric imaging.
4. Participate in room preparation prior to patient arrival.
5. Identify different patient conditions unique to pediatric age groups and recognize procedural changes brought about by conditions.
6. Identify methods of radiation protection for patient, parent, and operator.
7. Identify equipment and appropriate technical factor unique to pediatric imaging.
8. Describe the importance of the Image Gently campaign.
9. Observe, assist, and perform general, fluoroscopic, portable, and surgical radiographic procedures.
10. Perform mandatory and elective pediatric competencies in accordance with ARRT guidelines.

Radiation Therapy Rotation Expectations

1. Identify the major components of Radiation Therapy equipment.
2. Observe and assist with set-up of the treatment room.
3. Explain the production of radiation in a linear accelerator.
4. Differentiate between external beam therapy and brachytherapy.
5. Explain the importance of a patient's treatment chart with regard to treatment field size, distance, necessary blocking, and patient positioning.
6. Identify common instructions given to a patient prior to treatment.
7. Describe the importance of conventional simulation, CT simulation, dosimetry, and the treatment room.
8. Identify operator & patient safety devices.
9. Describe the various forms of patient immobilization used.
10. Describe various ways to alter dose distribution including lead alloy blocks, bolus bags and wedges.
11. Describe purpose and use of various positioning methods, including cone down field, arc or rotational field and opposed field.
12. Identify shielding materials and the multi leaf collimator.
13. Identify threshold doses for specific organs.
14. Describe complications that may occur due to radiation therapy treatments.

Ultrasound Rotation Expectations

1. Identify the major components of ultrasound equipment.
2. Describe the major differences between general x-ray and sonography.
3. List anatomical structures commonly imaged with sonography.
4. Describe how Ultrasound images are formed.
5. Explain the differences between the terms anechoic, hypoechoic and hyperechoic.
6. Identify different transducers and indications for their uses.
7. Understand the difference between sagittal and transverse planes in sonography.
8. Identify cystic and solid masses on Ultrasound images.
9. List conditions which justify having an Ultrasound procedure.
10. State the advantages of Ultrasound over other types of radiology procedures.

Imaging Procedure Competency Evaluations

Grading Criteria

The student's ability in performing imaging procedure competencies is evaluated according to the following scale:
4 (outstanding) = 100%
3 (above average) = 93%
2 (average) = 85% *passing clinical grade*
1 (below average) = 75%
0 (highly concerning performance) = 0%

Students must achieve a score of 85% or higher on all competency attempts to meet course and ARRT clinical competency requirements. If a student attempts a competency and receives a score less than 85%, the attempt will be averaged into the clinical course grade but will not count toward course or ARRT requirements.

Forms

Clinical Competency Evaluation Form

Primary competency evaluation form used in the clinical education setting. This form is used for all general radiographic competencies (e.g., chest, abdomen, extremities) and includes procedural assessment, part-IR alignment, positioning, CR-IR alignment, CR-part alignment, exposure factors and image analysis.
This form is utilized in Clinical Education I-VII.
See Appendix E – Clinical Competency Evaluation Criteria

Fluoroscopic Procedure Evaluation Form

This form is specifically used for fluoroscopic competency evaluations. The fluoroscopy procedures evaluated with this form include upper gi series, contrast enema, small bowel series, barium swallow, cystogram/VCUG, ERCP, arthrogram, myelogram and hysterosalpingogram.
This form is utilized in Clinical Education II-VII.
See Appendix F – Fluoroscopic Procedure Competency Evaluation Criteria

Mobile C-Arm Procedure Competency Evaluation Form

This form is specifically used for c-arm competency evaluations. The mobile c-arm procedures evaluated with this form include the c-arm procedure (requiring manipulation to obtain more than one projection) and the surgical c-arm procedure (requiring manipulation around a sterile field).
This form is utilized in Clinical Education IV-VII.
See Appendix G – Mobile C-Arm Procedure Competency Evaluation Criteria

Patient Care Competency Evaluations

Grading Criteria

The student's ability in performing patient care activities is evaluated according to the following scale:
4 (outstanding) = 100%
3 (above average) = 93%
2 (average) = 85% *passing clinical grade*
1 (below average) = 75%
0 (highly concerning performance) = 0%

Students must achieve a score of 85% or higher on all competency attempts to meet course and ARRT clinical competency requirements. If a student attempts a competency and receives a score less than 85%, the attempt will be averaged into the clinical course grade but will not count toward course or ARRT requirements.

Forms

Care of Patient Medical Equipment

During the course of clinical education and performance of radiographic procedures, students are expected to identify and properly care for multiple patient care devices. This form is used to evaluate the student's care of such devices, including, but not limited to, chest drainage tubes, nasogastric tubes, surgical drains, ventilator connections, urinary drainage and intravenous lines.
This form is utilized in Clinical Education I-VII.
See Appendix H – Care of Patient Medical Equipment Evaluation Criteria

Medical Asepsis

Infection control and safety are an integral part of the student's daily activities. During the course of clinical education and performance of radiographic procedures, students are expected to properly practice medical aseptic technique. This form assesses hand hygiene, donning PPE, doffing PPE and equipment asepsis.
This form is utilized in Clinical Education I-VII.
See Appendix I – Medical Asepsis Evaluation Criteria

Patient Transfer (Stretcher)

During the course of clinical education and performance of radiographic procedures, students are expected to safely transfer patients on stretchers. This form evaluates the student's performance when transferring patients from a stretcher to the exam table.
This form is utilized in Clinical Education I-VII.
See Appendix J – Patient Transfer (Stretcher) Evaluation Criteria

Patient Transfer (Wheelchair)

During the course of clinical education and performance of radiographic procedures, students are expected to safely transfer patients in wheelchairs. This form evaluates the student's performance when transferring patients from a wheelchair to the exam table or erect Bucky.
This form is utilized in Clinical Education I-VII.
See Appendix K – Patient Transfer (Wheelchair) Evaluation Criteria

Surgical Asepsis
Infection control and safety are an integral part of the student's daily activities. During the course of clinical education and performance of radiographic procedures, students are expected to properly practice surgical aseptic technique. This form assesses hand hygiene, donning sterile attire and preparing/maintaining a sterile field.
This form is use in Clinical Education II-VII.
See Appendix L – Surgical Asepsis Evaluation Criteria

Venipuncture
During the course of clinical education and performance of radiographic procedures, students are expected to properly perform venipuncture. This form assesses pre-venipuncture requirements, venipuncture technique and post-venipuncture requirements.
This form is utilized in Clinical Education II-VII.
See Appendix M – Venipuncture Evaluation Criteria

Vital Signs
During the course of clinical education and performance of radiographic procedures, students are expected to properly obtain patient vital signs. This form assesses the performance of obtaining temperature, respiration, blood pressure, pulse and pulse ox.
This form is utilized in Clinical Education I-VII.
See Appendix N – Vital Signs Evaluation Criteria

Additional Clinical Performance Evaluations

Advanced C-Arm Equipment Operation

This form is used to evaluate the student's ability to manipulate and operate surgical radiography equipment at an advanced level just prior to graduation.
This form is utilized in Clinical Education VII.
See Appendix O – Advanced C-Arm Equipment Operation Evaluation Criteria

Basic C-Arm Equipment Operation

This form is used to evaluate the student's ability to properly manipulate and operate surgical radiography equipment at a basic level during the first year of the program.
This form is utilized in Clinical Education III.
See Appendix P – Basic C-Arm Equipment Operation Evaluation Criteria

Image Analysis Case Presentation

This form is used to evaluate the student's ability to complete multiple tasks as part of an image analysis case presentation. Image analysis case presentations are integral components of each clinical course.
This form is utilized in Clinical Education I-VII.
See Appendix Q – Image Analysis Case Presentation Evaluation Criteria

Monthly Evaluation by Clinical Preceptors

This form is completed the Clinical Preceptor(s) on a monthly basis and evaluates the student's overall clinical performance.
This form is utilized in Clinical Education I-VII.
See Appendix R – Monthly Evaluation by Clinical Preceptors Evaluation Criteria

Weekly Evaluation by Clinical Faculty (CE I)

This form is completed the College Clinical Faculty on a weekly basis and evaluates new student performance during the first clinical course.
This form is utilized in Clinical Education I only.
See Appendix S – Weekly Evaluation by Clinical Faculty Evaluation Criteria (CE I)

Weekly Evaluation by Clinical Faculty (CE II-VII)

This form is completed the College Clinical Faculty on a weekly basis and evaluates the student's continual competence.
This form is utilized in Clinical Education II-VII.
See Appendix T – Weekly Evaluation by Clinical Faculty Evaluation Criteria (CE II-VII)

Exit Evaluations

Student Exit Evaluation

The student exit evaluation is completed by College Clinical Faculty during the final semester of the program in conjunction with the Professional Characteristics Evaluation.
This form is utilized in Clinical Education VII.
See Appendix U – Student Exit Evaluation Criteria

Professional Characteristics Evaluation

This form evaluates the professional characteristics exhibited by the student in the clinical education setting and is completed by College Clinical Faculty.
This form is utilized in Clinical Education VII.
See Appendix V – Professional Characteristics Evaluation Criteria

Faculty/Preceptor Evaluations

Clinical Instruction Performance Evaluation

Performance evaluations shall be completed on all individuals who assist in the clinical competency process and performance evaluation of the Diagnostic Medical Imaging Program students. This includes College Clinical Faculty as well as JRCERT recognized Clinical Preceptors. Students will complete the evaluations each semester. Results will be shared with faculty and preceptors, at minimum, on an annual basis.
This form is utilized in Clinical Education I-VII.
See Appendix W – Clinical Instruction Performance Evaluation Criteria

Clinical Visit Documentation

During clinical affiliate visits, College Clinical Faculty will observe, assist, and evaluate students in the clinical education setting and obtain feedback on student clinical progress. Faculty will also communicate with Clinical Preceptors to ensure program policies and procedures are adhered to and accreditation standards are being met. The purpose of this form is to document observations during these weekly clinical visits.
This form is utilized in Clinical Education I-VII.
See Appendix X – Clinical Visit Documentation Criteria

Appendices

Community College

of

Philadelphia

DIAGNOSTIC MEDICAL IMAGING PROGRAM

New Student Hospital Orientation Guide

Appendix A

New Student Orientation

New student orientation consists of three mandatory components:

Program orientation (**part I**) takes place prior to program commencement in June. It includes a comprehensive review of the program policy manual, DMI curriculum, College resources (e.g., Learning Lab, Counseling), uniform fitting and completion of multiple required forms.

Clinical orientation (**part II**) takes place immediately following the DMI 101 final exam (late August) and consists of a comprehensive review of clinical education expectations and evaluations, including ARRT competency requirements, E*Value use and all clinically related policies and procedures (e.g., supervision, radiation safety, attendance, dress code).

Hospital orientation (**part III**) takes place the week prior to the first fall semester and Clinical Education I (DMI 196) commencement. Students spend 1 ½ days at their assigned primary clinical affiliate. Orientation at any alternate site will take place on the first day of the rotation with an assigned Clinical Preceptor.

The Purpose of this Document

This document in intended to guide Clinical Preceptors in developing an informative and instructive hospital orientation. Each clinical affiliate has the autonomy to design a series of events that can stimulate an enthusiastic student. Hospital orientation is a time for new students to become acquainted with their clinical surroundings and provides the Clinical Preceptor with a unique opportunity to set the climate and tone for clinical rotations. A major objective is to empower the new students with information they can use to be helpful and productive members of the Radiology department during clinical education. **The following checklist shall serve as a guide during hospital orientation. All items should be checked off (or marked N/A where applicable) and both student and Clinical Preceptor should sign completed checklists at the conclusion of orientation.**

Note: Prior to hospital orientation, students have fully reviewed all program policies and procedures and signed the program policy manual acknowledgement and agreement form. Students have also completed the DMI 101 course - Introduction to Diagnostic Medical Imaging. This course provides an overall view of diagnostic medical imaging, describing its relationship to radiology and its part in medicine. Communication skills, professional conduct of the radiographer, medico-legal issues and ethical standards are covered as well as infectious diseases, infection control, standard precautions and safety. The basic concepts of radiographic equipment, patient positioning, image production and radiation protection are presented and discussed.

Hospital Orientation Checklist

Institutional Policies and Procedures

- ☐ Mission statement
- ☐ Quality patient care policy
- ☐ TJC National Patient Safety Goals
- ☐ Patient confidentiality (HIPAA)
- ☐ Infection control, PPE and sharps handling
- ☐ Emergency codes
- ☐ Hospital ID badges
- ☐ Hospital tour

Departmental Policies and Procedures

- ☐ Radiation safety (dosimeters, lead aprons; expectations in general, fluoroscopy and mobile rotations)
- ☐ MRI safety & MRI screening protocol
- ☐ Fire safety (nearest fire alarms, extinguishers and use)
- ☐ Hazardous chemicals in Radiology
- ☐ Student responsibilities in event of fire, hazardous spills, and/or disasters
- ☐ Student responsibilities in event of CODE/Rapid Response; location of CODE cart
- ☐ Department procedure protocols
- ☐ Use of lead markers
- ☐ Computer systems (PACS/RIS/HIS; functions and use)
- ☐ Stat readings and image copies
- ☐ Incident reporting
- ☐ Professionalism and dress code expectations
- ☐ Attendance expectations (clocking in/out, calling out procedure, lunch breaks)
- ☐ Important departmental phone numbers
- ☐ Student lockers; lounge
- ☐ Departmental tour & introductions (staff, preceptors, managers and administrators)

Patient Care and Radiographic Procedures

Location of patient care items:

- ☐ Emesis basins/bags
- ☐ Bedpans/urinals
- ☐ Slippers/socks
- ☐ Gowns
- ☐ Blankets
- ☐ Sheets/pillowcases

Location of medical asepsis items:

- ☐ Sink/soap, alcohol-based hand rubs
- ☐ Gloves
- ☐ Clorox/Sani-cloth wipes
- ☐ Soiled linen, biohazard waste

Equipment:

- ☐ Basic use of stretchers/wheelchairs (e.g., breaks, steering, side rails, footrests)
- ☐ Exam room preparation and clean-up
- ☐ Digital Radiography equipment
- ☐ Portable Radiography equipment
- ☐ Mobile C-arm equipment
- ☐ Computed Radiography equipment and image processing (where applicable)

Student Signature: _____ Date: _____

Preceptor Signature: _____ Date: _____

Clinical Affiliate: _____

Appendix A

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Competency Eligibility Timeline

ACTIVITY/PROCEDURE	COURSE	ELIGIBLE SEMESTER
GENERAL PATIENT CARE		
Vital Signs (Blood Pressure, Temperature, Pulse, Respiration, & Pulse Oximetry)	DMI 131	Fall Year I
Medical Aseptic Technique	DMI 131	Fall Year I
Sterile Aseptic Technique	DMI 132	Spring Year I
Venipuncture	DMI 132	Spring Year I
Assisted Patient Transfer	DMI 131	Fall Year I
Care of Patient Medical Equipment	DMI 131	Fall Year I
CHEST AND THORAX		
Chest Routine, AP Wheelchair & AP Stretcher	DMI 131	Fall Year I
Ribs	DMI 231	Fall Year II
Chest Lateral Decubitus	DMI 131	Fall Year I
Sternum	DMI 231	Fall Year II
Upper Airway (Soft Tissue Neck)	DMI 132	Spring Year I
Sternoclavicular Joints	DMI 231	Fall Year II
UPPER EXTREMITY		
Thumb & Finger	DMI 131	Fall Year I
Hand & Wrist	DMI 131	Fall Year I
Forearm & Elbow	DMI 131	Fall Year I
Humerus & Shoulder	DMI 132	Spring Year I
Clavicle	DMI 132	Spring Year I
Scapula	DMI 132	Spring Year I
AC joints	DMI 132	Spring Year I
Trauma	See body part	See body part
LOWER EXTREMITY		
Toes	DMI 131	Fall Year I
Foot	DMI 131	Fall Year I
Ankle	DMI 131	Fall Year I
Knee	DMI 131	Fall Year I
Tibia-Fibula	DMI 131	Fall Year I
Femur	DMI 132	Spring Year I
Patella	DMI 131	Fall Year I
Calcaneus	DMI 131	Fall Year I
Trauma	See body part	See body part

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Competency Eligibility Timeline

ACTIVITY/PROCEDURE	COURSE	ELIGIBLE SEMESTER
HEAD		
Skull, Facial Bones, Mandible, TMJ, Nasal Bones, Orbits, Paranasal Sinuses	DMI 231	Fall Year II
SPINE AND PELVIS		
Cervical Spine	DMI 132	Spring Year I
Thoracic Spine	DMI 132	Spring Year I
Lumbar Spine	DMI 132	Spring Year I
Cross-Table (Horizontal Beam) Lateral Spine	See body part	See body part
Pelvis	DMI 132	Spring Year I
Hip	DMI 132	Spring Year I
Cross-Table (Horizontal Beam) Lateral Hip	DMI 132	Spring Year I
Sacrum & Coccyx	DMI 132	Spring Year I
Scoliosis Series	DMI 132	Spring Year I
Sacroiliac Joints	DMI 132	Spring Year I
ABDOMEN		
Abdomen Supine	DMI 131	Fall Year I
Abdomen Upright	DMI 131	Fall Year I
Abdomen Decubitus	DMI 131	Fall Year I
Intravenous Urography	DMI 132	Spring Year I
FLUOROSCOPY STUDIES		
Upper GI Series (Single or Double Contrast)	DMI 132	Spring Year I
Contrast Enema (Single or Double Contrast)	DMI 132	Spring Year I
Small Bowel Series	DMI 132	Spring Year I
Esophagus	DMI 132	Spring Year I
Cystography/Cystourethrography	DMI 132	Spring Year I
ERCP	DMI 221	Fall Year II
Myelography	DMI 221	Fall Year II
Arthrography	DMI 221	Fall Year II
Hysterosalpingography	DMI 221	Fall Year II
MOBILE C-ARM STUDIES		
C-Arm Procedure (manipulation to obtain more than 1 projection)	DMI 199	Late Summer Year II
Surgical C-Arm Procedure (manipulation around a sterile field)	DMI 199	Late Summer Year II
MOBILE RADIOGRAPHIC STUDIES		
Chest & Abdomen	DMI 131	Fall Year I
Upper & Lower Extremity	See body part	See body part

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Competency Eligibility Timeline

ACTIVITY/PROCEDURE	COURSE	ELIGIBLE SEMESTER
PEDIATRIC PATIENT (AGE 6 OR UNDER)		
Chest Routine	DMI 231	Fall Year II
Upper Extremity & Lower Extremity	DMI 231	Fall Year II
Abdomen	DMI 231	Fall Year II
Mobile Study	DMI 231	Fall Year II
GERIATRIC PATIENT (AT LEAST 65 YEARS OLD AND PHYSICALLY OR COGNITAVELY IMPARIED AS A RESULT OF AGING)		
Chest Routine	DMI 131	Fall Year I
Upper Extremity & Lower Extremity	See body part	See body part
Hip & Spine	See body part	See body part

Competency eligibility means the student has successfully completed classroom assessment or a Clinical Objective Evaluation (COE) for the respective patient care activity or imaging procedure. Students may not perform clinical competencies in the clinical education setting unless this is verified.

Radiography

1. Introduction

Candidates applying for certification and registration under the primary eligibility pathway are required to meet the Professional Education Requirements specified in the *ARRT Rules and Regulations*. *ARRT's Radiography Didactic and Clinical Competency Requirements* are one component of the Professional Education Requirements.

The requirements are periodically updated based upon a practice analysis which is a systematic process to delineate the job responsibilities typically required of radiographers. The result of this process is a task inventory which is used to develop the clinical competency requirements (see section 4 below) and the content specifications which serve as the foundation for the didactic competency requirements (see section 3 below) and the examination.

2. Documentation of Compliance

Verification of program completion, including Didactic and Clinical Competency Requirements and all degree-related requirements including conferment of the degree, will be completed on the Program Completion Verification Form on the ARRT Educator Website after the student has completed the Application for Certification and Registration.

Candidates who complete their educational program during 2022 or 2023 may use either the 2017 Didactic and Clinical Competency Requirements or the 2022 requirements. Candidates who complete their educational program after December 31, 2023 must use the 2022 requirements.

3. Didactic Competency Requirements

The purpose of the didactic competency requirements is to verify that individuals had the opportunity to develop fundamental knowledge, integrate theory into practice and hone affective and critical thinking skills required to demonstrate professional competence. Candidates must successfully complete coursework addressing the topics listed in the ARRT Content Specifications for the Radiography Examination. These topics would typically be covered in a nationally-recognized curriculum such as the ASRT Radiography Curriculum. Educational programs accredited by a mechanism acceptable to ARRT generally offer education and experience beyond the minimum requirements specified in the content specifications and clinical competency documents.

4. Clinical Competency Requirements

The purpose of the clinical competency requirements is to verify that individuals certified by the ARRT have demonstrated competence performing the clinical activities fundamental to a particular discipline. Competent performance of these fundamental activities, in conjunction with mastery of the cognitive knowledge and skills covered by the certification examination, provides the basis for the acquisition of the full range of procedures typically required in a variety of settings. Demonstration of clinical competence means that the candidate has performed the procedure independently, consistently, and effectively during the course of his or her formal education. The following pages identify the specific procedures for the clinical competency requirements. Candidates may wish to use these pages, or their equivalent, to record completion of the requirements. The pages do NOT need to be sent to the ARRT.

4.1 General Performance Considerations

4.1.1 Patient Diversity

Demonstration of competence should include variations in patient characteristics such as age, gender, and medical condition.

4.1.2 Elements of Competence

Demonstration of clinical competence requires that the program director or the program director's designee has observed the candidate performing the procedure independently, consistently, and effectively during the course of the candidate's formal educational program.

4.1.3 Simulated Performance

ARRT defines simulation of a clinical procedure routinely performed on a patient as the candidate completing all possible hands-on tasks of the procedure on a live human being using the same level of cognitive, psychomotor, and affective skills required for performing the procedure on a patient.

ARRT requires that competencies performed as a simulation must meet the same criteria as competencies demonstrated on patients. For example, the competency must be performed under the direct observation of the program director or program director's designee and be performed independently, consistently, and effectively.

Simulated performance must meet the following criteria:

- Simulation of imaging procedures requires the use of proper radiographic equipment without activating the x-ray beam.
- A total of ten imaging procedures may be simulated. Imaging procedures eligible for simulation are noted within the chart (see section 4.2.2).
- If applicable, the candidate must evaluate related images.
- Some simulations are acceptable for General Patient Care (see section 4.2.1). These do not count toward the ten imaging procedures that can be simulated.

4.2 Radiography-Specific Requirements

As part of the education program, candidates must demonstrate competence in the clinical procedures identified below. These clinical procedures are listed in more detail in the following sections:

- Ten mandatory general patient care procedures;
- 36 mandatory imaging procedures;
- 15 elective imaging procedures selected from a list of 34 procedures;
- One of the 15 elective imaging procedures must be selected from the head section; and
- Two of the 15 elective imaging procedures must be selected from the fluoroscopy studies section.

One patient may be used to document more than one competency. However, each individual procedure may be used for only one competency (e.g., a portable femur can only be used for a portable extremity or a femur but not both).

4.2.1 General Patient Care Procedures

Candidates must be CPR/BLS certified and have demonstrated competence in the remaining nine patient care procedures listed below. The procedures should be performed on patients whenever possible, but simulation is acceptable if state regulations or institutional practice prohibits candidates from performing the procedures on patients.

General Patient Care Procedures	Date Completed	Competence Verified By
CPR/BLS Certified		
Vital Signs – Blood Pressure		
Vital Signs – Temperature		
Vital Signs – Pulse		
Vital Signs – Respiration		
Vital Signs – Pulse Oximetry		
Sterile and Medical Aseptic Technique		
Venipuncture*		
Assisted Patient Transfer (e.g., Slider Board, Mechanical Lift, Gait Belt)		
Care of Patient Medical Equipment (e.g., Oxygen Tank, IV Tubing)		

*Venipuncture can be simulated by demonstrating aseptic technique on another person, but then inserting the needle into an artificial forearm or suitable device.

4.2.2 Imaging Procedures

Institutional protocol will determine the positions and projections used for each procedure. When performing imaging procedures, the candidate must independently demonstrate appropriate:

- patient identity verification;
- examination order verification;
- patient assessment;
- room preparation;
- patient management;
- equipment operation;
- technique selection;
- patient positioning;
- radiation safety;
- image processing; and
- image evaluation.

4.2.2 Imaging Procedures (continued)

Imaging Procedures	Mandatory or Elective		Eligible for Simulation	Date Completed	Competence Verified By
	Mandatory	Elective			
Chest and Thorax					
Chest Routine	✓				
Chest AP (Wheelchair or Stretcher)	✓				
Ribs	✓		✓		
Chest Lateral Decubitus		✓	✓		
Sternum		✓	✓		
Upper Airway (Soft-Tissue Neck)		✓	✓		
Sternoclavicular Joints		✓	✓		
Upper Extremity					
Thumb or Finger	✓		✓		
Hand	✓				
Wrist	✓				
Forearm	✓				
Elbow	✓				
Humerus	✓		✓		
Shoulder	✓				
Clavicle	✓		✓		
Scapula		✓	✓		
AC Joints		✓	✓		
Trauma: Shoulder or Humerus (Scapular Y, Transthoracic or Axial)*	✓				
Trauma: Upper Extremity (Non-Shoulder)*	✓				
Lower Extremity					
Toes		✓	✓		
Foot	✓				
Ankle	✓				
Knee	✓				
Tibia-Fibula	✓		✓		
Femur	✓		✓		
Patella		✓	✓		
Calcaneus		✓	✓		
Trauma: Lower Extremity*	✓				

* Trauma requires modifications in positioning due to injury with monitoring of the patient's condition.

4.2.2 Imaging Procedures (continued)

Imaging Procedures	Mandatory or Elective		Eligible for Simulation	Date Completed	Competence Verified By
	Mandatory	Elective			
Head – Candidates must select at least one elective procedure from this section.					
Skull		✓	✓		
Facial Bones		✓	✓		
Mandible		✓	✓		
Temporomandibular Joints		✓	✓		
Nasal Bones		✓	✓		
Orbits		✓	✓		
Paranasal Sinuses		✓	✓		
Spine and Pelvis					
Cervical Spine	✓				
Thoracic Spine	✓		✓		
Lumbar Spine	✓				
Cross-Table (Horizontal Beam) Lateral Spine (Patient Recumbent)	✓		✓		
Pelvis	✓				
Hip	✓				
Cross-Table (Horizontal Beam) Lateral Hip (Patient Recumbent)	✓		✓		
Sacrum and/or Coccyx		✓	✓		
Scoliosis Series		✓	✓		
Sacroiliac Joints		✓	✓		
Abdomen					
Abdomen Supine	✓				
Abdomen Upright	✓		✓		
Abdomen Decubitus		✓	✓		
Intravenous Urography		✓			

4.2.2 Imaging Procedures (continued)

Imaging Procedures	Mandatory or Elective		Eligible for Simulation	Date Completed	Competence Verified By
	Mandatory	Elective			
Fluoroscopy Studies – Candidates must select two procedures from this section and perform per site protocol.					
Upper GI Series, Single or Double Contrast		✓			
Contrast Enema, Single or Double Contrast		✓			
Small Bowel Series		✓			
Esophagus (*NOT* Swallowing Dysfunction Study)		✓			
Cystography/Cystourethrography		✓			
ERCP		✓			
Myelography		✓			
Arthrography		✓			
Hysterosalpingography		✓			
Mobile C-Arm Studies					
C-Arm Procedure (Requiring Manipulation to Obtain More Than One Projection)	✓		✓		
Surgical C-Arm Procedure (Requiring Manipulation Around a Sterile Field)	✓		✓		
Mobile Radiographic Studies					
Chest	✓				
Abdomen	✓				
Upper or Lower Extremity	✓				
Pediatric Patient (Age 6 or Younger)					
Chest Routine	✓		✓		
Upper or Lower Extremity		✓	✓		
Abdomen		✓	✓		
Mobile Study		✓	✓		
Geriatric Patient (At Least 65 Years Old **and** Physically or Cognitively Impaired as a Result of Aging)					
Chest Routine	✓				
Upper or Lower Extremity	✓				
Hip or Spine		✓			
Subtotal					
Total Mandatory exams required	36				
Total Elective exams required		15			
Total number of simulations allowed			10		

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Position Statement on Breast Imaging Clinical Rotations

Adopted by the JRCERT Board of Directors (October 2021)

The JRCERT Board of Directors has received numerous inquiries to update and generalize the language in the Position Statement on Breast Imaging Clinical Rotations.

With regard to breast imaging, the JRCERT has determined programs must make every effort to place students in a breast imaging clinical rotation/procedure if requested and available. However, programs will not be expected to attempt to supersede clinical site policies that restrict breast imaging rotations/ procedures to students. Students should be advised that placement in a breast imaging rotation is not guaranteed.

The JRCERT reiterates that it is the responsibility of each clinical site to address any legal challenges related to a program's inability to place students in a breast imaging rotation. All students should be informed and educated about the various employment opportunities and potential barriers that may affect their ability to work in a particular clinical staff position.

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Clinical Competency Evaluation Criteria

The student's clinical competency performance will be rated according to the following scale:

Outstanding 4 Consistently demonstrates desired outcome/performance; little or no improvement needed	Above Average 3 Generally demonstrates desired performance; improvement continues to occur as expected	Average 2 Exhibits desired performance as expected; on-going direction/assistance is necessary; additional effort toward improvement is needed	Below Average 1 Rarely exhibits desired performance; considerable improvement is needed	Unacceptable 0 Never exhibits desired performance; serious deficiencies exist that need immediate attention

The likert scale is based on the following Program clinical performance expectations:

4 = 100 (Exemplary)
3 = 93 (Proficient)
2 = 85 (Competent) *passing clinical grade*
1 = 75 (Incompetent)
0 = highly concerning performance

Procedural Assessment Section

Patient Safety & Radiation Protection *(these items will be rated once for overall performance)*

1. Equipment asepsis
   Students are expected to clean the equipment prior to the exam. New table sheet, pillow case, etc. Appropriate use of alcohol-based products versus bleach.
2. Hand hygiene
   Students are expected to clean their hands prior to the exam and in the presence of the patient. Students are expected to wear gloves. Students are also expected to clean their hands post-exam.
3. Patient identification
   Students are expected to appropriately identify patients using a minimum of two identifiers (e.g., first and last name, DOB, MRN).
4. Patient history/LMP documentation
   Students are expected to obtain patient history and compare to the exam order. Students are also required to apply the 10-day rule for LMP.
5. Patient communication
   Students are expected to communicate appropriately with the patient throughout the exam. This includes appropriately addressing the patient (Mr. /Mrs. & patient surname), exam explanation, positioning instructions, breathing instructions and post-exam instructions.
6. Removal of artifacts
   Students are expected to confirm the removal of preventable artifacts (e.g. clothing, eyeglasses, jewelry) prior to the start of the procedure.
7. Radiation protection practices
   Students are expected apply appropriate radiation practices to patients, selves and others (e.g., shielding, ALARA principle).

Part-IR Alignment ***(these items will be rated for each projection)***

8. Exposure field size
   Students are expected to use the appropriate exposure field size for the selected body part. At no time should an exposure field size larger than the size of the IR be used.
9. Orientation to anatomy
   Students are expected to orient the exposure field for the projection (e.g., crosswise/landscape, lengthwise/portrait).
10. Centering to IR
    Students are expected to center the body part to the image receptor.

Positioning ***(these items will be rated for each projection)***

11. Patient position
    Students are expected to properly position the patient for each projection (e.g., seated, erect, recumbent).
12. Part position (e.g., rotation, OID)
    Students are expected to properly position the part (e.g., obliquity, rotation, tilt, and flexion).
13. Immobilization (e.g., instruction, sponges)
    Students are expected to use appropriate immobilization devices and provide applicable patient instruction prior to exposure.
14. Anatomical markers
    Students are expected to use lead anatomical markers for all projections and place them appropriately (e.g., right versus left side, face-up versus face-down).

CR-IR Alignment ***(these items will be rated for each projection)***

15. CR centered to IR
    Students are expected to align the central ray to the center of the image receptor.
16. Use of proper SID
    Students are expected to set the proper source-to-image receptor distance (e.g., 40" versus 72", table top versus table Bucky measurements).
17. Use of appropriate collimation
    Students are expected to collimate to the part and ensure inclusion of pertinent anatomy.

CR-Part Alignment ***(these items will be rated for each projection)***

18. CR centered to part
    Students are expected to align the central ray to the body part (e.g., T7 & MSP for a PA Chest).
19. Accurate CR angle when appropriate
    Students are expected to ensure a perpendicular beam or implement appropriate CR angle (e.g., 15° cephalic for AP axial sacrum).

Exposure Factors ***(these items will be rated for each projection)***

20. Exposure calculation and control panel settings
    Students are expected to utilize technique charts and evaluate patient body habitus when calculating exposure factors (e.g., hypersthenic versus asthenic, pediatric versus adult). Students are expected to set appropriate exposure factors for each projection (e.g., kV, mAs, proper APR/AEC settings). Students are also expected to ensure the table Bucky, table top or erect Bucky is selected.

Image Analysis Section ***(these items will be rated once for overall performance)***

Students are expected to evaluate final images and discuss the factors in each of the following categories. Faculty/Preceptors will score students on their ability to evaluate the images.

Patient Positioning/Equipment Set-Up

21. Identification of projection/position, orientation of image, evaluation of marker placement (pre-exposure versus annotated), identification of positioning errors and evaluation of CR-part-IR alignment

Anatomy & Pathology

22. Identification anatomy best demonstrated/inclusion of pertinent anatomy, identification of obvious pathology, evaluation of additive versus destructive pathology

Radiation Protection

23. Evaluation of appropriate collimation (versus image cropping) and use of shielding

Image Detail, Distortion & Artifacts

24. Evaluation of spatial resolution, identification of size and/or shape distortion, identification of voluntary versus involuntary motion, identification of preventable versus unpreventable image artifacts

Exposure

25. Identification of adequate versus inadequate exposure/beam penetration, evaluation of image contrast, discussion of exposure indicators/changes deemed necessary.

Scoring Summary

1 Projection - 25 Items
(4) Outstanding = 4 points each = **100** (4 points for each O selected)
(3) Above Average = 3.72 points each = **93** (-0.28 points for each AA selected)
(2) Average = 3.40 points each = **85** (-0.60 points for each A selected)
(1) Below Average = 3 points each = **75** (-1 point for each BA selected)
(0) Unacceptable = 0 points each = **0** (-4 points for each U selected)

2 Projections – 39 items
(4) Outstanding = 2.56 points each = **100** (2.56 points for each O selected)
(3) Above Average = 2.38 points each = **93** (-0.17 points for each AA selected)
(2) Average = 2.17 points each = **85** (-0.39 points for each A selected)
(1) Below Average = 1.92 points each = **75** (-0.64 points for each BA selected)
(0) Unacceptable = 0 points each = **0** (-2.56 points for each U selected)

3 Projections – 53 items
(4) Outstanding = 1.88 points each = **100** (1.88 points for each O selected)
(3) Above Average = 1.75 points each = **93** (-0.13 points for each AA selected)
(2) Average = 1.60 points each = **85** (-0.28 points for each A selected)
(1) Below Average = 1.41 points each = **75** (-0.47 points for each BA selected)
(0) Unacceptable = 0 points each = **0** (-1.88 points for each U selected)

4 Projections – 67 items
(4) Outstanding = 1.49 points each = **100** (1.49 points for each O selected)
(3) Above Average = 1.38 points each = **93** (-0.11 points for each AA selected)
(2) Average = 1.26 points each = **85** (-0.23 points for each A selected)
(1) Below Average = 1.11 points each = **75** (-0.38 points for each BA selected)
(0) Unacceptable = 0 points each = **0** (-1.49 points for each U selected)

5 Projections – 81 items
(4) Outstanding = 1.23 points each = **100** (1.23 points for each O selected)
(3) Above Average = 1.14 points each = **93** (-0.09 points for each AA selected)
(2) Average = 1.04 points each = **85** (-0.19 points for each A selected)
(1) Below Average = 0.92 points each = **75** (-0.31 points for each BA selected)
(0) Unacceptable = 0 points each = **0** (-1.23 points for each U selected)

A grade reduction of 15 points will occur if 'No' is selected for "Did the student complete this entire procedure competently without any repeatable errors?"

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Clinical Competency Evaluation
Fluoroscopic Procedure Evaluation Criteria

The student's performance is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1. **Exam Room Set-Up** 4 3 2 1 0 N/A
   Table set to erect or recumbent position, foot board removed for speech therapy procedure chair, lead drape removed for sterile procedure, Bucky tray appropriately moved to avoid image artifact, overhead tube crane in park position

2. **Control Panel Settings** 4 3 2 1 0 N/A
   Iodine versus barium exposure factors, appropriate use of rapid sequence imaging, last image hold feature, videofluoroscopic recording device, selection of correct patient data

3. **Selection and Preparation of Contrast Media** 4 3 2 1 0 N/A
   Iodine versus barium use, concentration and consistency considerations, appropriate preparation of solutions and suspensions, temperature considerations

4. **Patient History/Verification of Preparation** 4 3 2 1 0 N/A
   Effective patient communication, confirmation of completed informed consent, understanding of preparation requirements, documentation of history/allergic reactions, lab value considerations

5. **Cooperation with Medical Imaging Team** 4 3 2 1 0 N/A
   Works well as a team member, communicates in a professional manner, exhibits confidence and competence

6. **Procedural Imaging** 4 3 2 1 0 N/A
   Obtains overhead and/or fluoro spot scout images as directed, timely completion of requested imaging during the procedure, completes post-procedure imaging as directed

7. **Patient Care and Safety** 4 3 2 1 0 N/A
   Assists the patient before, during and after the procedure, ensures safe movement of the equipment, ensures safe transport of the patient to/from imaging table

8. **Radiation Protection Practices** 4 3 2 1 0 N/A
   Appropriate use of lead apparel for patient and self, avoids the head and foot of the table during live fluoroscopy to reduce radiation exposure, applies ALARA practices, properly records fluoroscopy time at the end of procedure

9. **Medical and Surgical Aseptic Technique** 4 3 2 1 0 N/A
   Hand hygiene before and after procedure, appropriate use of gloves, appropriate use of bleach versus alcohol based equipment disinfectants, preparing sterile tray/field, maintain sterile field

10. **Post-Exam Process** 4 3 2 1 0 N/A
    Image processing & evaluation, image verification, image transfer to PACS

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 10 Questions:
4 = 10 points each (-0 points for each 4 selected)
3 = 9.3 points each (-0.7 points for each 3 selected)
2 = 8.5 points each (-1.5 points for each 2 selected)
1 = 7.5 points each (-2.5 points for each 1 selected)
0 = 0 points each (-10 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Clinical Competency Evaluation
Mobile C-Arm Procedure Evaluation Criteria

The student's performance is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1. **Exam Preparation** 4 3 2 1 0 N/A
   Understanding of procedure, knowledge of related anatomy and physiology

2. **Surgical Attire** 4 3 2 1 0 N/A
   Wears appropriate operating room apparel (scrubs, bouffant, mask, shoe covers)

3. **Control Panel Settings** 4 3 2 1 0 N/A
   Properly sets control panel for procedure, ability to turn fluoro on and off, accurately selects patient data

4. **Equipment Operation** 4 3 2 1 0 N/A
   Correctly connects C-arm to monitor, ability to move equipment for each projection/view, ability to follow surgeon's instructions, skillfully operates all locks

5. **Patient Care and Safety** 4 3 2 1 0 N/A
   Verifies female patient pregnancy status, effective patient communication when appropriate, ensures safety of patient when manipulating equipment

6. **Cooperation with Surgical Team** 4 3 2 1 0 N/A
   Works well as a team member, understands roles of each member, communicates in a professional manner, exhibits confidence and competence

7. **Procedural Imaging** 4 3 2 1 0 N/A
   Obtains overhead and/or fluoro spot scout images as directed, timely completion of requested imaging during the procedure, completes post-procedure imaging as directed

8. **Radiation Protection Practices** 4 3 2 1 0 N/A
   Appropriate use of lead apparel, stands in appropriate location during fluoroscopy to reduce radiation exposure, applies ALARA practices, properly records fluoroscopy time at the end of procedure

9. **Medical and Surgical Aseptic Technique** 4 3 2 1 0 N/A
   Hand hygiene before and after procedure, maintains sterile field, appropriate covering of C-arm, appropriate cleaning of equipment pre and post procedure

10. **Post-Exam Process** 4 3 2 1 0 N/A
    Image processing & analysis, image verification, image transfer to PACS

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 10 Questions:
4 = 10 points each (-0 points for each 4 selected)
3 = 9.3 points each (-0.7 points for each 3 selected)
2 = 8.5 points each (-1.5 points for each 2 selected)
1 = 7.5 points each (-2.5 points for each 1 selected)
0 = 0 points each (-10 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Care of Patient Medical Equipment Evaluation Criteria

During the course of clinical education and performance of radiographic procedures, students are expected to identify and properly care for multiple patient care devices.

The patient care device(s) that apply to the examination observed shall be selected:

_____ Biliary drainage tube
_____ Chest drainage tube
_____ Colostomy device/drainage
_____ ECG/EKG leads and connection patches
_____ Endotracheal tube
_____ Foley catheter & drainage bag
_____ Ileostomy device/drainage
_____ IV line, connection tubing/infusion pump
_____ Intracranial pressure monitor
_____ Nasogastric/nasoenteric tube
_____ Non-tunneled catheter (Quinton)
_____ Oxygen tubing & nasal cannula/mask
_____ Left Ventricular Assist Device (LVAD)
_____ Nephrostomy catheter
_____ PEG or PEJ tube
_____ PICC line
_____ Surgical drain
_____ Tunneled catheter (Hickman, Broviac)
_____ Urostomy device/drainage
_____ Ventilator tubing/connections

The student's ability to care for the selected patient care equipment is rated according to the following scale:

4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1.	The student carefully removed patient medical equipment out of the exposure field when applicable, and followed appropriate infection control protocols.	4	3	2	1	0	N/A
2.	The student kept the patient's medical equipment and any drainage systems in the proper location throughout the examination (e.g., IV solutions were kept 18-20" above the level of the vein, urinary catheter bags were kept below the level of the urinary bladder at all times)	4	3	2	1	0	N/A
3.	The student followed instructions provided regarding the safe movement and/or care of the patient's medical equipment throughout the procedure.	4	3	2	1	0	N/A
4.	The student at no time disconnected, accidentally removed or otherwise damaged the patient's medical equipment.	4	3	2	1	0	N/A
5.	At the conclusion of the procedure, all patient care equipment was returned to its original location by the student.	4	3	2	1	0	N/A

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 5 Questions:
4 = 20 points each (-0 points for each 4 selected)
3 = 18.6 points each (-1.4 points for each 3 selected)
2 = 17 points each (-3 points for each 2 selected)
1 = 15 points each (-5 points for each 1 selected)
0 = 0 points each (-20 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Medical Asepsis Evaluation Criteria

Infection control and safety are an integral part of the student's daily activities. During the course of clinical education and performance of radiographic procedures, students are expected to properly practice medical aseptic technique.

The student's ability to practice medical aseptic technique is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

Hand Hygiene						
1. Removes all jewelry from hands and wrist.	4	3	2	1	0	N/A
2. Puts on lead apron, if applicable. Applies barrier techniques when applicable (e.g., IR cover)	4	3	2	1	0	N/A
3. Cleans hands according to proper hand hygiene and CDC recommendations (scrubs hands with soap and water for at least 20 seconds or rubs hands for at least 15 seconds or until dry if using an alcohol-based rub)	4	3	2	1	0	N/A
Donning PPE (Contact, Airborne, Droplet or Protective/Reverse Isolation Technique)						
4. Puts on cap followed by a mask and goggles, if applicable.	4	3	2	1	0	N/A
5. Picks up gown from the inside near the armhole and gently shakes it open.	4	3	2	1	0	N/A
6. Puts one arm in and then the other. Ties neck strings first, then ties waist strings.	4	3	2	1	0	N/A
7. Puts on clean, non-sterile gloves.						
Doffing PPE (Contact, Airborne, Droplet or Protective/Reverse Isolation Technique)						
8. While gloved, unfastens gown ties.	4	3	2	1	0	N/A
9. Grasps the palm area of the other gloved hand and peels off first glove.	4	3	2	1	0	N/A
10. Slides fingers of ungloved hand under remaining glove at wrist and peels off second glove.	4	3	2	1	0	N/A
11. Unties the mask ties, touching the ties only and removes the mask.	4	3	2	1	0	N/A
12. Pulls the gown off so that the sleeves are inside out and the front of the gown is folded inward. Avoids touching the front of the gown. Places it into the appropriate disposal container.	4	3	2	1	0	N/A
13. Performs hand hygiene.	4	3	2	1	0	N/A
Equipment Asepsis						
14. Properly cleans equipment from most contaminated area outward.	4	3	2	1	0	N/A
15. Properly cleans equipment from the top down.	4	3	2	1	0	N/A

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 15 Questions:
4 = 6.67 points each (-0 points for each 4 selected)
3 = 6.2 points each (-0.47 points for each 3 selected)
2 = 5.67 points each (-1 point for each 2 selected)
1 = 5 points each (-1.67 points for each 1 selected)
0 = 0 points each (-6.67 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Patient Transfer (Stretcher) Evaluation Criteria

During the course of clinical education and performance of radiographic procedures, students are expected to safely transfer patients on stretchers.

The student's ability to safely transfer the patient is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1. Moves the stretcher alongside the table, preferably on the patient's strong or less affected side. Places it as close to the table as possible and then secures it by depressing the wheel locks. Ensures the table and stretcher are at an equal height when possible.	4	3	2	1	0	N/A
2. If using a moving device, rotates the patient's body away from the table while the moving device is placed to the midpoint of the back. If using a draw sheet, begins by rolling up the draw sheet on both sides of the patient. Ensures that the draw sheet is completely under the patient and straightened before the transfer.	4	3	2	1	0	N/A
3. Returns the patient to a supine position and ensures the patient is halfway onto the moving device if utilizing one. Asks patient to cross the arms over the chest to avoid injury or interference during transfer.	4	3	2	1	0	N/A
4. Supports the patient's head and upper body from the far side of the radiographic table. Directs a second assistant to support the patient's pelvic girdle from the stretcher side and a third assistant to support the patient's legs from the table side.	4	3	2	1	0	N/A
5. Grabs the draw sheet and uses it to slowly move the patient onto the table. Removes the moving device, rotating the patient's body if necessary.	4	3	2	1	0	N/A

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 5 Questions:
4 = 20 points each (-0 points for each 4 selected)
3 = 18.6 points each (-1.4 points for each 3 selected)
2 = 17 points each (-3 points for each 2 selected)
1 = 15 points each (-5 points for each 1 selected)
0 = 0 points each (-20 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Patient Transfer (Wheelchair) Evaluation Criteria

During the course of clinical education and performance of radiographic procedures, students are expected to safely transfer patients in wheelchairs.

The student's ability to safely transfer the patient is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1. Communicates with the patient to ensure they can safely stand.	4	3	2	1	0	N/A
2. Positions the wheelchair at a 45^{o} angle to the table or erect Bucky, or parallel to the appropriate location.	4	3	2	1	0	N/A
3. Moves the wheelchair footrests out of the way and ensures that the wheelchair is locked.	4	3	2	1	0	N/A
4. Instructs the patient to sit on the edge of wheelchair seat.	4	3	2	1	0	N/A
5. Instructs the patient to push down on the arms of the chair to assist in rising and then stand up slowly.	4	3	2	1	0	N/A
6. Assists the patient to a sitting position on the radiographic table or to a standing position at the erect Bucky. Uses a step stool when necessary.	4	3	2	1	0	N/A
7. Guides the patient into a recumbent position on the table or into the proper position at the erect Bucky.	4	3	2	1	0	N/A
8. At the conclusion of the exam, ensures the wheelchair is locked and safely assists the patient back into the wheelchair.	4	3	2	1	0	N/A

Grading Scale:
4 = 100 (Outstanding)
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 8 Questions:
4 = 12.5 points each (-0 points for each 4 selected)
3 = 11.625 points each (-0.875 points for each 3 selected)
2 = 10.625 points each (-1.875 points for each 2 selected)
1 = 9.375 points each (-3.125 points for each 1 selected)
0 = 0 points each (-12.5 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Surgical Asepsis Evaluation Criteria

Infection control and safety are an integral part of the student's daily activities. During the course of clinical education and performance of radiographic procedures, students are expected to properly practice surgical aseptic technique.

The student's ability to practice surgical aseptic technique is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

<u>Hand Hygiene & Donning Sterile Gown</u>						
1. Removes all jewelry from hands and wrist.	4	3	2	1	0	N/A
2. Cleans hands according to proper hand hygiene and CDC recommendations (scrubs hands with soap and water for at least 20 seconds or rubs hands for at least 15 seconds or until dry if using an alcohol-based rub)	4	3	2	1	0	N/A
3. Puts on lead apron, if applicable. Dons a clean sterile gown. Puts one arm in and then the other. Ties gown without contaminating or gains assistance with tying gown.	4	3	2	1	0	N/A
<u>Opening a Sterile Tray</u>						
4. Places the sterile package in the center of the surface with the top flap of the wrapper set properly.	4	3	2	1	0	N/A
5. Pinches the first flap on the outside of the wrapper between the thumb and index finger reaching around (not over) the package. Pulls the flap open and lays it on the far surface.	4	3	2	1	0	N/A
6. Uses the right hand to open the right flap and the left hand to open the left flap.	4	3	2	1	0	N/A
7. Grasps the turned-down corner, and pulls down the fourth and final flap, being sure not to touch the inner surface of any of the package with an unsterile object.	4	3	2	1	0	N/A
<u>Opening Sterile Items/Adding to Sterile Field</u>						
8. Opens items properly by separating wrap.	4	3	2	1	0	N/A
9. Inverts package and drops onto field without contaminating.	4	3	2	1	0	N/A

Donning Sterile Gloves

10. Using open technique, picks up the first glove by its inside cuff with one hand.	4	3	2	1	0	N/A
11. Slides the glove onto the opposite bare hand, leaving the cuff down.	4	3	2	1	0	N/A
12. With the gloved hand (sterile), picks up the other glove by reaching under the cuff.	4	3	2	1	0	N/A
13. Pulls the glove onto the hand without touching the inside surface of the glove.	4	3	2	1	0	N/A
14. Arranges sterile items on tray without contaminating.	4	3	2	1	0	N/A
15. Properly removes sterile gown and gloves and practices hand hygiene.	4	3	2	1	0	N/A

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 15 Questions:
4 = 6.67 points each (-0 points for each 4 selected)
3 = 6.2 points each (-0.47 points for each 3 selected)
2 = 5.67 points each (-1 point for each 2 selected)
1 = 5 points each (-1.67 points for each 1 selected)
0 = 0 points each (-6.67 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Venipuncture Evaluation Criteria

During the course of clinical education and performance of radiographic procedures, students are expected to properly perform venipuncture.

The the student's ability to perform venipuncture is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1. Gathers and prepares appropriate supplies (e.g., tourniquet, alcohol prep, angiocath, needle-free valve, tegaderm, gauze, bandage).	4	3	2	1	0	N/A
2. Introduces himself/herself to patient, verifies patient's identity. Explains procedure to the patient.	4	3	2	1	0	N/A
3. Practices hand hygiene and applies gloves.	4	3	2	1	0	N/A
4. Determines the appropriate site for venipuncture. Places tourniquet 3 to 4 inches above selected site and instructs patient to open and close fist.	4	3	2	1	0	N/A
5. Appropriately positions the arm for venipuncture. Prepares skin with alcohol in circular motion for 30 seconds.	4	3	2	1	0	N/A
6. Stabilizes vein by placing thumb about 1 inch below expected point of entry, and pulls skin downward so it is taut.	4	3	2	1	0	N/A
7. Holds angiocath so needle bevel is facing upward and places it into the vein at a 15- 20 degree angle. Upon flashback, lowers the catheter to be parallel with the skin.	4	3	2	1	0	N/A
8. Threads catheter into vein while maintaining skin traction.	4	3	2	1	0	N/A
9. Releases tourniquet. Gently stabilizes catheter hub and presses the white button to remove needle.	4	3	2	1	0	N/A
10. Continues to secure catheter and attach needle free valve.	4	3	2	1	0	N/A
11. Covers injection site with sterile Tegaderm, careful not to lose venous access.	4	3	2	1	0	N/A
12. Upon completion, removes catheter quickly and applies pressure over puncture site. Applies bandage or gauze and tape.	4	3	2	1	0	N/A

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 12 Questions:
4 = 8.33 points each (-0 points for each 4 selected)
3 = 7.75 points each (-0.58 points for each 3 selected)
2 = 7.08 points each (-1.25 points for each 2 selected)
1 = 6.25 points each (-2.08 points for each 1 selected)
0 = 0 points each (-8.33 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Patient Care Activity – Clinical Competency Evaluation
Vital Signs Evaluation Criteria

During the course of clinical education and performance of radiographic procedures, students are expected to properly obtain patient vital signs.

The student's ability to obtain vital signs is rated according to the following scale:
4 – Outstanding 3 – Above Average 2 – Average 1 – Below Average 0 – Unacceptable N/A

1. Introduces herself/himself to patient.	4	3	2	1	0	N/A
2. Verifies patient's identity.	4	3	2	1	0	N/A
3. Performs hand hygiene.	4	3	2	1	0	N/A
<u>Temperature (Oral Method)</u>						
4. Places disposable sleeve on thermometer and place thermometer under the patient's tongue. Ensures the thermometer is kept in place for 1 minute.	4	3	2	1	0	N/A
5. Reads the thermometer and records the reading in Fahrenheit.	4	3	2	1	0	N/A
<u>Respiration</u>						
6. Measures the patient's respiration by observing the chest or abdomen for a 60 second period.	4	3	2	1	0	N/A
7. Records the number of respirations per minute.	4	3	2	1	0	N/A
<u>Pulse</u>						
8. Measures the patient's pulse rate at the radial artery near the wrist for a 60 second period.	4	3	2	1	0	N/A
9. Records the patient's pulse rate per minute.	4	3	2	1	0	N/A
<u>Blood Pressure (Manual Method)</u>						
10. Placed the cuff of the sphygmomanometer on the patient's arm midway between the elbow and shoulder.	4	3	2	1	0	N/A
11. Inflates the cuff above the systolic pressure to stop blood flow to the arm.	4	3	2	1	0	N/A
12. With the stethoscope placed over the brachial artery, slowly releases the cuff of the sphygmomanometer.	4	3	2	1	0	N/A
13. Records the systolic and diastolic reading.	4	3	2	1	0	N/A

Blood Pressure (Digital Method)

14. Obtains digital blood pressure equipment.	4	3	2	1	0	N/A
15. Places the cuff on the patient's upper arm, above the elbow, and secures it.	4	3	2	1	0	N/A
16. Turns the digital monitor on.	4	3	2	1	0	N/A
17. Inflates the cuff.	4	3	2	1	0	N/A
18. Observes and records the blood pressure indicated on the monitor.	4	3	2	1	0	N/A

Pulse Oximetry

19. Place pulse oximeter on the patient's index finger.	4	3	2	1	0	N/A
20. Records the pulse oximetry reading.	4	3	2	1	0	N/A

Grading Scale: **4 = 100 (Outstanding)**
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 20 Questions:
4 = 5 points each (-0 points for each 4 selected)
3 = 4.65 points each (-0.35 points for each 3 selected)
2 = 4.25 points each (-0.75 points for each 2 selected)
1 = 3.75 points each (-1.25 points for each 1 selected)
0 = 0 points each (-5 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Advanced C-arm Equipment Operation Evaluation Criteria

Satisfactory or Unsatisfactory is checked for each of the following tasks:

	Satisfactory	Unsatisfactory
1. Demonstrate 30 degree RAO and 30 degree LAO	_____	_____
2. Demonstrate cranial and caudal angulations	_____	_____
3. Demonstrate how to roadmap from a DSA run: • Peak opacify • Pause run • View subtracted image • Roadmap mask • Save mask • Use mask • Exit	_____	_____
4. Demonstrate cine setup: • Mode • Pulse • Rate • 15 FPS (frames per second) • Exit	_____	_____
5. Use Ethernet cable to send images to PACS	_____	_____

Grading Scale:
Satisfactory = 20 points
Unsatisfactory = 0 points
100 possible points (-20 points for each Unsatisfactory)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Basic C-arm Equipment Operation Evaluation Criteria

Satisfactory or Unsatisfactory is checked for each of the following tasks:

	Satisfactory	Unsatisfactory
1. Connect C-arm to work station. .	_____	_____
2. Plug power cord into AC outlet and turn units on.	_____	_____
3. Indicate exposure devices.	_____	_____
4. Collimate image.	_____	_____
5. Rotate image.	_____	_____
6. Flip image.	_____	_____
7. Magnify image.	_____	_____
8. Save image.	_____	_____
9. Indicate alarm reset button.	_____	_____
10. Indicate brightness/contrast controls.	_____	_____
11. Negate image.	_____	_____
12. Crop image.	_____	_____
13. Mark image.	_____	_____
14. Write a comment.	_____	_____
15. Switch modes if applicable.	_____	_____
16. Set unit for new patient.	_____	_____
17. Enter patient information.	_____	_____

Grading Scale:
Satisfactory = 5.89 points
Unsatisfactory = 0 points
100 possible points (-5.89 points for each U)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Image Analysis Case Presentation Evaluation Criteria

The student's ability to complete each of the following tasks as part of the image analysis case presentation is evaluated according to the following scale:	**Outstanding 4**	**Above Average 3**	**Average 2**	**Below Average 1**	**Unacceptable 0**
CASE PRESENTATION 1. Provides complete patient history 2. Identifies anatomy 3. Discusses system physiology 4. Identifies pathology (radiology report)					
PATIENT POSITIONING 5. Describes patient position 6. Identifies planes, lines, baselines used 7. Indicates centering landmarks 8. Discusses positioning corrections					
PATIENT / IR ALIGNMENT 9. Describes patient centering to IR 10. Describes CR centering to IR 11. Describes angle of CR 12. Discusses corrections in alignment					
RADIOGRAPHIC QUALITY 13. Recognizes that radiographic exposure is sufficient 14. Identifies the scale of contrast 15. Indicates factors effecting definition and distortion 16. Reports exposure index and suggests corrections when necessary					
RADIATION PROTECTION 17. Describes use of patient shielding 18. Describes the use of collimation 19. Indicates evidence of collimation and shielding on the image. 20. Discusses radiation protection for self and staff					

Grading Scale: 4 = 100 (Exemplary)
3 = 93 (Proficient)
2 = 85 (Competent) ***passing clinical grade***
1 = 75 (Incompetent)
0 = highly concerning performance

Outstanding **4** Consistently demonstrates desired outcome/performance; little or no improvement needed	**Above Average** **3** Generally demonstrates desired performance; improvement continues to occur as expected	**Average** **2** Exhibits desired performance as expected; on-going direction/assistance is necessary; additional effort toward improvement is needed	**Below Average** **1** Rarely exhibits desired performance; considerable improvement is needed	**Unacceptable** **0** Never exhibits desired performance; serious deficiencies exist that need immediate attention

Case Presentation

1. What is the patient's history?

2. Describe the anatomy visualized on the radiographs.

3. Explain physiology involved.
   Example: IVU = urinary system, UPGI = digestive system

4. Identify osteology visualized on the radiographs.
   Example: Lumbar spine and pelvis in lower back study or cranial bones in a skull examination. *Do not* discuss lumbar spine anatomy on a barium enema study.

Special Procedure Techniques (if applicable)

1. Discuss clinical indications for the particular study.

2. Explain the techniques in doing the particular study.
   Example: Seldinger technique or spinal puncture.

3. What contrast medium is used in the study?

4. Discuss patient precautions/contraindications to the study.

Patient Positioning and Image Receptor Alignment

1. What is the relationship of the planes/baselines to the image receptor?

2. How is the patient positioned with relation to the IR (supine, prone, lateral, oblique)?

3. What anatomy is best demonstrated with this particular projection?

4. What anatomical landmarks are used when centering or positioning of the patient to the IR?

5. Has pathology or trauma compromised routine patient positioning?

6. What is the relationship of the CR-part-IR?

7. Explain the corrections, in patient positioning or CR alignment, that are necessary to make this an optimal image.

Technical Factors and Image Quality

1. Was the exposure indicator within an acceptable range?

2. Is the part properly penetrated? How can you tell?

3. What type of contrast should be demonstrated on this image? Is the scale of contrast acceptable?

4. Does the image display indicators for underexposure or overexposure (e.g. quantum noise or excessive gray scale)?

5. Has pathology affected the exposure? Is the pathology additive or destructive?

6. Has spatial resolution been compromised by motion?

7. Evaluate magnification.

8. Evaluate shape distortion (elongation & foreshortening) and causes.

9. Evaluate marker placement (placement on IR/table, annotation)

10. Identify visible artifacts and causes. Are the artifacts preventable?

11. Which technical factors should be adjusted to improve the quality of the image?

Radiation Protection

1. Evaluate the use of collimation. Is collimation adequate?

2. What type of shielding was used for patient protection? Was it placed appropriately?

3. What type of shielding was used for operator protection?

Additional Comments and Questions

Students may and should make additional comments about their case presentations. Students should also be prepared to field questions from classmates concerning the presentation.

Course	# of Presentations	Presentation Topics
DMI 196	3	• Chest • Abdomen • Upper Extremity • Lower Extremity
DMI 197	3	• Upper or Lower Extremity (not previously presented) • Gastrointestinal or Genitourinary Contrast Procedure • Shoulder Girdle or Pelvic Girdle • Vertebral Column
DMI 198	2	• Any procedure not previously presented • Portable Chest or Portable Abdomen • Gastrointestinal or Genitourinary Contrast Procedure
DMI 199	2	• Student's best image/study • Student's worst image/study
DMI 297	3	• Cervical Spine (not previously presented) • Shoulder Girdle (not previously presented) • GI or GU Contrast Procedure (not previously presented)
DMI 298	3	• Ribs • Cranium • Advanced Orthopedics Involving a Pathological Condition • Any Interesting Study from an Advanced Imaging Modality
DMI 299	2	• Emergency Room Procedure • Reject Analysis

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Monthly Evaluation by Clinical Preceptors Evaluation Criteria

Clinical Preceptors evaluate the student-radiographer as objectively as possible in each of the following categories. Preceptors are asked to keep in mind an inaccurate assessment may give students a false sense of their abilities. Feedback in the form of constructive criticism at the end of this evaluation is appreciated as students strive to improve performance.

Each option is numbered according to the following performance scale:
(4) Outstanding, (3) Above Average, (2) Average, or (1) Below Average

SELF CONFIDENCE: student's feeling of assurance and self-confidence

(4) Confident	(3) Capable	(2) Overconfident; makes careless mistakes	(1) Lacks confidence

INITIATIVE: student's display of interest and motivation (action) in clinical assignment

(4) Seeks added responsibility	(3) Above average initiative	(2) Average initiative; does assigned work	(1) Unmotivated

ADAPTABILITY: student's ability to be guided, directed, and instructed in making constructive changes in behavior and ideas.

(4) Always accepts constructive criticism as a means for improvement	(3) Usually accepts constructive criticism as a means for improvement	(2) Sometimes accepts constructive criticism as a means for improvement	(1) Rarely accepts constructive criticism as a means for improvement

ACCOUNTABILITY TO CLINICAL ASSIGNMENT: student's presence in assigned clinical area

(4) Always present; makes good effort to participate	(3) Usually present; makes some effort	(2) Sometimes present; leaves without notice	(1) Rarely present; does not make an effort

JUDGMENT: student's ability to reason, interpret and use discretion in carrying out assignments

(4) Consistent performer; above average	(3) Organizes and plans well in familiar situations	(2) Sometimes disorganized in planning	(1) Rarely organized

PERFORMANCE UNDER PRESSURE: student's ability to handle pressure and remain calm in busy or crisis situations

(4) Handles difficult situations skillfully and without assistance	(3) Focuses well; completes work accurately but slowly	(2) Needs guidance to focus and work through problems	(1) Loses control if stressed

PERSONAL APPEARANCE: student's personal attire/appearance conforms to established dress code at all times

(4) Always meets dress code; well groomed	(3) Meets dress code; occasional reminder required	(2) Meets dress code; careless at times	(1) Rarely meets dress code; personal hygiene is a concern

APPENDIX R

ATTENDANCE/PUNCTUALITY: student arrives at clinical assignment at appointed time in the morning, from lunch and from approved breaks in accordance with College policy

(4) Punctual; always looks for work and is eager to perform	(3) Consistently available in assigned areas when work is allocated	(2) Occasionally disappears when work is to be performed	(1) Frequently late or absent when work is to be performed

INTERPERSONAL RELATIONS: student exhibits professional characteristics when interacting with patients and clinical staff

(4) Always professional and polite	(3) Usually professional and polite	(2) Uses inappropriate verbal or body language	(1) Often rude; unprofessional

EMPATHY TO PATIENTS: student demonstrates understanding of feelings, thoughts, and motives of the patient based upon their gender and cultural needs

(4) Always demonstrates concern	(3) Usually demonstrates concern	(2) Indifferent to patient needs	(1) Does not show concern for patient

QUALITY OF PROCEDURE PERFORMANCE: student's accuracy and thoroughness noted in procedure performance

(4) Consistently accurate	(3) Seldom makes errors; work is generally accurate	(2) Sometimes inaccurate	(1) Frequently makes the same mistakes

PROCEDURE MANAGEMENT: student's ability to independently complete all aspects of procedure using department standards and policies

(4) Consistently completes procedure	(3) Usually completes procedure	(2) Slow to learn department protocol	(1) Frequently fails to complete procedures

POSITIONING SKILLS: student's ability to place patient in correct position(s) for required studies

(4) Always follows protocol without error or assistance; rarely needs assistance	(3) Usually follows protocol; some assistance needed	(2) Positions sometimes; often needs assistance	(1) Rarely participates

KNOWLEDGE/HANDLING OF EQUIPMENT: student's ability to operate the radiographic equipment used in this rotation and to adapt to any changes necessary

(4) Excellent knowledge of equipment in **all** rooms	(3) Good knowledge and can adapt to new equipment	(2) Demonstrates knowledge of equipment when performing in identical or similar circumstances	(1) Limited knowledge of equipment handling and operation

EXPOSURE CONSIDERATIONS/MANIPULATION: student's ability to determine proper technical factors and to change factors as needed in producing a satisfactory radiograph

(4) Manipulates exposure factors **without** assistance according to situation	(3) Manipulates exposure with minimal input from technologist	(2) Demonstrates some knowledge but unsure; makes occasional mistakes	(1) Unable to make exposure adjustments; needs assistance

IMAGE EVALUATION: student's ability to identify pertinent anatomy on radiographs; discuss patient position and projection, evaluate image qualities (receptor exposure, contrast, spatial resolution, distortion), and patient protection

(4) Able to evaluate and adjust factors in all situations	(3) Is able to recognize and correct mistakes in most cases	(2) Can evaluate some image qualities with assistance	(1) Incapable of identifying any aspect of the image; offers minimal evidence of knowledge

OVERALL PROGRESS: student's ability to learn, retain direction and function during the month

(4) Excellent	(3) Good	(2) Fair	(1) Poor

QUANTITY OF WORK: student's availability, willingness and general ability to perform procedures

(4) Top performer	(3) Above average. Speed and accuracy improving	(2) Completes expected work	(1) Needs prodding. Low producer

COMMUNICATION SKILLS: student's ability to communicate with members of the medical imaging team and patients

(4) Always communicates effectively; projects confidence	(3) Usually communicates effectively	(2) Communicates with some hesitation	(1) Lacks confidence in communication with patients and staff

RADIATION PROTECTION PRACTICES: student's ability to practice appropriate radiation protection with respect to self, patient, and others (e.g., obtaining LMP, use of lead shielding, proper collimation)

(4) Always follows proper radiation safety procedures	(3) Usually follows proper radiation safety procedures	(2) Sometimes follows proper radiation safety procedures	(1) Rarely follows proper radiation safety procedures

The following additional questions are also answered:

1. Were repeat images required by the student during this rotation? Y N
2. If yes, was the student directly supervised during the repeat exposures? Y N

Monthly Evaluation Scoring (20 total items):

(4) Outstanding = 5 points each = **100**
(3) Above Average = 4.65 points each = **93** (-0.35 points for each 3 selected)
(2) Average = 4.25 points each = **85** (-0.75 points for each 2 selected)
(1) Below Average = 3.75 points each = **75** (-1.25 points for each 1 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Weekly Evaluation by Clinical Faculty Evaluation Criteria (CE I ONLY)

Faculty are asked to comment on the performance observed during their weekly visit with the student.

The student's performance is evaluated in each of the following categories based on weekly observations.	**Outstanding 4**	**Above Average 3**	**Average 2**	**Below Average 1**	**Unacceptable 0**
PATIENT MANAGEMENT • Greets and identifies patient; compares request to physician's orders; takes patient history • Respects patient's rights • Practices proper body mechanics • Adheres to The Joint Commission hospital national patient safety goals (e.g, infection prevention, communication)					
POSITIONING SKILLS • Demonstrates interest by asking questions and seeking more information • Initiates activities and assumes responsibility • Attempts to position patients for radiographic examinations under direct supervision					
POSITIONING EXPEDIENCY • Inspects room for cleanliness • Prepares the exam room as instructed • Communicates and cooperates with staff; demonstrates appropriate interactions, pays attention and follows directions • Assists with completion of exam paperwork					
EQUIPMENT HANDLING • Attempts to manipulate radiographic equipment for erect, table and table top imaging set-up • Assists with image processing					
SETTING EXPOSURE FACTORS • Attempts to set control panel with a provided technique and make supervised radiographic exposures during the rotation					
RADIATION PROTECTION • Demonstrates the knowledge and ability to follow ALARA principles					

IMAGE EVALUATION • Participates in the evaluation of radiographic images during the rotation					
PROFESSIONALISM • Responsibility *initiative in performing exams, works consistently well, proper use of downtime, consults staff when appropriate* • Dependability *arrives ready and on time, adherence to attendance policy, always in assigned area* • Professional Demeanor *adherence to dress code, works effectively as a team member, contributes to department efficiency, adheres to program, department and hospital rules/regulations* • Personal Characteristics *participates in challenging procedures, accepts constructive criticism as a means for improvement, adapts to situational changes with minimal disruptions, respects and acknowledges talents of peers, demonstrates accountability for actions*					

<u>Faculty answer the following additional questions:</u>
Does the student demonstrate acceptable performance for their level in the Program? Yes No

If No, please comment on performance concerns:

Grading Scale:
4 = 100 (Exemplary)
3 = 93 (Proficient)
2 = 85 (Competent) ***passing clinical grade***
1 = 75 (Incompetent)
0 = highly concerning performance

Outstanding **4** Consistently demonstrates desired outcome/performance; little or no improvement needed	**Above Average** **3** Generally demonstrates desired performance; improvement continues to occur as expected	**Average** **2** Exhibits desired performance as expected; on-going direction/assistance is necessary; additional effort toward improvement is needed	**Below Average** **1** Rarely exhibits desired performance; considerable improvement is needed	**Unacceptable** **0** Never exhibits desired performance; serious deficiencies exist that need immediate attention

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Weekly Evaluation by Clinical Faculty Evaluation Criteria (CE II-VII)

Faculty are asked to comment on the procedures observed during their weekly visit with the student.

The student's performance is evaluated in each of the following categories based on weekly observations.	**Outstanding 4**	**Above Average 3**	**Average 2**	**Below Average 1**	**Unacceptable 0**
PATIENT MANAGEMENT • Greets and identifies patient; compares request to physician's orders; takes patient history • Respects patient's rights • Practices proper body mechanics • Practices infection control					
POSITIONING SKILLS • Positions patient and body part correctly • Utilizes immobilization devices • Aligns IR, tube, and SID • Communicates positioning instructions to patient					
POSITIONING EXPEDIENCY • Inspects room for cleanliness • Gathers necessary accessories • Works in organized steps • Completes procedure in minimum time					
EQUIPMENT HANDLING • Manipulates locks correctly • Operates equipment carefully • Provides safe environment for patient, self, staff • Processes images correctly					
SETTING EXPOSURE FACTORS • Selects departmental techniques • Marks anatomy properly • Communicates correct breathing instructions • Adjusts technique when necessary					
RADIATION PROTECTION • Practices patient shielding • Practices self and staff protection • Uses proper collimation • Does not repeat images					
IMAGE EVALUATION • Identifies images as optimal, acceptable or unacceptable • Evaluates patient positioning, CR-part-IR alignment, evidence of radiation protection, image artifacts, image sharpness, obvious pathology and exposure factors					

PROFESSIONALISM • Responsibility *initiative in performing exams, works consistently well, proper use of downtime, consults staff when appropriate* • Dependability *arrives ready and on time, adherence to attendance policy, always in assigned area* • Professional Demeanor *adherence to dress code, works effectively as a team member, contributes to department efficiency, adheres to program, department and hospital rules/regulations* • Personal Characteristics *participates in challenging procedures, accepts constructive criticism as a means for improvement, adapts to situational changes with minimal disruptions, respects and acknowledges talents of peers, demonstrates accountability for actions*					

<u>Faculty answer the following additional questions:</u>
Does the student demonstrate continual competency for their level in the Program? Yes No

If No, please comment on performance concerns:

Grading Scale:
4 = 100 (Exemplary)
3 = 93 (Proficient)
2 = 85 (Competent) ***passing clinical grade***
1 = 75 (Incompetent)
0 = highly concerning performance

Outstanding **4** Consistently demonstrates desired outcome/performance; little or no improvement needed	**Above Average** **3** Generally demonstrates desired performance; improvement continues to occur as expected	**Average** **2** Exhibits desired performance as expected; on-going direction/assistance is necessary; additional effort toward improvement is needed	**Below Average** **1** Rarely exhibits desired performance; considerable improvement is needed	**Unacceptable** **0** Never exhibits desired performance; serious deficiencies exist that need immediate attention

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Student Exit Evaluation Criteria

College Faculty should evaluate the student in the areas noted based on observations of the student in the clinical affiliate. This evaluation should be completed during the final weeks of Clinical Education VII (DMI 299) and in the presence of the student. Faculty are encouraged to provide constructive criticism while obtaining the student's comments.

College Faculty Section

ETHICAL CONDUCT, ATTITUDE, AND PROFESSIONALISM

The student:

1. can follow instructions	yes____	no ____
2. accepts responsibility	yes____	no ____
3. adheres to CCP and clinical affiliate policies	yes____	no ____
4. cooperates with staff and peers	yes____	no ____
5. demonstrates empathy towards patients	yes____	no ____
6. accepts constructive criticism	yes____	no ____
7. demonstrates profession behavior in all situations	yes____	no ____

COMMENTS:

PSYCHOMOTOR ABILITIES

The student:

8. produces quality radiographs most of the time	yes____	no ____
9. properly positions and protects the patient	yes____	no ____
10. handles R/F equipment knowledgeably	yes____	no ____
11. adjusts technical factors when circumstances require	yes____	no ____
12. recognizes technical/positioning errors and corrects them accordingly	yes____	no ____

COMMENTS:

13. IN YOUR OPINION, WHAT ARE THE STUDENT'S STRENGTHS OR STRONG POINTS?

14. IN YOUR OPINION, WHAT ARE THE STUDENT'S WEAKNESSES/AREAS IN NEED OF IMPROVEMENT?

Continued

15. **IN YOUR OPINION, WHAT ARE THE STUDENT'S EMPLOYMENT PROSPECTS? WHAT TYPE OF FACILITY WOULD THIS STUDENT BE MOST SUCCESSFUL WORKING IN?**

Student Section

Faculty shall ask the student the following questions and record responses.

1. **WHAT 3 ASPECTS WERE THE MOST POSITIVE ABOUT YOUR TRAINING? (Academic and/or Clinical)**
   1.
   2.
   3.
2. **WHAT 3 RECOMMENDATIONS WOULD YOU MAKE TO IMPROVE THE DMI PROGRAM EDUCATIONAL EXPERIENCE? (Academic and/or Clinical)**
   1.
   2.
   3.
3. **WOULD YOU CONSIDER WORKING AT YOUR PRIMARY CLINICAL SITE? WHY OR WHY NOT?**
4. **ARE YOU SATISFIED WITH THE EDUCATION YOU RECEIVED FROM CCP'S DMI PROGRAM? WHY OR WHY NOT?**

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Professional Characteristics Evaluation Criteria

Professionalism encompasses a number of different attributes, such as emotions, interests, beliefs, values, and attitudes of the student. Together, these attributes identify and define a professional. Evaluating professional characteristics in the clinical setting is essential and includes concepts such as caring about patients, cooperativeness with staff, confidence, resourcefulness and dependability. College Faculty should evaluate the student in the areas noted based on observations in the clinical setting and also provide constructive criticism regarding professional characteristics.

The student's professional characteristics are rated according to the following performance scale:

Outstanding	**Above Average**	**Average**	**Below Average**	**Unacceptable**
4	**3**	**2**	**1**	**0**
Consistently demonstrates desired outcome/performance; little or no improvement needed	Generally demonstrates desired performance; improvement continues to occur as expected	Exhibits desired performance as expected; on-going direction/assistance is necessary; additional effort toward improvement is needed	Rarely exhibits desired performance; considerable improvement is needed	Never exhibits desired performance; serious deficiencies exist that need immediate attention

RESPONSIBILITY/DEPENDABILITY

1. Assumes appropriate responsibility and initiative in performing exams. Performs tasks and procedures without being asked. Accepts assigned tasks willingly.
   4 3 2 1 0

2. Works consistently well. Sees tasks to completion while being accurate and thorough.
   4 3 2 1 0

3. Demonstrates an interest in and desire for learning. Makes proper use of downtime by asking questions, practicing procedures and equipment manipulation, or familiarizing oneself with the clinical education setting protocols and procedures.
   4 3 2 1 0

4. Recognizes problems and takes immediate steps to correct. Consults staff when appropriate.
   4 3 2 1 0

5. Arrives in department on time, ready to begin performing exams and/or preparing room.
   4 3 2 1 0

6. Always in assigned area. Adheres to scheduled clinical hours and attendance policy.
   4 3 2 1 0

PROFESSIONAL DEMEANOR

1. Adheres precisely to dress code. Presents a professional appearance.
   4 3 2 1 0

2. Treats patient information and results of procedures done as confidential information. Provides privacy and comfort to patients.
   4 3 2 1 0

3. Provides physical and psychological care for the patient. Recognizes and obtains help for difficult situations.
   4 3 2 1 0

4. Practices good radiation protection with respect to patients, self, and co-workers by utilizing collimation, obtaining and documenting LMP, setting appropriate technical factors, properly wearing radiation monitor and utilizing lead shielding when appropriate.
   4 3 2 1 0

5. Works effectively as a team member. Communicates well with clinical staff.
   4 3 2 1 0

6. Contributes to the efficiency of the radiography department. Presents confidence in skills and knowledge.
   4 3 2 1 0

7. Adheres to program, department, and hospital rules and regulations.
   4 3 2 1 0

8. Communicates in a professional manner with patients. Puts patients at ease and inspires confidence.
   4 3 2 1 0

9. Holds self to high standards professionally. Takes pride in quality performance.
   4 3 2 1 0

PERSONAL CHARACTERISTICS

1. Accepts directions willingly. Follows through on directions given.
   4 3 2 1 0

2. Accepts constructive criticism in a positive manner. Is receptive to new ideas as helpful for improvement.
   4 3 2 1 0

3. Demonstrates accountability for actions. Uses mistakes constructively. Rarely repeats mistakes.
   4 3 2 1 0

4. Recognizes limitations of skills and knowledge; seeks assistance when necessary.
   4 3 2 1 0

5. Participates in challenging procedures. Strives toward proficiency.
   4 3 2 1 0

6. Is able to adapt to situational changes with minimal disruptions. Maintains poise in difficult situations.
   4 3 2 1 0

7. Preserves appearance of calm when events or people are difficult.
   4 3 2 1 0

8. Holds self to high personal standards. Recognizes boundaries for inappropriate behaviors, actions, and attitudes.
   4 3 2 1 0

9. Shows appreciation and support for clinical staff and fellow classmates. Respects and acknowledges talents of peers.
   4 3 2 1 0

Grading Scale:
4 = 100 (Outstanding)
3 = 93 (Above Average)
2 = 85 (Average) ***passing clinical grade***
1 = 75 (Below Average)
0 = highly concerning performance

Point Deductions Based on 24 Questions:
4 = 4.167 points each (-0 points for each 4 selected)
3 = 3.875 points each (-0.292 points for each 3 selected)
2 = 3.54 points each (-0.625 point for each 2 selected)
1 = 3.125 points each (-1.042 points for each 1 selected)
0 = 0 points each (-4.167 points for each 0 selected)

Community College *of* Philadelphia
Diagnostic Medical Imaging Program
Clinical Instruction Performance Evaluation Criteria

Performance evaluations shall be completed on all individuals who assist in the clinical competency process and performance evaluation of the Diagnostic Medical Imaging Program students. This includes CCP Clinical Faculty as well as JRCERT recognized Clinical Preceptors.

The individual's instructional abilities are rated according to the scale below.

	Always (5)	**Usually (4)**	**Sometimes (3)**	**Rarely (2)**	**Never (1)**	**N/A**
1. Promotes an atmosphere that is conducive to learning.						
2. Makes expectations regarding clinical education clear.						
3. Corrects student mistakes while encouraging improved performance.						
4. Communicates with students in a manner that demonstrates respect.						
5. Affords students adequate opportunity for communication.						
6. Professionally communicates in the patient's presence when procedural direction is required.						
7. Is patient and considerate.						
8. Asks effective questions to stimulate problem solving and critical thinking.						
9. Allows participation in procedures within Program direct/indirect supervision guidelines.						

Continued

	Always (5)	Usually (4)	Sometimes (3)	Rarely (2)	Never (1)	N/A
10. Provides constructive criticism as a means for improvement.						
11. Is respectful and approachable.						
12. Treats students in a fair and professional manner.						
13. Shows concern for student progress.						
14. Allows further independence as clinical skills are mastered.						
15. Connects theory taught in the classroom to Clinical Education.						
16. Embodies knowledge, competence, and professionalism expected of a medical imaging professional.						

The evaluator is asked to provide constructive criticism regarding strengths and weaknesses and give examples.

17. Clinical Instruction Strengths:
18. Clinical Instruction Weaknesses/Areas in Need of Improvement:

Community College of Philadelphia
Diagnostic Medical Imaging Program
Clinical Visit Documentation Criteria

During clinical affiliate visits, DMI Program Faculty will observe, assist, and evaluate students in the clinical education setting and obtain feedback on student clinical progress. DMI Program Faculty will also communicate with Clinical Preceptors to ensure program policies and procedures are adhered to and accreditation standards are being met. The purpose of this form is to document observations during these weekly clinical visits.

During the clinical affiliate visit, DMI Program Faculty witnessed students:	**Yes**	**No**
in their assigned clinical rotations.		
in proper dress code, including ID badge & radiation monitor.		
engaging in professional behavior.		
taking an active interest in the clinical rotation.		
performing procedures & evaluating images appropriately.		
practicing radiation safety.		
communicating with patients and staff in a professional manner.		
During the clinical affiliate visit, DMI Program Faculty witnessed:		
student to technologist ratio of 1:1.		
support of student learning by Clinical Preceptors.		
students having appropriate direct supervision when not deemed competent.		
students having appropriate direct supervision when repeating images.		
students having appropriate indirect supervision when deemed competent.		
During the clinical affiliate visit, DMI Program Faculty provided constructive criticism to students.		

Faculty are asked to provide comments regarding the clinical affiliate visit: