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ST. VINCENT'S COLLEGE

RADIOGRAPHY PROGRAM

Student Handbook
2016-2017

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Dear Radiography Student:

I am pleased to welcome you to the Radiography Program at St. Vincent's College. The course of study you are undertaking will be a concentrated, challenging and rewarding one.

This guide contains information about the Program and College resources and policies that pertain to both our Bridgeport and Stamford campuses. You will find this handbook useful throughout your course of studies.

Sincerely,

Terry K. Hine

Terry K. Hine, MAT, RT(R) (M)
Associate Professor and
Chair of Radiologic Science Programs

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INTRODUCTION

The College has developed this Student Handbook for Radiography students. The purpose of this guide is to provide information which is supplementary to the College Catalog, the College Student Handbook, and the Radiography Course Syllabi.

The data contained within this student handbook reflects current policies and, in some instances, is subject to modification.

MISSION OF THE RADIOGRAPHY PROGRAM

The mission of the Program in Radiography is derived from the mission of St. Vincent's College and the mission of the Academic Services Division. It has as its focus the education of radiographers who provide diagnostic services for the sick and sick poor. It provides a sound and stable educational environment where a diverse student population has the freedom to learn and grow intellectually as well as develop competencies in clinical skills. Faculty members are qualified and caring teachers and radiography educators who are dedicated to excellence in radiography education, health care, life-long learning and the mission of the college. The Program in Radiography establishes a technical educational foundation upon which students of radiography may continue to build their professional careers.

PHILOSOPHY OF THE RADIOGRAPHY PROGRAM

The Philosophy and Objectives of the Program in Radiography are derived from the Mission, Philosophy and Objectives of St. Vincent's College.

The faculty believes that **Man**, composed of body, mind and spirit, is created in the likeness of God. We believe each person as a unity of body, mind, and spirit, possess a unique sacredness, have been endowed with human dignity, rights and responsibilities; that the sacredness, dignity and rights of each person must be protected and promoted with the utmost care, from the moment of conception through life and death. We believe that man is endowed with a free will, has adaptive mechanisms to actualize potentials, has ability to communicate, and has an awareness of the past, present and future.

We believe that **Society** consists of organized social systems which influence and are influenced by many factors including social behavior, interaction, perception and health. A social system is composed of groups of human beings who interact with each other on the basis of culture, shared values, and common purpose or goal, within geographic limitations. Each social system designates roles, status, authority and power within its own structural boundaries. Society is continually changing as it adapts to advancing knowledge, technology and human resources.

We believe that **Health** is a dynamic state of physical, mental and social wellbeing which is influenced by and encompasses the individual's genetic inheritance, life experiences and resources. The relative dominance of the strengths and limitations in these areas determines an individual's place on the health continuum. The way people perceive health will depend on their past experiences, the environment in which they have lived and their concept of health. Health is the responsibility of each individual as well as society.

We believe that radiographers are that part of the medical team that are educated by theory and application to use medical radiation and imaging techniques for the maximum diagnostic benefit of the patients, while keeping radiation exposure to a safe minimum. Radiographers practice technology founded on a scientific basis, utilizing equipment and accessories consistent with the purpose for which is has been designed.

Radiographers exercise care, discretion and judgment in the practice of the profession and assume responsibility for professional decisions, acting in the best interest of the patient.

We believe that **Learning** is an individual response to both planned and spontaneous experiences. The learning process includes active participation on the part of the learner and results in behavioral changes. Learning is most meaningful when it is related to the pursuit of the individual's own goals; when it is enhanced by positive reinforcement and reward, when it is influenced by role models, and when it takes place in a variety of ways at different rates. We further believe that learning is a lifelong, self-actualizing process which enables the individual to have deeper understanding and appreciation of the immediate and ultimate purpose of life.

We believe that **Education** is the organized learning process by which a person assimilates knowledge, develops skills, establishes values, and realizes potentials. Formal education must include clearly defined, obtainable and measurable goals. The faculty assumes the major responsibility for providing a climate in which optimum learning is possible, and in facilitating the learning process.

We believe that **Radiologic Education** is an ongoing process by which judgment is developed as knowledge (based on the physical, biological, social sciences and the humanities) is accrued

and competencies (application of skills, concepts and attitudes) are acquired. The faculty provides for learning experiences of increasing complexity as it assesses, plans, implements and evaluates the curriculum.

Graduates of this program are prepared to practice radiography, within the scope of practice, in a variety of settings. Within each setting the radiographer functions efficiently and effectively, demonstrating conduct and attitudes reflecting the profession. This is accomplished by: responding to patient needs, performing tasks competently, and supporting colleagues and associates in providing quality patient care.

The faculty believes Radiologic Education is an ongoing process in that the practitioner of Radiography continues to accept the responsibility for independent study, continuing education and actualization of leadership potential.

Therefore, we as Radiologic educators aim to contribute toward the development of the student as an individual, as a contributing member of the community and as a responsible member of society, who upon completion of the program is eligible to seek licensure as a registered radiologic technologist and to function as a beginning practitioner within the health care delivery system.

PROGRAM OBJECTIVES

The objectives of the associate in science with a major in radiography are as follows:
The graduates of the radiography program:

1. Demonstrate charity and respect for the human dignity and rights of all individuals. *(G4)
2. Function as beginning technologists in the health care delivery system. * (G 1, 3 & 5)
3. Provide diagnostic services with related teaching in structured health care settings.
4. Demonstrate accountability for legal and ethical practice. * (G1)
5. Demonstrate responsibility and accountability for personal and professional behavior. *G4)
6. Participate in professional activities and continuing education, consistent with the standards of the American Registry of Radiologic Technologists. *(G4)

*Program goals

Radiography Program Assessment and Student Learning Outcomes

Goal 1: Students will be prepared to function as entry –level professionals in the healthcare delivery system

- Students will apply entry-level positioning skills.
- Students will select appropriate exposure factors for quality imaging.
- Students will practice appropriate radiation protection

Goal # 2: Students will demonstrate appropriate communications skills.

- Students will use appropriate vocabulary and language to orally convey information, concepts and ideas.
- Students will use a systematic approach to locate and use information to plan and write professional papers.

Goal # 3 Students/graduates will develop and practice effective problem solving skills and critical thinking skills.

- Students will manipulate technical factors for non-routine examinations.
- Students will adapt positioning for trauma patients.
- Students will produce solutions to real-world clinical situation
- Students will critique radiographic images for diagnostic quality

Goal # 4 Students/graduates will understand the importance of professional growth and development.

- Graduates will participate in professional activities with state or national societies.
- Graduates will demonstrate charity and respect for the human dignity and rights of all individuals.
- Students will demonstrate good interpersonal relationships with patients, clinical staff and clinical Instructors.
- Graduates will utilize professional judgement in delivering patient care.
- Graduates will contribute to society through involvement in community service activities.

Goal #5: The program will continuously monitor program satisfaction and ARRT exam pass rates, job placement and student completion rates in compliance with JRCERT accreditation.

- Graduates will pass the ARRT national certification on 1st attempt within 6 months post-graduation.
- Of those pursuing employment, graduates will be gainfully employed within 12 months post-graduation.
- Students will complete the program within 24 months
- Graduates will be satisfied with their education.
- Employers will be satisfied with the graduate’s performance

GENERAL INFORMATION

Dr. Susan Capasso, Ed.D is the Vice President Academic Affairs/Dean of Faculty. Her office is located on the second floor of the College at Hunting Street. Dr. Capasso's telephone number is 576-5481. *email scapasso@stvincentscollege.edu

Program Chairperson

Terry K. Hine, MAT, RT(R) (M) is Chair of the Radiography Program. Her office, Room # M319 is located on the third floor of St. Vincent's College at 2660 Main Street and she may be reached by phoning (203) 576-5072. Office hours are posted outside her office and at other times by request. *e-mail thine@stvincentscollege.edu.

Bridgeport Campus Faculty

Radiography faculty have offices on the third floor of the college at 2660 Main Street, Office M321 (E&K) and Room 213 at the Hunting Street address. The faculty has at least three office hours per week set aside for student consultation. Those hours are posted outside their office at Hunting Street, Room 213 or they may be reached by:

Clinical Coordinator

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Communication

Notices for class are posted online on Blackboard Learn. Notes for individual students from faculty are sent by College e-mail. Students are urged to check their College assigned e-mail frequently in order to remain up-to-date with College and Program matters. In addition, to communicate with faculty, messages may be left with the Academic Services Secretary located on the second floor of the College.

Students **must** use the e-mail address assigned by the College. No other e-mail address will be utilized by faculty.

Student Records

Students may inspect their course file by scheduling an appointment with the faculty. A student must examine the file with the faculty in attendance and cannot delete anything from the files.

College Radiography Laboratories

Bridgeport campus: The Radiography Laboratory is located on the 3rd floor @ the Virginia O'Brien Fortin Learning Center @ 2660 Main St: Bridgeport.

Stamford campus: The Radiography Laboratory is located in Suite 103 @ 1351 Washington Blvd: Stamford.

The skills laboratories are open for the practice of skills each week. Students must make an appointment with either the Program Chair or Clinical Instructor prior to use.

Recording Devices

The use of any recording devices is not permitted during class, or in clinical agencies.

Cell Phones

Cell phones are allowed in the classroom only if they are turned off or are turned to a silent mode. Cell phones are not to be answered in class under any circumstances. Cell phones are not allowed to be on during quizzes or examinations (or used as calculators) and will be placed at the back of the room. Cell phone use is not allowed in the clinical area. When there are extenuating circumstances that require the student to be available by phone, the student should speak to the instructor to make appropriate arrangements.

RADIOGRAPHY CERTIFICATION & REGISTRATION

Students who have satisfactorily completed the required course of study and have met all academic, financial and personal obligations to the college are recommended for graduation by the faculty. Upon graduation the student is eligible to take the ARRT examination for certification and registration. All students are expected to take the review course for the ARRT examination, arranged by the radiography program, prior to sitting for the exam.

Section 19A -14 of the Connecticut General Statutes authorizes the Department of Public Health and Addiction Services to deny licensure to applicants who may be addicted to drugs or alcohol or who have been disciplined in other states or who have been convicted of a felony. Candidates for licensure in Connecticut will be asked questions pertaining to these matters during the licensure application process.

Students may not perform radiographic procedures as a paid radiographer in the state of Connecticut until all requirements for licensure are met.

GRADING SCALE

All radiography courses require a passing grade of "B-" or better. All courses may be repeated only once. The following are the numerical equivalents for the radiography courses:

A	93 -100	C	73 - 76
A-	90 – 92	C-	70 - 72
B+	87 – 89	D+	67 - 69
B	83 – 86	D	60 - 66
B-	80 – 82	F	0 - 59
C+	77 - 79		

Radiography majors are required to achieve a grade of B- (80-82) to pass each radiography course. See College Catalog for grading in the courses in general education.

STANDARDS FOR WRITTEN ASSIGNMENTS

Students are required to use the American Psychological Association (APA) Manual for guidance when completing research papers for course content.

ACADEMIC ADVISEMENT

Each radiography student is assigned a radiography faculty advisor at the start of the radiography sequence. To facilitate the development of an effective advisor - advisee relationship, every effort is made to keep each student's advisor the same throughout that student's career at St. Vincent's College. Changes in student and/or faculty advisor status may result in a subsequent reassignment of faculty advisor.

It is each student's responsibility to refer to the posted listing of Faculty Academic Advisors to determine the assigned faculty advisor. Listings are posted throughout the academic facility in numerous locations.

Each student is expected to meet with the assigned faculty advisor at least twice each semester to discuss areas including, but not limited to academic progress, course selections, and career goals/options. Students are strongly encouraged to meet with the assigned advisor frequently. Meeting with a faculty advisor solely to determine course selections is not conducive to an effective advisement process.

Please keep in mind that the role of the faculty academic advisor is separate and distinct from that of the Academic Counselor.

DISABILITIES

<http://www.stvincentscollege.edu/current-students/students-with-disabilities/>

ADA Procedure

Before you receive course accommodations in any class, you will need to make an appointment with the ADA Coordinator. However, if you have additional information you would like to speak to the course faculty about, have emergency medical information you wish to share, or need special arrangements in order to evacuate the building, please make an appointment to speak with the course faculty as soon as possible.

Students who disclose any physical or mental health condition, physical limitation, or learning disabilities and request an accommodation must meet with the ADA Coordinator.

Contact the ADA Coordinator at 203-576-6022 who will explain the information and documentation that is required, along with all applicable deadlines.

Provide timely documentation from an appropriate professional containing information sufficient to determine the student's disability; the impact, if any, of the disability on the student's ability, with or without accommodations, to participate in and meet the material requirements of the College classes and programs, without posing safety risks to him or herself or others; the nature and extent of appropriate accommodation; and whether the accommodations requested are reasonable.

All requests will be reviewed on a case-by-case basis with the student, and as appropriate, with the student's treating professional.

The ADA Coordinator will discuss the requested accommodations with the student and Academic Dean, as needed. The ADA Coordinator will issue a letter to the student identifying the granted accommodation(s); this letter must be shared with the faculty teaching the course(s) in order for the accommodation(s) to be effected.

ACADEMIC WARNING

An Academic Warning is a mechanism utilized by faculty to assist a student in identifying and correcting individual deficits in theory and/or clinical practice. A student who is not making satisfactory progress in a course will receive an Academic Warning at mid-semester or at any time during a course. This is advisory and will contain recommendations for achieving success.

Procedure:

1. The appropriate faculty member will complete a Notice of Academic Warning, which will identify specific areas of weakness as well as recommendations designed to assist the student to succeed.
2. The student will delineate specific plans to meet faculty recommendations.

The student will follow any prescription for counseling and also meet with the faculty member at least every other week.

COURSE WITHDRAWAL

A student who withdraws from a radiography course with a grade average of less than 80 after mid-semester will have the grade for that course recorded as an F on the official transcript.

ACADEMIC PROBATION

A student who fails the theory component of a radiography course will be placed on Academic Probation until the student achieves a passing grade in that course.

FAILED RADIOGRAPHY COURSES

A student who fails the theory component of a radiography course must satisfactorily repeat **both** the theory and clinical components of the course.

DISMISSAL FROM THE MAJOR

If a student has failed to attain a grade of B- or better in more than one radiography course within the total program of studies, that student will be dismissed from the program.

If a student has failed to attain a grade of B- or better in the same radiography course twice, that student will be dismissed from the program.

Any student receiving a clinical failure in a radiography course will receive an "F" for the course and will be terminated from the radiography program.

READMISSION TO THE RADIOGRAPHY PROGRAM

Students seeking readmission to the radiography program must wait six months after termination before reapplying to the program. Students seeking readmission must meet with the Radiography Chair and complete the admissions process through the admissions office. Readmission is not automatic and is based on faculty review, clinical evaluations, faculty references, a cumulative grade point average of 2.5, and evidence of the applicant's efforts to strengthen areas of weakness. Readmitted students may register on a space-available basis only. Readmitted students must follow the curriculum in place at the time of their return to the program.

ACADEMIC HONESTY

Based on the mission and philosophy of St. Vincent's College, special emphasis is placed on academic honesty. Plagiarism, cheating, theft of College equipment, and all forms of academic dishonesty are subject to disciplinary action. Clear cases of academic dishonesty in any course will result in an "F" grade for that assignment, examination, or for the course itself. Dismissal from the College may be recommended. For any disciplinary action, the College affords a student the right to appeal. The grievance policy can be found in the College Handbook.

IMMUNIZATION AND TESTING

All students who have not maintained a current immunization status or PPD testing may be prevented from entering the clinical area until the specific immunization(s) and/or testing is/are completed. Clinical time lost due to inadequate immunizations and/or testing will be made up at faculty convenience.

REPORTING POLICY FOR EXPOSURE TO COMMUNICABLE DISEASES

All students in the Radiography program must report exposure to communicable diseases and other illnesses that may affect other students, patients and staff to the program chair, who will then send the student to the Employee/Student Health Center at St. Vincent's Medical Center. They will determine whether there is need for further action. This policy is to protect the students, staff and patients who might be exposed to a contagious disease or illness. All exposures to the above must be reported whether exposure took place at or outside the Clinical Education Centers.

CLINICAL ABSENCE

A student is expected to attend **all** clinical experiences. Students are expected to provide appropriate notification if they are unable to attend scheduled clinical assignments.

Absence from clinical experience is defined as any amount of scheduled time lost due to lateness, illness, and/or other emergencies. Some courses may have added requirements regarding the reporting of a clinical absence that will be explained during the introductory hours of the course.

It is the responsibility of the student to know and carry out all procedures for reporting absence.

Procedure:

1. A student must notify the appropriate faculty member **one hour prior** to the beginning of the assigned clinical time.
2. The student must supply the following information to the faculty member:
 - a. reason for absence
 - b. expected length of absence

If the student cannot predict the length of absence, the faculty member must be contacted on a daily basis.

After 1 week of illness, the student must present physician's release to the Student Occupational Health Center prior to returning to class and/or the clinical area.

PROLONGED ABSENCE

A student who is continuously absent from a radiography course and who fails to notify faculty within five business days will be at risk of failure. Students with a continuous absence must contact course faculty on a weekly basis. An extended absence may prevent achievement of course objectives, which will result in a course failure.

RE ENTRY REVIEW PROCESS

The Re-entry Review Process has been developed to assist a student who has had an interrupted program of studies. There is no credit assigned for this process. It is a required process for the student who has been away from the program of studies for six months or more in order to enhance educational success and promote safety at the clinical site. Previously acquired knowledge is assessed with the learner (student) prior to entering the next radiography course. Deficiencies, if present, are clearly delineated and a planned remediation program is implemented.

Procedure:

1. At least six weeks before the beginning of the Radiography course, for which the student will enroll, the student must contact the Chair of the Radiography Program.
2. Special registration will be required for this process. The fee for the Re-Entry Process is \$200.00 and must be paid on or before registration.
3. At least five weeks before the beginning of the radiography course the student must:
 - a. take a competency test incorporating selected previously attained clearances
 - b. retake the final examination of the previous radiography course
4. Based on the above tests, deficiencies, if present, will be identified and a plan of review will be designed at least four weeks before the beginning of the radiography course.
 - a. content/theory-the course outline of the previous course will be utilized to set up a plan, incorporating the audiovisual and computer labs
 - b. Skills - any areas of deficiency along with any other skills will be practiced under the guidance of the clinical instructor.
5. Clinical experience review will be provided, as needed, no later than two weeks before the beginning of the radiography course. A faculty member will supervise the student and make suggestions regarding any areas of weakness.

The student will receive a summary of the results of the review process and a Notice of Completion from the responsible faculty member, although no grade will be given for the review.

The student is responsible for bringing the Notice of Completion to the Registrar prior to registration for the next sequential Radiography course.

CERTIFICATION IN CARDIO-PULMONARY RESUSCITATION

In preparation for practice as registered technologists, students are required to care for patients whose illnesses are at varying levels of acuity. Students must have the ability to respond to patients needs in terms of basic life support when necessary.

Therefore, students entering the radiography sequence are required to be certified in Cardio-Pulmonary Resuscitation (Professional Rescuer or Health Care Provider) and to maintain certification throughout the program. Proof of certification must be made prior to the start of each fall semester.

The cost of certification is assumed by the student.

INCLEMENT WEATHER DELAYS/CLOSINGS

To prevent confusion during inclement weather, please note the following:

When the College is officially closed due to inclement weather, classes and clinical experiences will be cancelled. When a (2) two hour delay is announced for the College, It should be interpreted as all classes and clinical activities commencing (2) two hours after the normal start time for the College (8:00 a.m.).

THEREFORE, A (2) HOUR DELAY MEANS THAT ALL CLASSES AND CLINICAL EXPERIENCES WILL COMMENCE AT 10:00 A.M. THAT DAY.

Please continue to monitor the identified radio and television channels for current information regarding the status of classes.

RADIOGRAPHY PROGRAM CODE OF CONDUCT

1. No cell phones, iPhones, or any other electronic devices are allowed in lecture or lab rooms. If you are caught using the device in prohibited areas, the device will be confiscated. If you want to use personal computers in the classroom, you must obtain the permission of the instructor. No recording devices are allowed in the classroom, lab, or clinical education centers.
2. No hats will be worn in lecture or lab when taking a test. If you come in wearing a hat on a test day, you will be asked to remove it.
3. No one will be allowed to leave the classroom during a test. Please take care of your business before the test begins.
4. If you arrive late for class, quietly sit in the back of the room so as not to interrupt the instructor or disturb other students.
5. If you miss a class, it is your responsibility to find out what you've missed, and to get the handouts, etc. from the instructor.
6. If you miss a class, you need to contact the instructor to explain the absence.
7. Academic dishonesty in any form will not be tolerated, and will be subject to disciplinary action.
8. Course grades for assignments and tests will be posted on Blackboard Learn, but only as a means of notification. Grade averages from Blackboard Learn will be used to calculate your final course grade. Final course grades will be calculated by instructors and posted through Campus Anywhere upon completion of the course.
9. Responses to your e-mails will be returned within a reasonable amount of time. An email sent during the week, during regular school hours, will be answered within 48 hrs. of receipt. E-mails sent on the weekends will be answered no later than the following Tuesday. Do not expect to receive answers to emails instantaneously or during the middle of the night.
10. Exams will not be returned to you. If you are interested in reviewing the test/exam to see where you made errors, you will need to make an appointment with the instructor within one week of taking the test/exam to review it.
11. Students who qualify for and have documentation for special needs during class or test accommodations must contact the instructor and show the documentation immediately upon beginning the course. Requests for special accommodations will not be honored without documentation.
12. Dissatisfaction with grades should be discussed with the instructor who gave the grade to resolve the issue. During this discussion, every effort should be made by the parties involved to resolve the issue. Students are reminded that the grievance procedure may not be used to protest grading policies.

DRESS CODE FOR CLINICAL EXPERIENCE

The student uniform is required of all radiography students on clinical assignment in order to insure the professional appearance of students while delivering care to patients. By wearing the St. Vincent's uniform, students develop an identity as St. Vincent's College students, and serve as visible representatives of the College in a variety of health care agencies throughout the larger community. In some clinical experiences outside St. Vincent's College students will be given specific dress code instruction.

Uniform: The St. Vincent's College uniform is required of students during their clinical experiences. The uniform, however, should be worn only for those experiences related to a radiology course or when it is otherwise required. All parts of the uniform must be neat, clean and in good repair. College Patch must be affixed to right sleeve.

Women: Boot cut elastic waist Pant and Female Scrub Top in Navy (bearing the school name), white hose, plain white lab coat, white shoes and College I.D. badge. Clogs are not permitted.

Men: Male Scrub Pant and Men's Scrub Top in Navy (bearing school name), white hose, white shoes and College I.D. badge.

A plain white lab coat may be worn with the uniform, but a sweater must never be worn when giving patient care. A Turtleneck (White) may be worn under Scrub Top.

Outside the clinical area, the uniform may only be worn to and from home.

Hair: The hair must be neatly arranged, off the collar, and off the face. Facial hair, including sideburns, must be neat and trim. Hair color must be within natural parameters.

Jewelry: Watches, plain wedding bands and stud type (metal, white or pearl) earrings may be worn; no more than one to each ear lobe. Other jewelry is not permissible, appropriate or safe, including other visible body piercing (s).

Cosmetics: Cosmetics may be worn in moderation. Nails must be kept short and well-groomed for patient safety. Only colorless nail polish is allowed and when worn must be intact. Fabricated nails (i.e.: acrylic) are inappropriate, unsafe and not allowed.

Tattoos: Students with tattoos must have them covered at all time. No visible tattoos are allowed on clinical rotations.

Visiting in a Hospital setting:

When visiting in a hospital setting students must wear street clothes and observe the scheduled visiting hours.

RADIOLOGIC TECHNOLOGISTS WISHING TO COMPLETE THEIR ASSOCIATE
DEGREE OR OBTAIN CONTINUING EDUCATION CREDIT MAY CONTACT THE PROGRAM
CHAIRPERSON

CLINICAL POLICIES AND PROCEDURES

The purpose of clinical education in radiologic technology is to allow the student to apply theoretical principles of radiography, patient care and departmental procedures to practical experience. The student's role in the clinic setting is one of a learner and not a staff radiographer.

Clinical education will be arranged by the college in conjunction with the affiliating clinical facilities. While the student is in the clinical department he/she must observe the regulations imposed by the affiliating clinical facility with regard to patient safety and welfare. Also, the assigned schedule of experience must be followed closely. In case of illness or other emergency, the student must personally notify the department and the Clinical Instructor prior to the scheduled clinical period.

While performing various college and clinical duties the student is directly responsible to the staff member of the affiliating clinical facility in charge of the room to which the student is assigned. If any operational or personal problems arise, the clinical instructor should be contacted. (See policy for clinical absence on page 17).

The student will progress from the role of the observer and assistant to relative independence according to his/her initiative and capabilities.

Students must have their Clinical Competency Exam forms with them at all times. At the start of each new clinical rotation this form should be shown to the clinical instructor(s) for review. The form will indicate what Radiologic exams the student has completed clinical competency clearance on. This information can then be used to determine the level of supervision (Direct or Indirect) the student will need for each Radiologic examination.

Note: In clinical settings, students may be exposed to adverse situations or conditions.

The following categories of learning activities are outlined to correspond approximately to the time distribution of the total program.

FIRST YEAR: FALL SEMESTER

1. Observe the general function of the Radiology Department.
2. Participate in procedures of patient reception and processing.
3. Participate in procedures of radiograph imaging recording.
4. Apply the fundamental principles in digital imaging.
5. Assist and perform EKG and Phlebotomy.
6. Observe, assist and perform routine and simple radiographic and or fluoroscopic/portable examinations of the chest, abdomen, and extremities according to the student's initiative and ability with direct or indirect supervision.

FIRST YEAR: SPRING SEMESTER

1. Assist and perform EKG and Phlebotomy.
2. Assist and perform routine radiographic and or fluoroscopic/portable examinations of the chest, abdomen, extremities, thoracic cage, spine, GI tract, and GU tract according to the student's initiative and ability with direct or indirect supervision.
3. Observe or assist Operating Room procedures under direct.
4. Perform all activities and radiographic examinations listed in the first semester on a under indirect supervision basis after competency has been achieved.

SECOND YEAR: FALL SEMESTER

Assist and perform radiographic and or fluoroscopic/portable examinations of the chest, abdomen, extremities, thoracic cage, spine, GI tract, GU tract, skull and facial bones, and emergency radiographs with under direct or indirect supervision according to the student's imitative and ability. Observe and assist with CT and MRI procedures.

1. Assist and perform difficult examinations, uncommon radiographic procedures and surgical radiographic examinations with minimal assistance, under direct or indirect supervision, according to the discretion of the clinical instructor and supervising staff technologist.
2. Perform all examinations outlined in the first year with indirect supervision after competency has been achieved.

SECOND YEAR: SPRING SEMESTER

1. Continue to observe and assist with CT and MRI procedures. Continue to assist and perform difficult examinations, uncommon radiographic procedures and surgical radiographic examinations direct or indirect supervision according to the discretion of the clinical instructor and supervising staff technologist. *Observe and assist in the optional rotations of Ultrasound, Nuclear Medicine and Radiation Oncology Procedures.
2. Perform all radiographic examinations listed in previous semesters with indirect supervision after competency has been achieved.

*** OPTIONAL ROTATIONS:**

The student will observe and assist with the routine examinations of the specialty areas of Ultrasound, MRI, Nuclear Medicine and Radiation Oncology. The student must request this, in writing, prior to the start of RAD 221 or RAD 232.

NOTE: Students must complete the required number of clinical competency clearances each semester. Students must complete the required total number of Mandatory, Elective and General Patient Care clinical competency clearances in order to complete the program and meet the eligibility requirements of the ARRT. (See ARRT competency requirements)

CLINICAL EDUCATION SCHEDULE

During the first year it is understood that the student shall devote 16 hours per week during the first semester and 17 hours per week during the second semester. The schedule below is a suggested guideline and is designed to benefit the student. Variations from this schedule will not appreciably detract from the total learning objectives. The Clinical Coordinator will compose and distribute individualized clinical rotations to the students and the clinical education centers.

FIRST YEAR

General Radiography	14
Fluoroscopy	10
Portable Radiography	4
EKG and Phlebotomy	2
30 Weeks	

SECOND YEAR

During the second year the students shall devote 24 hours a week for each of the two semesters.

Fluoroscopy	12
General Radiography	13
Special Procedures	1
Interventional	1
*Nuclear Medicine	(1 day)
*Radiation Oncology	(1 day)
*Ultrasound	(1 day)
*MR	(1 day)
CT	1
*30 Weeks	

The clinical education schedule is arranged through the college and the clinical facility. It is understood that this schedule is to be adhered to closely. Only scheduled clinical education in accredited affiliating clinical facilities shall be recognized by the college as meeting the required hours of clinical experience.

* OPTIONAL, when choosing optional rotations, faculty will assign other clinical hours based on choice(s) and any remaining hours to complete 30 weeks.

RELATIONSHIPS WITHIN THE CLINICAL FACILITIES

Students are expected to cooperate with clinical facility personnel. While there, you must observe regulations imposed by the facility regarding patient safety, welfare, personal cleanliness and hygiene. Failure to observe the same will be evidence of inappropriate behaviors.

As a student learner, you are expected to cooperate with the personnel at all times. If any problems arise about the performance of a task that seems unreasonable, you are to report the incident to the clinical instructor. The clinical instructor will be responsible for handling the matter. Please review the radiology program policy and procedures document.

CLINICAL ATTENDANCE POLICY

Refer to the Clinical Absence Policy on page 7 of the Handbook. In addition, the following should be adhered to:

Tardiness is defined as more than 7 minutes late in arriving at your clinical assignment or in returning from mealtime or breaks. Radiography, as in every other health profession, is characterized by promptness and dedication to the care of your patients, please bear this in mind and arrange your day so to arrive in clinic early enough to prepare for your patients.

After 3 times tardy (7 minutes late), the student will receive a written warning and may not meet the outcome for accountability and responsibility on the summative clinical evaluation, which would result in failure of the Radiography course.

SUPERVISION/REPEAT POLICY

Until students achieve the programs required competency in a given procedure (via competency clearance), all clinical assignments must be carried out under the direct supervision of a qualified radiographer. The following are the parameters of direct supervision:

1. Qualified radiographer reviews the request in relation to the student's achievement.
2. Qualified radiographer evaluates the condition of the patient in relation to the student's achievement; and
3. Qualified radiographer must be in the radiographic room while procedure is being performed and reviews and approves the radiographs upon completion of exam.

Indirect supervision is defined as the supervision provided by a qualified radiographer immediately available to assist students regardless of the level of student achievement.

"Immediately available" is interpreted as the presence of a radiographer in or adjacent to the room or location where the procedure is being performed. The radiographer should not be involved in an additional radiographic procedure, as this could render the radiographer not immediately available under some circumstances.

Students will not perform any portable examinations in the critical care areas without direct

supervision.

After students have passed the required competency procedure, they may then perform that procedure with indirect supervision, however, if an image or images must be repeated, it must be done with direct supervision.

OPTIONAL STUDENT OBSERVATION DURING MAMMOGRAPHY EXAMINATIONS

To assure that the program provides equitable educational opportunities to all students who are requesting an observational clinical experience in mammography, the following policy will be adhered to:

All radiography program students (both male and female) will be permitted (at student's request) an observational clinical experience in mammography at each clinical education setting. Patient consent for observation by a student will be obtained by a staff radiographer prior to the start of the exam.

Theory and lab in mammography will be presented to all students as part of the regular curriculum in the second year (RAD 232).

RADIATION MONITORING POLICY

Policy:

St. Vincent's College will maintain records of the cumulative dose of radiation by occupationally exposed students.

Purpose:

To provide a method of keeping records on the cumulative dose of radiation received by students during clinical rotations. Students exposed to radiation and radioactive materials licensed by the NRC are subject to the rules and regulations, Title 10, CFR.

Procedure:

- A. The College has a contractual arrangement with the Landauer Dosimetry Service for radiation badge monthly monitoring services.
- B. The Clinical Coordinator coordinates and distributes all radiation monitoring badges for exchange and return.
- C. Badges must be exchanged by the 10th of each month and returned to the Program Chair/Director designee within one week for mailing to Landauer.
- D. Badges are to be worn by all students on the trunk of the body at sternum or hip level.
- E. During fluoroscopy, the badge should remain at sternum or hip level and always behind the protective lead apron so as to record whole body and gonadal exposure.
- F. Badges are to be worn by all students when assigned to rotations at Clinical Education Settings and during Lab Classes.
- G. The badge must be worn with the front or label side facing away from the body with nothing obstructing the front of the badge.
- H. The badge should be protected from heat and wetness and should be handled carefully. Also, the badge is not to be worn when having medical or dental X-rays.
- I. A Radiation Dosimetry report is received at the end of each month. After review by the Program Chair/Director, a copy is made which is then reviewed and signed by each student. The original is maintained in the Dean of Academic Services office and the copy is filed in the Program Chair/Directors office, available to the students throughout their program.
- J. Female students are encouraged to report pregnancies early on. The declared pregnant female will be provided with two badges, one whole body and one fetus. One badge is to be worn at the collar; the second is to be worn at the waist. A consulting physicist will review their radiation exposure readings with them.
- K. It is the student's responsibility to secure the radiation-monitoring badge in a safe place so it will not be misappropriated or accidentally exposed to radiation.
- L. As outlined in our ALARA program, there are investigational levels calculated in MREMS/Quarter and certain responsibilities with each level. They are outlined as below:

Whole Body	ALARA level 1	ALARA Level 2
Head, trunk, active blood forming organs, lens of eye or gonads	125 mRem	375 mRem

The following actions will be taken at the ALARA levels as follows:

- Personnel doses – Less than Level 1 – no action is taken, except when deemed appropriate by the RSO.

- Personnel doses – Equal to or greater than Level 1 but less than Level 2 – The RSO reviews the dose and reports the results at the next RSC meeting.
- Personnel doses equal to or greater than Level 2 – The RSO will investigate in a timely manner the cause and, if warranted, take action. A report of the investigation and any action taken, and a copy of the individuals NRS-5 or its equivalent will be presented to the RSC at its first meeting following the completion of the investigation. The details of these reports will be included in the RSC minutes.

Any badge reported over ALARA 1 will be reported immediately to the Radiation Safety Officer for the appropriate action as outlined above.

Revised 8/09 Th, Reviewed 9/10Th

Reviewed 8/11 Th

Reviewed 8/12 Th

Revised 8/13 Th

Reviewed 1/16Th



Pregnancy Policy

To minimize radiation exposure of the woman and fetus, Radiography students are encouraged to inform their Program Chairperson when she is or may be pregnant. A declared pregnant worker means a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception (10CFR 20.1003, Definitions). A signed form containing information required by the NRC will be obtained and kept in the student's record.

The radiation dose history of the radiation worker will be reviewed and she will be interviewed and provided with appropriate information by the program chairperson and if indicated by radiation history or if requested by the student, the Radiation Safety Officer. He/she will answer any question regarding the effects of radiation on the fetus and provide her with the NRC guide. The radiation dose received by the worker will be continuously monitored to insure recommended dose limits are not exceeded.

(Abstracted from: R.C. Lange, Ph.D., Radiation Health Physicist, Yale University, School of Medicine, December 10, 1985 and NRC Rules and Regulations, parts indicated above.)

Note: If the student chooses to disclose her pregnancy, **she must have the option of continuing the educational program without modification or interruption.** Other options can include modification in clinical assignments, leave of absence from clinical assignments, and/or leave of absence from the program. The basic premise is that the pregnant student be allowed to make an informed decision based on her individual needs and preferences. Students may also choose to withdraw the declaration at any time and for any reason by submitting the request to withdraw in writing to the Program Chairperson.

Revised 8/08 Th
Reviewed 8/09 Th
Reviewed 9/10 Th
Reviewed 8/11 Th
Reviewed 8/12 Th
Revised 8/13 Th
Reviewed 1/16



DECLARATION OF PREGNANCY BY STUDENT

STUDENT NAME: _____ SOC. SEC. NO: ____-____-_____

DATE OF DECLARATION: _____ DATE OF BIRTH: _____

I, hereby declare to St. Vincent's College, Bridgeport, Connecticut, that I am pregnant. The approximate date of conception was _____ with an approximate due date of _____.

I understand that the U.S. Nuclear Regulatory Commission (NRC) limit for radiation dose to the embryo/fetus during the whole term of pregnancy is: 0.5 rem (5 mSv), and that the limit for any month during pregnancy is 0.05 rem (0.5 mSv). I understand that St. Vincent's College clinical affiliates will endeavor to maintain the radiation dose to the embryo/fetus during the whole term of pregnancy below the NRC limit of 0.5 rem (5mSv), and further, that the clinical affiliates will endeavor to avoid substantial variation above a uniform monthly exposure rate of 0.05 rem/month (0.5 mSv/month). I **(elect)** or **(do not elect)** (circle one) to continue the educational program without modification or interruption.

Other options include modification in clinical assignments, and/or leave of absence from the program. I understand that if I do not elect to follow my Clinical Schedule, program completion may be delayed. I also understand that I may withdraw this declaration at any time and for any reason, by submitting the request to withdraw in writing to the Program Chairperson.

Student Signature

Print Student Name

Date

Program Chairperson

RSO (Optional)

Revised 8/09 Th, Reviewed 9/10Th, Reviewed 8/11 Th/Reviewed 8/12 Th, Revised 8/13 Th, Revised 1/16Th

Physical and Mental Performance Requirements

According to the nature of the duties required in the St. Vincent's College Radiography Program the applicants/students must be:

1. Able to reach, manipulate and operate equipment necessary for the radiography profession.
2. Able to move, manipulate and observe a patient or client as necessary for the radiography profession.

The above refers to:

Strength

- Able to push/pull objects more than 50 pounds
- Able to lift objects more than 100 pounds with assistance

Manual Dexterity

- Able to perform simple motor skills such as standing, walking, etc.
- Able to perform moderately difficult skills such as positioning patient, formulating techniques

Coordination

- Able to perform gross body coordination such as walking, stooping, etc.
- Able to perform tasks which require hand-eye coordination such as positioning patient, formulating techniques
- Able to perform tasks which require arm-hand steadiness
- Able to walk and stand

Mobility

- Able to stand for prolonged periods
- Able to remain in an uncomfortable position for prolonged periods (such as the wearing of a lead apron)

3. Able to visually assess patients, medical tests results, and the working environment to correctly decide the appropriate action to take for the benefit of the patient:

The above refers to:

Visual Discrimination

- Able to see objects as in patient assessment
- Able to discriminate colors

4. Able to clearly communicate, both verbally and in writing, with the patient, family, personnel and others to disseminate information relevant to patient care and student duties, and to be able to hear to accurately gather information relevant to patient and student duties.

The above refers to:

Communication and Hearing

- Able to communicate verbally and in writing
- Able to hear normal sounds within normal background of noise

5. Able to demonstrate emotional stability and psychological health in day-to-day interaction with patients, families of patient's, peers, staff, and others, in routine and non-routine decision making processes, and on the daily execution of didactic and clinical assignments.
6. Able to make appropriate judgment decisions in an emergency or where a situation is not clearly governed by specific guidelines

The following are environmental conditions that a student in the Radiology program may come in contact with:

- Exposure to blood, body tissues, or fluids
- Exposure to radiation
- Exposure to chemicals
- Exposure to bodily injuries
- Exposure to electrical hazards
- Exposure to electro-magnetic radiation

RESPONSIBILITIES OF THE STUDENT

1. The importance of a good appearance cannot be overestimated. Students are expected to comply with the policies of the College in regard to dress and grooming.
2. Establish good working relationships with all personnel with whom you have contact.
3. Be responsible for all equipment and materials used during clinical assigned hours.
4. Gain respect of your colleagues by being professional and dignified.
5. Attend and participate in all scheduled clinical activities.
6. Consult with your staff technologists, floor supervisors, and/or the college faculty for help on problems.
7. Participate in the evaluation of your clinical progress in conjunction with the clinical staff at the clinical education centers.
8. Observe the staff on the radiologic department. This is a learning situation and many ideas and suggestions can be gained from watching the clinical staff.
9. Strive to broaden your own knowledge and background on clinical subject matters by reading the professional literature available.

CRITERIA USED IN CLINICAL EVALUATION

The following objectives have been developed for several specific areas so that the student and evaluator can use the following objectives to provide guidance and assistance in evaluation. In any educational endeavor, skills must be learned and mastered. In using the following performance objectives, the evaluator must be aware of the level of competency which the student should be at for the amount of time in the program. If the evaluator has any questions concerning this level, please refer to the rationale and general objectives section.

I. GENERAL RADIOGRAPHY

Upon completion of his/her clinical experiences, the student will be able to demonstrate knowledge, understanding, and dexterity of four areas of general radiography. These areas include: (A) equipment and accessories, (B) radiographic procedures, (C) radiographic technique, and (D) radiation protection and other safety practices. An acceptable level of competence has been attained when

A. Equipment and Accessories

1. Describe the type of X-ray tube used in the general radiography room. The description of the tube will include:
 - a. Focal spot size(s)
 - b. Diameter and RPM of anode
 - c. Heating capacity or tube rating
2. Describe the general construction and type of X-ray machine used in the general radiography room. The description will include:
 - a. Generator size
 - b. Current phase, i.e., single or multi
 - c. Type of rectification
 - d. Type of timer
 - e. Special features, i.e., fluoroscopic devices
3. Select and use accessory items appropriately to include:
 - a. Restraining and supporting devices
 - b. Cones, collimators, grids, and filters

B. Radiographic Procedures

Perform general radiographic studies and evaluate from the standpoint of:

- a. Radiographic and diagnostic quality
- b. Accuracy of interpretation of the request
- c. Positioning of the anatomic part
- d. Appropriate CR size
- e. Adequate X-ray beam limitations
- f. Correct markers or identifying information

C. Radiographic Technique

1. Select the proper technical factors for routine situations and make appropriate adjustments for the unusual case by manipulating the imaging arrangement. The factors to be altered or arranged in varying patterns of use include:
 - a. Kilovolts, milliamperes, distance and time
 - b. Grids and filters,
 - c. Adjusting digital factors for CR and DR

2. Describe specific tasks related to general radiography to include:

- a. Testing X-ray beam alignment
- b. Testing image receptor artifacts (computed radiography)
- c. Testing the X-ray timer using the spinning top test
- d. Testing milliamperage stations using the step wedge
- e. Examining image receptors for defects (computed radiography)

D. Radiation protection and safety practices. Perform patient handling tasks safely to include:

- a. Transporting and transferring patients
- b. Checking for patient identification
- c. Handling patients with infectious diseases
- d. Providing radiation protection for patients, personnel and guests by utilizing shields, screens, collimators, filters, patient restrainers, and by employing correct technical factors to obviate the necessity for retakes, ascertain pregnancy status of female patients
- e. Providing safety from electrical hazards by routinely inspecting equipment wiring
- f. Insure safety in dimly lighted areas by keeping room furnishings and accessories properly placed and safely positioned
- g. Providing safe storage for patient's belongings, e.g., eyeglasses, dentures, jewelry, etc. which may be temporarily removed during the procedure

II. FLUOROSCOPY

Upon completion of the student's experience in fluoroscopy, he/she will be able to demonstrate knowledge, understanding and skills in five broad areas: (A) equipment and accessories, (B) radiographic and fluoroscopic procedures (C) contrast media (D) radiographic and fluoroscopic and digital technique, and (E) radiation protection and other safety practices. An acceptable level of competence has been achieved when the student is able to:

A. Equipment and Accessories

1. Describe the type of radiographic tube used including:
 - a. Focal spot size
 - b. Diameter and RPM of anode
 - c. Heating capacity or tube rating
2. Describe the type of fluoroscopic tube used including:
 - a. Focal spot size
 - b. Diameter of anode and RPM if rotating anode
 - c. Safe operating conditions for fluoroscopic and for radiographic exposures
 - d. Distance of tube from patient, from IR and for radiographic exposure
3. Describe the general construction and type of X-ray machine in terms of:
 - a. Generator size
 - b. Current phase, i.e., single or multi-phase
 - c. Type of rectification
 - d. Type of timers
 - e. Special equipment specific to fluoroscopy
 - 1) image intensification
 - 2) Monitor system
 - 3) image recording unit
 - 4) digital imaging
4. Select and use accessory items appropriately to include:
 - a. Restraining and supporting devices

- b. Cones, grids, and filters
- c. Examination trays and supplies

B. Radiographic and fluoroscopic procedures

1. Perform tasks specific to fluoroscopy to include:
 - a. Assist in the operation and adjustment of
 - 1) Monitor system
 - 2) spot imaging
 - 3) digital imaging
 - 4) image intensifier
 - b. Assist the physician with the non-exposure aspects of fluoroscopic procedures, e.g.
 - 1) upper and lower gastrointestinal studies
 - 2) spine and spinal cord studies
 - 3) gynecological/urological, pain management, and other studies requiring fluoroscopy
2. Perform, with indirect supervision, technical tasks requiring radiography in combination with fluoroscopy

C. Contrast Media

1. Prepare barium mixtures using formulas appropriate to the examination
2. Select the contrast dispenser appropriate for the specific media and/or examination
3. Use sanitation techniques to prepare contrast media dispensers and other contrast utensils and containers

D. Technique

1. Select the proper technical factors for routine fluoroscopic studies and make appropriate adjustments for the unusual patient by manipulating the radiographic image arrangements of factors:
 - a. Kilovolts, milliamperes, distance, and time
 - b. Screens, grids, filters.

E. Radiation Protection and Safety Practices

1. Perform patient handling tasks safely to include:
 - a. Transporting and transferring patients
 - b. Checking for patient identification
 - c. Handling patients with infectious diseases
 - d. Providing radiation protection for patients, personnel and guests by utilizing shields, screens, collimators, filters, patient restrainers, and by employing correct technical factors to obviate the necessity for retakes, ascertain pregnancy status of female patients
 - e. Providing safety from electrical hazards by routinely inspecting equipment wiring
 - f. Insuring safety in dimly lighted areas by keeping room furnishings and accessories properly placed and safely positioned
 - g. Providing safe storage for patient's belongings, e.g., eyeglasses, dentures, jewelry, etc., which may be temporarily removed during the fluoroscopic procedure

III. MOBILE AND SURGICAL RADIOGRAPHY

Upon completion of the student's rotation in mobile and surgical radiography, the student will be able to demonstrate knowledge and understanding as well as dexterity in the examination and care of the confined patient and patients undergoing surgical procedures. An acceptable level of competence has been attained when the student is able to:

- a. Utilize rules of body mechanics for the safety of both patient and technologist
- b. Provide the necessary radiation protection while performing bedside or surgical radiographic examinations
- c. Make adjustments in exposure factors specific to mobile and surgical procedures
- d. Make the necessary positioning changes and make compensations for these changes
- e. Utilize proper safety techniques and take proper precautions against electrical hazards
- f. Prevent spread of infection and disease by practicing medical asepsis in patient's room by following the established infection control guidelines/protocols.
- g. Perform all routine bedside and surgical radiographic procedures

IV. ORTHOPEDIC RADIOGRAPHY

Throughout rotations that include orthopedic radiographic exams, the student will be able to demonstrate knowledge, understanding, and skills in four broad areas: (A) equipment and accessories, (B) radiographic procedures, (C) radiographic technique, and (D) radiation protection and other safety practices. An acceptable level of competence has been attained when the student is able to:

- A. Equipment and Accessories
 1. Describe the type of X-ray tube used to include:
 - a. Focal spot size
 - b. Diameter and RPM of anode
 - c. Heating capacity or tube rating
 2. Describe the general construction and type of X-ray machine used with specific reference to:
 - a. Generator size
 - b. Type of rectification
 - c. Current phase, i.e., single or multi-phase
 - d. Type of timers
 3. Select and utilize accessory items appropriately to include:
 - a. Restraining and supporting devices
 - b. Cones, grids, and filters

B. Radiographic Procedures

Perform general orthopedic examinations to include:

- a. All routine radiographic bone studies
- b. Routine joint examinations
- c. Techniques appropriate for the various supports, braces, casts, and fixation and prosthesis devices

C. Radiographic Technique

Select the proper technical factors for routine examinations and make appropriate adjustments

for the unusual patients by manipulating the imaging arrangement for varying factors to include:

- a. Kilovolts, milliamperes, distance, and time
- b. Screens, grids, filters, IR
- c. Developing and processing procedures
- d. Digital techniques for CR and DR

D. Radiation Protection and Safety Practices

Perform patient handling tasks safely to include:

- a. Transporting patients from one area to another and transferring patients from one position to another, e.g., stretchers and chairs to bed or table
- b. Checking for patient identification
- c. Handling patients with suspected spinal fracture or cord injuries, or other fracture/dislocation injuries.
- d. Handling patients with infectious diseases
- e. Insure radiation protection for patients, personnel, and guests by utilizing radiation protection shields, screens, collimators, filters, patient restrainers, and by avoiding the necessity for retakes because of technical errors, ascertain pregnancy status of female patients
- f. Insure safety from electrical hazards by routinely inspecting equipment wiring, etc.
- g. Provide security for patient's belongings, e.g., eyeglasses, false teeth, jewelry, etc., which may be removed during the radiographic procedure

V. SPECIAL PROCEDURES/CARDIAC LAB

Upon completion of the special procedures assignments, the student will be able to demonstrate knowledge and understanding of angiographic/cardiographic studies utilizing special equipment and techniques that dynamically demonstrate functioning organs or systems. The student will be able to assist in special procedures examinations. An acceptable level of competence has been attained when the student is able to:

- a. Set the X-ray machine controls and position the tubes for angiographic/cardiac studies
- b. Assist in the preparation of contrast media for pressure injection
- c. Assist in setting up trays for special procedures/cardiac studies
- d. Select appropriate catheters, guide wires, syringes and needles for angiographic/cardiac studies
- e. Position the patient for radiographs
- f. Perform patient handling tasks specific to special procedures/cardiac studies
- g. Practice radiation safety
- h. Practice aseptic techniques in handling materials and supplies necessary to the procedure
- i. Prepare used trays for return to appropriate station
- j. Label specimens for laboratory analysis or tests and forward to the appropriate laboratory
- k. Calculate heat units for multiple exposures
- l. Sort and package radiographs for interpretations
- m. Set up and assist in fluoroscopy
- n. Manipulate table during cardiac procedures
- o. List accessory equipment and state the rationale for the use in special angiographic examinations and cardiac procedures

VI. MAMMOGRAPHY IMAGING

Upon completion of mammography imaging theory and lab, the student will demonstrate an understanding of basic mammography imaging. An acceptable level of competence has been obtained when the student is able to:

- a. Describe the type of X-ray equipment used in mammography
- b. Describe the imaging arrangements and techniques used in digital mammography.
- c. Simulate mammography studies utilizing dedicated equipment
- d. Identify artifacts and other technical flaws if present of the image
- e. Critique the radiograph in terms of diagnostic quality
- f. Describe patient handling tasks specific to mammography studies
- g. Describe radiation protection for patient and personnel

VII. CT

Upon completion of CT, the student will be able to demonstrate knowledge and understanding of CT scanning. An acceptable level of competence has been attained when the student is able to:

- a. Describe the machine that is operated at clinical site, age, type, generation,
- b. etc.
- c. Describe the warm ups made prior to the first exam of the day
- d. Enter patient data into log book and computer
- e. Assist in positioning the patient for their exam
- f. Define dynamic scanning and the purpose of using it
- g. Describe the preparation of the patient for having a chest, abdominal, or brain scan
- h. Define the Hounsfield number, and give some examples
- i. Identify and anatomy on a chest, abdominal scan, or brain scan

VIII. MRI

Upon completion of MRI, the student will be able to demonstrate knowledge and understanding. An acceptable level of competence has been attained when the student is able to:

- a. Describe the machine located at the clinical site, age, type, magnet, etc.
- b. Interview patients to assure magnetic safety.
- c. Wear appropriate garments to ensure magnet safety.
- d. Adhere to safety procedures relative to magnet safety.
- e. Enter patient data into log book and computer.
- f. Assist in positioning patient for their exam.
- g. Explain the basic principles of MRI imaging.
- h. Critique and identify anatomy on MRI exams of:
 - 1) Head scan
 - 2) Spine scan
 - 3) Orthopedic

IX. RADIOGRAPHIC RECORDS AND FILES

Upon completion of learning experiences during Patient Care, the student will be able to demonstrate knowledge and understanding in basic PACS systems, (B) schedules and traffic flow patterns. An acceptable level of competence has been attained when the student is able to:

X. QUALITY CONTROL

Throughout all segments of clinical practice the student will be able to demonstrate knowledge and understanding and thus, his/her ability to make judgments on matters related to the diagnostic quality of radiography. An acceptable level of competence has been attained when the student is able to:

- a. Sort and match radiographs and merge in the proper sequence with radiographic file, including the protocol for digital stacking
- b. Critique images to determine adequate visibility of the structures of interest
- c. Identify the photographic and geometric deficiencies in radiographs and recommend the necessary corrections
- d. Recognize and identify artifacts if present on the image

XI. PATIENT HANDLING TASKS

Throughout all segments of clinical practice the student will develop the necessary skills in patient care and will have an understanding of radiologic patient services as provided in the clinical setting which will enable them to perform in an efficient and courteous manner. An acceptable level of competence has been attained when the student is able to perform patient handling tasks to include the following:

- a. Drape or gown patient for examination
- b. Transfer patients safely to and from stretchers and chairs
- c. Check patient's chart for contraindications in reference to procedure, e.g., pregnancy, obtains and record on exam request LMP.
- d. Ascertain if the patient is prepared for the procedure
- e. Use immobilizing devices during exposure when indicated
- f. Explain or answer questions about doctor's instructions
- g. Explain the X-ray procedure to the patient
- h. Reassure apprehensive parents of pediatric patients
- i. Reassure and calm children
- j. Review printed instructions on procedures with patient or patients' family
- k. Review patients clinical history
- l. Check for clarification of conflicting doctor's orders
- m. Receive patients on arrival, i.e., introduce self, obtain patients name, and record in daily logbook
- n. Give precise and adequate direction to patient concerning procedure
- o. Use proper procedure for identifying patients
- p. Observe care to maintain the I.V. flow and integrity of the unit
- q. Make notations of significant patient physical or emotional response to procedures
- r. Label specimens
- s. Provide radiation protection for personnel and patient
- t. Inspect for electrical and mechanical hazards and observe rules of safety
- u. Respect rights and expectations of the patients
- v. Comply with legal requirements pertaining to safe handling of patients.

XII. ULTRASOUND (Optional)

Upon completion of optional ultrasound rotations, the student will be able to demonstrate knowledge and understanding of ultrasound procedures. An acceptable level of competence has been attained when the student is able to:

- a. List exams possible with ultrasound
- b. List prep for each exam
- c. Describe the applications of different size transducers
- d. Describe the purpose of full bladder in exams
- e. Describe the basics of ultrasound technology
- f. Describe positions used for abdominal exam
- g. Know how to input patient data
- h. Describe and assist with an abdominal scan

XIII. NUCLEAR MEDICINE (Optional)

Upon completion of the optional nuclear medicine assignment, the student will be able to demonstrate knowledge and understanding of the rationale for using radionuclides in diagnosis and therapy. An acceptable level of competence has been attained when the student is able to:

- a. Describe and assist with a bone scan
- b. Describe and assist with a cardiac scan
- c. Describe and assist with a lung scan
- d. Describe and assist calculation of a patient dose for nuclear medicine tests
- e. List contrast media, other pharmaceuticals or foods which affect nuclear medicine
- f. Describe procedure for disposing of radioactive waste, storing radioactive materials and decontamination
- g. Aid the technologist in obtaining patient data unique to nuclear medicine

XIV. RADIATION ONCOLOGY (Optional)

Upon completion of the optional radiation oncology assignment, the student will be able to demonstrate knowledge and understanding of the rationale for using radiation in the treatment of malignant and selected benign pathology. An acceptable level of competence has been attained when the student has observed/assisted with:

- a. Operation of the therapeutic units
- b. Describing the process of radiation production for each unit
- c. Positioning patients, for treatment purposes
- d. Attaching cones and filters as prescribed
- e. Instructing to patient prior to treatment
- f. Monitoring the machine during treatments
- g. Storage, filing and retrieving patient data
- h. Draping and positioning patients for physical examination
- i. Describing the entire process of block "cutting" and masking
- j. Interpreting treatment charts on patients in therapy. Explain what records are kept and why
- k. List some of the common side effects resulting from radiation therapy. List some of the rare side effects

XV. EKG AND PHLEBOTOMY (Criteria are outlined on sheets to be given as assigned)

RATIONALE FOR CLINICAL PERFORMANCE EVALUATIONS

PURPOSE: To effectively measure the performance of a student radiologic technologist at the completion of a clinical rotation. (85% minimum standard)

Objectives of a performance evaluation:

1. To provide feedback for the student radiographer on his/her clinical performance for each rotation including praise for noteworthy performance and analysis of deficient performance.
2. To provide individual clinical performance and satisfaction by providing communication between the radiology staff and the student regarding the student's performance.
3. To assist the student in understanding his/her part in the achievement of clinical educational objectives and career goals.
4. To provide information for use in educational decisions, terminations, revision of curriculum or class content and student remediation.

PROCEDURE FOR CLINICAL EVALUATION

The radiology staff member to whom the student is assigned will complete the Clinical Evaluation form at the end of each clinical rotation. Each form will be returned to the clinical instructor. The student will review and sign these evaluations each semester.

RATIONALE FOR IMAGE CRITIQUE SESSIONS

PURPOSE: The image critique sessions are to provide the opportunity for continual review and reinforcement of theoretical concepts with an evaluation of the same. (85% minimum)

OBJECTIVES OF THE IMAGE CRITIQUE

1. To provide the opportunity for the student/instructor to correlate didactic and clinical education.
2. To review radiographic procedures with specific emphasis on:
 - a. Principles of radiographic exposure
 - b. Radiographic procedures/routines at each clinical education setting
 - c. Radiographic image evaluation
 - d. Methods of patient care in the respective rotation
 - e. Equipment manipulation in the respective rotation
 - f. Human structure and function
 - g. Pathology
3. To provide information for use in educational decisions, revision of curriculum or class content and student remediation.

PROCEDURE:

1. The scheduling of the image critiques will be handled individually to minimize the loss of clinical experience.
2. The image critique evaluation sheet will be completed when clearance for exam is completed.
3. The following image critique procedure sheet will be closely followed.

IMAGE CRITIQUE EVALUATOR/STUDENT NOTES

Please react to the following comments for the items listed. The points you record will be based on how well the student has responded to the item.

A. RADIOGRAPHIC QUALITY OBJECTIVES

1. Brightness - does the student describe the image brightness, can the student describe how to modify image brightness.
2. Contrast - has the student stated the correct contrast of the image, has the student sited the correct criteria for the determination of short scale vs. Long scale contrast, effects of the latitude.
3. Definition - has the student described the overall detail correctly, has the student sited the effects of the geometric and photographic factors on the recorded image.
4. Distortions - has the student correctly described the distortions identified or can the student correctly theorize the effects of any change in the patient, IR or tube as you have described.

B. POSITIONING OBJECTIVES

1. Position correctness - are the positions presented in compliance with the department's routines.
2. Centering central ray and patient - is the central ray to the center of the IR; is the central portion of the part to be demonstrated in the middle of the IR; is the patient rotated correctly, is unnecessary anatomy removed from area.
3. Collimation/Gonadal shielding - is collimation evident on the images - (if applicable), was strict collimation demonstrated on pediatric examinations, was gonadal shielding utilized (if appropriate).
4. Image receptor size - was the correct receptor size utilized with respect to the department's routine and site of the patient, was the IR correctly placed in the holder/under the patient.
5. Marker placement - was "R" or "L" in the correct place, minute or hour markers visible, name, hospital number and date on the image without the superimposition of essential anatomy in this area. If the student's marker is not visible on the radiograph then those images are not acceptable for a clearance or an image critique grade.

C. ATTITUDE VALUE OBJECTIVES

1. Presentation of examination - did the student follow the image critique presentation steps, where the images presented in an orderly fashion, was the presentation done promptly.
2. Recognition of quality of images - does the student recognize the quality of the image presented, can the student theorize what effects proposed changes in technique, patient rotation and equipment manipulation will have on image quality.
3. Team participation - has the student participated in other presentations by asking questions and offering information, does the student interact well with the other students, radiology staff.
4. Punctuality - did the students arrive on time and prepared for the image critique session, has the student demonstrated punctuality in the clinical setting as you have observed since the last evaluation.

D. TECHNICAL KNOWLEDGE OBJECTIVES

1. Anatomy - did the student correctly identify the anatomy present.
2. Pathology - did the student correctly identify the pathology which is described in the radiologist's report
3. Technique changes - did the student correctly solve technique change problems.
4. Equipment - did the student correctly describe the equipment used in performing the exam

E. PATIENT CARE/ARTIFACTS/ANATOMY/PATHOLOGY/MISC

The evaluator at his/her discretion can ask the question of the individual or the group. Please make reference to the clinical rotation schedules, the student's relative length of time in the program, course content presented thus far and respective departments routine procedures manual before determining the questions. Please encourage students to take notes from all the presentations. Please encourage unusual or interesting cases to be presented -- just for informational purposes.

PROCEDURAL STEPS FOR IMAGE CRITIQUES

1. Exam presented for critique
2. Room or method utilized to produce radiographs
3. Patient's history - reason for exam, injuries to area being examined - both acute and chronic, previous surgery, preexisting conditions that would affect final image.
 - a. Example: Emphysema for chest exam
4. Routine views - the number and name of projections, the rotation of the part, the angulation of the x-ray tube.
5. Anatomy - bony structures, landmarks articulations, normal variances, physiologic functions of part examined.
6. Technical factors - KVP, MAS, Distance
7. Brightness/Density
8. Contrast
9. Definition (Visibility of detail)

NOTE: It is recommended that the above information be prepared before the critique sessions and may be used during the evaluation process.

RADIOGRAPHIC POSITIONING LAB

FINAL EXAMINATION EVALUATOR

STUDENT NOTES

To comply with recommendations for competency based clinical education this evaluation has been constructed. The student will be evaluated at the end of the semester on an examination listed in the appropriate semester on the competency clearance record. To assure that the student is competent to perform the examinations previously cleared on, the clinical instruction staff will select appropriate examinations for the student's performance to be evaluated. This evaluator will note the following items as he/she records the score for each line: (total score \geq 85% minimum)

PREPARATION

Evaluation of requisition - did the student correctly identify the procedure and routine views to be done with 100% accuracy.

Room readiness - did the student ensure the table was clean, appropriate IRs available, tube and table in position for start of examination, ancillary supplies adequate for examination with 100% accuracy.

PROCEDURES

1. Approach and assistance to patient - did the student assist the patient to the radiographic room, talk with the patient in a gentle manner, give proper instructions for moving and breathing, have the patient gowned properly and following the proper procedure for isolation of the patient.
2. Correct positioning - are the positions the student is attempting exactly what is required - 85% or greater accuracy.
3. Centering patient and central ray - is the central ray directed to the center portion of the part to be demonstrated in the middle of the image, is the patient rotated correctly, is the unnecessary anatomy removed from the image area - 85% or greater accuracy.
4. Image receptor size and placement - the correct IR utilized for the examination with respect to the department's routing and the patient's size, the IRs long axis correctly aligned with the part's long axis - 85% or greater accuracy.
5. Marker placement was the "R" or "L" in the correct place, minute or hour markers visible, name, hospital number and date on the image without the superimposition of essential anatomy in the marker area - 100% accuracy.
6. Collimation/gonadal shielding - is collimation attempted (automatic collimation override on pediatric examinations) was gonadal shielding used and not interfering with the structures demonstrated on the radiographs - all with 100% accuracy.
7. Equipment manipulation - does the student know how to operate the various locks on the tube head, turn the tube from horizontal to vertical and (vice versa), insert and remove IRs from the appropriate holders, cycle the different units in preparation for the imaging sequences, measure the patient, use the technique chart, select factor at

control panel, position the tube/portable machine correctly and adapt for technique changes in SID, grid ratio, and collimation with 85% or greater accuracy.

8. Time for each position - from the time the student starts to position the patient for a view until the exposure is made - satisfactory (1 point) if cycle is completed 2 1/2 minutes; unsatisfactory (0 points) if over 2 1/2 minutes.

NOTE: The evaluator reserves the right to terminate any attempt on a specific position if in this/her opinion the radiograph would need to be repeated due to a technical error by the student.

CLINICAL EVALUATION PROCESS

At the end of this section you will find the clinical evaluation tools to be used to determine your clinical grade. Please refer to the rationale and objectives and the evaluator notes for the forms included.

OBJECTIVES

Evaluation is an ongoing process, the purpose of which is to:

1. Identify the strengths and weaknesses of the student and the clinical program.
2. Increase the competency of the student by providing feedback that may lead to self-improvement.
3. Provide a vehicle for focusing on important qualities of clinical skills in order to assess competencies achieved.
4. Provide information that will be helpful in recommending the student for a specific position.

CLINICAL GRADE DETERMINATION (See course syllabus)

Note: Competency clearances - the number of clearances required for each semester is listed on the competency requirement record sheet. If the student does not meet the specified number of clearances for a semester then an incomplete grade will be given for clinical. The student is given the standard (see college catalog) length of time to clear the incomplete.

RADIOGRAPHIC POSITIONING LABORATORY

RATIONALE

PURPOSE: To provide for the opportunity of student demonstration to the clinical laboratory supervisor of the mastery of the theory and practice of essential clinical skills under simulated conditions prior to assuming actual clinical responsibilities.

PROCEDURE: Laboratory exercises in radiographic positioning skills augment the lecture portion of the following courses: RAD 101, 112, 221 and 232. The examinations presented in lecture for each semester/course is as follows:

SEMESTER I - RAD 101

Chest, abdomen, finger, hand, forearm, wrist, elbow, shoulder, scapula, humerus, clavicle, foot, ankle, lower leg, knee, patella, femur, hip, pelvis, os calcis and AC joints

SEMESTER II - RAD 112

Sternum ribs, cervical, thoracic, lumbar, sacrum, coccyx, GI system, GU system, introduction to Digital radiography.

SEMESTER III - RAD 221

Skull, facial bones, sinuses, mandible, mastoids, zygomatic arches, T.M.J.'s, orbits and optic foramen, digital radiography, CR & PACS, bone densitometry, arthrograms, special procedures, pediatrics, sialograms, and pathology of selected systems

SEMESTER IV RAD 232

Myelograms, CT, MRI and other specialized procedures, as well as quality control testing procedures

COMPETENCY: The student will have received lecture and demonstration in each radiographic procedure prior to attempting the examination in the laboratory setting. Where applicable the student will take radiographs of "PIXEY" or other phantoms. The student will observe and assist in radiographic procedures until those examinations have been mastered. At this time the student will attempt to gain a competency clearance for that examination in the clinical education center.

RADIOGRAPHIC POSITIONING LABORATORY OBJECTIVES

GENERAL COMPETENCY: The student will be able to demonstrate knowledge of the anatomy of the part and competently perform diagnostic radiographic positioning of the part.

COMPETENCY-BASED OBJECTIVES

Upon completion of the laboratory exercises the student will be able to:

1. Display knowledge and recognition of the anatomy, location, number and functions of the bones involved inclusive of its articulation as indicated by the written examination and oral discussion with 85% or greater competency.
2. Know and recognize and be able to describe in writing and orally the position and parts demonstrated by each radiographic view with 85% or greater competency.
3. Know and recognize the central ray projection for the indicated radiographic views of the part as described in writing, orally, and identified on the radiograph with 85% or greater competence.
4. Know, utilize and be able to list the position aids, ancillary, image, IR holder, and protective devices applicable to each radiographic view of the part.
5. Know, utilize and be able to list the correct views required, instructions to the patient, patient preparation, patient assistance, equipment manipulation, patient positioning and technique with 85% or greater competence in written test, oral discussion, or skills observation by clinical laboratory supervisor.
6. Given a hypothetical situation in the laboratory, written test or oral discussion, role play as the patient and the technologist to enhance understanding of the patients' situation and condition to develop a courteous, confident empathetic attitude toward the patient.

METHODS OF EVALUATION

Laboratory demonstration
Radiographic Positioning Lab Final Evaluation

Written quizzes, midterm, and final examinations are given in the following classes, RAD 101, 112, 221, and 232.

The final evaluation of the student successfully meeting the laboratory objectives is the successful completion of image critiques and competency clearances of the examination. If the student does not show competence in the clinical area for a particular examination, he/she will complete the laboratory skills demonstration again.

COMPETENCY FOR SPECIFIC RADIOGRAPHIC PROCEDURES

PHILOSOPHY OF COMPETENCIES

The clinical education aspect of the radiography curriculum requires the successful student to integrate cognitive, psychomotor and affective skills in the performance of radiographic procedures. The student moves from the role of observer to “doer” during this development process to ensure and reinforce affective and psychomotor domains. After the student has performed a specific point, the student can be evaluated on the complete process of cognitive, affective and psychomotor skills that are employed in completing the specific radiographic procedure. (85% minimum)

PLANS FOR COMPETENCIES

1. The cognitive and psychomotor skills are presented in the campus laboratory.
2. The student must complete a number of trials prior to asking for a competency of the radiographic procedure. A competency is unacceptable if any radiographs require repeating.
 - Classroom lecture for each procedure as evidenced on Competency Evaluation
 - Demonstration/Re-demonstration as evidenced on Competency Evaluation
 - Recycled at unacceptable level = 2 additional trials as evidenced on Competency Evaluation
 - Recycled at minor improvement level = 1 additional trial as evidenced on Competency Evaluation
3. The student must be cleared with a minimum competency level of 85% (as is supported by the ASRT).
4. The student will be permitted three (3) attempts for each competency (original + 2 recycle). If the student is not successful in three attempts, the requirements for clinical performance have not been met. This constitutes failure of clinical education.
5. The student may request competency of any of all of the exams indicated for the specific semester of enrollment or previous semesters of enrollment. (see course description)
6. The student must clear the specific number of competencies per semester to ensure successful completion of the specific clinical education.
7. The student may not request competency of any of the exams indicated for subsequent semesters.
8. In addition to complying with the competency procedure, the student must maintain satisfactory clinical participation as is indicated by the semester objectives and the on-going evaluation processes.
9. It is the student's responsibility to assure that an accurate and up- to date record of competencies is maintained by the clinical instructor.
10. The program chair reserves the right to approve on an individual basis.
 - a. Waiver of re-demonstration for limited specific examination area
 - b. Competency to be obtained in the campus energized laboratory

NOTE: The student must successfully meet the set minimum number of competencies per semester to meet the requirements of the specific semester clinical education course. If these minimal competencies are not met, the student is unsuccessful in completing the semester's clinical education course, and incomplete grade will be given.

(REFER TO #4 OF PLAN FOR COMPETENCIES)

The image presented for a competency will be valid only if the student's markers are visible.

TESTING PROCEDURES

Testing is an integral component of an educationally sound program. All courses in radiography will utilize extensive testing techniques. The course will consist of the following testing tools:

1. Quiz(s)
2. Radiography Positioning Lab Final Evaluation
3. Papers, Journal Club (with presentation), and Critical Thinking Journal entry
4. Midterm/final examinations

The didactic examinations may have the answers placed on computer score sheets. The tests themselves will remain with the instructor. The objective-based test will be composed of questions in the form of: true or false statements; multiple choices or matching. In the matching sections each item may be used once, more than once or not at all. The tests will cover laboratory instruction, classroom lecture and assigned reading material and handouts.

The instructor will score all quizzes and examinations for review during the next class session. At this time the student may dispute the answers to the questions they missed. The student will submit in writing a question-by-question explanation why their choices should be correct. As taking the test was an individual achievement so shall be the rebuttal. The rebuttal will occur without conferring with another student, notes or the text. The instructor will review your rebuttal and inform you in the next class session the results. Partial credit may be given if the rebuttal serves merit.

TEACHING/TECHNIQUES

A variety of teaching techniques will be employed during your enrollment. The following is a listing of how we intend to teach and representative courses.

- Brain storming-all clinical courses, quality assurance, etc.
- Conferencing - all image critiques
- Demonstrating/Performance - all laboratory sessions
- Discussion - all didactic and clinical courses

Guest lecturers - radiographic pathology, imaging modalities radiation safety, introduction to profession

- Peer teaching - all image critiques
- Role/Play - all laboratory sessions
- Simulation - all laboratory sessions
- Tour - Radiographic pathology, imaging modalities



CLINICAL PERFORMANCE EVALUATION

Average Score _____ %
STUDENT _____ DATE _____ WEEK(S) _____

ROOM ASSIGNMENT _____ CLINICAL FACILITY _____

Student must complete top part of form, including week(s) of Room Assignment

A. Appearance: adherence to dress code, wears appropriate uniform, wears name tags, and radiation monitor.

Exceptionally clean and professional	Unacceptable all the time	Usually tidy and professional attire	Acceptable most of the time	Average
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B. Attitude: how does student react to clinical assignments, shows respect for staff, radiologist, and physicians.

Indifferent - complains little acts indifferent to staff	Enthusiastic all the time	Antagonistic complains about clinical assignment schedule, shows little respect	Acceptable complains very little shows respect most of the time	Shows interest most of the time shows respect all the time
--	---------------------------	---	---	--

C. Interpersonal relations: ability to work with others, accepts constructive criticism.

Gets along well with others (tech or students); works as a team	Acceptable	Works best alone; cannot work with others	Gets along with other students; has difficulty interacting with RT	Average ability for level of training
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D. Punctuality: includes breaks and lunches, promptly notifies CI of absences and when they will be tardy.

Often late/ absent doesn't notify CI promptly	Excellent, usually arrives early	Always arrives on time	Frequently absent or lost	Usually punctual
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E. Interpersonal and relations with patients: professional rapport and ethics, patient comfort.

Casual and over-friendly	Student is unconcerned with patient	Occasionally does not relate in a professional manner	Professional and friendly	Professional, yet distant
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II. PERFORMANCE

A. Initiative: the amount of exams student does in a workday, offering assistance, keeping self-busy.

Procedure output acceptable, student does only assigned work	Procedure output always below acceptable level, tends not to work	Procedure output more than required, student energetic	Procedure output often below acceptable level; student tends to be slow	Procedure output outstanding; student tends to be very energetic
--	---	--	---	--

B. Critical Thinking: ability to adjust to new or unusual conditions: trauma patients or conditions where routine must be altered.

Learns slowly but well; needs some instruction	Learns rapidly with little effort or instruction; outstanding!	Has much trouble adjusting to new conditions, needs constant instruction and guidance	Inflexible; student unable to adjust	Learns well with some instruction and in relatively short time
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C. Quality of Procedures: accuracy of radiologic exam, freedom from errors, seeks assistance when necessary.

Student makes some mistakes but learns from them; doesn't repeat	Constantly makes many careless and repeated errors	Student makes almost no mistakes does meticulous and precise work	Quality of assignments acceptable with level of learning	Clinical tasks inconsistent, does well, then makes many careless errors
--	--	---	--	---

D. Organization: ability to perform in a logical and efficient sequence.

Very efficient, needs no assistance or reminders	Inconsistent, does well then makes careless errors	Acceptable level but needs some assistance	Unorganized needs much supervision and guidance	Does very well; requires little guidance
--	--	--	---	--

F. Application of knowledge: how well does student apply what he/she has learned (either academically or clinically).

Lacks knowledge; needs much supervision	Has knowledge; can apply theory to task with frequent guidance	Cannot relate theory to tasks, needs constant-supervision	Has knowledge, can apply theory to task with little assistance	Has knowledge; does task readily; needs no assistance
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COMMENTS:

Signatures:

Date: _____ STUDENT:

_____ EVALUATOR: _____

Average Score: _____% (85% minimum standard)



IMAGE CRITIQUE EVALUATION

STUDENT NAME: _____ DATE: _____

RADIOGRAPHIC EXAMINATION/PROJECTION: _____

SCALE 0-5 (WITH 4 BEING GOOD AND 5 BEING EXCELLENT)* Passing = 85% or greater

Table with 2 columns: Objectives and Points. Rows include Radiographic Quality Objectives (Brightness, Contrast, Quantum Mottle, Artifacts), Positioning Objectives (Position Correctness, Centering, Collimation, IR, Marker Placement), Attitude/Value Objectives (Presentation, Recognition, Team Participation, Punctuality), Technical Knowledge Objectives (Anatomy, Pathology, Technique Changes, Equipment), and Patient Care.

INSTRUCTOR MAY ASK 5 QUESTIONS (3PTS EACH)

- 1. _____
2. _____
3. _____
4. _____
5. _____

EXPOSURE INDEX # _____

STUDENT SIGNATURE _____

INSTRUCTOR SIGNATURE _____ Clearance Eval Completer _____



RADIOGRAPHIC POSITIONING FINAL EVALUATION

STUDENT: _____ DATE: _____ COURSE: _____

RADIOGRAPHIC PROCEDURE: _____

POSITIONS: 1. _____ 2. _____ 3. _____

GRADING KEY: 2 = SATISFACTORY 1 = NEEDS IMPROVEMENT 0 = UNSATISFACTORY

<PREPARATION>

EVALUATION OF REQUISITION	YES (1)	NO (0)
ROOM PREPARATION	YES (1)	NO (0)

	<PROCEDURE> POSITION	1	2	3
1	APPROACH AND ASSISTANCE TO PATIENT			
2	CORRECT POSITIONING			
3	CENTERING PATIENT AND CENTRAL RAY			
4	IMAGE RECEPTOR SIZE AND PLACEMENT			
5	MAKER PLACEMENT			
6	COLLIMATION/GONADAL SHIELDING			
7	EQUIPMENT MANIPULATION			
8	TIME FOR EACH POSITION			

< 2 ½ MINUTES = SATISFACTORY
UNSATISFACTORY

> 2 ½ MINUTES =

COMMENTS:

Student's Signature _____

Instructor's Signature _____

Grade : _____ (*pass/fail)

Total # points _____ = _____%
Total # Possible

***Pass = minimum of 85%**



RADIOGRAPHIC POSITIONING FINAL EVALUATION

Student _____ Date _____ Score _____

Projection/s _____ Evaluator: _____

Students will be assigned a task. (Students will not get advanced notification of part to be imaged). Competency performance will be evaluated by the instructor using the criteria below

Grading Key: Fail= x; Pass=1

Max Total Points: 1 projection= 17; 2-projections = 28; 3-projections =39; 4-projections =50; 5 projections=60

Minus 5 point if wrong marker used or wrong part imaged or wrong imaging protocols followed.

	Category – You MUST state info aloud or act out these protocols	Grade					Comments
		1 st	2 nd	3 rd	4 th	5 th	
1	Verification of patient identification- 2 methods must be used						
2	Pre-instruction patient preparation – external or internal – indicate method of verification						
3	Detailed clinical history obtained/pregnancy consent (for females of child-bearing age)						
4	Infection control – handwashing/clean Bucky if direct patient contact						
5	Ease with manipulating patient and equipment						
6	Props if needed available in the room before beginning the exam i.e. room prep						
	Projections	1st	2nd	3rd	4th	5th	
1	Technical factors – correct vs. incorrect (Exposure preset grade for 1 st projection. Correct 'S' values & preset for others)						
2	Correct breathing instructions given						
3	SID checked and/or detent if Bucky imaging (correct vs. incorrect)						
4	Lead shielding correctly placed– Y/N or N/A						
5	Exact centering - point of entry or exit						
6	Exact part positioning - on IP. MSP or MCP to IP relationship for obliques						
7	Tube angulation (correct vs. incorrect)						
8	Exact vs. unsatisfactory collimation to part						
9	Correct use of lead marker (R & L), placed within the collimated field						
10	Anatomical structures accurately positioned and aligned. No tilting, rotation, unwanted magnification, distortion, elongation or foreshortening.						
11	Image is centered, when applicable, with no clipping of anatomy. Marker imaged in collimated field						



CLINICAL COMPETENCY EVALUATION

Radiography Program Grade_____

St. Vincent's College

STUDENT: _____

EXAM (Procedure): _____

CLINICAL FACILITY: _____

TOTAL COMPETENCIES TO DATE: _____ SEMESTER: _____

	LOCATION:	DATE:	ASSESSMENT#:
SIGNATURE:			
Class	<u>Skills Lab</u> _____	_____	<u>N/A</u> Initial _____
*Demo	_____	_____	<u>N/A</u> Initial _____
*Re Demo	_____	_____	<u>N/A</u> Initial _____
Competency	_____	_____	_____ * *sign back of form

INSTRUCTIONS:

Please print your name, examination, clinical facility and trial examination information for this competency. Be sure to fill out the semester and total number of clearances to date. Please keep a record of your competencies on your skills card(s).

The student will present the completed form to the supervising technologist before the examination is started. Unacceptable competencies will be returned to the program faculty. The acceptable competencies will be returned to the student. The Technologist is encouraged to make appropriate comments below. The clinical faculty will sign in the appropriate space when this examination is successfully critiqued at your image critique session.

Radiographic Factors Used: mA _____ time _____ kVp _____ SID _____

LMP: _____
Confirmed Pregnancy status (if applies) _____

Patient History:

*Re Demo can be done on Patient, Phantom or Simulated

COMPLETION DATE: _____

CLINICAL FACULTY: _____



PSYCHOMOTOR SKILLS CHECKLIST

Patient _____ Phantom _____ Simulation _____

ACCEPTABLE - 2; REQUIRES MINOR IMPROVEMENT - 1; UNACCEPTABLE - 0; N/A

Table with 20 rows of skills and their corresponding scores (2, 1, 0, N/A) for Patient, Phantom, and Simulation.

EVALUATOR SIGNATURE _____ DATE _____

TOTAL POINTS _____ *SCORE _____%

TOTAL POINTS POSSIBLE: 40

PERFORMANCE MINIMUM REQUIREMENT = 85% COMMENTS:



Clinical Competency Requirements

Name: _____ Date of Entrance: _____

Graduation Date: _____

Candidates for certification are required to meet the Professional Requirements specified in Article II of the ARRT Rules and Regulations. This document identifies the minimum didactic and clinical competency requirements for certification referenced in the Rules and Regulations. Candidates who complete a formal educational program accredited by a mechanism acceptable to the ARRT will have obtained education and experience beyond the requirements specified here.

Didactic Requirements

Candidates must successfully complete coursework addressing the topics listed in the ARRT Content Specifications for the Examination in Radiography. These topics are presented in a format suitable for instructional planning in the ASRT Radiography Curriculum (2007).

Clinical Requirements

As part of their education program, candidates must demonstrate competence in the clinical activities identified in this document. Demonstration of clinical competence means that the program director or designee has observed the candidate performing the procedure, and that the candidate performed the procedure independently, consistently, and effectively. Candidates must demonstrate competence in the areas listed below.

- Six (eight counting the two extra required by +SVC) mandatory general patient care activities.
- Thirty-one mandatory radiologic procedures.
- Fifteen elective radiologic procedures to be selected from a list of 35 procedures.
- One elective imaging procedure from the head section.
- Two elective imaging procedures from the fluoroscopy studies section, one of which must be either an Upper GI or a Barium Enema.

Documentation

The following pages identify specific 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.

To document that the didactic and clinical requirements have been satisfied, candidates must have the program director (and authorized faculty member if required) sign the ENDORSEMENT SECTION of the **Application for Certification** included in the *Certification Handbook*.

+See note

Clinical Competency Requirements cont'd

The clinical competency requirements include the six general patient care activities listed below and a subset of the 66 (plus two SVC electives, see note at end of list) radiologic procedures identified on subsequent pages. Demonstration of competence should include variations in patient characteristics (e.g., age, gender, medical condition).

1. General Patient Care

Requirement: Candidates must demonstrate competence in all six (eight counting the two extra required by SVC) patient care activities listed below. The activities must be performed on patients; unless state or institutional regulations prohibit candidates from performing the procedures on patients.

General Patient Care	Date Completed	Competence Verified By
CPR		
Vital signs (blood pressure, temperature, pulse, respiration, Pulse Oximetry)		
Sterile and Medical aseptic techniques		
Venipuncture		
Transfer of patient		
Care of patient medical equipment (e.g., oxygen tank, IV tubing)		
+ECG (EKG)		
+Standard Precautions and Use and Disposal of Needles		

+ SVC Radiography Program Requirement.

2. Radiologic Procedures

Requirement: Candidates must demonstrate competence in all 35 procedures identified as mandatory (**M**). Procedures should be performed on patients (**P**); however, up to eight mandatory procedures may be simulated (**S**) (see endnote) if demonstration on patients is not feasible.

Candidates must demonstrate competence in 15 of the 35 elective (**E**) procedures. Candidates must select one elective procedure from the head section. Candidates must select Upper GI or Contrast Enema plus one other elective from the fluoroscopy section. Elective procedures should be performed on patients; however, electives may be simulated (see endnote) if demonstration on patients is not feasible.

Institutional protocol will determine the positions or projection used for each procedure.

Demonstration of competence includes requisition evaluation, patient assessment, room preparation, patient management, equipment operation, technique selection, positioning skills, radiation safety, image processing, and image evaluation.

Radiologic Procedure	Mandatory or Elective	Date Completed	Patient or Simulated	Competence Verified By	Comments
<i>Chest and Thorax</i>					
Chest Routine	M				
Chest AP (Wheelchair or Stretcher)	M				
Ribs	M				
Chest Lateral Decubitus	E				
Sternum	E				
<i>Upper Extremity</i>					
Thumb or Finger	M				
Hand	M				
Wrist	M				
Forearm	M				
Elbow	M				
Humerus	M				
Shoulder	M				
Trauma: Shoulder (Scapular Y, Transthoracic or Axillary) *	M				
Clavicle	M				
Scapula	E				
AC Joints	E				
Trauma: Upper Extremity (Non shoulder) *	M				
<i>Lower Extremity</i>					
Toes	E				
Foot	M				
Ankle	M				
Knee	M				
Tibia-Fibula	M				
Femur	M				
Trauma: Lower Extremity *	M				
Patella	E				
Calcaneus (Os Calcis)	E				
<i>Head-Candidates must select at least one elective procedure from this section</i>					
Skull	E				
Paranasal Sinuses	E				
Facial Bones	E				
Orbits	E				
Zygomatic Arches	E				
Nasal Bones	E				
Mandible	E				
Temporomandibular Joints	E				
<i>Spine and Pelvis</i>					
Cervical Spine	M				
Trauma: Cervical Spine (Cross Table Lateral) *	E				
Thoracic Spine	M				
Lumbar Spine	M				
Pelvis	M				
Hip	M				
Cross Table Lateral Hip	M				
Sacrum and/or Coccyx	E				
Scoliosis Series	E				
Sacroiliac Joints	E				

Radiologic Procedure	Mandatory or Elective	Date Completed	Patient or Simulated	Competence Verified By	Comments
Abdomen					
Abdomen Supine (KUB)	M				
Abdomen Upright	M				
Abdomen Decubitus	E				
Intravenous Urography	E				
Fluoroscopy Studies-Candidates must select either Upper GI or Barium Enema plus one other elective procedure from this section					
Upper GI Series (Single or Double Contrast)	E				
Contrast Enema (Single or Double Contrast)	E				
Small Bowel Series	E				
Esophagus	E				
Cystography / Cystourethrography	E				
ERCP	E				
Myelography	E				
Arthrography	E				
Hysterosalpinogram	E				
Mobile C-Arms Studies					
Orthopedic C-Arm Procedure (requires manipulation to obtain more than one projection)	M				
Sterile C-Arm procedure (requires manipulation around a sterile field)	E				
Mobile Radiographic Studies					
Chest	M				
Abdomen	M				
Orthopedic (indicate)	M				
Pediatrics (age 6 or younger)					
Chest Routine	M				
Upper Extremity (indicate)	E				
Lower Extremity (indicate)	E				
Abdomen	E				
Mobile Study (indicate)	E				
Geriatric Patient (Age 75 or Older)**					
Chest Routine	M				
Upper Extremity (indicate)	E				
Lower Extremity (indicate)	E				
Abdomen	E				
Mobile Study (indicate)	E				
+Other Exam (indicate)	+E				

+SVC Program Electives (SVC electives may be chosen in addition to the ARRT requirements)

Trauma is considered a serious injury or shock to the body. Modifications may include variations in positioning, minimal movement of the body part, etc.

** Patient is physically or cognitively impaired as a result of aging.

Note: The ARRT requirements specify that certain clinical procedures may be simulated. Simulations must meet the following criteria: (a) the student is required to competently demonstrate skills as similar as circumstances permit to the cognitive, psychomotor, and affective skills required in the clinical setting; (b) the program director is confident that the skills required to competently perform the simulated task will generalize or transfer to the clinical setting. Examples of acceptable simulation include: demonstrating CPR on a mannequin; positioning a fellow student for a projection without actually activating the x-ray beam, and evaluating an image from a teaching file; performing venipuncture by demonstrating aseptic technique on another person, but then inserting the needle into an artificial forearm or grapefruit

CLINICAL EDUCATION SETTINGS

ST. VINCENT'S COLLEGE RADIOGRAPHY PROGRAM (All Sites are within a 32 mile radius from St.Vincent's College)

JRCERT RECOGNIZED

In the Greater Bridgeport Area:

1. **ST. VINCENT'S MEDICAL CENTER**
2800 MAIN STREET
BRIDGEPORT, CT 06606
(203) 696-3510: Robin Smith, (203) 696-3512: Emmie Russo
Radiology Department: (203) 576-6176 Main Dept., (203) 576-5538 ED

2. **GRIFFIN HOSPITAL**
130 DIVISION STREET
DERBY, CT 06418
(203) 735-7421 or (203) 732-7300: Linda Lewis, Kevin Hill

IVY BROOK
2 IVY BROOK RD
SUITE 130
SHELTON, CT 06484
(203)732-1451

3. **ST. VINCENT'S IMMEDIATE HEALTHCARE CENTERS,**
SITES AT:

2600 MAIN STREET
BRIDGEPORT, CT 06606
(203) 371-4445: Geraldine Signore

1055 BOSTON POST ROAD
FAIRFIELD, CT 06824
(203) 259-3440: Michael Jucha

401 MONROE TURNPIKE
MONROE, CT 06468
(203) 268-2501: Lori Coglitore

Two Trapp Falls
SHELTON, CT 06484
(203) 929-1109: Susan Paoli

4. PHYSICIAN ONE URGENT CARE CENTERS OF CONNECTICUT:

**SOUTHBURY OFFICE
900 MAIN STREET 2 SUITE 100
SOUTHBURY, CT 06488
(203) 262-1911
Lisa Santoro**

**BROOKFIELD OFFICE
31 OLD ROUTE 7
BROOKFIELD, CT 06804
(203) 885-0808
Lauren Alesi**

**NORWALK OFFICE
346 MAIN STREET
NORWALK, CT 06851
(203) 846-0005
Lauren Griffin Bousquet**

**RIDGEFIELD OFFICE
10 SOUTH STREET
SUITE 101
RIDGEFIELD, CT 06877
(203) 431-4600
Luca Guardio**

In Stamford, CT:

- 1. STAMFORD HOSPITAL, Main Campus
30 Shelburne Road @ West Broad Street
Stamford, CT 06902
Main Phone #: 203-276-7860 Nikol Leslie**
- 2. DARIEN IMAGING CENTER
6 Thorndal Circle, Suite 104
Darien, CT 06820
Phone #: 203-276-6116 Beth Siegelbaum**
- 3. TULLY HEALTH CENTER
32 Strawberry Hill Court
Stamford, CT 06902
Phone #: 203-276-2000 Santina Kovatch**
- 4. CHELSEA PIERS IMAGING
1 Blachley Rd
Stamford, CT 06902
Phone#: 203-276-4124 Jayme Frangione**

SUGGESTION BOX

WE WANT TO HEAR FROM YOU!

Please use the suggestion box to share your suggestions, ideas or comments for St. Vincent's College.

Suggestions will be collected and reviewed by the Student Services team and forwarded to the appropriate area on campus. SVC pledges to uphold the principles of civil dialogue: to genuinely listen, speak respectfully, and be accountable for our words and actions. Please observe these principles when submitting your ideas.

Suggestion boxes are in the following locations:

- 2600 Main St. Student café
- Hunting Street, 1st floor student cafeteria

JRCERT NONCOMPLIANCE PROCEDURE

The college holds full accreditation by the Joint Review Committee on Education in Radiologic Technology (JRCERT) and the New York State Department of Health.

Students have the right to submit allegations against a JRCERT-accredited program if there is reason to believe that the program has acted contrary to JRCERT accreditation standards or that conditions at the program appear to jeopardize the quality of instruction or the general welfare of its students.

Contact of the JRCERT should not be the first step in the formal institutional/program grievance procedure. The individual must first attempt to resolve the complaint directly with institution/program officials by following the grievance procedures provided by the institution/program. If the individual is unable to resolve the complaint with institution/program officials or believes that the concerns have not been properly addressed, he or she may submit allegations of non-compliance directly to the JRCERT.

The report must include the area of noncompliance, and must include the student's name and signature. It should be forwarded to the following address:

Joint Review Committee on Education
In Radiologic Technology
20 N Wacker Drive, Suite 900
Chicago, IL 60606-2901
Tel. #312-709-5300
Fax#312-704-5305
E-mail – mail@jrcert.org