

BLUEFIELD STATE COLLEGE
CLINICAL OBJECTIVE MANUAL
IN
RADIOLOGIC TECHNOLOGY



Bluefield State College

Class of 2022-2024

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COMPETENCY BASED CLINICAL EDUCATION

A competency based clinical educational experience has been designed to ensure that all students are exposed to the many facets of Radiologic Technology. This educational system integrates didactic instruction with clinical instruction.

Throughout the course of study, students must demonstrate psychomotor skills at acceptable competency levels. Specific competency evaluations are completed during each semester in accordance to didactic instruction. Each student must exhibit both cognitive and clinical competency in each area.

By correlating didactic and clinical education, a unified goal is achieved in which competent technologists are trained that project professional maturity and a high degree of technical expertise.

Imaging examinations performed by, and accompanying responsibilities assigned to, a radiographer shall be at the direction of physicians qualified to request and/or perform radiologic procedures. Upon completion of the program the radiographer shall have met the following learning outcomes:

1. The student will utilize effective communication skills when interacting with the patient and other members of the health care team, demonstrating knowledge of both communication and critical thinking skills necessary to the profession.
2. The student will demonstrate ethical and professional behavior, practicing within the code of ethics and scope of practice for the profession.
3. The student will understand the function of medical image processing, with demonstration of knowledge concerning various forms of image processing and determine the proper sequence for proper filing of a completed image.
4. The student will evaluate radiographic quality, applying the knowledge of positioning and technical selection necessary for diagnostic images.
5. The student will provide the patient with proper care during medical imaging procedures. This will include knowledge of body mechanics, patient immobilization, basic life support techniques, patient education for examinations, and overall patient care and comfort.

6. The student will demonstrate the proper methods of radiation protection and exposure selection with regard to the patient, the equipment, other personnel, and to oneself.
7. The student will properly position the patient in correlation with medical imaging equipment for the production of a diagnostic image.
8. The student will demonstrate knowledge of radiation physics, understanding the basic operation and maintenance of radiographic equipment and the interactions of x-ray with matter.
9. The student will utilize problem solving skills and exercise independent thinking while performing medical imaging examinations.

PROCEDURE PRACTICE FOR POSITIONING

The student in a laboratory situation will:

1. Demonstrate correct positioning, stabilizing or immobilizing as needed.
2. Select the correct image receptor (IR).
3. Align the x-ray tube to part and image receptor (IR).
4. Adjust the cone or collimator to appropriate field size.
5. Demonstrate the application of necessary protective shielding.
6. Measure the part by caliper utilization, if applicable.
7. Select and set exposure factors.
8. Expose the image receptor (IR) (if utilizing phantom).
9. Evaluate the image receptor (IR) for accuracy of positioning and exposure quality.

GENERAL PROTOCOL FOR RADIOGRAPHERS DURING RADIOGRAPHY OF PATIENTS

1. Read and assess requisition completely.
2. Determine what size and number of image receptors (IR) you will need.
3. Prepare radiographic room.
4. ***Correctly identify patient. (Check arm band or have patient repeat full name.)***
5. Dress patient correctly. (Sometimes done by nurse or transportation aide.)
6. ***Explain to the patient what you will be doing and what is expected of them.***
7. ***ASSIST the patient to position and place where you want them for the first image.***
8. Measure the part to be radiographed where applicable.
9. Determine the radiographic technique to be used and set on the control panel.
10. Position the patient accurately.
11. Collimate the beam so that only the area of interest is included.
12. Identify right and left side of patient with the proper lead marker.
13. Restrain the patient if needed.
14. Use lead gonadal shielding on anyone under 50 years of age or per guidelines of clinical education setting.
15. Provide lead aprons and lead gloves, if necessary, for EVERYONE assisting with restraint in the room.
16. Take exposure, while watching patient through window.
17. Repeat steps 7 through 16 for each radiographic view needed.
18. Patient is not to be left alone in the radiographic room unless restrained and holding a pull cord for emergency use.
19. Explain that you are going to review the images you have taken to determine if adequate images/radiographs have been achieved.
20. ID each exposed image receptor (IR) you have used for the exam.
21. Record the date, time, number of films, name, room number, technique used, and patient history on the requisition and/or on the radiology information system.
22. Properly critique images. If the image does not need to be repeated, place in proper slot or send with patient if indicated.
23. Place a corrected patient exam card in the designated computer terminal completed box, including the time, room number, number of films and rejects, where applicable.
24. Assist the patient from table to wheel chair, cart or walking position.
25. Open door for the patient to exit the room.
26. Explain to out-patients where they are to go next. Take in-patients to the proper holding area and place a TO GO card in the transportation aide area or follow facility protocol.
27. Straighten up the radiographic room, change linens and clean off table with alcohol, or appropriate cleaner, so room will be ready for the next patient.
28. Wash your hands, as well as “foam in and foam out.”

These steps were originally taken from the Textbook of Radiographic Positioning and Related Anatomy by Kenneth I. Bontrager. They have been modified to meet the needs of the BSC Radiologic Technology Program as of 3-07. Reviewed spring 2008/2009/2011/2015/2017/2018/2019/2021/2022

ETHICS

CODE OF ETHICS

The Code of Ethics forms the first part of the Standards of Ethics. The Code of Ethics shall serve as a guide by which Certificate Holders and Candidates may evaluate their professional conduct as it relates to patients, healthcare consumers, employers, colleagues, and other members of the healthcare team. The Code of Ethics is intended to assist Certificate Holders and Candidates in maintaining a high level of ethical conduct and in providing for the protection, safety, and comfort of patients. The Code of Ethics is aspirational. This is taken from the ARRT.

1. The radiologic technologist acts in a professional manner, responds to patient needs, and supports colleagues and associates in providing quality patient care.
2. The radiologic technologist acts to advance the principal objective of the profession to provide services to humanity with full respect for the dignity of mankind.
3. The radiologic technologist delivers patient care and service unrestricted by the concerns of personal attributes or the nature of the disease or illness, and without discrimination on the basis of race, color, creed, religion, national origin, sex, marital status, status with regard to public assistance, familial status, disability, sexual orientation, gender identity, veteran status, age, or any other legally protected basis.
4. The radiologic technologist practices technology founded upon theoretical knowledge and concepts, uses equipment and accessories consistent with the purposes for which they were designed, and employs procedures and techniques appropriately.
5. The radiologic technologist assesses situations; exercises care, discretion, and judgment; assumes responsibility for professional decisions; and acts in the best interest of the patient.
6. The radiologic technologist acts as an agent through observation and communication to obtain pertinent information for the physician to aid in the diagnosis and treatment of the patient and recognizes that interpretation and diagnosis are outside the scope of practice for the profession
7. The radiologic technologist uses equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice, and demonstrates expertise in minimizing radiation exposure to the patient, self, and other members of the healthcare team.
8. The radiologic technologist practices ethical conduct appropriate to the profession and protects the patient's right to quality radiologic technology care.

9. The radiologic technologist respects confidences entrusted in the course of professional practice, respects the patient's right to privacy, and reveals confidential information only as required by law or to protect the welfare of the individual or the community.
10. The radiologic technologist continually strives to improve knowledge and skills by participating in continuing education and professional activities, sharing knowledge with colleagues, and investigating new aspects of professional practice.
11. The radiologic technologist refrains from the use of illegal drugs and/or any legally controlled substances which result in impairment of professional judgment and/or ability to practice radiologic technology with reasonable skill and safety to patients.

<https://assets-us-01.kc-usercontent.com/406ac8c6-58e8-00b3-e3c1-0c312965deb2/37b3dd0a-1049-4af9-91e4-ed639545b547/code-of-ethics.pdf>

In addition to the preceding Code of Ethics, all radiologic technology students must follow stated policies and procedures or the following actions will result:

1. Students may not assist or confer in regards to falsifying any records, clinical or didactic. Appropriate actions will result in regards to each incident.
2. Unprofessional and/or unethical conduct involving associated entities related to the program will be reviewed and appropriate actions will result.
3. Unauthorized use of hospital computers for any use will result in disciplinary action. This is defined in the Computer Use policy per the program.

CLINICAL COMPETENCY GRADING SYSTEM

CLINICAL COMPETENCY GRADING SYSTEM

Grades will be determined by:

RADT 112:

Weekly Evaluations	15%
Clinical Written Objectives.....	20%
Professionalism	20%
Final Clinical Exam (Written)	25%
Comprehensive Evaluation	20%

RADT 117 and 127:

Weekly Evaluations	15%
Clinical Written Objectives (including mid-term).....	15%
Professionalism	15%
Competency Performance Objectives/Continued Competency Exams	20%
Final Clinical Exam (Written <u>and</u> Practical).....	20%
Comprehensive Evaluation – MT & Final.....	15%

RADT 216:

Weekly Evaluations	15%
Clinical Written Objectives**	15%
Professionalism	15%
Competency Performance Objectives/Continued Competency Exams	20%
Final Clinical Exam (Written)	20%
Comprehensive Evaluation – Final	15%

**There will be no mid-term examination in RADT 216

RADT 226:

Weekly Evaluations	15%
Clinical Written Objectives	20%
Professionalism	10%
Competency Performance Objectives/Continued Competency Exams	20%
Final Clinical Exam (Written)	20%
Comprehensive Evaluation – Final.....	15%

There will be no practical final or mid-term examination in RADT 226 (only written examinations).

RADT 227:

Weekly Evaluations	10%
Professionalism	15%
Written Objectives	5%
Written <u>and</u> Practical Final Exam	30%
Competency Performance Exams/Continued Competency Exams	20%
Comprehensive Evaluation -- Final	20%

Revised 1-10/2012/2013/2015

**ALL STUDENTS MUST MAINTAIN A "C" AVERAGE IN ORDER TO
PROGRESS TO THE NEXT LEVEL**

GRADE SCALE--CLINICAL

94.5 - 100	A.....	Excellent
89.5 - 94.4.....	B.....	Above Average
84.5 - 89.4	C.....	Average
79.5 - 84.4.....	D.....	Failure
0 - 79.4.....	F.....	Failure

Clinical Grade Conversion Scale

Radiologic Technology Program

A = 3.5 - 4.0	B = 3.0 - 3.4	C = 2.0 - 2.9	D = 1.0 - 1.9	F = Below 1.0
4.0 = 100	3.4 = 94	2.9 = 89.4	1.9 = 84.4	.9 - 0 = F
3.9 = 99	3.3 = 93	2.8 = 89	1.8 = 84	
3.8 = 98	3.2 = 92	2.7 = 88.5	1.7 = 83	
3.7 = 97	3.1 = 91	2.6 = 88	1.6 = 82.5	
3.6 = 96	3.0 = 89.5	2.5 = 87.5	1.5 = 82	
3.5 = 94.5		2.4 = 87	1.4 = 81.5	
		2.3 = 86.5	1.3 = 81	
		2.2 = 86	1.2 = 80.5	
		2.1 = 85.5	1.1 = 80	
		2.0 = 84.5	1.0 = 79.4	

Reviewed/Revised Spring 2017/Spring 2019/Spring 2020/Spring 2022

EXPLANATION OF CATEGORIES

Weekly Evaluation/per rotation:

Weekly evaluation completed on achieved objectives.

Clinical Written Objectives:

Will involve a grade for all written objectives assignments, reading assignments, and mid-term(written and/or practical). Clinical competency procedure sheets must also be in this category. Please refer to the Clinical Objective Manual(Part II of this book).

Professionalism:

This category includes areas of attendance/ethics/dress code. Any deficient hours will result in a minimum of a 10 (or 1%) point reduction in this category. Compliance to the dress code is essential. If non-compliance occurs, a reduction of 10 (or 1%) points will result for each infraction.

Competency Performance/Evaluation Objectives/Continued Competency Exams:

Clinical Instructors must evaluate each objective as it is mastered by the student. Clinical competency tests will be included in this section. Please refer to the Clinical Objective Manual(Part II of this same book). Continued competency exams are to be completed in the semesters that they are listed in this manual.

Comprehensive Evaluation:

Completed by the Clinical Instructor at mid-term and at the end of the semester (or as required). Student competency and progression will be evaluated.

Final Clinical Examinations:

Examination regarding clinical objectives covered during courses. These exams may be written and/or practical in nature depending on the clinical course.

EVALUATION FORMS

Students assume **direct responsibility** for e-mailing the correct staff member in Trajecsys to complete the evaluation forms on a weekly basis and to review the evaluation on Trajecsys upon completion.

PROCEDURE:

Students will follow the evaluation form procedure on Trajecsys from the Clinical Preceptor. They will, on the last day of their rotation, at a time convenient for the staff radiographer, submit an e-mail to the staff radiographer, and ask the radiographer to complete the form on Trajecsys. After completion of this form, the student will review the evaluation in Trajecsys and note any comments, if needed. The Clinical Preceptor will review the form and note comments, if needed. The Clinical Preceptor will set an appointment to review the evaluation with the student, if there are issues with the evaluation. Evaluation will be periodically reviewed and initialed by the Clinical Coordinator and/or Program Director. This process may vary at each individual clinical affiliate.

All evaluations must be satisfactory or the Clinical Preceptor will have the right to request probationary status.

CLINICAL-COMPETENCY EVALUATIONS

Clinical-Competency Evaluations will be completed by the Clinical Preceptor and/or staff technologist during each semester. These examinations will be practical in nature, and these grades will be a permanent part of the student's record. Continued competency examinations will be given to students in each semester of clinical education in order to ensure continued competency and proficiency in the clinical phase of education. These examinations will be decided on by the clinical preceptor/clinical coordinator and will be graded by the clinical preceptor.

These examinations will be based on the clinical guidelines and requirements to be completed in a given period of time. Refer to the Clinical Competency System for Objectives.

A passing grade (85% or higher) **must** be achieved on each competency before continuance to the next level. These will be completed on Trajecsys, and students assume **direct responsibility** for e-mailing the correct staff member in Trajecsys to complete the competency evaluation when finished. The student **MUST** review the competency grade after completion and grading in Trajecsys.

COURSE OUTLINES DESCRIPTIONS

**INTRODUCTION TO CLINICAL RADIOGRAPHY
RADT 112**

**DIRECT LEVEL OF SUPERVISION
16 HRS/WK (80 HRS)
CREDITS: 1**

This course provides the student with an introduction and adjustment period to the actual practice of radiography and the function of a radiology department. All classes take place in the clinical education setting.

The student will be evaluated on their clinical efficiency, their application of classroom philosophies, professional conduct, and dress.

During this course the student will be exposed to ancillary areas, procedures, patient care procedures, proper ethics, and the responsibilities of maintaining their radiographic rooms.

This course is taught during the second summer term of the first year.

PR/CO: Admission to program, RADT 109, RADT 109L, RADT 113

**CLINICAL RADIOGRAPHY I
RADT 117**

**DIRECT LEVEL OF SUPERVISION
LAB: 16 HRS/WK (240 HRS)
CREDITS: 2**

Clinical Radiography I is the second in a series of courses that provides the student with the necessary clinical education needed in the actual practice of radiography. The student will learn: patient-technologist interaction, performance of general methods of patient care and comfort, performance of radiographic examinations which have been covered in the didactic studies and for which the student has shown a certain degree of accuracy in simulated as well as actual lab practice.

Courses will take place in the clinical education setting. The student has actual patient contact as well as hands on exposure to x-ray controls.

Students continue to rotate through areas listed under rotational assignments, including a weekend rotation, but more concentration is placed in general radiography. In the event, there is a problem area for an individual student, then the rotation schedule will be adjusted to alleviate the problem area.. The student can begin to master basic skills in learning to function in a radiographic room. They will also learn to master basic radiographic examinations under the direct supervision of the Clinical Instructor and qualified staff.

PR: RADT 109, 109L, 112, 113 CO: RADT 115, and 118

CLINICAL RADIOGRAPHY II
RADT 127

DIRECT SUPERVISION
16 HRS/WK (240 HRS)
CREDIT: 2

Clinical Radiography II is the third in the series of courses for clinical competence. The student will utilize radiographic procedures that were satisfactorily completed in RADT 117, and continue ALL standard practices learned earlier. They will participate in and perform more complex examinations which have been discussed in didactic studies and for which the student has shown knowledge and competence through energized and non-energized lab practice.

All courses in this series will take place in the clinical education settings. The student will rotate from their base clinic facility to another main clinical site. The student will have actual patient contact and will make the x-ray exposure. Students will progress to higher competency levels in all areas of clinical as illustrated in the rotational area objectives.

Students continue to rotate through areas listed under rotation assignments, including a weekend rotation, and remain in each area for a minimum of three weeks, unless there is a problem area for an individual student, then the rotation schedule will be adjusted to alleviate this problem area. The student can begin to master basic skills in learning to function in a radiology room. They will also begin to master more complex radiographic examinations under direct supervision.

PR: RADT 109, 109L, 112, 113, 115, 116L, 117, 118
CO: RADT 119, 120, 121L, 122L

**CLINICAL RADIOGRAPHY III
RADT 216**

**INDIRECT AND DIRECT LEVEL OF SUPERVISION
20 HRS/WK (100 HRS) – 10 hours per day
CREDIT: 1**

Clinical Radiography III is the fourth in a series of courses for clinical education and competence in the practice of radiography. Emphasis is placed on fluoroscopic procedures. Students are expected to have gained competency in all prerequisite general areas and to have become secure in the performance of these areas. Continued actual patient-technologist contact for students occurs.

This course is taught in the first five week summer term.

PR: All 100 level RADT courses

CO: RADT 201, 212

**CLINICAL RADIOGRAPHY IV
RADT 226**

**DIRECT AND INDIRECT LEVEL OF SUPERVISION
16 HRS/WK (260 HRS)
CREDITS: 2**

Clinical Radiography IV is the fifth in the series of courses for clinical education in the practice of radiography. The student becomes a true part of the health care team by performing examinations in a manner befitting their vast training in the expertise of radiographic science and patient care practice under the guidance of professional radiographers and the Clinical Instructor. All courses in this series will take place in the hospital clinical area. Continued actual patient-technologist contact for the student will occur. Students will return to their base clinical education centers and diversify their knowledge in other imaging modalities: rotations may consist of but not limited to nuclear medicine, oncology, CT, and ultrasound. This course will also concentrate on special procedure radiographies correlating to didactic studies.

After Hours Radiography (includes mandatory a weekend rotation . . . (2 weeks) (2 – 10 pm Monday & Wednesday **and** an additional 1 – 11 pm Saturday & Sunday weekend)

PR: All 100 level RADT courses, RADT 201, 212, 216

CO: RADT 211, 220, 225

**CLINICAL INTERNSHIP
RADT 227**

**INDIRECT LEVEL OF SUPERVISION
24 HRS/WK (360 + 20 for mandatory weekend = 380 HRS)*
CREDIT: 3**

The Clinical Internship is the sixth in a series of courses for clinical competency in the practice of radiography. Students, under the guidance of professionals, perform as competent individuals proficient in all aspects of radiography. Students shall be required to demonstrate proficiency in all previous course work. Students, in conjunction with faculty, will determine their practical assignment areas which will be determined by areas of weakness and/or areas of future employment. All courses in this area will take place in the clinical education setting.

During this phase of the clinical experience, the student may rotate through off-site affiliates to gain additional experience in the field of medical imaging and evaluate future employment possibilities.

* During this semester the clinical hours per day are 8 total (730 am – 330 pm or 3 pm – 11 pm **plus** one **mandatory** weekend rotation of Saturday and Sunday evenings which is 10 hours – 1 pm – 11 pm each day OR 9 pm – 7 am).

PR: All 100 level RADT courses, RADT 201, 211, 212, 216, 220, 225, 226

CO: RADT 218

STUDENT ROTATIONS

CLINICAL ROTATION POLICY

I recognize that all weekly rotations are scheduled in order to meet the objectives set forth for each clinical course and that it is essential to achieve a passing average (85% or better) on the combined rotation. Each semester differs in the number of weeks scheduled for each clinical area. I understand that I will be allowed one (1) additional week, if I have not achieved a passing average in the clinical area that I have been assigned. The additional week of clinical rotation may be scheduled, if needed, after the semester has ended and a grade of I (incomplete) will be given until the rotation is completed and the grade is entered into Trajecsys by the clinical preceptor/staff upon completion of the rotation. If at the end of this additional week, (which may be scheduled at the discretion of the clinical preceptor under the direction of the clinical coordinator) I have not attained a passing average in the clinical area, I will receive a failing grade (F) in the clinical area in which the problem occurs, resulting in clinic course failure. All students should appreciate the importance of each scheduled area in the Radiologic Technology Program's clinical competency-based education at Bluefield State College and place a high degree of merit on each rotational area.

INTRODUCTION TO CLINICAL RADIOGRAPHY

During this semester the student remains in one clinical education setting and is allowed to spend a minimum of one week per rotational area. This includes preparatory instruction in the care and use of all radiographic and surgical equipment, the functional operation of the department, the routine chest and abdomen examinations, assistance during fluoroscopic examinations, and the basic concepts of contrast media, patient transport, and patient care. This will be a five week course during the second summer term.

ROTATIONAL ASSIGNMENTS (Student rotate through these areas)

Radiography/Fluoroscopy/Image Processing..... (2 weeks)
Clerical/Records Management.....(Front Desk, 1 week)
Transport.....(1 week)
Surgical/Mobile.....(1 week)

CLINICAL RADIOGRAPHY I

During this semester the student will rotate to multiple clinical education settings to become proficient in general radiographic studies. They will spend a minimum of two weeks per practical assignment area unless competency is not obtained, and this is considered to be a problem area.

Clinic classes will coincide with the didactic course of Radiographic Procedures I, which includes theories of general radiography of the appendicular skeleton, vertebral, thorax, abdominal, pediatric, and trauma. Simulation classes will coincide with Clinic I examinations and a clinical test will be given on this category at the end of the session.

ROTATION ASSIGNMENTS (Students rotate through these areas)

Fluoroscopy.....(3 weeks)
Radiography.....(4 weeks)
Tomography/CT.....(2 weeks)
Mobile Radiography.....(2 weeks)
After hours..... (3 weeks) (2 – 10 pm) *
Weekend (Sat/Sun).....(1 -- 730 am – 330 pm)

CLINICAL RADIOGRAPHY II

During this semester the student will rotate to multiple clinical education settings in order to expose them to different radiographic equipment, education and procedures. In addition, during this semester the student will simulate and gain competency in skull radiography. They will dedicate a minimum of three weeks per rotational area unless a problem in competency arises.

Clinic classes will coincide with the Radiographic Procedures II course which includes theories of general skull radiography, gastrointestinal, genitourinary, tomography, and other general studies. Simulation classes will coincide with Clinic II examinations and a clinical test will be given on this category. Clinical experiences in Clinic I examinations will continue at this time.

ROTATION ASSIGNMENTS: (Students rotate through these areas)

Fluoroscopy.....	(3 weeks)
Radiography.....	(4 weeks)
Tomography/CT.....	(2 weeks)
Mobile Radiography	(2 weeks)
Student Choice.....	(1 week) **
After Hour.....	(3 weeks) (2 – 10 pm) *
Weekend (Sat/Sun)	(1 -- 730 am – 330 pm)

**Choices are Ultrasound, Nuclear Medicine, Magnetic Resonance Imaging, Specials/Interventional, Cardiac Cath OR Mammography

** All specialized modality rotations **must be direct supervision only.** Under no circumstances shall a student perform an examination in these areas without direct supervision.



Bluefield State

C O L L E G E

Student Name: _____

Selection to be turned into to Mrs. Atwell on the specified dates in early/mid-October of Clinic I (RADT 117).

Clinical II (RADT 127) rotational assignments consists of 15 weeks.

Assignments for this semester are as follows:

- 3 weeks of Fluoroscopy
- 4 weeks of General Radiography
- 2 weeks of Tomo/CT
- 2 weeks of Mobile
- 3 weeks of Evenings -2p to 10p
- 1 week of Weekend (Sun/Sat) Rotation Week to consist of Sunday 730am-330pm and then Saturday 730 am-330 pm
- 1 week is to be chosen by the student for this semester

Choices are:

- Ultrasound
- Nuclear Medicine
- MRI
- Special Procedures/Interventional Radiography
- Mammography
- Cardiac Cath

1st Choice _____

Alternate Choice _____

Alternate choice is in case there is an issue with tech/student ratio in this semester.

CLINICAL RADIOGRAPHY III – 10 hours clinical days

Clinical Radiography III is the fourth in a series of courses for clinical competence in the practice of radiography. The student is made aware of fluoroscopic procedures. The student will have the opportunity to choose 2 weeks of optional rotational areas. They are expected to have gained competency in all prerequisite general areas and to become secure in the performance of these areas.

Clinic classes coincide with the increasing of student competency skills in gastrointestinal and miscellaneous fluoroscopic examinations. Example of examinations: Pyelography, cholecystography, and general radiographic examinations. This will be a five-week course taught during the first summer term.

*Choice of: Mobile, SONO, Specials, Mammo, NM or MR (must choose 2 different rotation areas)

** All specialized modality rotations **must be direct supervision only.** Under no circumstances shall a student perform an examination in these areas without direct supervision.

ROTATIONAL ASSIGNMENTS (Students rotate through these areas):

Fluoroscopy..... (1 week)

Radiography..... (1 week)

Student Choices* (2 week)

After-Hours (12 noon-10 pm)..... (1 week)

*Choice of: Mobile, SONO, Specials, Mammo, NM or MR (must choose 2 different rotation areas)

** All specialized modality rotations **must be direct supervision only.** Under no circumstances shall a student perform an examination in these areas without direct supervision.



Bluefield State

C O L L E G E

Student Name: _____

Selection to be turned into to Mrs. Atwell on the specified dates in early/mid-March of Clinic II (RADT 127).

Clinical III (RADT 216) rotational assignments consists of 5 weeks of two 10 hour clinical days.

Assignments for this semester are as follows:

- 1 week of Fluoroscopy
- 1 week of General Radiography
- 1 week of Evenings -12p to 10p

The other two weeks are to be chosen by the student for this semester.

Choices are:

- Ultrasound
- Nuclear Medicine
- MRI
- Special Procedures
- Mobile/OR
- Mammography

1. _____

2. _____

Alternate choices if above two choices have a tech/student ratio problem in this semester.

1. _____

2. _____

CLINICAL RADIOGRAPHY IV

During this semester, the student will rotate through multiple clinical education settings. If a problem area exists in a non-specialty area, the period may be extended one week.

Clinical classes coincide with the increase of the student's skill in skull examinations, pediatrics, vascular imaging, and mobile examinations. Emphasis is placed on special procedures to coincide with didactic studies.

Clinical experience will continue in other areas but the focus is on pediatrics, special procedures, and mobile examinations. A brief introduction to nuclear medicine, MRI, Radiation Therapy, Special Procedures, and Ultrasound is also provided.

ROTATIONAL ASSIGNMENTS (Students rotate through these areas):

Fluoroscopy.....	(2 weeks)
Radiography.....	(3 weeks)
Ultrasonography.....	(1 week)
Special Procedures/Cath Lab	(1 week)
CT Scanning.....	(1 week)
Nuclear Medicine.....	(1 week)
Radiation Therapy.....	(1 week)
MRI.....	(1 week)
Mobile Radiography	(2 weeks)
After Hours Radiography (includes a mandatory weekend rotation . . .)	(2 weeks)(2 – 10 pm Monday & Wednesday and 1 – 11 pm Saturday & Sunday***)

** All specialized modality rotations **must be direct supervision only.** Under no circumstances shall a student perform an examination in these areas without direct supervision.

*** The weekend rotation is MANDATORY and students are not permitted to use absenteeism time for this rotation. If missed for any reason the time must be rescheduled by the clinical instructor. A deduction from the comprehensive evaluation as well as the weekend evaluation will occur. If weather is an issue the faculty will cancel and there will be no re-scheduled time.

Bluefield based students may choose Specials at their clinical site OR Cath Lab at BRMC. This choice must be made during Clinical Radiography III.

CLINICAL INTERNSHIP

The following is a list of guidelines that must be followed for Clinic V.

1. Each student must spend the first week and last two (2) weeks in their base hospital (the hospital they are based at in Clinic IV). There will be a total of fifteen (15) weeks of rotations.
2. Each student will be required to have three (3) weeks of After Hours. This is 3:00 - 11:00 pm or 11:00 pm - 7 am of which 3 days **must** be 3:00 - 11:00 pm. There may be a class day that you will be scheduled to work on the 3:00 - 11:00 pm shift. **This rotation will also include a weekend rotation of 10 hours per day – 1 pm to 11 pm OR 9 pm to 7 am. THIS WEEKEND IS MANDATORY AND ADDITIONAL SO EACH STUDENT MUST DO BOTH DAYS REGARDLESS OF ILLNESS OR OTHER REASONS. ABSENTEEISM TIME CANNOT BE USED FOR THE WEEKEND ROTATION AND MUST BE RESCHEDULED IF AN ABSENCE OCCURS. . **IF WEATHER IS AN ISSUE THE FACULTY WILL DETERMINE IF THERE IS A NEED TO CANCEL AND THERE WILL BE NO RE-SCHEDULED TIME. THIS WOULD BE ON A DAILY BASIS FOR THE WEEKEND.**
3. Each student will also be **required** to rotate through the following areas for one (1) week: fluoroscopy, radiography, and mobile.
4. Each student may spend no more than eight (8) weeks in any one rotational area (i.e. MRI, General Radiography, Mobile, NM, etc.). This is either at one or a combination of affiliates.

The selections that you choose will be attempted by the clinic instructors but **will not be guaranteed**. The clinic instructors have the discretion to change internship schedules as they deem necessary. The student should consider their strengths and weaknesses while preparing the schedule. Schedule changes are made **ONLY** at the discretion of the clinical coordinator. These **MUST** be due to future employment and accompanied by a letter stating such from the department manager. All requests for schedule changes will be validated by the clinical coordinator.

Revised 2/00-6/02 -9/04-5/06-6/07-6/08/2-10/2015/2016/2017/2018

POSSIBLE ROTATIONAL ASSIGNMENTS FOR CLINIC V

Fluoroscopy (required)	Nuclear Medicine or Oncology
Radiography (required)	After Hour(required ;3:00-11:00pm;3 weeks)
Tomography	Magnetic Resonance Imaging
Special Procedures	Cardiac Catheterization
Mammography	All Clinical Education Centers
Mobile Radiography (required)	
Ultrasonography	
CT scanning	

(required Fluoroscopy, Radiography, and Mobile are one (1) mandatory week each while After Hours is a required 3 weeks including a weekend rotation which does **not** have days off prior to and after completion in order to get all clinical education hours in this semester)

CLINICAL EDUCATION CENTERS (number of students permitted in these settings may vary due to accreditation of the site) – Please see Student Handbook for geographical locations of these centers.

PCH-Bluefield --	offers general radiology, CT, evenings and Radiation Therapy
Carl Larson Cancer Center (800 am) --	offers radiation therapy procedures/examinations in a clinical setting
Genesis Cancer Care (Princeton & Lewisburg 8 am – 4 pm) --	offers radiation therapy procedures/examinations in a clinical setting
Alliance Imaging @ PCH – (730 am)	offers MRI technology (fixed and mobile)
Summers County ARH (8 am – 4 pm) –	offers general radiography, mammography, nuclear medicine and CT in a rural healthcare setting
Greenbrier Physicians (8 am – 4 pm)–	offers general and orthopedic radiography, mammography, ultrasound, and bone density
Orthopedic Center of the Virginia’s – (830 am – 430 pm)	offers orthopedic radiography in a clinical setting
Robert C. Byrd Clinic (8 am – 4 pm) –	offers general radiographic procedures in a clinical setting
Giles Memorial Hospital (8 am - 4 pm) --	offers a variety of diagnostic including fluoroscopy, radiography, and CT.
Summersville Regional Medical Center – (evenings/weekends)	offers general radiography including CT (weekend and evening rotations only based on availability)

MAJOR CLINICAL EDUCATION CENTERS:

Beckley Appalachian Regional Hospital, Beckley Veterans Administration Hospital, Princeton Community Hospital & Welch Community Hospital

Revised 5-06/6-07/6-08/10-08/1-11/6-13/2014/2015/2017/2018/2020/2021

Clinical Internship Schedule Request Form

Student: _____ Date: _____

Base clinic site: _____ (this is the clinic site you were based at in clinic IV)

Each student **MUST** spend the first week and the last two weeks in their base hospital. There is a total of 15 weeks in Clinic V. Each student may spend no more than eight (8) weeks in any one rotational area. This may be at one clinical facility or in a combination of affiliates. Please see the clinical objective manual for your choices for internship rotations. Evenings may be 3 pm-11 pm or 11 pm to 7 am and may be done all at one time or one week done separately. Please indicate your choice. The weekend rotation will be placed between two consecutive evening rotations and a day off will not be provided. The order in which you list your rotations **is not** the order in which you will receive your schedule. All spaces below **MUST** be filled in by the student!

	Rotation	Clinical site
1	Fluoroscopy -Mandatory	
2	Gen. Rad.-Mandatory	
3	Mobile/O.R.-Mandatory	
4	Evenings-Mandatory	
5	Evenings-Mandatory	
6	Evenings-Mandatory	
Weekend	Sat. and Sun.-Mandatory – (10 hours per day)	
7		
8		
9		
10		
11		
12		
13		
14		
15		

Please list any special considerations such as a specific weekend or evening shift that you definitely cannot work. These will be taken into consideration but not guaranteed. _____

Please list the person you would like to travel with for an off base clinical rotation (both persons must list to ensure that you agree to travel together).

Competency Performance Evaluations

Competency Performance Examination Requirements taken from:

https://assets-us-01.kc-usercontent.com/406ac8c6-58e8-00b3-e3c1-0c312965deb2/68688f6b-d625-4fce-be07-b9b8a81b7d10/RAD_CC_2022.pdf

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.

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.

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

**COMPETENCY PERFORMANCE EXAMINATIONS
BLUEFIELD STATE COLLEGE RADIOLOGIC TECHNOLOGY PROGRAM**

Student Name/ID Number: _____ Date of Admission: June 2022

Imaging Procedure	Mandatory	Elective	Eligible for Simulation	Suggested Clinic Semester for Completion	Date of Completion	Competence Verified By	Grade
Chest and Thorax							
Chest Routine	M			Clinic I			
Chest (AP) Wheelchair or Stretcher	M			Clinic I			
Ribs	M		X	Clinic II			
Chest Lateral Decubitus		E	X				
Sternum		E	X				
Upper Airway (Soft-Tissue Neck)		E	X				
Sternoclavicular Joints		E	X				
Upper Extremity							
Thumb or Finger	M		X	Clinic I			
Hand	M			Clinic I			
Wrist	M			Clinic I			
Forearm	M			Clinic I			
Elbow	M			Clinic I			
Humerus	M		X	Clinic I			
Shoulder	M			Clinic I			
Clavicle	M		X	Clinic I			
Scapula		E	X				
AC Joints		E	X				
Trauma: Shoulder or Humerus (Scapular Y, Transthoracic, or Axial)	M			Clinic IV			
Trauma: Upper Extremity (Non-Shoulder)	M			Clinic IV			

Imaging Procedure	Mandatory	Elective	Eligible for Simulation	Suggested Clinic Semester for Completion	Date of Completion	Competence Verified By	Grade
Lower Extremity							
Toes		E	X				
Foot	M			Clinic I			
Ankle	M			Clinic I			
Knee	M			Clinic I			
Tibia-Fibula	M		X	Clinic I			
Femur	M		X	Clinic I			
Patella		E	X				
Calcaneus		E	X				
Trauma: Lower Extremity	M						
Head – Candidates must select at least one elective from this section							
Skull		E	X				
Facial Bones		E	X				
Mandible		E	X				
Temporomandibular Joints		E	X				
Nasal Bones		E	X				
Orbits		E	X				
Paranasal Sinuses		E	X				
Spine and Pelvis							
Cervical Spine	M			Clinic II			
Thoracic Spine	M		X	Clinic II			
Lumbar Spine	M			Clinic II			
Cross-Table (Horizontal Beam) Lateral Spine (Patient Recumbent)	M		X	Clinic IV			
Pelvis	M			Clinic I			
Hip	M			Clinic I			

Imaging Procedure	Mandatory	Elective	Eligible for Simulation	Suggested Clinic Semester for Completion	Date of Completion	Competence Verified By	Grade
Cross-Table (Horizontal Beam) Lateral Hip (Patient Recumbent)	M		X	Clinic IV			
Sacrum and/or Coccyx		E	X				
Scoliosis Series		E	X				
Sacroiliac Joints		E	X				
Abdomen							
Abdomen Supine	M			Clinic I			
Abdomen Upright	M		X	Clinic I			
Abdomen Decubitus		E	X				
Intravenous Urography		E					
Fluoroscopy Studies – Candidates must select two procedures from this section and perform per site protocol							
Upper GI Series, Single or Double Contrast		E					
Contrast Enema, Single or Double Contrast		E					
Small Bowel Series		E					
Esophagus (NOT Swallowing Dysfunction Study)		E					
Cystography/Cystourethrography		E					
ERCP		E					
Myelography		E					
Arthrography		E					
Hysterosalpingography		E					
Mobile C-Arm Studies							
C-Arm Procedure (Requiring manipulation to obtain more than one projection)	M		X	Clinic IV			
Surgical C-Arm Procedure (Requiring manipulation around a sterile field)	M		X	Clinic IV			

Imaging Procedure	Mandatory	Elective	Eligible for Simulation	Suggested Clinic Semester for Completion	Date of Completion	Competence Verified By	Grade
Mobile Radiographic Studies							
Chest	M			Clinic II			
Abdomen	M			Clinic II			
Upper or Lower Extremity	M			Clinic II			
Pediatric Patient (Age 6 or younger)							
Chest Routine	M		X	Clinic III			
Upper or Lower Extremity		E	X				
Abdomen		E	X				
Mobile Study		E	X				
Geriatric Patient (at least 65 years old AND physically and cognitively impaired as a result of aging)							
Chest Routine	M			Clinic IV			
Upper or Lower Extremity	M			Clinic IV			
Hip or Spine		E					
Subtotal							
Total Mandatory Exams Required	36						
Total Elective Exams Required		15					
Total Number of Simulations Allowed			10				
CT Comps (ADDITIONAL/OPTIONAL to required/electives)							
CT Head		E					
CT Thorax		E					
CT Abdomen		E					

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

Revised 7-076-08/6-09/11-10/Spring 2016/Spring 2021 – Reviewed 2012/2013/2015/2016/2017/2018/2019/2020/2021/2022

Revised 2021 per required radiography competencies for January 2022

https://assets-us-01.kc-usercontent.com/406ac8c6-58e8-00b3-e3c1-0c312965deb2/68688f6b-d625-4fce-be07-b9b8a81b7d10/RAD_CC_2022.pdf

Student Name: _____

Student ID Number: _____

**CONTINUED COMPETENCY EXAMINATIONS
CLASS OF 2022-2024**

These Continued Competency Examinations **MUST** be completed by the Clinical Instructor or the Clinical Coordinator. In Clinical Radiography II, III, & IV the Continued Competency Examinations are performed from the previous semester listing of competencies. For Clinical Radiography V these examinations must be chosen from all of the previous semesters. Students are aware that repetition in testing may occur at any time throughout the program to ensure continued competency.

Continued Competency Examinations				
Semester	Examination	Patient Number	Facility	Graded By:
Clinical Rad II				
Clinical Rad II				
Clinical Rad III				
Clinical Rad III				
Clinical Rad IV				
Clinical Rad IV				
Clinical Rad IV				
Clinical Rad V				
Clinical Rad V				
Clinical Rad V				

Trajecsys

I understand that the program will be utilizing the Trajecsys system for all clinical competencies, weekly evaluations, assessment, and as a time clock system. This will incur a one-time cost for the students (approximately \$150.00), unless a student is re-admitted and that may incur additional costs.

Competency Performance Evaluations –

Students have access to these in
Trajecsys.

WEEKLY EVALUATION FORMS

Students have access to these in Trajecsys.

These evaluations are utilized for each semester (Intro to Clinic, Clinic I, II, III, IV, and V) and are comprised of rotational objectives and performance skills. There is a different evaluation form for each rotation per clinical area. These evaluation forms are detailed for each particular area.

Bluefield State College

Comprehensive Evaluation

The Clinical Instructors may evaluate each student's progress at any time during the semester. Each student must be evaluated at mid-term and final. This evaluation will reflect the student's progress and the expected level of competency.

Each student must attain a satisfactory (passing) score on each comprehensive evaluation to retain unconditional program status.

**THIS FORM IS ON TRAJECSYS FOR THE CLINICAL
PRECEPTORS TO COMPLETE.**



Bluefield State College

RADIOLOGIC TECHNOLOGY COMPREHENSIVE EVALUATION

Student Name: _____ Date: _____

Clinic Facility: _____ Semester/Midterm or Final: _____ Grade: _____

For each of the following categories use the scale indicated in order to designate the student's level of performance.

***=Weekly evaluations/observations/attendance/conference forms support designated score**

	4 - superior	3 - above average	2 - average	1 - below average	0 - not acceptable
I. Attendance * _____ Score	Student has not used any of their clinical absenteeism hours or taken medical leave.	Student has used up to 25% of their clinical absenteeism hours and/or used 16 hours of medical leave and followed the attendance policy.	Student has used up to 50% of their clinical absenteeism hours and/or used 24-36 hours of medical leave and followed the attendance policy.	Student has used up to 75% of their clinical absenteeism hours and/or over 48 hours of medical leave and followed attendance policy.	Student has used all allotted clinical absenteeism hours and/or medical leave time was not made up/scheduled within the designated semester time frame and the attendance policy was not followed.
II. Tardiness * _____ Score	Student has no tardies.	Student has 1 tardy and followed the tardy policy..	Student has 2 tardies and followed the tardy policy.	Student has 3 tardies, creating an 8-hour clinical absenteeism deduction and followed the tardy policy. If this occurs along with documented use of absenteeism hours it may be grounds for dismissal from the program.	Student has 4 or more tardies, creating 16 hours or more clinical absenteeism hour deductions. If this event occurs along with already documented use of absenteeism hours it may be grounds for dismissal from the program. The tardy policy was not followed.

Utilizing the scale of 4 to 0 above evaluate the student's level of clinical performance for each category.

III. Clinical performance

- | | |
|---|---|
| _____ 1. Maximum number of competencies obtained per semester criteria | _____ 2. Demonstrates confidence, cooperation and organization in clinical performance |
| _____ 3. Demonstrates retention of positioning criteria and clinical skills | _____ 4. Demonstrates beam limitation per exam criteria |
| _____ 5. Provides radiation protection to patients and others in the room | _____ 6. Correctly utilizes radiographic and accessory equipment within safety guidelines |
- _____ **Score** Divide total by 6 = _____

IV. Critical Thinking

- _____ 1. Complies with clinical site and program rules and expectations
- _____ 2. Demonstrates clinical ability to improvise or be flexible when circumstances dictate variations to routine

- _____ 3. Demonstrates correct technical factor selections per body habitus and understands how to adjust as needed
- _____ 4. Makes few errors in procedures, rotations, and repeat images due to technical factors and positioning are limited
- _____ 5. Demonstrates appropriate interactions with healthcare workers, ancillary staff, patients, and customers
- _____ 6. Takes the initiative to be involved in procedures, performs/involved with a good quantity of workload, and in advancing their learning of the profession
- _____ 7. Clinical assignments turned in on time
- _____ **Score** Divide total by 7 = _____

V. Communication Skills/Dress Code

- _____ 1. Demonstrates excellent verbal skills with healthcare workers, ancillary staff, patients, and customers
- _____ 2. Demonstrates excellent nonverbal skills with healthcare workers, ancillary staff, patients, and customers
- _____ 3. Adequately explains procedures to patients' procedures to patients and family members
- _____ 4. Demonstrates appropriate listening skills to patient, patient's family, healthcare workers, and ancillary staff.
- _____ 5. Always adheres to the RT program dress code
- _____ 6. Demonstrates self confidence in performance, a positive attitude and emotional control
- _____ 7. Demonstrates no bias toward any individuals
- _____ **Score** Divide total by 7 = _____

VI. Clinical Growth/Patient Care/Professionalism

- _____ 1. Always strives to perform to the maximum of his/her abilities to develop clinical skills
- _____ 2. Always takes and active role in assigned rotation and seeks additional assignment when rotation is slow
- _____ 3. Demonstrates the ability to work efficiently and effectively alone or as a team member.
- _____ 5. Demonstrates learning from mistakes and takes constructive criticism well
- _____ 6. Takes responsibility and accountability for their actions, clinical assignments, and clinical work
- _____ 7. Always acts in a professional and ethical manner in the clinical setting
- _____ 8. Demonstrates excellent patient, customer, healthcare workers, and ancillary staff interactions in the clinical setting
- _____ **Score** Divide total by 8 = _____

Final Grade Computation:

Attendance _____
Tardiness _____
Clinical Performance _____
Critical Thinking _____
Communication Skills/Dress Code _____
Clinical Growth/Patient Care/Professionalism _____
Total _____ **divided by 6 =** _____

Comments: _____

Clinic Instructor Signature/Date

Student Signature/Date

Revised: 11-97/ 5-99/8-00/6-02/6-05/3-07/12-09/1-11/1-25-13/2014/2019

SECTION II

BLUEFIELD STATE COLLEGE
CLINICAL OBJECTIVE MANUAL
IN
RADIOLOGIC TECHNOLOGY

ORIGINATED:

JANUARY 1992

REVISED:

Spring/Summer 2022

DEFINING OBJECTIVES

This manual is designed to inform the students and/or faculty of all objectives concerning the radiologic clinical area. Therefore, this manual contains the clinical competency/performance objectives, rotation objectives, clinical written objectives, and clinical course objectives. A brief description of each of these is as follows:

- Objective:** Pertaining to an end or aim. Purpose or reason.
- Clinical Competency/
Performance Objectives:** Objective concerning competence in all aspects of the Radiologic Technology field and evaluated accordingly. (Refers to the competency objective evaluations).
- Rotation Objectives:** Objectives concerning *each* area the student rotates through during the course of their Radiologic Technology education.
- Clinical Written
Objectives:** Objectives involving written clinical assignments for each clinical semester to aid with clinical education.
- Clinical Course
Objectives:** Objectives concerning each clinical course. (Intro to Clinic, Clinic I, II, III, IV, & V).

Revised 2/00
Reviewed Yearly

**CLINICAL COMPETENCY/PERFORMANCE
OBJECTIVES**

Specific Objectives:

The Student Will:

1. Perform and/or assist with each radiologic procedure assigned to that room. (Direct Supervision Level)
2. Perform independently in areas of successful completion in competency evaluations.
3. Be able to:
 - A. Evaluate each requisition/order.
 - B. Demonstrate the proper physical facilities readiness.
 - C. Demonstrate the proper patient-technologist relationship.
 - D. Demonstrate correct positioning skills.
 - E. Manipulate equipment effectively.
 - F. Show evidence of radiation protection.
 - G. Evaluate the radiologic image for:
 1. Anatomical Parts
 2. Proper Alignment
 3. Radiographic Technique
 2. Film Identification including patient information and correct marker placement
 5. Evidence of Radiation Protection
4. Be evaluated on clinical competency examinations.
5. Perform at a minimum mastery level of 84.5%.
6. Observe and perform in all rotations.
7. Adhere to all HIPPA regulations and hospital specific rules/regulations.

CLINICAL COURSE OBJECTIVES

INTRODUCTION TO CLINICAL RADIOGRAPHY:

1. The student shall exhibit professional conduct.
2. The student shall become cognizant and demonstrate proper patient care practices including cleanliness and aseptic techniques.
3. The student shall state the general organization and function of a radiology department.
4. The student will be introduced to the basic functions of the radiologic control panel and demonstrate the operation of the radiographic machines (locks, etc.), and stating the function of each.
5. The clinical instructor shall grade the student on the clinical competency objectives. The student must obtain a minimum of 85% (on each category) in order to progress to Clinical Radiography I.
6. The student shall obtain proficiency and demonstration of skills as illustrated in the rotational objectives.
7. The student shall demonstrate an interest as a member of the health care team.
8. The student shall identify and state the chain of command in the radiography program and radiology departments.

CLINICAL RADIOGRAPHY I

1. The student shall exhibit professional conduct.
2. The student will apply knowledge under actual patient conditions exhibiting clinical proficiency skills.
3. The student shall apply and gain knowledge in film quality.
4. The student shall practice proper care of patients emergency and otherwise.
5. The student shall complete Category I of the competency performance objectives. This is to be completed after the student has practiced the examination in simulation and/or lab. Category I examinations must be observed and graded by the clinical instructor and/or designated staff in actual room conditions and on actual patients unless otherwise noted.

CLINICAL RADIOGRAPHY I (continued)

6. The student shall obtain proficiency and demonstrate skills as stated in the rotational objectives.
7. Continue to practice basic room objectives with increased level of confidence and demonstration of technical competency progression to the level as ascertained in the Clinic I Course Description.

CLINICAL RADIOGRAPHY II

1. The student shall continue to exhibit professional conduct and ethical practice.
2. The student will apply and gain knowledge in film quality.
3. The student will practice proper care of patients emergency and otherwise.
4. The student shall complete Category II of the competency performance objectives. This is to be completed after the student has practiced examinations in simulation and/or lab. Category II examinations must be observed and graded by the clinical instructors and/or designated staff in actual room conditions and on actual patients.
5. The student shall obtain proficiency and demonstrate skills as illustrated in the rotational objectives.
6. Continue to practice basic room objectives with increased levels of confidence and demonstration of technical competency progression as ascertained in the Clinic II description.
7. Rotate clinical education settings to expand knowledge concerning radiographic procedures, equipment, and protocols.

CLINICAL RADIOGRAPHY III

1. The student shall continue to exhibit professional conduct.
2. The student will apply knowledge under actual patient conditions exhibiting clinical proficiency skills.
3. The student shall practice proper patient care for all examinations.
4. The student will apply and gain knowledge in film quality.

CLINICAL RADIOGRAPHY III (continued)

5. The student shall complete Category III of the clinical performance objectives. This is to be completed after the student has practiced the examinations in simulation and lab, and satisfactorily completed the full routine in simulation without assistance. Category III examinations must be observed and graded by the clinical instructor and/or designated staff in actual room conditions and on actual patients.

CLINICAL RADIOGRAPHY IV

1. The student shall continue to exhibit professional conduct.
2. Apply knowledge under actual patient conditions exhibiting clinical proficiency skills.
3. The student shall apply and exhibit knowledge in film quality.
4. The student shall demonstrate competence in all previous clinical performance examinations and will complete Category IV of the clinical performance objectives. Category IV examinations must be observed and graded by the clinical instructor and/or designated staff.
5. Rotate clinical education settings to apply knowledge learned concerning radiographic procedures, equipment, and protocols.

CLINICAL INTERNSHIP V

1. The student will continue to exhibit professional conduct.
2. The student must apply knowledge under actual patient conditions exhibiting clinical proficiency skills.
3. The student must discern proper radiographic quality.
4. The student must complete all mandatory and elective competencies.
5. The student must review all aspects of the two year program and actively explore areas of deficiency.
6. The student must develop an expertise in all phases of radiologic technology, perfecting the techniques and procedures previously experienced.

CLINICAL WRITTEN OBJECTIVES

INTRODUCTION TO CLINICAL RADIOGRAPHY

All objectives listed below are to be completed and submitted by the date on the syllabus or as defined by the clinical instructor.

1. A 2-page (minimum – double spaced with 1 inch margins – Times New Roman 12 font) computer generated paper on "My First Clinical Day". This paper should discuss your feeling on this day both prior to arriving and at the end of the day. It should also discuss your observations, what you did, and what you learned on this day. You should NOT discuss the time spent going over the orientation to the clinical education setting or the hospital tour.
2. The following objectives must all be included in a 2-page minimum paper (double spaced with 1 inch margins – Times New Roman 12 font — computer generated paper) and labeled as A, B, C, D, E.
 - a. Explain the *correct* procedure for answering the telephone and the location of departmental crash carts at this clinical facility.
 - b. State facility codes for a code blue, fire, and disaster. Discuss in detailed steps what you should do if a fire occurs in the Medical Imaging/Radiology department.
 - c. State the location of departmental policy and procedure manuals.
 - d. Discuss the difference in patient confidentiality and a patient's privacy.
 - e. Discuss patient's rights.

CLINICAL RADIOGRAPHY I

1. Critical thinking exercises: Questions will cover pediatrics, geriatric, trauma, professional discretion, confidentiality, medical law, benefits of collimation, and patient care.
2. Additional assignments may be required.

CLINICAL RADIOGRAPHY II

1. Merrill's review questions specific for headwork.
2. Additional assignments may be required.

CLINICAL RADIOGRAPHY III

1. Merrill's review questions for Clinic III Contrasted Imaging Studies.
2. Students must read assigned sections in texts.
3. Additional assignments may be required.

CLINICAL RADIOGRAPHY IV

1. Students will perform reflection on volunteer hours per guidelines included in this handbook. Mrs. Atwell will grade this assignment and it will be turned in per the syllabus to her.
2. Students will complete an abstract of their project that is due to be completed in the final spring semester. This will be turned in to Mrs. Haye for her grading the week per the syllabus. This will be a part of the final project grade as well as a grade in Clinic IV.
3. Additional assignments may be required.

Revised 2/00- 6/04 – 4/05/2012/2013/1-4-18

Reviewed 2017/2019

Reflection on Volunteer Hours Clinical Radiography IV

You must reflect on your volunteer hours and answer the following questions in narrative form:

1. What volunteer action(s) did you take?
2. How did your volunteer action(s) benefit individuals in the community?
5. What did you learn about yourself as a result of your volunteer action(s)?
6. What was the best thing(s) about your volunteer service?

Please computer generate this reflection using the following guidelines:

1. Use one (1) inch margins and double space.
2. Use a 12 font, Times New Roman
3. Complete a minimum of one (1) page and a maximum of two (2) pages.
4. Include a cover page with this and include your name, Clinical Radiography IV and date (this is in addition to the 1-2 page reflection statement).
5. The due date for this reflection will be on your Clinical Radiography IV syllabus and if late a deduction of 5 points per day, including weekends, will be taken off the final grade.
6. This will be submitted to Mrs. Atwell via e-mail in Microsoft Word.

Revised 6-05/Reviewed/2012/2015/2017/2019/2021/2022

ABSTRACT GUIDELINES CLINICAL RADIOGRAPHY IV

The abstract is being used as a written objective for Clinical Radiography IV. This abstract is a brief, comprehensive summary of the contents of the project that will be submitted for Clinical Radiography V and Integration of Radiographic Principles in the final Spring semester.

This will be turned in to Mrs. Haye per the syllabus for Clinic Radiography IV and will be an assignment grade for Clinic IV **AND** a part of the final project grade in RADT 218.

This will be turned in electronically to Mrs. Haye per the due date and, if late, five (5) points per day will be deducted from the final grade of the abstract. Mrs. Haye will provide instructions as to how to submit this document. If there are more than one student working on the project only ONE (1) abstract must be submitted however all members are responsible to ensure that it is correct and submitted properly and on time.

On the first line of the abstract page, center the word “Abstract” (no bold, formatting, italics, underlining, or quotation marks).

Beginning with the next line, write a concise summary of the key points of your research. (Do not indent.) Your abstract should contain at least your research topic, research questions, participants, methods, results, data analysis, and conclusions. You may also include possible implications of your research and future work you see connected with your findings. Your abstract should be a single paragraph, double-spaced. Your abstract should be between 150 and 250 words.

https://owl.purdue.edu/owl/research_and_citation/apa_style/apa_formatting_and_style_guide/general_format.html

The abstract should summarize the facts of the project and is not intended to discuss methods in detail.

You must use the following guidelines for preparing your abstract:

- A. *Cover Page:* Attach to front of abstract with Project Name, Student Name(s), Date, Clinical Radiography IV (make sure that these are centered to the page)
- B. *Margins:* One inch on all sides (top, bottom, left, right)
- C. *Font Size and Type:* 12 pt. (Times Roman or Courier are acceptable typefaces)
- D. *Spacing:* Double-space
- E. *Alignment:* flush left
- F. *Heading:* Abstract (centered on the first line)
- G. *Format:* The abstract begins on the line following the abstract heading. The abstract should be between 150 and 250 words. All numbers in the abstract (except those beginning a sentence) should be typed as digits rather than words.

GUIDELINES FOR GRADING OF CLINIC WRITTEN ASSIGNMENTS

The following has been formulated to assure consistency in grading of written assignments (essay style papers) between each of the four clinic centers. Each area is defined and the percentage assigned for that particular area.

- CONTENT:** This category shall include the make-up of the paper: the material presented, how well it is researched, and its thoroughness. **50%**

- NEATNESS/FOLLOWING OF DIRECTIONS OR STATED GUIDELINES:** This category shall include the overall neatness of the paper, such as erasing, poor writing, and overall presentation. In addition, the paper will be reviewed for compliance with stated directions. **20%**

- ORGANIZATION:** This category shall include the flow of writing. An introduction to the subject, the body and a conclusion to tie the material together, should be recognized. If references are supplied the correct listing of these are included in this area. **15%**

- SPELLING/GRAMMAR/PUNCTUATION, ETC.:** This category shall include the use of proper sentence structure, punctuation marks (*including the use of quotes where needed*), and correct spelling. **15%**

CLINICAL ROTATIONAL OBJECTIVES

Reviewed 2022

INTRODUCTION TO CLINICAL RADIOGRAPHY

GENERAL RADIOGRAPHY/FLUOROSCOPY/MOBILE/OR

The Student Will:

1. Differentiate between types of examinations.
2. Recognize methods of radiation protection to patients and self.
3. Be responsible for all aspects of equipment manipulation.
4. Identify each IR size.
5. Prepare radiographic/fluoroscopic/mobile room/equipment with necessary supplies.
6. Provide a clean and orderly environment.
7. Establish professional student-patient-technologist relationships.
8. Observe all examinations in assigned areas.
9. Perform and/or assist staff as much as possible.
10. State location of emergency equipment (Crash cart, drugs, etc.).
11. Properly identify images with pertinent information.(Name, Date, etc.)
12. Recognize universal protection, infection control procedures.
13. Demonstrate procedure for caring for patient's personal belongings.
14. Maintain confidentiality of all patient examinations.
15. Assist with patient comfort and safety.

CLERICAL

The Student Will:

1. Assist with processing a patient requisition following prescribed protocol methodology.
2. Identify records and forms for patient information purposes.
3. State the rationale for the filing system for the appropriate facility.
4. Demonstrate and exercise use in the operation of computers, etc.
5. Demonstrate proper method to answer the telephone and transfer calls.
6. Differentiate between the out-patient versus in-patient process.
7. Provide a neat and clean working environment.
8. Demonstrate proper methodology for patient scheduling, under direct supervision.
9. Maintain confidentiality of all patient information.
10. Demonstrate shredding of documents per departmental protocol.

TRANSPORT

The Student Will:

1. Demonstrate proper method of patient transfer procedure.
2. Demonstrate proper method of wheelchair operation.
3. Raise footrests before allowing patient in or out of the wheelchair.
4. Keep wheelchair locked during procedure.
5. Provide assistance to patient to maintain their modesty.

6. Assist patient in movement to wheelchair and/or stretcher utilizing body mechanics and maintaining patient care and modesty.
7. Provide assistance to the transport personnel as much as possible.
8. Observe methodology to provide proper support to injured and/or trauma patients.
9. Demonstrate proper placement and movement of medical equipment. (IV's, catheters, oxygen units, etc.)
10. Differentiate between disabilities and distinguish when assistance is necessary.
11. Communicate effectively with patients, staff, and peers.
12. Recognize universal protection, infection control procedures.
13. Demonstrate procedure for caring for patient's personal belongings.
14. Assist with patient comfort and safety.

RECORDS MANAGEMENT/IMAGE PROCESSING

The Student Will:

1. Demonstrate procedure to dispense images.
2. Demonstrate process to file images in proper place.
3. State rationale of filing system.
4. Know method to check out or send images/CD's out.
5. Distinguish between films which have or have not been reported.
6. Provide assistance to file room personnel as much as possible.
7. Provide a clean and orderly environment.
8. Demonstrate shredding of documents per department protocol.
9. Demonstrate the procedure to activate and deactivate the automatic processor, if applicable.
10. Identify monitoring devices for temperature and the correct temperature for operation, if applicable.
11. Identify and locate size and type of image receptors available.
12. Provide a clean and neat environment.
12. Provide assistance to the darkroom or image processing personnel.
14. Demonstrate method to replenish system.
15. State basic principles of processing.
16. Demonstrate and assist with method of cleaning and maintaining IR.
17. Identify and state the function of ancillary darkroom equipment, if applicable.
18. In facilities where the darkroom is minimally utilized the student must learn the method employed in that facility. The clinic instructors will in-service in this area.
19. Students who are assigned to facilities with Computed Radiography and PACS systems will also have to meet the requirements as set forth by the facility in proper image processing.

Revised 2/00-4/05-6-07/6-08/4-13

CLINIC I & II

RADIOGRAPHY

The Student Will:

1. Perform examinations under indirect supervision, once competency is obtained.
7. Apply radiation protective shielding devices to all patients.
3. Demonstrate and observe positioning methodology and centering points on all examinations.
4. Follow general protocol for radiographers during radiography of patients.
5. Recognize and critique diagnostic image quality.
6. Practice independent selection of technical factors under direct supervision.
7. Utilize effectively immobilization techniques.
8. Exercise judgement and correlate instruction in the revision of technical factors concerning repeat images.
9. Actively participate in trauma imaging exhibiting improvised techniques to obtain diagnostic quality.

FLUOROSCOPY

The Student Will:

1. Demonstrate the proper method to prepare barium and other contrast agents.
2. Apply radiation protective shielding devices to all patients.
3. Correctly set up equipment for fluoroscopic and radiographic examinations.
4. Correctly place all necessary supplies for GI and BE examinations.
5. Assist radiologist during fluoroscopic studies by delivering correct imaging receptors.
6. Observe all centering points for each examination.
7. Perform correctly, after instruction, preliminary images as indicated.
8. Correctly send for a patient and identify the patient.
9. Correctly dismiss patients according to status.
10. Review images done to recognize basic anatomical structures.

TOMOGRAPHY/CT

The Student Will:

1. Demonstrate and observe machine operation in all procedures.
2. Apply radiation protective shielding devices to all patients.
3. State the basic procedure and protocol involved in urology radiography.
4. Assist in preparing the examination room.
5. Identify and state classic reaction symptoms.
6. Assist with injector and computer set up in CT.
6. Prepare and observe procedure for a contrast reaction.
7. State and observe procedure for a contrast reaction.
8. Demonstrate recognition of good image quality.

9. Identify and correlate alterations in technical factors in the performance of tomographic procedures.
10. Assist in obtaining a signed consent form and history from all patients.

MOBILE RADIOGRAPHY

The Student Will:

1. Demonstrate and observe difference in procedures.
2. Apply radiation protective shielding devices to all patients.
3. Identify and demonstrate proper operation and adjustment of mobile equipment.
4. Demonstrates recognition of diagnostic quality.
5. Observes and assists with all examinations.
6. Independently performs complete examinations on which the student has proven competency (Direct Supervision for O.R and mobile procedures).
7. Observe methodology for sterile and isolation procedures.

AFTER HOURS

The Student Will:

1. Perform and/or assist with all examinations.
2. Apply radiation protective shielding devices to all patients.
3. Practice standard self-protection methods.
4. Utilize calipers, where applicable, for determining exposure factors.
5. Practice General Protocol for Radiographers During Radiography of Patients.(See Section I of this book.)
6. Differentiate and state differences in procedures.
7. Participate actively in the radiographic examination of trauma patients.
8. Demonstrate procedure of department protocol on after hour shifts.
9. Demonstrate procedure for handling body fluids.
10. Function effectively in stressful situations.
11. Evaluate and initiate correct imaging protocol.

Revised 2/00/6-07

CLINIC III

RADIOGRAPHY

The Student Will:

1. Follow general protocol for radiographers during radiography of patients.
2. Apply radiation protective shielding devices to all patients.
3. Identify examinations and protocol.
4. Identify and set exposure factors on the control panel.
5. Identify pathology and recognize good image quality.
7. Efficient operation of radiographic equipment.
8. Determine optimum exposure factors and correctly provide required adjustments to technical factors in consideration of pathological conditions.
8. Perform correctly, with adequate speed, those radiographic procedures which have been simulated under lab conditions.
9. Assist with care for pediatric, geriatric, and psychiatric patients.

FLUOROSCOPY/TOMOGRAPHY

The Student Will:

1. Perform and/or assist the radiologist with examinations.
2. Apply radiation protective shielding devices to all patients.
3. Identify protocol for GI and BE examinations.
4. Demonstrate and observe centering points for fluoroscopic examinations.
5. Identify specific anatomy as it relates to the procedure.
6. Identify pathology and recognize good diagnostic image quality.
7. Efficient operation of equipment.
8. Determine optimum exposure factors and correctly provide required adjustments to technical factors in consideration of pathological conditions.
9. Perform correctly, with adequate speed, those imaging procedures which have been simulated under laboratory conditions.
10. Assist with care for pediatric, geriatric, and psychiatric patients.
11. Demonstrate and observe centering points for all exams.
12. Demonstrate and/or observe machine operation for all exams.
13. State basic procedure and protocol for urography procedures.
14. Prepare radiographic rooms for all examinations.
15. Prepare contrast media under aseptic conditions.
16. Illustrate concern for possible contrast reaction and correlate with the appropriate action.
17. Identify pathology which may be visualized on images.
18. Demonstrate operation and utilization of tomographic equipment.
19. Determine optimum exposure factors and correctly provide required adjustment to technical factors in consideration of pathological conditions.

MOBILE RADIOGRAPHY

The Student Will:

1. Demonstrate and observe differences in procedures.
2. Apply radiation protective shielding devices to all patients.
3. Demonstrate and observe methodology for sterile and isolation procedures.
4. Demonstrate proper operation and adjustment of mobile equipment.
5. Identify and utilize accessory equipment in mobile imaging (grids, etc.) independently.
6. Independently apply medical terminology and correlation of examinations.
7. Independently perform completed examinations on which competency has been proven.
8. Determine optimum exposure factors and correctly provide required adjustments to technical factors in consideration of pathological conditions.
9. Assist with care for pediatric, geriatric, and psychiatric patients.

Revised 2/00-6/02/6-07/6-08

CLINICAL IV AND INTERNSHIP (unless noted as Clinic III)

RADIOGRAPHY

The Student Will:

1. Perform and/or assist with all examinations.
2. Apply radiation protective devices to all patients.
3. Utilizes practices of standard radiation self-protection.
4. Utilize calipers, where applicable, for determining all exposure factors.
5. Perform examinations previously covered.
6. Observe and demonstrate centering points on all examinations.
7. Follow general protocol for radiographers during radiography of patient.
8. Place appropriate supplies in facility.
9. Provide a clean and orderly environment.
10. Identify examinations and protocols.
11. Identify and set exposure factors on the control panel.
12. Critique images in regards to image quality and positioning.
13. Identify pathology on images.
14. Operate radiographic/fluoroscopic equipment as procedures dictate.
15. Demonstrate an understanding of the technical aspects of imaging equipment.
16. Demonstrate procedure for handling body fluids.
17. Function effectively in stressful situations.
18. Evaluate and initiate correct imaging protocol.

FLUOROSCOPY

The Student Will:

1. Perform and/or assist with all examinations.
2. Apply radiation protective devices to all patients (where possible).
3. Practice standard radiation self-protective techniques.
4. Utilize calipers, where applicable, for determining all exposure factors.
5. Assists radiologists with procedures.
6. Identify steps for GI and BE examinations.
7. Observe and demonstrate centering points for all overhead imaging.
8. Identify contrast medias to be utilized.
9. Identify specific anatomy as it relates to the procedure.
10. Critique under direct supervision, completed images in regards to positioning and exposure quality.
11. Identify pathology as illustrated on images.
12. Effectively evaluate and initiate correct methodology to image all patient types and habitus.
13. Demonstrate procedure for handling body fluids.

14. Prepare laboratory specimens and dispense of these in the prescribed manner.
15. Function effectively in stressful situations.

TOMOGRAPHY

The Student Will:

1. Perform and/or assist with all examinations.
2. Apply radiation protective devices to all patients when applicable.
3. Practice standard radiation self-protection.
4. Utilize calipers, where applicable, for determining exposure factors.
5. Observe and demonstrate centering points for all examinations.
6. Observe and demonstrate machine operation for all examinations.
7. State basic procedure and protocol for IVP's.
8. Prepare the radiographic room for urinary radiography.
9. Select and prepare contrast media under aseptic conditions.
10. Illustrate concern for possible reactions occurring.
11. State and practice procedure for a contrast media reaction.
12. Identify pathology which may be visualized on images.
13. Position the patient, film, and tube as examination protocol dictates.
14. Determine and select proper fulcrum settings.
15. Demonstrate procedure for handling body fluids.
16. Function effectively in stressful situations.
17. Evaluate and initiate correct imaging protocol.

MOBILE RADIOGRAPHY

The Student Will:

1. Perform and/or assist with all examinations.
2. Apply radiation protective devices to all patients (whenever possible).
3. Practice standard radiation self-protection.
4. Utilize calipers, where applicable, for determining exposure factors.
5. Observe and differentiate in examinations protocols.
6. Observe and demonstrate sterile and isolation procedures.
7. Demonstrate proper operation adjustment of mobile equipment.
8. Demonstrate proper procedures in surgical and mobile trauma radiography.
9. Demonstrate procedure for handling body fluids.
10. Function effectively in stressful situations.
11. Evaluate and initiate correct imaging protocol.

AFTER HOURS/WEEKEND

The Student Will:

1. Perform and/or assist with all examinations.
2. Apply radiation protective shielding devices to all patients.
3. Practice standard self-protection methods.
4. Utilize calipers or provided technique charts, where applicable, for determining exposure factors.
5. Practice General Protocol for Radiographers During Radiography of Patients.(See Section I of this book.)
6. Differentiate and state differences in procedures.
7. Participate actively in the radiographic examination of trauma patients.
8. Demonstrate procedure of department protocol on after hour shifts.
9. Demonstrate procedure for handling body fluids.
10. Function effectively in stressful situations.
11. Evaluate and initiate correct imaging protocol.
12. Understands the facility protocols and rationale for backboard/trauma patients.

SPECIAL PROCEDURES (Clinic III optional rotation)

The Student Will:

1. Assist and/or observe with all examinations.
2. Apply radiation protective shielding devices to all patients.
3. Assist and/or observe in patient preparation.
4. Assist in preparing equipment for special procedures.
5. Observe and identify procedure protocols.
6. Practice aseptic techniques as required (prepare injection site and drape patient).
7. Assist radiologist during special procedure (scrub).
8. Assist and demonstrate sterile techniques in preparation for a special procedure.
9. Review and identify all anatomy relevant to routine procedures.
10. Practice proper methodology in disposing of contaminated items.
11. Operate and demonstrate knowledge of equipment operation (image equipment, cine equipment, and film programming).
12. Prepare fluoroscopic equipment for use.
13. Properly load film into the cine camera and energize.
14. Position patient and select techniques required in preliminary filming.
15. Instill contrast media into the automatic injector.
16. Identify contrast medias and state indications and contraindications of each.

SPECIAL PROCEDURES (cont.)

17. Prepare injection site and drape patient maintaining a sterile field.
18. Identify the operation of the EKG monitor and other devices.
19. Demonstrate procedure for handling body fluids.
20. Prepare laboratory specimens and dispense of them in the prescribed manner.
21. Exhibit correct methodology in sterile application of gowns and gloves.
22. Function effectively in stressful situations.
23. Evaluate and initiate correct imaging protocol.

MAMMOGRAPHY (Clinic III and V optional rotation)

The Student Will:

1. Assist and/or observe all examinations.
2. Apply radiation protective shielding devices to all patients (where possible).
3. Prepare and/or assist with patient preparations.
4. Assist and/or set up equipment.
5. Assist and/or process images.
6. Assist and/or position equipment for different projections.
7. Demonstrate proper patient care procedures.
8. Assist and/or obtain proper medical history.
9. Assist and/or observe sterile procedures for biopsy examinations.
10. Position body part to obtain diagnostic images. This maybe actual practice or simulation. This rotation **must** be under direct supervision. Please refer to the Mammography Policy in Policy and Procedure Manual for additional guidelines.

CT SCANNING

The Student Will:

1. Assist and observe room preparation and equipment set-up.
2. Apply radiation protective shielding devices to all patients where possible).
3. Prepare and observe contrast media administration.
4. Identify location of contrast media reaction materials and procedures for implementing counteractive measures.
5. Identify and review all anatomy relevant to routine procedures.
6. Evaluate all images for the proper demonstration of relevant anatomy.
7. Demonstrate basic computer skills.
8. Demonstrate proper filming methodology.
9. Identify procedures to be done.

ULTRASONOGRAPHY (Clinic III optional rotation)

The Student Will:

1. Assist and/or observe on all examinations.
2. Prepare and/or assist with preparation.
3. Assist and observe room preparation and equipment set-up.
4. Identify and demonstrate anatomy relevant to routine procedures.
5. Evaluate all images for the proper demonstration of relevant anatomy.
6. Identify the function of different transducers to be utilized.
7. Demonstrate a basic understanding of equipment operation.
8. Demonstrate procedure for handling body fluids.

NUCLEAR MEDICINE (Clinic III optional rotation)

The Student Will:

1. Assist and/or observe all examinations.
2. Prepare and/or assist with patient preparation.
3. Assist and observe room preparation and equipment set-up.
4. Observe and/or assist in preparation of nuclear medicine isotopes.
5. Identify contraindications of certain nuclear medicine studies when done in series.
6. Operate and demonstrate a basic understanding of the technical aspects of equipment.
7. Demonstrate procedure for handling body fluids.
8. Function effectively in stressful situations.

ONCOLOGY (Clinic IV and V only)

The Student Will:

1. Assist and/or observe all examinations and procedures.
2. Assist and/or prepare patients for procedures.
3. Assist and/or prepare room and equipment set-up.
4. Observe and assist in preparing equipment to deliver treatments.
5. Under direct supervision, operate equipment.
6. Identify different types of equipment and indications of each.

CARDIAC CATHETERIZATION (Clinic VI and V only)

The Student Will:

1. Understand and assist with operation of control panel.
2. Observe operation of automatic injector.
3. Operate x-ray table with supervision.
4. Observe and understand operation of cine-filming mechanism.
5. Assist in room and patient preparation.
6. Watch cine on projector.
7. Observe filing system, scheduling, and mailing process.
8. Know the pre- and post-angiographic care procedure.
9. Assist with preparing the room and patient.
10. Observe and understand filming procedure.
11. Recognize selective catheterization of cardiac arteries.
12. Assist with the filming procedure.

MRI* (Clinic III, IV and V)

The Student Will:

1. Work safely around the magnet.
2. Assist the technologist with the screening of each patient.
3. Explain the procedure completely to each patient.
4. Accurately record protocols, 180 degree gain, 90 degree gain, and receive gain for each series of scans.
5. Type in correct patient information on computer console.
6. Select the correct coil for patient procedure.
7. Zero and target patient to isocenter.
8. Assist technologist with patient positioning.

Each student will complete an MRI screening tool every semester provided by the Clinical Coordinator and given to the Clinical Preceptors so students are safe in the MRI working environment. See MRI Screening Tool in this Manual.

Revised 2-00/6-07/6-08/2022



MRI Screening--Radiologic Technology Program

Name _____

Review of Medical History

- | | | | |
|---|---------|--------|--------------------|
| 1. Cardiac Pacemaker/Cardiac Wires | Yes ___ | No ___ | |
| 2. Aneurysm Clips | Yes ___ | No ___ | |
| 3. Any Other Type of Surgical Clips | Yes ___ | No ___ | |
| 4. Implantable Defibrillator | Yes ___ | No ___ | |
| 5. Stents | Yes ___ | No ___ | Card Available ___ |
| 6. Cochlear Implants | Yes ___ | No ___ | |
| 7. Orbital Prosthesis | Yes ___ | No ___ | |
| 8. Brain Surgery | Yes ___ | No ___ | |
| 9. Neurostimulator/Biostimulator | Yes ___ | No ___ | |
| 10. Joint Prosthesis | Yes ___ | No ___ | |
| 11. Hearing Aids | Yes ___ | No ___ | |
| 12. Cataract Surgery | Yes ___ | No ___ | |
| 13. Implanted or Removable Dental Work | Yes ___ | No ___ | |
| 14. History of Metal Work | Yes ___ | No ___ | |
| 15. History of Shrapnel Injuries | Yes ___ | No ___ | |
| 16. Body Piercings | Yes ___ | No ___ | |
| 17. Tattoos | Yes ___ | No ___ | |
| 18. Any Other Type of Metal Fragments | Yes ___ | No ___ | |
| 19. *Females-Any Possibility of Pregnancy | Yes ___ | No ___ | |
| 20. *Females-Hair Extensions | Yes ___ | No ___ | |

** If answered yes to any of the above, clinical correlation will be required prior to rotating into MRI.

Please list all previous surgeries: _____

Student Signature

Date

Clinical Coordinator Signature

Date

CLINICAL COMPETENCY MANUAL AGREEMENT

I understand that a copy of the Bluefield State College Clinical Objective Manual in Radiologic Technology is available in Moodle under the Class of 2022-2024 for my reference and use. I agree to abide by the policies and procedures that are within this manual and understand that changes may occur and that I will be notified of such changes.

Student Name: _____

Date: _____

Clinical agency to which I am assigned as of the above date:

Clinical manual agreement.7-04/7-05/6-08/6-09/6-10/6-11/6-12/6-13/6-14/6-15/6-16/4/17-6-1-18/6-1-19/2020/2021/2022