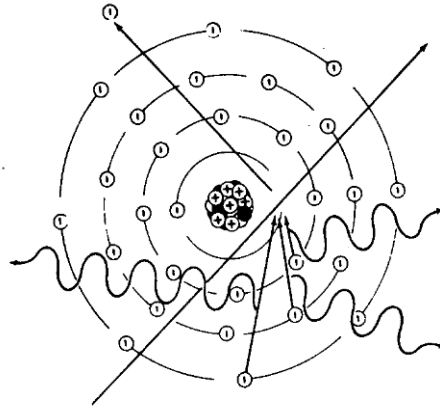


**ZANE STATE COLLEGE**  
**RADIOLOGIC TECHNOLOGY PROGRAM**  
**STUDENT HANDBOOK**  
**2009 - 2011**



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## INTRODUCTION

In order to insure effective education in the Radiologic Technology program, each individual participating in the program must have a full understanding of the responsibilities and considerations involved. This handbook has been designed as a guide to provide the student with the necessary information regarding the policies, procedures, and expectations which govern the students enrolled in the program. This handbook should not be considered a complete official statement of all policies of Zane State College or the Division of Health, Public Service and Service Related Programs. It is meant to be a guide and assist the student in reaching his or her goal as a radiographer. More information is provided in the Zane State College Catalog and Student Handbook.

Please read the following pages and ask for further explanation on points that you feel need clarification. The College, college administration, RAD program, and RAD faculty reserve the right to revise any portion of the program or contents of this handbook at any time. Any changes pertinent to the students enrolled in the RAD program will be communicated to them by the RAD faculty.

## MISSION OF ZANE STATE COLLEGE

Every learner puts knowledge to work through experience-based learning provided with a personal touch.

## MISSION OF THE HEALTH, PUBLIC SERVICE, AND SERVICE-RELATED PROGRAMS DIVISION

The mission of the division, as embodied in the College strategic plan, is to equip students with the ethical standards, knowledge, and practical experience necessary to provide quality service throughout their chosen careers, availing themselves of lifelong learning and serving the diverse needs of the community in the 21st century.

## PURPOSE OF PROGRAM

The Radiologic Technology program offered by Zane State College is designed to prepare students for professional careers as radiographers in the medical field. By providing pertinent learning experiences, the program enables students to demonstrate competency in the didactic and clinical aspects of the field. In addition, the program attempts to develop student interests in the professional societies and continuing education.

## STATEMENT OF PURPOSE

The 24-month Radiologic Technology Program offered by Zane State College is designed to prepare students for professional careers as radiographers in the medical field. By providing pertinent learning experiences, the program enables students to demonstrate competency in the didactic and clinical aspects of the field. In addition, the program attempts to develop student interests in the professional Societies and continuing education.

The curriculum involves 41 credit hours of didactic course work in Radiologic Technology, 25 credit hours of clinical course work, and 42 credit hours of general and basic education requirements. The curriculum (didactic and clinical) is designed in accordance with the guidelines set forth by the Joint Review Committee on Education in Radiologic Technology. The assessment procedures include written and oral exams and assignments, laboratory experiments and a competency-based clinical education plan.

\*Upon successful completion of the requirements of the program, the student is awarded an Associate of Applied Science degree in Radiologic Technology and is eligible to apply to take the national certifying examination of the American Registry of Radiologic Technologists.

Zane State College is an accredited institution as granted by the Higher Learning Commission of North Central Association of Colleges and Schools. The Radiologic Technology program is accredited by the Joint Review Committee on Education in Radiologic Technology.

JRCERT  
20 N Wacker Drive, Suite 2850  
Chicago, IL 60606-3182  
Phone: (312) 704-5300  
[www.jrcert.org](http://www.jrcert.org)

\*If a student has ever committed a felony, the American Registry of Radiologic Technologists may or may not allow the student to take the national certifying examination. (ARRT Examinee Handbook, rev. 2008).

ZANE STATE COLLEGE  
RADIOLOGIC TECHNOLOGY OUTCOME ASSESSMENT

The Radiologic Technology program offered by Zane State College is designed to prepare students for professional careers as radiographers in the medical field. By providing pertinent learning experiences, the program enables students to demonstrate competency in the didactic and clinical aspects of the field. In addition, the program attempts to develop student interests in the professional societies and continuing education.

An entry-level paraprofessional with an associate degree in Radiologic Technology from Zane State College will be able to:

1. Demonstrate clinical competency.
2. Demonstrate problem solving and critical thinking skills in radiography.
3. Demonstrate professional interpersonal communication skills.
4. Demonstrate the value of professionalism by supporting the Code of Ethics and lifelong learning.
5. Function as a competent, entry-level radiographer as described by national radiologic technology educational and professional organizations.

Statement of Program Effectiveness

RAD program effectiveness will be evidenced by the criteria which are listed below:

- Ninety percent (90%) of all RAD graduates will pass the ARRT national certification examination in radiography on the first attempt.
- The average scaled test score for the ARRT national certification examination in radiography will meet or exceed the state average for Ohio.
- One hundred percent (100%) of the students will meet or exceed the score of eighty-five percent (85%) for the Final Competency Evaluation.
- Fifty percent (50%) of the students enrolled in the RAD program will complete the program.
- Ninety-five (95%) of the graduates will gain employment within six months of graduation.

- The majority of the RAD students will meet or exceed a score of eighty-five percent (85%) for the Trauma Lab Practical in RAD 299.
- The students will meet or exceed an average score of eighty percent in the area of communication on the Clinical Affective Evaluation.
- Ninety five percent (95%) of the RAD students will meet or exceed an average score or better (2 on 1-3 Likert Scale) in the areas of communications on the Clinical Affective Evaluations.
- The RAD students will meet or exceed a score of eighty-five percent (85%) for the written paper in RAD 212.
- The RAD students will meet or exceed a score of eighty-five (85%) for the oral presentation in RAD 212.
- One hundred percent (100%) of employer respondents will rate the graduates' professionalism as average or better (3 on 1-5 Likert Scale).
- One hundred percent (100%) of employer respondents will rate the graduates' problem solving and critical thinking skills as average or better (3 on 1-5 Likert Scale).

## RESPONSIBILITIES OF A RADIOGRAPHER

Today the art and science of medical radiography has grown to encompass a multitude of responsibilities. The enormity of these responsibilities is often underestimated not only by the layman but by radiographers themselves.

Responsibility involves a duty or a trust. The radiographer has a duty to perform tasks to the very best of their abilities and to improve these abilities whenever possible. The focus of attention in these objectives is the PATIENT, the quality of whose radiographs must be of a caliber that injuries and disease are unmistakably evident. The quality of the radiograph allows the radiologist to detect and diagnose different pathologies and the physician or surgeon to treat or repair. Therefore, the price placed on the radiographer's ability or lack of it is very high.

In the execution of their daily duties (as outlined in the sample job description), the radiographer must work in harmony with professional and non-professional personnel. They must be able to accept duties assigned to them by their superiors and delegate duties to their subordinates according to their status. In a department filled with students, every radiographer automatically becomes a teacher, supervisor, and a role model for the students.

The profession of Radiologic Technology is only one of the paramedical and medical professions whose effect is expended on behalf of the welfare of the patient. What is the impression that we, the radiographers, give to the patient as we perform the radiographic examinations? Be assured that the patient is aware of our every move, our every mood. The patient is going to be keenly aware of the sincerity of our efforts. Do we believe in what we are doing? Are we doing it with confidence? Does the patient sense our desire to help them as an individual?

Every patient is an individual human being, and regardless of their material wealth or lack of it, have an intense desire to be respected. In a society filled with religious, racial, and political problems, we as professionals must respect the right of everyone to adhere to their own beliefs. A sick or injured person who is placed in our care merits the utmost of our efforts as professionals.

## JOB DESCRIPTION: RADIOGRAPHER

Summary: Under the direction of a radiologist, the radiographer is concerned with the proper operation of x-ray equipment and preparation of patients for various types of diagnostic procedures. Upon request of a physician, the radiographer exposes x-ray film or utilizes image receptors to produce radiographs of internal parts of the body. These radiographs may reveal evidence of disease, injury, or other significant medical information.

### Significant Duties

1. Performs diagnostic radiographic services.
  - A. Operates imaging equipment.
  - B. Operates other equipment/devices as appropriate.
  - C. Positions patients.
  - D. Immobilizes patients as necessary.
  - E. Calculates exposure factors.
  - F. Practices radiation protection.
  - G. Evaluates radiographs for technical quality.
  - H. Assumes care for physical and psychological needs of patient during examinations and procedures.
  - I. Practices aseptic technique as necessary.
  - J. Assists with administration of contrast media.
  - K. Assists physician with imaging procedures.
  - L. Initiates life support measures for patients, if necessary.
2. May be required to work a variety of work shifts (i.e., 7 a.m.-3 p.m., 3-11 p.m., or 11 p.m.-7 a.m.) during the week or weekend.
3. May be required to work weekend shifts and holidays.
4. Maintains patient records.
5. Assumes responsibility for assigned area.
6. Provides input for equipment and supply purchase decisions.
7. Instructs specific units of didactic and/or clinical education, in the radiography program, if applicable.
8. In the absence of a supervisor, assumes acting supervisory responsibility.
9. Assumes responsibility for portions of the quality assurance program.
10. Pursues ongoing continuing education.

11. May control inventory and purchase of supplies for assigned areas.
12. May be responsible for the supervision and evaluation of student technologists.

### Qualifications

1. Graduate of Joint Review Committee on Education in Radiologic Technology (JRCERT) accredited Radiography Program, or equivalent.
2. Certification by the American Registry of Radiologic Technologists or equivalent.
3. Competency in components of radiography practice as appropriate.
4. Valid state license, if applicable.

### **Technical Standards Requirements for Zane State College RAD Program**

- Hear faint sounds from a distance of 15 feet.
- Far vision correctable to 20/20 in one eye and 20/40 in the other.
- Lift 20 lbs. from the floor, carry 10 feet and place on a surface 36" high.
- Frequent lifting and carrying up to 50 lbs.
- Push/pull 1 to 20 lbs. force continuously, 20 to 50 lbs. force occasionally, and 50-75 lbs. force rarely.
- Work with arms overhead for 15 to 20 minutes at a time.

If a student needs accommodations to perform these tasks, it is the responsibility of the student to provide formal documentation of the disability so his or her needs can be met.

ZANE STATE COLLEGE  
PURPOSE OF POLICIES AND PROCEDURES

The following policies and procedures have been developed by the Radiologic Technology Program at Zane State College. The purpose of these policies and procedures is:

1. To maintain an efficient operation which affords the highest quality medical care for the patient in the Radiology Department.
2. To provide the student with the best possible educational environment.
3. To provide a foundation for the student on which they may develop characteristics essential as a professional member of a health care team.

ZANE STATE COLLEGE  
Division of Health, Public Service and Service Related Programs  
Radiologic Technology Program

**ACADEMIC POLICIES AND PROCEDURES**

The following academic policies and procedures for the Radiologic Technology Program have been developed to ensure that graduates of the program demonstrate competence in the psychomotor, cognitive, and affective skills necessary of individuals who perform quality diagnostic radiographic procedures.

A complete detailing of the academic policies and procedures for the entire college can be found in the Zane State College Catalog and Student Handbook. Students enrolled in the Radiologic Technology Program will also be required to abide by the additional policies and procedures as set forth by the Zane State College Board of Trustees.

**Minimum Grades for Health Students**

- I. The following rules apply to students in the Medical Assisting Technology, Medical Laboratory Program, Occupational Therapy Assisting Program, Physical Therapist Assistant Program, and Radiologic Technology programs.
  - A. A student may not enroll in a technical course unless his or her overall grade point average is 2.5 or higher.
  - B. All course prerequisites must be met before admission to a course.
  - C. A grade of "C" or better is required of each technical course in order to continue in the course sequence. These courses for the RAD program are indicated on page 33.
  - D. A student receiving a grade of "D" or below in any technical course required by the above named programs must withdraw from the sequence and has the following options:
    1. Assume a health studies core status.
    2. Withdraw from the technical program.
    3. May remain in the technical program (on advice of Advisor) to repeat the course in which he or she did not achieve at least a "C" grade. (Note that the College does not offer each course every quarter.) The student may repeat the course only once to raise his or her grade to a "C" level. Upon successful completion of the repeated course (grade of at least a "C"), the student must then be reevaluated for continuation in the program. Due to the arrangements of the curriculum sequence, this may require an extra year in the program. A student who does not achieve a "C" or better in two technical courses may not be re-admitted to the Radiologic Technology program.

## II. Re-Admission

Students who have been dismissed or who have elected to withdraw from the Radiologic Technology program may reapply for the succeeding school year. If a student elects to reapply, application for admission must be made into the immediate succeeding school year to avoid retaking the professional courses which were successfully completed. If the student delays readmission beyond the immediate succeeding school year, then they may be readmitted but may have to retake all technical courses previously completed. Applicants for readmission are reviewed equally with all other applicants and are therefore subject to competitive selection.

## III. Cheating

Cheating of any form will not be tolerated in the classroom or clinical. Instances of academic dishonesty will be grounds for a failing grade in that course or courses and possible probation or dismissal from the program or College.

A more detailed listing of further academic policies and regulations is contained in the Zane State College Catalog and Student Handbook.

## IV. Graduation

In order to graduate and receive the Associate of Applied Science Degree in Radiologic Technology that student must:

1. Successfully complete all coursework required for the degree.
2. Attain a "C" (GPA of 2.0) or higher in all courses as indicated on page 33.
3. Maintain a "C" (2.0) cumulative grade point average.

## FIELD TRIPS

Students are expected to participate in any field trip scheduled by the faculty. When field trips are taken during clinical time students who do not attend the field trip will be required to maintain clinical time attendance. Students not attending field trips may be required to submit a research paper pertaining to the fieldtrip material or other assigned topic per the Program Director.

## STUDENT PREGNANCY

The student has a right to privacy and confidentiality. By that right, a student is not required to inform RAD faculty of pregnancy or the intent to become pregnant. However, **exposure of a fetus to radiation has significant risks**. Such risks include skeletal deformities, mental retardation, spontaneous abortion, and childhood malignancy. All students receive basic radiation protection instruction during the first clinical quarter of the program. As a means of protection, the pregnant student is expected to protect herself in the presence of ionizing radiation through the use of maximized distance, maximized shielding, and minimized time spent in the presence of ionizing radiation.

Disclosure of pregnancy is voluntary, however, it is strongly encouraged that the pregnant student discuss her situation with the Program Director so that additional and maximum protection measures can be explained and implemented. These measures will include the ordering of a fetal dosimeter to be worn at the waist and possibly changing the clinical rotation schedule to minimize fetal dose of radiation. The student has two options for the clinical rotations: 1) The student may choose to modify the clinical rotation, however, this may lead to additional time for completion, or 2) the student may continue in the clinical rotation schedule without modification. In the event that the student delivers during the academic quarter, additional weeks of Directed Practice may be added to compensate for any time taken. As established by the N.C.R.P. report #116, the dose equivalent limit to the fetus is 0.5 rem/gestation.

It is the student's responsibility to maintain didactic assignments to the satisfaction of the instructors involved. This may require that the student repeat courses missed during the maternity leave, which could lead to an additional year for course completion. Any questions regarding the pregnant student's responsibilities should be directed to the Program Director.

## ACCESS TO RECORDS

In compliance with the Buckley Amendment to the Family Educational Rights and Privacy Act of 1974, the following policy is established to provide proper procedure for access to student RAD records:

Students have the right to inspect and review all RAD records directly related to the student. This includes any material incorporated into the student's record folder intended for school use or to be made available to outside parties.

Students must request inspection of their file by written request and will be granted access within 14 days of receipt of the written request to the RAD Program Director. The student's file must be inspected in the Program Director's office and in the presence of the Program Director, during normal business hours, or by special arrangement.

No records can be sent to any institution without the written consent of the student with the following exceptions:

- \* Transmittal of personal information to state and local government authorities as required by state statute.
- \* Release of directory information including the student's name, address, major field of study, place of birth, participation in official recognized activities, dates of attendance, degrees and awards received, and the most recent previous educational institution attended.

The written consent to release records must specify the exact records to be released and to whom the records shall be released. A copy of these records will be given to the student, if requested. This includes the following information:

- \*Course transcript
- \*Program evaluations
- \*Other specified information

Proper procedure for release of a student's record involves the following considerations:

- \* Upon student request, a transcript will be sent to the authorized agency.
- \* Information may be sent out in compliance with a judicial order.

Any student requesting a reference needs to complete the required authorization and must stipulate what areas the RAD faculty are to comment. This is in compliance with the Family Educational Rights and Privacy Act of 1974. A copy of the completed form will be forwarded to the authorized agency.

## ATTENDANCE POLICY

A significant portion of the educational process in radiography is the development of a strong sense of responsibility on the part of each student toward the patient, fellow radiographers, faculty members, the radiology department, and the hospital. One of the primary manifestations of this responsibility is regular, punctual attendance in the clinical and didactic areas. Since it is recognized that absence is occasionally unavoidable, the following policy has been established for both the classroom and clinical areas:

**Absences or tardies for clinical or class assignments must be reported to the program office at phone number 454-2501, Ext. 1241 or 1271, at least 15 minutes prior to the beginning of the students assigned clinical or class time. A message may be left on the office answering machine. The clinical instructor at the clinical site must also be notified by telephone at least 15 minutes prior to the beginning of the students assigned clinical time. Any didactic work missed must be made up to the satisfaction of the instructor. Failure to report absences as required will result in a 'double incident of absence' assigned to the student.**

Non-attendance will be monitored as 'incidents of absence'. An 'incident of absence' is any period of time when the student is absent from their assigned schedule, clinical or classroom. One day or consecutive days of absence, regardless of length, is considered one incident of absence. Tardiness is considered an incident of absence. For absences of more than one day in length, the student is required to report to the program office and, if applicable, to the clinical instructor for each day absent, unless otherwise indicated by the program director.

Progressive corrective action occurs as follows, when a student accumulates a number of incidents of absence that reflects an unacceptable pattern:

- 2 incidents/quarter = verbal warning
- 3 incidents/quarter = written warning & reduction of overall course score by 5 points
- 4 incidents/quarter = written warning & reduction of overall course grade by one letter grade
- 5 incidents/quarter = written warning & reduction of overall course grade to a 'D'

The Program Director has the authority to move to the most severe consequence for absences if the pattern of non-attendance is consistent in nature from one quarter to the next.

Bereavement, jury duty, military duty and medical emergencies will be handled on an individual basis. Documentation may be required in some instances. Illnesses of three days or longer will require documentation of a physician's visit.

If a student presents to the clinical setting with an illness, the clinical instructor will adhere to the policy and procedures established for the site. The course of action will be at the discretion of the clinical instructor and/or RAD faculty.

Inclement weather absence will be handled in accordance with the Zane State College inclement weather policy. Tardiness due to inclement weather will be handled on an individual basis and may result in an 'incident of absence' per the program director and/or clinical instructor. The use of common sense is highly encouraged in relation to inclement weather. The student should not put themselves in danger in order to attend their clinical assignment.

Excessive absenteeism and/or tardiness may result in dismissal from the program.

## CLINICAL POLICIES AND PROCEDURES

### YOU AND THE PATIENT

The care for those who are ill or hospitalized is provided by people, like you, who exhibit kind interest in all persons. It is only through the efforts and cooperation of each member of the health care team that the goal of expert, scientific, and compassionate care of patients can be maintained.

Your courtesy, tact, empathy, cheerfulness, kindness, and consideration of patients, anxious relatives, and your co-workers will help immeasurably. It is our sincere desire to assist you in finding enjoyment and satisfaction as a radiography student. We are interested in your education, happiness, health, and success.

### THE MEDICAL IMAGING DEPARTMENT

Medical Imaging Departments operate as a distinct, integral part of the total function of the hospital. The department strives to achieve the goals listed below, which are consistent with the overall goals of each hospital. The Medical Imaging Department serves to:

1. Provide for quality patient care on a continuous basis through the use of an adequate staffing schedule of well-trained, registered radiographers and supporting personnel, utilizing well-maintained and technologically-sound radiologic equipment. This goal must be achieved to permit the radiologists to complete timely, accurate diagnostic interpretations, to complete medically-sound therapeutic treatments, and to provide accurate and timely reports to referring physicians and related hospital personnel.
2. Provide an atmosphere for professional growth and development through experience, in-service programs, and opportunity for inter-professional relations and conferences for department employees.
3. Provide an educational opportunity to radiography students and to other students and staff of the hospital.

### CONFIDENTIALITY

In general, all information regarding patients, visitors, or staff of the clinical education centers is considered confidential, according to the Health Insurance Portability and Accountability Act (HIPAA). As such, this information is not to be discussed by the student to anyone. Any such breach of confidentiality will result in disciplinary action including, but not limited to clinical suspension, removal from the clinical site, and/or program dismissal. However, it is the policy of the hospitals to cooperate with the news media for information in accordance with HIPAA.

Students must refer all such requests for information from the news media to the Department of Public Relations, with the exception of inquiries regarding a patient's condition, which should be referred to the hospital patient information service. Any request to take photographs on hospital premises must also be referred to the Department of Public Relations.

### IONIZING RADIATION

All student radiographers are monitored on a continuous basis by a dosimeter type monitor. Records of student exposure to ionizing radiation are maintained by the Program Director and are maintained in the radiology laboratory. RAD students review the radiation reports with the RAD faculty during the mid-quarter evaluations or upon receipt of report. All students are provided with introductory instruction in radiation protection measures before directed practice rotations begin. Students are to wear protective apparel during any portable or fluoroscopic procedure. **Students are NOT permitted to hold a patient during a radiologic examination!**

### HOSPITAL ELEVATORS

Passenger elevators are to be used by patients, visitors, students, and employees. Students are encouraged to walk up or down one flight of stairs and only use the elevators for further distances. Service elevators are to be used for transportation of patients in wheelchairs or carts, supplies, portable machine, or other equipment.

### HOSPITAL ACCIDENTS

Patients and visitors are usually unfamiliar with hospital routines. Therefore, you must be constantly on guard to protect their safety. Many accidents are caused by unsafe acts or unsafe conditions. If you notice a potential accident hazard, report it to your clinical instructor or supervisor immediately. If you are in an accident or happen to see an accident occur, an incident report must be completed and submitted to the clinical instructor with a copy given to the Program Director. If you are injured, any treatment costs are your responsibility.

### MEDICAL INSURANCE

During the course of the program, students are responsible for their own health insurance. While it is not possible to require students to maintain some type of coverage, it is highly recommended. Due to the high cost of medical care, students should have medical coverage, either through parent, spouse, or individual policies.

### FIRE

Fire safety procedures should be followed in accordance with the protocol of the assigned clinical site.

### SMOKING

One of the major purposes of any hospital is to maintain, restore, and preserve the health and safety of its patients, personnel, and the public. The use of tobacco in any form is inconsistent with this purpose. Hospitals are operated in such a way as to support this philosophy and to assure compliance with local, state, federal, and accrediting agency regulations. It is the policy of each hospital that the combustible use of tobacco products is prohibited throughout the hospital, except in specifically designated areas. This applies to all persons coming to or affiliated with the hospital. Smoking is prohibited in all patient areas and in all areas where readily ignitable material/combustion supporting materials are used and/or stored. The College is also a non-smoking facility. Smoking at the College is permitted only outside the buildings at the specified locations.

## CPR POLICY

In order to provide life-saving techniques, the student **MUST** be certified in CPR Class C from the American Heart Association prior to their second quarter in the program. Many hospital and community organizations offer CPR training free of charge.

## TRANSPORTATION

Students must provide their own transportation to and from the College and the clinical affiliates.

## POLICY REGARDING STUDENTS WITH AIDS OR HIV

Detection and control of infectious disease is accomplished to assure a safe environment for students, employees, patients, faculty, staff, and hospital visitors. Students are encouraged to promptly visit their physician for evaluation when suffering from potential infection (ex. fever, diarrhea, skin lesions).

The student is encouraged to discuss their infectious disease status with program faculty. Zane State College and the RAD program faculty will protect the privacy of individuals who are self-disclosed. The RAD faculty will refer the student for specific education necessary to avoid transfer of disease in the clinical areas. Clinical placement will be made with the welfare and safety of the student and potential patients in mind. However, the clinical affiliate has the right to agree or disagree to take self-disclosed students who have AIDS-related diseases including seropositive individuals.

The College and RAD faculty do not discriminate against students with infectious diseases. Students with communicable diseases will not be excluded from the program in accordance with the American with Disabilities Act.

## STANDARD PRECAUTIONS

Guidelines have been adopted in accordance with the current consensus of the medical and scientific community that many diseases cannot be transmitted by casual body contact in the clinical setting. However, because there is a risk of contracting an infectious disease, the student should adhere to the following guidelines:

1. Sharp items (needles, scalpel blades, etc.) should be considered infectious and be handled with extraordinary care to prevent accidental injuries.
2. Disposable syringes and needles, scalpel blades and other sharp items should be placed in puncture resistant containers located as practical as possible to the area in which they are used. To prevent needle stick injuries, needles should **NOT** be recapped, purposely broken, removed from disposable syringes, or otherwise manipulated by hand.
3. When the possibility of exposure to blood or other body fluids exists, appropriate attire should be worn. The anticipated exposure may require gloves alone, or may also require a gown, mask and/or goggles when performing procedures. Hands should be washed thoroughly and immediately if they accidentally become contaminated with blood.
4. To minimize the need for emergency mouth-to-mouth resuscitation, mouth-pieces, resuscitation bags, or other ventilation devices should be located and available for use in areas where the need for resuscitation is predictable.

5. Pregnant students engaged in health care are not known to be at greater risk than students who are not pregnant. However, if a student develops infection with the AIDS virus during pregnancy, an infant has an increased risk of infection by prenatal or perinatal transmission. Because of this risk, pregnant students should be especially familiar with precautions for preventing the transmission or acquisition of the AIDS virus.
6. Students are required to receive the Hepatitis B vaccine series in order to help minimize their risk of infection.

### HEPATITIS B IMMUNIZATION POLICY

In order to protect the student from the Hepatitis B virus, they are required to receive the Hepatitis B immunization series of three injections over a period of six months. Incoming RAD students must provide the College with documentation of their Hepatitis B vaccination. Entering students who fail to provide the appropriate documentation by this date will be withdrawn from the program and replaced with an alternate student. Students failing to complete the series of three injections will be unable to register and/or complete their programs. All costs associated with the vaccine series is the responsibility of the student.

### EMPLOYER INTERVIEWS

Students scheduling interviews with potential employers will only be granted time from clinical or didactic classes if the student has accrued sufficient educational time to allow for the absence. All other absences for employer interviews will be counted as an incident of absence and noted in the student's record folder. Refer to the Attendance Policy for further details.

### OUTSIDE EMPLOYMENT

Extra worked performed voluntarily or for compensation is to be arranged by the student and their employer. The College strongly encourages students to take advantage of the educational opportunities afforded by additional clinical work and responsibility, but such arrangements and agreements are voluntary on the part of the student and are organized and controlled by the professional staff of the facility.

Clinical times are set by the Director, clinical coordinator, and clinical instructor at the clinical affiliates. Students who must work are required to set up a work schedule around the assigned clinical times. Due to the intensity of the RAD curriculum, it is not recommended that students pursue full-time employment.

### NURSING MOTHERS

Any student who is nursing will need to follow the breast-feeding protocol of their assigned clinical site.

## CLINICAL ATTIRE

The uniform for the student is a symbol of the profession. As such, it must always be clean and pressed. In the clinical areas, student attire must follow the policies and procedures of each clinical site:

Solid color scrubs that are Caribbean blue.

Solid color lab coats will match the worn color scheme.

Plain white T-shirt (no thermal material) is permitted to be worn under scrub tops

In order to maintain a neat and professional appearance, the uniform dress hemline must remain at or below the level of the knee. Due to stretching, bending, and lifting, a pants uniform may be desirable. Also, students are expected to wear appropriate undergarments.

White, leather uniform or tennis shoes with **NO** accenting colors are to be worn. Canvas shoes are not permissible. Students should wear white socks and footies are not permissible.

Costume jewelry is not to be worn with the uniform. A watch, wedding rings, and one additional ring, and small earrings are permissible. Hoop and dangle earrings are not permissible. Two earrings per ear are permissible. No visible body-pierced jewelry other than earrings is permissible. One short necklace is permissible, but bracelets are not permissible. No visible tattoos are permissible. Earplugs are not permissible.

Cosmetics should be worn with discretion. If fingernail polish is worn, it should be pastel in color with fingernails short in length (1/4") for safety purposes and should not be cracked or peeling. Artificial nails are not permissible to maintain compliance with JCAHO standards and CDC recommendations. If perfume is worn, it should be lightly scented due to the fact that it can be objectionable to the patient.

Hair must be tied back at all times. Large hair bows or ribbons, and extreme hair styles and colors are considered unprofessional and are not permissible.

Students are required to take necessary care of all personal hygiene. Male students are to be clean-shaven or have a neatly-groomed beard or mustache of reasonable style.

Name badges and dosimeter are to be visibly worn **AT ALL TIMES** while at the clinical site. Failure to have these during clinical education will be a verbal warning for the first offense and an incident of absence for subsequent violations. It is at the discretion of the RAD clinical instructor and/or RAD faculty to send the student home or modify the clinical rotation.

The following are considered unprofessional and are not allowed: gum chewing, socks with color, and rolled-up pant hems.

Failure to follow the established dress code will result in an advisement for the first offense. On the second offense, the student will receive a verbal warning, be sent home, and receive an overall clinical grade reduction of two percentage points. On the third offense, the student will receive a written warning, be sent home, and receive an overall clinical grade reduction of five percentage points. A fourth offense will result in dismissal from the RAD program.

## LIABILITY INSURANCE

It is necessary for each student to purchase liability insurance while in the RAD program. This is obtained through a group policy with Maginnis and Associates. The premiums are paid each fall quarter during registration and cover the student for the next consecutive twelve months.

## RADIATION MONITORING & RADIATION PROTECTION

All students are required to wear their dosimeter whenever they are in the Radiology Department or RAD laboratory. Any student present without his or her dosimeter will be required to leave, get their badge, and return to the clinical area. An incident of absence will be assigned for the time away from the clinical affiliate.

Each student is responsible for his or her badge. If the dosimeter is lost, the student will not be allowed to continue your clinical experience until a new badge is issued. This could result in considerable loss of clinical time.

Dosimeters should be worn at the level of the collar. When a lead apron is worn, the dosimeter should be worn at the level of the collar, outside of the lead apron.

During clinical time, students ARE NOT permitted to hold patients during routine radiographic procedures. The holding of patients leads to excessive ionizing radiation exposure, and could lead to dismissal from the RAD program.

## REPEAT RADIOGRAPH POLICY

Any radiograph that requires repeating must be done with **direct supervision** of the clinical instructor or other registered radiographer. It is the student's responsibility to notify a technologist of the repeat and have the technologist assist with the repeat radiograph. If no technologist is available, the student **SHALL NOT** repeat the radiograph until a technologist becomes available to assist with the repeat radiograph.

The purpose of this policy is to protect the patient from unnecessary radiation exposure that may occur if a student repeats the same mistake several times.

## GENERAL POLICIES AND PROCEDURES

### RAD CLUB

The purpose of the RAD Club is to support the profession of radiologic technology by increasing public knowledge of the RAD program. Another underlying purpose of the Club is to raise funds to help defray the cost of student attendance to educational conferences. The Club is presided by the President of the sophomore class. The duties of the President including conducting the business of the meetings, scheduling meetings, attending Student Senate meetings, informing RAD students of the business of the Student Senate, informing the Student Senate of the business of the RAD Club, informing RAD faculty of the business of the RAD Club, and delegating responsibilities as appropriate to RAD Club members. During fall quarter, the members of the RAD Club must elect a Treasurer. The responsibility of the treasurer is to maintain accurate records of Club financial transactions and to make those appropriate transactions with the Zane State College Business Office under the direction of the Program Director.

### ATTENDANCE AT EDUCATIONAL MEETINGS

Continuing educational activities are an important component of any education. It provides a means to meet other students and technologists who share the same interest to our profession. It also helps to keep us up to date in new technologies and procedures and develop a sense of commitment to our profession. Students are encouraged to enjoy themselves and act in a responsible manner consistent with high ethical and moral standards. The following rules have been established to provide guidelines for student attendance at educational meetings held outside the College:

1. All educational time incurred during educational meetings will be credited as hours of educational experience time (ET).
2. The student is granted compensatory time off school (ET) at the rate of one hour of educational time equal to one hour of program experience. However, the educational time will only be granted if the educational meeting occurs outside of the student's regularly scheduled didactic or clinical time. If the student attends an educational meeting during clinical hours, he/she will not receive ET.
3. To be granted educational time off, the student must request time off 24 hours in advance, in writing with reference to the amount of ET requested on the specific date and time to be used. All requests must be approved by the Program Director.
4. Educational meeting time must be verified by program faculty within 48 hours of meeting attendance to receive ET credit unless otherwise indicated. The Program Director maintains a record of each student's educational meeting attendance for the purpose of administering ET.

5. To receive credit for an educational meeting, the student may be required to submit a brief written synopsis of each session attended. The synopsis is to be delivered to the Program Director within two days of the educational session unless otherwise indicated.
6. All expenses are the sole responsibility of the student, to include meals, lodging, transportation, registration, and other travel costs. Students may work through the RAD Club to raise funds to off-set the cost of attendance.
7. All students are eligible to attend the educational meetings. However, prior approval for attendance must be secured from the Program Director.
8. Use of RAD Club funds to attend approved educational activities (OSRT, RSNA, ASRT) would require meeting the following guidelines:
  - a. Attendance is required to 50% of the sessions during non-clinical time and 100% of the sessions during regularly scheduled clinical time.
  - b. Reservations for hotel rooms will only be made for students attending sessions the following day.
  - c. Violations of these guidelines for use of RAD Club funds may result in one or more of the following:
    1. Financial reimbursement to the RAD Club.
    2. Banning from future meetings.
  - d. Extenuating situations will be taken into consideration.

### RAD LABORATORY POLICY

The RAD Laboratory is located in H314, Health Science Hall.

The radiation source in this room consists of the radiographic tube. In addition, secondary radiation emitted from the phantom and x-ray table are potential sources of x-radiation exposure to the operator.

The potential biological effects of x-radiation exposure include genetic alteration (chromosome damage) and slight increased risk of cancers, particularly leukemia. X-radiation exposure to the embryo/fetus represents greater sensitivity to x-radiation exposure than the adult.

X-radiation exposure will be minimized in room H314 by adhering to the following:

1. The energized Radiologic Technology Laboratory will only be used under the supervision of a qualified RAD instructor. The room is to be secured and locked when not in use or when prior arrangements are made with RAD faculty.
2. All persons in room H314 during an x-ray exposure should be monitored with a dosimeter. These must be worn at the level of the collar and outside any protective apparel. A pregnant student or employee will be monitored at the collar and at the waist to measure radiation exposure to the fetus.

3. Dosimeter reports will be maintained in the laboratory. Students or employees who receive 125 mrem or more in a three month period of radiation monitoring will be required to document activities which may have resulted in this exposure. Incidents of overexposure (i.e., greater than 5,000 mrem/calendar yr.) will be reported to the Director of the Ohio State Bureau of Radiological Health by the RAD Program Director.
4. All persons in room H314 during an x-ray exposure will be positioned behind a protective barrier wall.
5. The door to room H314 will be closed and locked during any x-ray exposure.
6. X-ray exposures will be minimized by proper maintenance of the x-ray generating equipment and processing equipment. A technique chart for the phantom exposures will be available for consultation.
7. X-ray exposures will be made only for reasons consistent with a class assignment. Assignments will be limited to the number of radiographs necessary to fulfill the educational objectives.
8. Under **NO** circumstances will human tissue be radiographed using this radiographic equipment.
9. Following any laboratory activity, the radiation emitting equipment will be turned off at the breaker and the processor shut down.
10. The safe operating procedures are posted on the H314 bulletin board.
11. The State of Ohio "Notice to Employees" is posted on the H314 bulletin board.

#### GENERAL BEHAVIOR - PROFESSIONAL ETHICS

The student is responsible for his/her behavior as both an individual and as a member of the group. Rules of behavior which are endorsed as appropriate according to high social, ethical, and moral standards are expected to be followed. As a consequence, the student is held responsible for any acts which may violate these standards. The following rules have been established to provide guidelines for proper, professional conduct:

The student is expected to conduct himself/herself in a professional manner at all times while in the College, hospital, or while participating in program functions.

The student is expected to be courteous to patients, staff, visitors, faculty, and other students. When speaking to or about a patient, the name of the patient should be used, unless circumstances dictate otherwise.

The student is expected to be cordial and congenial to all patients. Solicitation or acceptance of tips from patients or hospital visitors is prohibited.

Visiting with a patient during clinical hours is not permitted. Friends who are hospital patients should be visited according to hospital regulations.

The student is to consider the affairs of patients, the RAD program, the College, and the hospital, confidential. Such matters are not to be discussed with other students, staff, family, faculty, or friends.

Sleeping during clinical or didactic hours is unacceptable.

Students should act as responsible adults. Cheating may result in dismissal from the program.

Telephone calls to the hospital radiology department are to be answered promptly with identification of the department, area, and the individual answering the telephone. All messages should be taken in writing.

Personal telephone calls are not to be made or received while in the hospital, except in the case of an emergency. Cell phone (talking, texting, browsing, ect.) use during clinical hours is strictly prohibited.

All unusual incidents concerning hospital patients, visitors, staff, etc. must be reported to the Clinical Instructor and supervisor and the proper incident form must be completed and a copy given to the Program Director.

The following are considered examples of severe, inexcusable behavior which may result in immediate dismissal from the program:

Deliberate damage to College, hospital or other's property

Stealing

Physical assault of another individual

Conviction of a felony

Indecent or lewd conduct

Carrying a weapon on College or hospital premises

Falsification of any information to the hospital or College

Smoking in hazardous areas

Consumption of intoxicants while on College or hospital property or attempting to perform duties while under the influence of alcohol or other drugs

Falsification or misuse of College or hospital records

Working beyond the appropriate duties of a student

Drug dealing or attempted drug dealing

Excessive absenteeism/tardiness

It is impossible to compile a complete summary of misconduct that requires disciplinary action. The Program Director is responsible for interpreting the rules of conduct, and any questions in this area should be addressed to the Program Director.

Failure of the student to abide by general rules and regulations will result in disciplinary action. If disciplinary action is taken, the student will be advised of this action in private consultation with the RAD faculty. The action will be documented in the student's record file and the student will be asked to sign the document to indicate their awareness of the action.

### COMMUNICATION OF CONCERNS

Should a student have concerns about the Zane State College RAD program's adherence to the Standards of the Joint Review Committee on Education in Radiologic Technology (JRCERT), the student may report those concerns to the JRCERT at:

JRCERT  
20 N. Wacker Drive, Suite 2850  
Chicago, IL 60606-3182  
Phone: (312) 704-5300

Zane State College  
RAD Program  
Grievance Policy

Any grievance or concern regarding the Zane State College Radiologic Technology program must be made in writing review. Students must adhere to the following channels and timelines when addressing grievances or concerns involving the Radiologic Technology Program.

- Step 1: Discuss the complaint with RAD faculty and/or the clinical instructor, as appropriate.
- Step 2: If dissatisfied with Step 1, file a written complaint or grievance with the RAD program director. This must be done within thirty (30) days after the date of the occurrence. If the incident or occurrence involves a clinical rotation site, the complaint must be made to the RAD clinical coordinator. The RAD Program Director or the RAD Clinical Coordinator must respond within thirty (30) days upon receipt of the written grievance.
- Step 3: If still not satisfied, a letter should be addressed to the Academic Dean of Health, Public Service & Service Related Programs within thirty (30) days of the date after the RAD faculty reply. The letter should clearly detail the steps which have already been taken and contain the facts of the grievance. A request for a hearing before the Academic Dean of Health, Public Service & Service Related Programs should be included. The Academic Dean of Health, Public Service & Service Related Programs will schedule a hearing with the student within thirty (30) days of the request.
- Step 4: Upon considering information provided at the student hearing, the Academic Dean of Health, Public Service & Service Related Programs shall make a decision regarding the formal grievance. This decision shall be made within thirty (30) days of the student's formal hearing with the Academic Dean.
- Step 5: If still dissatisfied with the decision, the student may address the grievance with the Vice President for Academic and Student Services. This should be done in accordance with the Zane State College Grade Appeals and Academic Complaints Policy outlined in the college catalog.

Should a student have concerns about the Zane State College RAD program's adherence to the Standards of the Joint Review Committee on Education in Radiology Technology, the student may report those concerns to the JRCERT at:

JRCERT  
20 N. Wacker Drive, Suite 2850  
Chicago, IL 60606-3182  
Phone: (312) 704-5300

## **DRUG PREVENTION POLICY**

### **1. PROFESSIONAL STANDARDS OF CONDUCT**

In order to prepare the student for his/her chosen career field, the Division of Health, Public Service and Service Related Programs recognizes the need to adopt specific policies which reflect the standards of practice within the various professions. Many helping and service professions support the belief that the use and/or being under the influence of intoxicants is a barrier to effective professional performance. It is also a belief that use and/or being under the influence of intoxicants jeopardizes the safety and well being of individuals served by health and public service professionals. Students are held responsible for knowing the standards of practice within their respective technologies.

### **2. LEGAL STANDARDS OF CONDUCT**

The unlawful manufacture, distribution, dispensing, possession, use of or being under the influence of illicit drugs and/or alcohol is prohibited on Zane State College property or as any part of College activities.

### **3. LEGAL SANCTIONS FOR THE UNLAWFUL POSSESSION OR DISTRIBUTION OF ILLICIT DRUGS AND ALCOHOL**

A number of state and local laws exist concerning the unlawful possession or distribution of illicit drugs and alcohol. The individual student is held responsible for knowing the laws and abiding by them.

### **4. DESCRIPTION OF HEALTH RISKS**

All students need to be aware of the risks inherent with alcohol and/or drug abuse. The College will have a number of health-related brochures distributed throughout the facilities.

### **5. DISCIPLINARY SANCTIONS**

All students within the Division of Health, Public Service and Service Related Programs must know and abide by the **LEGAL AND PROFESSIONAL STANDARDS OF CONDUCT** outlined above. If a student demonstrates evidence of use of a prohibited substance during classroom or laboratory instruction or during clinical practice that student will be subject to disciplinary actions. Those actions may include but not be limited to the following:

First incident during classroom laboratory.

- A. The student will be dismissed from the immediate class.
- B. The student will meet with program faculty and receive a verbal warning.
- C. Notation of the incident will be made in the student's technical program file.

Second incident during classroom laboratory.

- A. The student will be dismissed from the immediate class and the remainder of his/her technical lab classes for one (1) week.
- B. The student will meet with the program faculty and receive a written reprimand.
- C. Notation of the incident and reprimand will be made in the student's technical program file.

Third incident during classroom laboratory.

- A. The student will be dismissed from the immediate class and all technical courses for the remainder of the quarter and consequently from the technical program.
- B. The student will be referred for evaluation and subsequent treatment of chemical dependency.
- C. The student may reenter the technical program only after providing evidence of evaluation, treatment as necessary and being "clean and sober".
- D. The student will be expected to sign a letter of agreement stipulating the conditions of readmission.
- E. Notation of the incident will be made in the student's technical program file.

Actions taken for those incidents occurring during clinical practice may include but not be limited to the following:

First incident during clinical practice.

- A. The student will be removed immediately from the clinical experience and suspended from clinical practice until he/she is exonerated by testing for the presence of chemicals and/or evaluation for chemical dependency according to the policies and procedures of the clinical site and/or Zane State College.
- B. If exonerated by testing, the student may return to clinical practice.
- C. If testing and/or evaluation reveals the presence of chemicals and/or chemical dependency, the student may not return to the clinic until treatment has been completed and appropriate documentation validates the student is "clean and sober".
- D. The student will be expected to sign a letter of agreement stipulating the conditions of return to the clinic.
- E. The student may be permitted to attend technical classes during the treatment period.
- F. Notation will be made in the student's technical program file.

A second incident during clinical practice will result in immediate dismissal from the clinic and all technical program courses. The student may petition for readmission to the program after a two (2) year waiting period and documentation that he/she is "clean and sober".

In extreme cases where the individual student's behavior has had direct or indirect negative impact on a client/patient, a clinical site employee, or another student, the faculty and administration of Zane State College reserve the right to move to immediate dismissal from the program, college, or take legal action against the offending student.

As a result of any criminal drug statute conviction, the student must notify the College of the violation. The College, within 30 days of such notification, is required by Federal law to:

- A. take appropriate action against such student, up to and including dismissal; and/or
- B. require such student to participate satisfactorily in a drug treatment or rehabilitation program approved for such purpose by a Federal, state or local health, law enforcement, or other appropriate agency.

### DISCIPLINARY PROCESS

Each student in the RAD Program is required to abide by the policies and procedures outlined in the following:

- 1. Zane State College Catalog and Student Handbook,
- 2. Radiologic Technology Student Handbook, and the
- 3. Clinical Education Center Policy and Procedures Manual(s)

Disciplinary action will be taken against a student in the Radiologic Technology program for the following reasons:

- 1. Failure to comply with the policies and procedures of the College, program and/or clinical education center.
- 2. Failure to abide by the A.S.R.T. Code of Ethics (to be distributed in RAD 100).

The disciplinary procedure is as follows:

#### I. WARNINGS

- A. Minor Violation: Verbal Warning

A RAD program faculty member will talk to the student, remind them of correct behavior, and answer questions which the student may have about the incident. Documentation will be placed in the student's permanent file and a copy given to the student.

- B. Major Violation: Written Warning

If the major violation is a violation of the repeat policy or has endangered the safety and well being of a patient, co-worker or employee or fellow student, more severe disciplinary action on the first occurrence may be incurred.

#### II. SUSPENSION

Repetition of a major violation or continued repetition of a minor violation warrants a suspension. A suspension period of 1-5 days and two incidents of absence will be incurred. The student will be required to make up any didactic assignments to the satisfaction of the instructor.

A written report will be completed by the program faculty member, signed by the student as recognition of discussion of the event, and the length of suspension will be determined. The report will be maintained in the student's permanent file and a copy given to the student. The student may also be required to attend counseling sessions at Zane State College.

A RAD program faculty member will document the event, discuss it with the student, and place the documentation in the student's permanent file and give a copy to the student. Repetition of a minor violation is considered a major violation. Students violating RAD program policy may be required to meet with Zane State College Student Success Center counselor to correct or improve undesired behavior.

### III. DISMISSAL

Repeated failure to abide by the policies and procedures or an extreme violation of general, acceptable behavior as discussed earlier will result in dismissal from the program. The faculty reserves the right to request the withdrawal of any student whose integrity, health, or conduct is in conflict with the ethical standards of the profession of Radiologic Technology. A full report will be completed, signed by the student and the faculty and maintained in the student's permanent file and a copy given to the student. Students have the right of appeal as outlined in the RAD Student Handbook and Zane State College Catalog and Student Handbook.

## CURRICULUM FOR RADIOLOGIC TECHNOLOGY

<u>CRSE No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>CRSE No.</u>	<u>Course Title</u>	<u>Credits</u>
<u>SUMMER QUARTER (1)</u>			<u>SUMMER QUARTER (5)</u>		
BIO 240	Anat. & Phys. I*	4	COM 261	Public Speaking	4
BIO 241	Anat. & Phys. I Lab*	1	RAD 204	Rad. Imaging & Processing*	3
RAD 100	Intro to Med Imaging*	2	RAD 230	Directed Practice IV*	4
ENG 150	Freshmen Comp.	5			11
HLT 121	Medical Terminology*	3	<u>FALL QUARTER (6)</u>		
IDS 101	College Success Strat.	1	RAD 215	Phar. In Med Imaging*	2
		16	RAD 231	Directed Practice V*	4
<u>FALL QUARTER (2)</u>			SOC 101	Intro. to Sociology	4
BIO 242	Anat. & Phys. II*	4	HLT 250	Cross Sectional Anat*	2
BIO 243	Anat. & Phys. II Lab*	1			12
ENG 180	Technical Writing	4	<u>WINTER QUARTER (7)</u>		
RAD 121	Rad. Procedures I*	4	RAD 202	Rad. Pathology*	2
RAD 130	Directed Practice I*	3	RAD 203	Radiobiology/ Radiation Protection*	3
		16	RAD 210	Rad. Image Analysis*	3
<u>WINTER QUARTER (3)</u>			RAD 232	Directed Practice VI*	4
MTH 115	College Algebra*	5			12
RAD 122	Rad. Procedures II*	4	<u>SPRING QUARTER (8)</u>		
RAD 131	Directed Practice II*	3	RAD 211	Medical Imaging Ethics & Law*	2
		12	RAD 212	Allied Imaging Modalities*	2
<u>SPRING QUARTER (4)</u>			RAD 233	Directed Practice VII*	4
CPT 105	Intro. to Microcomp. Software Appls.	3	RAD 299	Preparation for Role Transition*	3
RAD 124	Adv. Rad. Procedures*	4	SOC 206	Cultural Diversity	4
RAD 132	Directed Practice III*	3			15
RAD 105	Rad. Equip. & Prod.*	4	<b>TOTAL CREDIT HOURS</b>		
		14	<b>108</b>		
<u>General Electives</u>			<u>Other Recommended Courses</u>		
BUS 153	Consumer Econ.	3	HLT 105	The U.S. Health System	
COM 122	Interpersonal Comm.	3	CHM 101	Chemistry I	
GEO 161	US Geography	3	CHM 102	Chemistry II	
HUM 101	Leadership Develop. Studies	3	HLT 102	Rad. Protection for the GXMO	
IDS 203	Intro. to Ethics	3	HLT 173	Diseases and the Disease Process	
PSY 101	Life Skills for Women	3	HLT 141	First Aid	
PSY 217	Social Psychology	3	HLT 151	Patient Contact & Public Relations	
SOC 218	Social Problems	3	MTH 227	Statistics	
			MTH 124	Algebra & Trigonometry I	

\* denotes those courses that the student must earn a grade of 'C' or better.

## ADVISORY COMMITTEE

The prime, overall direction and guidance for the RAD program is achieved through the Advisory Committee and its subcommittees. This committee essentially establishes all policies and procedures, modifies the curriculum, identifies program goals, strengths and weaknesses, and determines methods of program improvement. In general, the committee usually meets two times per year and includes the following members:

RAD Faculty Members  
RAD Clinical Instructors  
Clinical Site Radiology Department Administrators  
Clinical Site Radiology Department Chief Technologists/Supervisors  
Two Radiology Administrators and/or Educators from the community  
RAD Club President or Sophomore RAD Student

## PROFESSIONAL ORGANIZATIONS

Students are encouraged to join professional organizations which promote continuing education and provide a diverse learning experience through meetings. Students are urged to become members of the following organizations:

### OHIO SOCIETY OF RADIOLOGIC TECHNOLOGISTS

The state professional organization presents an Annual Educational Meeting each spring, as well as various seminars throughout the year. Members of the O.S.R.T. receive a newsletter six times per year. Students are eligible to run for the office of Student Trustee during their first year in the RAD program. Students must recognize this as a professional activity and abide by the Code of Conduct or disciplinary action may be taken.

### AMERICAN SOCIETY OF RADIOLOGIC TECHNOLOGISTS

This is a national professional organization. A bimonthly professional journal is published by the A.S.R.T. which contains topics of interest for radiographers and students. The A.S.R.T. holds an annual meeting at various locations throughout the United States and this society offers benefits such as insurance policies and monetary loans available to members at reasonable rates.

## THE AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS

The A.R.R.T. is a national certifying organization for the radiologic technology profession. Registration is not presently a mandatory prerequisite to practice as a radiographer, but it is a nationally recognized accomplishment required by most health care institutions. It is usually a condition for employment and is usually required for any professional advancement. All graduates of the Zane State College Radiologic Technology program are eligible to apply to sit for the registry examination upon graduation and are employable as registry-eligible radiographers until registered.

Applications to the A.R.R.T. are made prior to graduation to sit for the examination. Graduates will apply for the administration of the examination during spring quarter and take the exam following the graduation date. The application materials will be discussed and distributed as part of RAD 299.

**ZANE STATE COLLEGE**  
**Radiologic Technology Program**

**Concerns not addressed through College due process or other policies**

An occasion may arise in which a concern is made regarding an aspect of the Radiologic Technology Program that does not fall within the realm of the College's due process procedures or academic appeals process. Sources of such concerns may be clinical education sites, employers of graduates, or members of the public. When such a concern is brought to the attention of the program director, other program faculty, the division dean, or other institution administrators, the concern will be recorded by the program director on the program's Concern Form. Pertinent information and communications will be documented to include suggestions by parties involved for appropriate responses. A follow-up schedule to include the people who will receive further communication will be identified. Subsequent efforts and communication leading to a resolution will be attached to the form. All documentation will be kept on file in the RAD Program Director's office with copies provided to other administrators as deemed appropriate.

**ZANE STATE COLLEGE**  
**Radiologic Technology Program**  
**Concern Form**

Person initiating the concern \_\_\_\_\_

Date \_\_\_\_\_

Relationship with the college/program:

Description of the concern (include dates, description of incident/s):

Suggestions for response to concern:

Follow-up schedule and contacts:

Signatures (as appropriate):

Initiator: \_\_\_\_\_

Program Representative: \_\_\_\_\_

College Representative: \_\_\_\_\_

Other(s): \_\_\_\_\_

\_\_\_\_\_

(attach additional or subsequent documentation)

## CLINICAL COMPETENCY EDUCATION

### DEFINITION OF TERMS

1. OBSERVE  
The student can watch a radiographer perform a radiographic examination.
2. ASSIST  
The student can help the radiographer in performance of a radiographer examination in a manner determined by the radiographer, without actually performing the examination (i.e., bring patient into room, etc.)
3. PARTICIPATE  
The student will take part or have a part in the examination.
4. PERFORM  
The student conducts a radiographic examination under the direct supervision of the radiographer.
5. DIRECT SUPERVISION  
A registered radiographer is present with the student in an ionizing radiation room, or with an energized mobile unit.
6. INDIRECT SUPERVISION  
A registered radiographer is present in the radiology department or is readily available for guidance, but not necessarily with the student in the ionizing radiation room.
7. RADIOGRAPHIC EXAMINATION  
This consists of a series of radiographs of an anatomical region, sufficient to permit diagnostic evaluation of that region.
8. CATEGORY  
A series of related radiographic examinations which demonstrates a specific area of the human body, (i.e., upper extremities), or group of studies.
9. COMPETENCY  
The student is able to perform radiographic examinations under indirect supervision and assume those duties and responsibilities as described by the clinical goals and objectives.
10. COMPETENCY EVALUATION  
Procedure by which the student's performance and the resulting radiographs for a specific examination are evaluated.
11. FINAL COMPETENCY EVALUATION  
Procedure by which the student's overall performance in all categories is evaluated. This consists of the performance of one examination from seven categories, chosen at random.
12. CLINICAL INSTRUCTOR  
A registered staff radiographer that has been trained to evaluate the student within the boundaries of the Clinical Competency-based Plan.
13. SIMULATION  
The student performs the radiographic examination on a person other than a real patient for a competency evaluation. This will be done limitedly and at the discretion of the clinical instructor or faculty member.

## CLINICAL COMPETENCY-BASED EDUCATION OVERVIEW

The implementation of a competency-based evaluation system conducted with a series of planned clinical rotations provides a standardized format for evaluation of the student in the clinical setting. In addition, the system is designed to allow each student to progress at an individual rate consistent with their abilities, knowledge, and motivation. However, minimum performance standards must be met to demonstrate satisfactory progress through the Directed Practice courses.

The didactic and laboratory aspects of the curriculum are well integrated with Directed Practice assignments to allow each student the opportunity to achieve program goals and objectives in the optimum manner. Concurrent didactic and directed practice experiences allow students to apply theoretical principles to the clinical situation in a systemic and organized manner. To achieve a meaningful and productive clinical experience, the student is provided with behavioral objectives which specify desired behaviors to be demonstrated in all areas of directed practice instruction. As the student masters the didactic and laboratory objectives, he/she applies these principles in the clinical setting, guided by the clinical objectives for each Directed Practice course.

### ATTAINMENT OF CLINICAL COMPETENCY

The student begins the clinical experience by observing and assisting the registered radiographer in the performance of radiographic examinations. This experience serves to familiarize the student with the care and radiography of patients for a given radiographic examination. Once the student masters the examination as taught in Radiographic Procedures I - III, he/she moves from a passive role to one of active participation, thus allowing "hands on" experience in the performance of procedures. These radiographic examinations are performed under the direct supervision of registered radiographers in each given category.

After a period of four weeks following classroom instruction or after passage of the laboratory practical on each examination, the student can be evaluated on the procedure by the clinical instructor, faculty member, or clinical evaluators. The evaluations are termed **Competency Evaluations** and the student must obtain the minimum number specified for each quarter. No more than two Competency Evaluations may be carried over from quarter to quarter in order to fulfill the requirements of that quarter. No failing competency evaluation may be carried over to the following quarter(s). The student is required to pass 75 percent of competency evaluations on the FIRST ATTEMPT. Failure to comply will result in the student being assigned a letter grade of "D" and dismissal from the RAD program.

Should the student not pass a Competency Evaluation, he or she must successfully perform the failed procedure with a faculty member in the laboratory setting or perform the failed procedure under the direct supervision of the clinical instructors. This is accomplished as circumstances allow, but must occur prior to the end of the quarter.

Upon successful completion of the Competency Evaluation, the student can perform the examination/procedure under indirect supervision. The student demonstrates continued competency on these procedures through a **Competency Maintenance Evaluation**. A specified number of Competency Maintenance Evaluations are required per quarter and the student must meet these specifications in order to pass the Directed Practice. No more than two competency maintenance evaluations may be carried over from quarter to quarter in order to fulfill the requirements of that quarter and no failing competency maintenance evaluations may be carried over to the following quarter(s). Beginning with RAD 131 (Directed Practice II), the student is required to pass 75 percent of competency maintenance evaluations on the FIRST ATTEMPT. Failure to comply will result in the student being assigned a letter grade of "D" and dismissed from the RAD program. No more than one competency maintenance examination may be done in regard to the Ancillary Duties Category. If the student does not complete the required number of Competency Evaluations or Competency Maintenance Evaluations for that quarter, then a grade of Incomplete will be assigned until all requirements are fulfilled. These must be completed by the end of finals week for that particular quarter. **However, a student may not perform repeat radiographs without the direct supervision of a registered radiographer, regardless of direct/indirect supervision status on a given examination/procedure.** Students may only simulate 1 examination per quarter, with the exception of quarters six and seven when two simulations are permitted, and this is at the discretion of the clinical instructor/RAD faculty.

The student continues their progression through the Directed Practice system in the manner previously described. Upon successful completion of all Directed Practice requirements the student requests the **Final Competency Evaluation**. In order to assure each student ample examinations in each category and opportunities to gain proficiency in the performance of the examinations, the Final Competency Evaluation may not be requested prior to the first day of the scheduled graduating quarter in the second year of the program.

One fundamental aspect of a competency-based system is that it allows students to progress at their own rate. However, **it is equally important that the student demonstrate progression in the clinical area.** To accomplish this, the following guidelines suggest a typical rate of competency achievement in the clinical setting:

<u>Freshman Students</u>		<u>Sophomore Students</u>	
<u>Directed Practice</u>	<u># of Completed Categories</u>	<u>Directed Practice</u>	<u># of Completed Categories</u>
I Fall	1	IV Summer	5
II Winter	2	V Fall	6
III Spring	3	VI Winter	8
		VII Spring	9 and Final Competency Evaluation

## THE FINAL COMPETENCY EVALUATION

The Final Competency Evaluation is designed to test the overall clinical performance of the student during their graduating quarter. To accomplish this, the student must successfully complete one randomly chosen examination from a total of seven categories. Not more than one examination/procedure may be simulated on the Final Competency Evaluation for completion. Simulations will be done only at the discretion of the Clinical Instructor and not before the last two weeks of the graduating quarter. The student must successfully complete the Final Competency Evaluation to be eligible for graduation and to apply to sit for the national registry examination given by the American Registry of Radiologic Technologists (A.R.R.T.). The Clinical Instructor and/or RAD faculty member will evaluate at least 50 percent of the Final Competencies.

Upon successful completion of the Final Competency Evaluation, the student will be allowed to perform all examinations under indirect supervision until graduation. During this time, the student will continue to produce at least one Competency Maintenance Evaluation per week. **All repeat examinations must be taken under the direct supervision of a registered radiographer.**

## DIRECTED PRACTICE HOURS

For the majority of the RAD program, the student will be assigned directed practice rotations during Monday through Friday from 7:00 a.m. to 3:00 p.m. During these hours, the student will be assigned to a specific room or radiographic specialty area.

## DIRECTED PRACTICE ROTATIONS

At other times during the two year period, the student will be scheduled for directed practice rotations during non-routine hours. Tentative clinical assignments will be scheduled as follows:

- |  |  |
|--|--|
| I. <u>RAD 130 - Fall</u><br>Office - 2 weeks consecutively<br>Transportation - 2 weeks<br>consecutively<br>Fluoroscopy - 2 weeks<br>IVP - 2 weeks<br>ER/General - 3 weeks                                    | V. <u>RAD 231 - Fall</u> (New Clinical Site)<br>Fluoroscopy - 2 weeks<br>IVP - 1 week<br>OR - 2 weeks<br>Port/General - 2 weeks<br>Ancillary Duties - 1 week<br>Specialities (1 day each in NM,<br>Radoncology, and US)- 1 week<br>CT - 2 week                                     |
| II. <u>RAD 131 - Winter</u><br>Fluoroscopy - 3 weeks<br>IVP - 2 weeks<br>ER/General - 3 weeks<br>Port/General - 2 weeks  | VI. <u>RAD 232 - Winter</u><br>Fluoroscopy - 3 weeks<br>OR - 2 weeks<br>CT - 1 week<br>3-11 p.m. - 1 week<br>Cardiac Cath./MRI/student choice<br>- 1 week<br>Port/General - 2 weeks<br>Mammography elective – 1 week of<br>fluor   |
| III. <u>RAD 132 - Spring</u><br>Fluoroscopy - 3 weeks<br>IVP - 2 weeks<br>OR - 2 weeks consecutively<br>ER/General - 1 week<br>Port/General - 1 week<br>3-11 p.m. – 1 week                                   | VII. <u>RAD 233 - Spring</u><br>OR - 2 weeks<br>Fluoroscopy - 1 week<br>3-11 p.m. - 1 week<br>11 p.m.-7 a.m. - 1 week: Fri., Sat.,<br>and<br>Sunday nights<br>IVP - 1 week<br>Port/General - 2 weeks<br>Student's Choice - 1 week<br>Independent - 1 week (instructor's<br>choice) |
| IV. <u>RAD 230 - Summer</u><br>OR - 2 weeks consecutively<br>IVP - 1 week<br>Fluoroscopy - 3 weeks<br>3-11 p.m. - 1 week<br>Port/General - 2 weeks<br>Doctor's office - 1 day<br>Special procedures – 2 days |  |

## PURPOSE OF NON-ROUTINE DIRECTED PRACTICE ROTATIONS

The general intent of scheduling a student for a non-routine rotation is to provide learning experiences and opportunities not readily available during regularly scheduled directed practice hours. For examples, the student is more likely to play an involved role in radiography of a traumatized patient during an evening rotation. Such experience serves to increase the student's sense of responsibility and self-confidence. The RAD program believes that such non-routine directed practice rotations greatly enhance and compliment the educational process. These non-routine rotations serve to:

1. Acquaint the student in a more direct role with the care, handling, and radiography of traumatized and other non-routine patients.
2. Provide increased opportunity to gain proficiency in performing examinations of a critical/complex nature on an individualized basis.
3. Develop a degree of student independence of thought and action in the performance of duties.
4. Increase student confidence in their abilities through more independent actions.
5. Become familiar with Radiology department protocol that differs from that practiced during routine hours.
6. Develop appreciation of the interdepartmental cooperation necessary for quality patient care.
7. Establish a work ethic and pattern that resembles that of an employable radiologic technologist.

## DIRECTED PRACTICE ADVISING

The Clinical Instructor will counsel the student in regard to their progress and inform faculty of any problems that the student may be having. The student must attend two clinical conferences with the Clinical Instructor to discuss progress and problems; one mid-quarter and one end-of-the quarter.

## STUDENT EVALUATION OF CLINICAL INSTRUCTION

Student feedback about clinical instruction is considered vital to the viability of the evaluation process. At the end of spring quarter the student will complete an Evaluation of Clinical Instruction form for their clinical instructor and any other staff radiographer. This form is designed to assess the radiographer's performance from the student's perspective. These evaluations serve to:

1. Recognize the value of positive clinical instruction.
2. Focus on means of improving the student's clinical experience.
3. Identify any potential problems occurring with the clinical evaluation system.

In addition, the student should feel free to voice any comments or suggestions to the RAD program faculty. The program reserves the right to modify the clinical evaluation system at any time during the year, as the need arises. Student will always be informed in advance of any changes that are pertinent to them.

## DIRECTED PRACTICE GOALS AND OBJECTIVES

The goals of the clinical competency evaluation system are, that under indirect supervision, the student will be able to:

1. Perform any examination/procedure listed on the Radiological Procedures list.
2. Produce technically satisfactory radiographs with minimum radiation exposure and discomfort to the patient.

In order to successfully complete a competency evaluation, the student must meet the following objectives with a minimum composite score of 76%. In order to successfully complete the clinical education, the student must pass a minimum of 75% of attempted competencies and competency maintenances on the first attempt.

1. The student will review the patient requisition.
  - a. Assess the requisition for correct and necessary information.
  - b. Recognize conflicting clinical history and examination ordered.
  - c. Recall the patient's name and age.
  - d. Identify the mode of transportation to the radiology department.
  - e. Recall the date of the exam and the date that the requisition was completed.
2. The student will demonstrate proper room preparation.
  - a. Provide a clean table and/or upright grid device for the patient.
  - b. Maintain an orderly work area.
  - c. Maintain a proper inventory of supplies.
  - d. Ready the radiographic unit (tube, table, console)
  - e. Provide appropriate size and type of cassettes for the exam requested.
  - f. Set the average technique before patient arrival into the room.

3. The student will demonstrate proper patient preparation.
  - a. Introduce themselves to the patient in a courteous manner.
  - b. Select the correct patient for the examination.
  - c. Gown the patient in the manner indicated by the procedure.
  - d. Assist the patient to and from the radiographic room in a safe and courteous manner.
  - e. Maintain the patient's respect and dignity throughout the procedure.
  - f. Converse with the patient in an intelligent, professional manner.
  - g. Communicate procedure instructions to the patient with clarity.
  - h. Obtain and record a precise patient clinical history.
  - i. Question females of child-bearing age about the possibility of pregnancy.
  
4. The student will position the patient using the standard methods employed for each examination.
  - a. Position the patient in the manner described in the radiology department procedures manual.
  - b. Instruct the patient to assume a physical position with concise instructions.
  - c. Position the correct area of interest to be radiographed.
  - d. Maintain patient comfort.
  - e. Remove unwanted articles from the area to be radiographed.
  - f. Complete each examination in an appropriate time as determined by the patient's condition and the student's level of clinical education and experience.
  
5. The student will manipulate all radiographic equipment pertinent to each examination.
  - a. Center the central ray correctly to the part to be radiographed.
  - b. Center the part to the image receptor.
  - c. Correctly angle the central ray.
  - d. Maintain the proper source-to-image receptor distance for each projection.
  - e. Move the radiographic tube from horizontal to/from vertical and correctly move the tube in other directions as needed.
  - f. Utilize all equipment locks to avoid damage to equipment or injury to the patient or self.
  - g. Collimate to the area or part of interest.
  - h. Select the proper size and type of cassette for each projection.
  - i. Employ a grid when necessary.
  - j. Correctly place cassette in table and spot film device.
  - k. Operate all controls on the mobile radiographic unit.
  - l. Operate all fluoroscopic controls in the proper manner.
  - m. Identify each radiograph with 'R' or 'L' or other appropriate marker(s) in the correct location.
  - n. Display patient information in the proper space.
  - o. Place any 'time' markers appropriately on the cassette/radiograph.
  
6. The student will demonstrate correct technical factor manipulation.
  - a. Interpret a technique chart to set the proper exposure factors.
  - b. Set the automatic exposure control device in the proper manner.
  - c. Measure the patient correctly to determine radiographic exposure factors, when applicable.
  - d. Select the correct combination of factors at the control console.
  - e. Adapt the exposure technique for changes in SID, cassette type, pathology, etc., when applicable.
  - f. Establish exposure factors to prevent patient motion.

7. The student will employ proper radiation protection measures for the patient and the operator.
  - a. Use gonadal shielding when appropriate.
  - b. Wear a lead apron and gloves in the presence of ionizing radiation.
  - c. Maximize the distance between the radiation source and self.
  - d. Minimize the time spent in an area of radiation, when appropriate.
  - e. Employ proper technical factors and proper positioning methods to avoid repeat radiographs.
  - f. Shield all patients where appropriate.
  
8. The student will demonstrate proper procedures for making the radiographic exposure.
  - a. Instruct the patient in proper breathing instructions for each projection.
  - b. Observe the patient and the control console during the exposure time.
  - c. Utilize a protective barrier while making the radiographic exposure.
  
9. The student will assess each finished radiograph for adequacy.
  - a. Identify all pertinent anatomical parts visible on the radiograph.
  - b. Determine if rotation of the body part(s) is present.
  - c. Determine if motion is present.
  - d. Describe the adequacy of the exposure factors chosen.
  - e. Describe the overall radiographic quality of the image.
  - f. State if the radiograph is correctly identified and marked.
  - g. Discuss means of improving the radiograph.
  
10. The student will demonstrate the proper elements of communication to dismiss the patient following the radiographic procedure.
  - a. Complete all necessary paperwork, as required.
  - b. Give proper post-procedure instructions, when applicable.
  - c. Dispatch the patient to the proper destination after the examination.
  - d. Transport the patient to the proper destination after the examination, when applicable.
  
11. The student will demonstrate proper procedure when utilizing contrast media.
  - a. Locate syringes, needles, and other supplies, as needed.
  - b. Prepare sterile trays and instruments to avoid contamination.
  - c. Understand contrast media dosage, use, and potential adverse reactions.
  - d. Monitor the patient's condition throughout the procedure.
  - e. State the proper location of emergency equipment pertinent to the examination.

## Radiography Clinical Competency Requirements

The clinical competency requirements include the six general patient care activities listed below and a subset of the 66 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

**Requirements:** Candidates must demonstrate competence in all six patient care activities listed below. The activities should be performed on patients; however, simulation is acceptable (see endnote) if 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, pulse, respiration, temperature)		
Sterile and aseptic technique		
Venipuncture		
Transfer of patient		
Care of patient medical equipment (e.g., oxygen tank, IV tubing)		

**Radiography  
Clinical Competency Requirements (cont.)**

**2. Radiologic Procedures**

**Requirement:** Candidates must demonstrate competence in all 36 procedures identified as mandatory (M). Procedures should be performed on patients; however, up to eight mandatory procedures may be simulated (see endnote) if demonstration on patients is not feasible.

Candidates must demonstrate competence in 15 of the 30 elective (E) procedures. 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 projections 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.

<b>Radiologic Procedure</b>	<b>Mandatory or Elective</b>	<b>Date Completed</b>	<b>Patient or Simulated</b>	<b>Competence Verified By</b>
<b>Chest and Thorax</b>				
Chest Routine	M			
Chest AP (Wheelchair or Stretcher)	M			
Ribs	M			
Chest Lateral Decubitus	E			
Sternum	E			
Upper Airway (Soft-Tissue Neck)	E			
<b>Upper Extremity</b>				
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	E			
Scapula	E			
AC Joints	E			
Trauma: Upper Extremity (Nonshoulder)*	M			

**Radiography  
Clinical Competency Requirements (cont.)**

<b>Radiologic Procedure</b>	<b>Mandatory or Elective</b>	<b>Date Completed</b>	<b>Patient or Simulated</b>	<b>Competence Verified By</b>
<b>Lower Extremity</b>				
Foot	M			
Ankle	M			
Knee	M			
Tibia-Fibula	M			
Femur	M			
Trauma: Lower Extremity*	M			
Patella	E			
Calcaneus (Os Calcis)	E			
Toe	E			
<b>Cranium</b>				
Skull	M			
Paranasal Sinuses	M			
Facial Bones	E			
Orbits	E			
Zygomatic Arches	E			
Nasal Bones	E			
Mandible (Panorex acceptable)	E			
<b>Spine and Pelvis</b>				
Cervical Spine	M			
Trauma: (Cervical Spine (Cross Table Lateral*)	M			
Thoracic Spine	M			
Lumbrosacral Spine	M			
Pelvis	M			
Hip	M			
Cross Table Lateral Hip	M			
Sacrum and/or Coccyx	E			
Scoliosis Series	E			
Sacroiliac Joints	E			
<b>Abdomen</b>				
Abdomen Supine (KUB)	M			
Abdomen Decubitus or Upright	M			
Intravenous Urography	E			

<b>Radiologic Procedure</b>	<b>Mandatory or Elective</b>	<b>Date Completed</b>	<b>Patient or Simulated</b>	<b>Competence Verified By</b>
<b>Fluoroscopy Studies</b>				
Upper GI Series (Single or Double Contrast)	M			
Barium Enema (Single or Double Contrast)	M			
Small Bowel Series	E			
Esophagus	E			
Cystography/Cystourethrography	E			
ERCP	E			
Myelography	E			
Arthrography	E			
<b>Surgical Studies</b>				
C-Arm Procedure	M			
Surgical Cholangiography	E			
Retrograde Pyelography	E			
<b>Mobile Studies</b>				
Chest	M			
Abdomen	M			
Orthopedic	M			
<b>Pediatrics (age 6 or younger)</b>				
Chest Routine	M			
Upper Extremity	E			
Lower Extremity	E			
Abdomen	E			
Mobile Study	E			

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

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.

**ZANE STATE COLLEGE  
RADIOLOGIC TECHNOLOGY  
COMPETENCY EVALUATION**

Student: \_\_\_\_\_ Date: \_\_\_\_\_ Start Time: \_\_\_\_\_  
 Evaluator: \_\_\_\_\_ Finish time: \_\_\_\_\_  
 Examination: \_\_\_\_\_ Room: \_\_\_\_\_ Patient ID No. \_\_\_\_\_  
 Score: \_\_\_\_\_

ACTIVITY	TASKS – Includes but not limited to items listed	MINUS POINTS		COMMENTS
Multiple Attempts	Second attempt _____ Third attempt _____ Fourth or more attempts _____	.4	_____	
		.7	_____	
		1.0	_____	
Review Requisition	Check: PT NAME _____ EXAM _____ Age, Ambulation _____ History _____ Date _____	.6	_____	
		.6	_____	
		.2	_____	
		.2	_____	
		.2	_____	
Room Preparation	Clean table/room _____ Cassettes/grid ready _____ Locate sponges, sandbags, tape _____ Set average technique _____	.3	_____	
		.3	_____	
		.3	_____	
		.2	_____	
Patient Preparation	Introduce self; ask name _____ POSITIVELY IDENTIFY PT _____ Ensure proper gowning of pt _____ Assist pt to room and table _____ Maintain pt modesty _____ Establish rapport with pt _____ Explain exam to pt _____ Obtain & record pt history _____ DETERMINE POSSIBILITY OF PREG _____ ENSURE PATIENT SAFETY AT ALL TIMES _____	.2	_____	
		1.3	_____	
		.6	_____	
		.6	_____	
		.3	_____	
		.2	_____	
		.4	_____	
		.3	_____	
		1.3	_____	
		1.3	_____	
Position Patient	2 minutes per view _____ INSTRUCT PT TO ASSUME POSITION _____ POSITION AREA OF INTEREST _____ CENTER AREA OF INTEREST TO FILM _____ Minimize pressure to injury _____ Explain movements to pt _____ REMOVE RADIOPAQUE OBJECTS _____ PERFORM ALL REQUIRED VIEWS _____	.6	_____	
		1.3	_____	
		1.3	_____	
		1.3	_____	
		.6	_____	
		.2	_____	
		1.3	_____	
		1.3	_____	
Manipulate Equipment	DIRECT CENTRAL RAY TO PART _____ ANGLE CENTRAL RAY APPROPRIATELY _____ Use correct SID _____ Use appropriate object-film dist _____ ALIGN CR AND CASSETTE _____ Use all appropriate locks _____ Position cassette under anatomy _____ Collimate to part _____ USE CORRECT FILM SIZE/SPEED _____ USE CORRECT GRID (OR NONGRID) _____ Immobilize area of interest _____ Correctly position all ID markers _____ UTILIZE ALL COMPUTER SYSTEMS _____	1.3	_____	
		1.3	_____	
		.6	_____	
		.2	_____	
		1.3	_____	
		.2	_____	
		.6	_____	
		.4	_____	
		1.3	_____	
		1.3	_____	
		.6	_____	
		.6	_____	
		1.3	_____	

ACTIVITY	TASKS – Includes but not limited to items listed	MINUS POINTS		COMMENTS
Technique Setting	Measure body part if appropriate _____ Refer to technique chart _____ SET APPROPRIATE TECHNIQUE _____ Adapt technique _____ (pathology, minimize motion)	.2 .3 1.3 .6	_____ _____ _____ _____	
Radiation Protection	USE GONADAL SHIELD AS APPROPRIATE _____ Use lead aprons, gloves as needed _____ Wear film badge _____ ENSURE PROTECTION OF SELF & STAFF _____	1.3 .6 .6 1.3	_____ _____ _____ _____	
Make Exposure	CORRECT BREATHING INSTRUCTION _____ Correct movement instruction _____ Observe pt and control panel _____ Make exposure from protected area _____	1.3 .4 .4 .6	_____ _____ _____ _____	
Evaluate Radiograph	Identify anatomy demonstrated _____ ALIGNMENT OF ANATOMY, TUBE, FILM _____ Evaluate exposure factors _____ Minimal unsharpness _____ Correct ID marker visible _____	.6 1.3 .6 .4 .3	_____ _____ _____ _____ _____	
Dismiss Patient	Complete requisition _____ Document exam completion _____ Give post procedure instruction _____ Transport pt to appropriate loc. _____	.2 .2 .6 .2	_____ _____ _____ _____	
Contrast Media	Contrast media prepared _____ Explain contrast administration _____ Sterile tray prepared _____ Locate emergency equipment _____	1.3 .6 1.3 1.3	_____ _____ _____ _____	

DIFFICULTY LEVEL	SIGNATURES
<input type="checkbox"/> Average Difficult Level <input type="checkbox"/> Above Average Difficult <input type="checkbox"/> Pt unconscious <input type="checkbox"/> Pt unable to maintain position on own strength <input type="checkbox"/> Pt requires immobilization <input type="checkbox"/> Pt care equipment requires adaptation from routine <input type="checkbox"/> Pt requires constant observation due to illness or age <input type="checkbox"/> Pt in soft restraints <input type="checkbox"/> Trauma pt <input type="checkbox"/> Other _____	TOTAL POINTS: _____ (5.0 - _____) 3.8 minimum passing score  STUDENT: I feel confident in performing this procedure without direct supervision. <input type="checkbox"/> Agree <input type="checkbox"/> Disagree  EVALUATOR: This student is competent to perform this procedure without direct supervision. <input type="checkbox"/> Agree <input type="checkbox"/> Disagree

ADDITIONAL COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

STUDENT'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_ EVALUATOR'S SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**ZANE STATE COLLEGE  
RADIOLOGIC TECHNOLOGY  
COMPETENCY MAINTENANCE EVALUATION**

Student: \_\_\_\_\_ Date: \_\_\_\_\_ Start Time: \_\_\_\_\_  
 Evaluator: \_\_\_\_\_ Finish time: \_\_\_\_\_  
 Examination: \_\_\_\_\_ Room: \_\_\_\_\_ Patient ID No. \_\_\_\_\_  
 Score: \_\_\_\_\_

ACTIVITY	TASKS – Includes but not limited to items listed	MINUS POINTS		COMMENTS
Multiple Attempts	Second attempt _____	.4	_____	
	Third attempt _____	.7	_____	
	Fourth or more attempts _____	1.0	_____	
Review Requisition	Check: PT NAME _____	.6	_____	
	EXAM _____	.6	_____	
	Age, Ambulation _____	.2	_____	
	History _____	.2	_____	
	Date _____	.2	_____	
Room Preparation	Clean table/room _____	.3	_____	
	Cassettes/grid ready _____	.3	_____	
	Locate sponges, sandbags, tape _____	.3	_____	
	Set average technique _____	.2	_____	
Patient Preparation and	Introduce self; ask name _____	.2	_____	
	POSITIVELY IDENTIFY PT _____	1.3	_____	
	Ensure proper gowning of pt _____	.6	_____	
	Assist pt to room and table _____	.6	_____	
	Maintain pt modesty _____	.3	_____	
	Establish rapport with pt _____	.2	_____	
	Explain exam to pt _____	.4	_____	
	Obtain & record pt history _____	.3	_____	
	DETERMINE POSSIBILITY OF PREG _____	1.3	_____	
ENSURE PATIENT SAFETY AT ALL TIMES _____	1.3	_____		
Position Patient	2 minutes per view _____	.6	_____	
	INSTRUCT PT TO ASSUME POSITION _____	1.3	_____	
	POSITION AREA OF INTEREST _____	1.3	_____	
	CENTER AREA OF INTEREST TO FILM _____	1.3	_____	
	Minimize pressure to injury _____	.6	_____	
	Explain movements to pt _____	.2	_____	
	REMOVE RADIOPAQUE OBJECTS _____	1.3	_____	
	PERFORM ALL REQUIRED VIEWS _____	1.3	_____	
Manipulate Equipment	DIRECT CENTRAL RAY TO PART _____	1.3	_____	
	ANGLE CENTRAL RAY APPROPRIATELY _____	1.3	_____	
	Use correct SID _____	.6	_____	
	Use appropriate object-film dist _____	.2	_____	
	ALIGN CR AND CASSETTE _____	1.3	_____	
	Use all appropriate locks _____	.2	_____	
	Position cassette under anatomy _____	.6	_____	
	Collimate to part _____	.4	_____	
	USE CORRECT FILM SIZE/SPEED _____	1.3	_____	
	USE CORRECT GRID (OR NONGRID) _____	1.3	_____	
	Immobilize area of interest _____	.6	_____	
	Correctly position all ID markers _____	.6	_____	
UTILIZE ALL COMPUTER SYSTEMS _____	1.3	_____		

ACTIVITY	TASKS – Includes but not limited to items listed	MINUS POINTS		COMMENTS
Technique Setting	Measure body part if appropriate _____ Refer to technique chart _____ SET APPROPRIATE TECHNIQUE _____ Adapt technique _____ (pathology, minimize motion)	.2 .3 1.3 .6	_____ _____ _____ _____	
Radiation Protection	USE GONADAL SHIELD AS APPROPRIATE _____ Use lead aprons, gloves as needed _____ Wear film badge _____ ENSURE PROTECTION OF SELF & STAFF _____	1.3 .6 .6 1.3	_____ _____ _____ _____	
Make Exposure	CORRECT BREATHING INSTRUCTION _____ Correct movement instruction _____ Observe pt and control panel _____ Make exposure from protected area _____	1.3 .4 .4 .6	_____ _____ _____ _____	
Evaluate Radiograph	Identify anatomy demonstrated _____ ALIGNMENT OF ANATOMY, TUBE, FILM _____ Evaluate exposure factors _____ Minimal unsharpness _____ Correct ID marker visible _____	.6 1.3 .6 .4 .3	_____ _____ _____ _____ _____	
Dismiss Patient	Complete requisition _____ Document exam completion _____ Give post procedure instruction _____ Transport pt to appropriate loc. _____	.2 .2 .6 .2	_____ _____ _____ _____	
Contrast Media	Contrast media prepared _____ Explain contrast administration _____ Sterile tray prepared _____ Locate emergency equipment _____	1.3 .6 1.3 1.3	_____ _____ _____ _____	

DIFFICULTY LEVEL	SIGNATURES
<input type="checkbox"/> Average Difficult Level <input type="checkbox"/> Above Average Difficult <input type="checkbox"/> Pt unconscious <input type="checkbox"/> Pt unable to maintain position on own strength <input type="checkbox"/> Pt requires immobilization <input type="checkbox"/> Pt care equipment requires adaptation from routine <input type="checkbox"/> Pt requires constant observation due to illness or age <input type="checkbox"/> Pt in soft restraints <input type="checkbox"/> Trauma pt <input type="checkbox"/> Other _____	TOTAL POINTS: _____ (5.0 - _____) 3.8 minimum passing score  STUDENT: I feel confident in performing this procedure without direct supervision. <input type="checkbox"/> Agree <input type="checkbox"/> Disagree  EVALUATOR: This student is competent to perform this procedure without direct supervision. <input type="checkbox"/> Agree <input type="checkbox"/> Disagree

ADDITIONAL COMMENTS: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

STUDENT'S SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

EVALUATOR'S SIGNATURE \_\_\_\_\_

DATE \_\_\_\_\_

## **AFFECTIVE EVALUATION**

1. **ATTENDANCE/PUNCTUALITY**: Consistently prompt and reliable in attendance; ready to start at beginning of shift.
2. **APPEARANCE**: Well groomed; follows appropriate dress code; neat and careful about appearance.
3. **ADAPTABILITY**: Adjusts readily to changes and accepts new situations without complaint; shows poise and control under pressure.
4. **MOTIVATION/INITIATIVE**: Does assigned work well and frequently seeks additional responsibilities; utilizes time effectively; starts assignments without prompting
5. **PROFESSIONALISM/DISCRETION**: Respects confidentiality; respects patients' rights, needs, and diversity; does not participate in gossip; behavior and language are appropriate for clinical setting.
6. **RESPONSIBILITY/ACCOUNTABILITY**: Accepts responsibility for performance; takes steps to correct errors; does not blame others or make excuses.
7. **CONFIDENCE**: Can perform most previously learned tasks without reassurance of abilities; not overly or inappropriately confident.
8. **ATTITUDE**: Accepts criticism without defensiveness; does not act resentful or argumentative
9. **COOPERATIVE/TEAMWORK**: Consistently cooperative; works well with other students; hospital staff and physicians; volunteers to help with other assignments when they are not busy.
10. **JUDGEMENT**: Makes sound, appropriate decisions in all situations using good critical thinking skills according to level of clinical experience.
11. **COMMUNICATION AND INTERPERSONAL SKILLS**: Explains procedures and situations to patients and others appropriately according to their ability to understand; demonstrates compassion for others and adjusts well to personality differences; always courteous and tactful.
12. **DEPENDABILITY**: Carries out all tasks in a timely and conscientious manner with appropriate supervision according to level of education.

**ZANE STATE COLLEGE  
RADIOLOGIC TECHNOLOGY PROGRAM  
AFFECTIVE EVALUATION**

Student _____ Date/Week _____ Area _____ Please consider student's level of clinical experience.	Excellent	Above Average	Average	Below Average	Unsatisfactory	Does not Apply or Did Not Observe	Comments
<u>ATTENDANCE/PUNCTUALITY</u> : Consistently prompt and reliable in attendance; ready to start at beginning of shift.							
<u>APPEARANCE</u> : Well groomed; follows appropriate dress code.							
<u>ADAPTABILITY</u> : Adjusts readily to changes and accepts new situations without complaint; shows poise and control under pressure.							
<u>MOTIVATION/INITIATIVE</u> : Does assigned work well and frequently seeks additional responsibility.							
<u>PROFESSIONALISM/DISCRETION</u> : respects confidentiality, respects patients' rights, needs, and diversity; behavior and language are appropriate for clinical setting.							
<u>RESPONSIBILITY/ACCOUNTABILITY</u> : Accepts responsibility for performance; takes steps to correct errors; does not blame others or make excuses.							
<u>CONFIDENCE</u> : Can perform most previously learned tasks without reassurance of abilities; not overly or inappropriately confident.							
<u>ATTITUDE</u> : Accepts criticism without defensiveness; does not act resentful or argumentative.							

	Does not Apply or Did Not Observe	Unsatisfactory	Below Average	Average	Above Average	Excellent	
Comments							
							<u>COOPERATIVE/TEAMWORK</u> : Consistently cooperative; works well with other students; hospital staff and physicians; volunteers to help with other assignments when they are not busy.
							<u>JUDGEMENT</u> : Makes sound, appropriate decisions in all situations using good critical thinking skills according to level of clinical experience.
							<u>COMMUNICATION AND INTERPERSONAL SKILLS</u> : Explains procedures and situations to patients and others appropriately according to their ability to understand; demonstrates compassion for others and adjusts well to personality differences; always courteous and tactful.
							<u>DEPENDABILITY</u> : Carries out all tasks in a timely and conscientious manner with appropriate supervision according to level of education.