



**Radiologic
Technology Program**

**Student Clinical
Handbook**

2023-2024 Edition

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INTRODUCTION

The purpose of this student clinical handbook is to guide the Radiologic Technology student through all aspects of their clinical training. It provides resource information relevant to this training program as well as the total profession.

The following pages contain program description, clinical standards and policies, record keeping materials related to clinical experience hours, and classifications of studies performed. The goals are well identified for each level of training, and progress evaluation forms are provided. The final section contains a time flow chart and application forms for State certification and National registry.

The total content of this workbook is designed to guide the student toward becoming a well-trained and employable Radiologic Technologist.

All information contained within is the specific responsibility of the Rad Tech student and will be used to direct the student through the clinical phase of the program and successful program completion.

Failure to comply with clinical requirements as outlined in this manual can result in program dismissal.

GENERAL PHILOSOPHY

In keeping with the District policy to provide post high school education for all high school graduates, the Radiologic Technology Program will include the following:

1. Occupational training in the area of Radiologic Sciences. The purpose of this instruction is to qualify the student for examination by the ARRT (American Registry of Radiologic Technologists) and the CRT (California Department of Public Health) and to prepare the student for gainful employment in the field.
2. Clinical experience for each student in the Radiologic Technology Program in a directly supervised radiographic facility such as hospital, radiology office, and imaging center.
3. Guidance program by the instructional staff and the College to assist students, regardless of their background or ability, to gain from the educational experience, to motivate, and to orient to the medical profession and its opportunities.
4. Cooperation with professional associations and related organizations in order to bring in-service or continuing education to the members of the profession, its leaders and its educators.

RADIOLOGIC TECHNOLOGY DEPARTMENT PHILOSOPHY

The philosophy of the Radiologic Technology Department concurs with and evolves from the philosophy of the college and the concept of education as set forth by the American Society of Radiologic Technologists and the Joint Review Committee in Education in Radiologic Technology.

The department has agreed upon the following as the basic foundation for the instructional program:

1. To graduate an appropriate number of students, therefore meeting the needs of the community.
2. To provide a program that reflects current trends in course content and instructional modality, presented in a meaningful sequence.
3. To provide an effective student screening mechanism in order to determine program admission.
4. To perform ongoing evaluation of student performance in both the classroom and clinical area in order to further evaluate their aptitude for the profession.
5. To coordinate didactic and clinical instruction.
6. To provide a structured well-rounded clinical educational experience.
7. To work cooperatively with other radiologic technology programs.
8. To work cooperatively with other Allied Health programs within the division.
9. To graduate students who can satisfactorily function in general diagnostic radiology.
10. To instill the concept of continued education and lifelong learning.
11. To identify the need to participate in the Radiologic Technology organizations at all levels.
12. To prepare the student to function as a member of the health care team.

MISSION STATEMENT

The Mission of the Radiologic Technology program is to prepare qualified medical imaging practitioners, who will support the highest level of ethical patient care, while employing competent technical practices. A commitment to professional growth and life long learning will be developed.

PROGRAM GOALS/ STUDENT LEARNING OUTCOMES:

Goal: Students will be clinically competent and ready to begin a successful career in the Radiologic Sciences.

SLO: Students will be able to perform entry-level radiographic procedures.

SLO: Students will be able to demonstrate radiation safety and ALARA principles.

Goal: Students will be able to demonstrate professional and ethical behaviors

SLO: Students will be able to express the characteristics of providing humanistic health care.

SLO: Students will be able to demonstrate age specific patient care skills.

SLO: Students will be able to demonstrate professional behaviors/professionalism.

Goal: Students will exhibit the communication skills necessary to effectively perform the duties of a Radiographer in a variety of health care environment

SLO: Students will express effective oral communication skills

SLO: Students will demonstrate written communication skills

Goal: Students will demonstrate independent critical thinking skills to solve clinical practice related problems to optimize diagnostic outcomes

SLO: Students will evaluate radiographic images for diagnostic quality

SLO: Students will accurately modify technical factors to produce diagnostic quality images.

PROGRAM STAFF

PROGRAM DIRECTOR: Loren Sachs, RT: (714) 432-5540 (OCC)

CLINICAL COORDINATOR: Kelly Holt, EdD, RT: (714) 432-5757 (OCC)

ADJUNCT FACULTY: Elizabeth Barton, RT; Donna Pierce, RT; Jacquelyn Duley, RT
Anthony Luong, RT; Tim Gibbs, RT

COLLEGE ADMINISTRATION

DEAN, CONSUMER & HEALTH SCIENCES: Christiaan Desmond, EdD.: (714) 432-5531

VP OF INSTRUCTION: Michelle Hillman-Grimes: (714) 432-6350

COLLEGE PRESIDENT: Angelica Suarez, PhD (714) 432-5712

External Agencies

ASRT Executive Office
1500 Central Avenue SE
Albuquerque, NM 87123
(800) 444-ASRT

A.R.R.T. Executive Office
1255 Northland Drive
Mendota Heights, MN 55120
Jerry Reid, Exec. Director
(612) 687-0048

California Department of
Public Health
Radiologic Health Branch
P.O. Box 997414
Sacramento, CA 95899-7414
(916) 327-5106

Joint Review Committee on Education in Radiologic Technology
20 N. Wacker Drive, Suite 900
Chicago, IL 60606
(312) 704-5300

RADIOLOGIC TECHNOLOGY PROGRAM

PROGRAM OPERATION

A. Program Director

The program director must be a full-time faculty member within the program. Required certification by the ARRT and the state (CRT) is mandated. Must be an experienced radiographer with a minimum of five years experience. Must have a baccalaureate degree with a minimum of three years of experience as an instructor. Membership in appropriate professional organizations (ASRT, CSRT, AEIRS, RTEC) is highly recommended.

B. Instructional Staff

Full-time and part-time instructors in the program shall be certified by the American Registry of Radiologic Technologists (ARRT), holder of a current C.R.T., and possess any other District required documentation. They shall have had at least five years experience in radiologic technology. Possess two years experience in radiologic technology with baccalaureate degree or six years with any associate degree.

C. Medical Advisor

The medical advisor shall be certified by the American Board of Radiology. He/she shall be a full-time practicing radiologist in an affiliated hospital with at least five years experience in radiology. They may or may not be a part of the general teaching staff but will consult with and advise the program director.

D. Clinical Preceptor (clinical affiliate)

Clinical educators shall be A.R.R.T. and C.R.T. certified and have two years of professional radiographer experience. As adjunct faculty, they shall work cooperatively with college faculty in the clinical management of assigned students.

E. Curriculum

The curriculum must meet the generally accepted curriculum recommendations by the Joint Review Committee (JRCERT), the American Society of Radiologic Technologists (ASRT) and the California Department of Radiologic Health (RHB).

F. Counseling

It is the responsibility of each of the instructional staff to guide and direct students individually or in groups in industry orientation, job opportunities, and occupational counseling.

Students with identified problems in either classroom or clinical education will be counseled by the entire staff on an individual need basis. Written records of all conferences shall be kept.

Permission for students to waive, substitute, or give final graduation approval or associate degree or certificate is through the Program Director and graduation office in accordance with the college's graduation requirements.

Every graduating student will have his progress reviewed by the Allied Health Counselor or equivalent in the fall semester of the 2nd year and follow the graduation check procedure as directed.

Failure to have all required courses for AS degree completed by the end of the final spring semester will cause the student to be ineligible to sit for the external exam(s).

RADIOLOGY CLUB

1. Each class level has its president/student rep who speaks for the class at the various meetings and functions.
2. Meetings should be student instigated but directed by the faculty club advisor and should be educational in nature and supplement the instructional program.
3. Fund-raising club functions should be promoted to provide funds for identified activities.

SCHOLARSHIPS OR STUDENT GRANTS

1. The Radiologic Technology program scholarships available, specifically for Rad Tech students. These scholarships are offered only to 1st year students who plan to continue into the 2nd year of the program. Scholarship information and applications will be coordinated through the Rad Tech faculty and OCC scholarship office. It is the student's responsibility to submit completed applications within the designated deadlines.
2. Rad Tech students are also eligible for the following scholarships:
 - 1) General scholarships offered through ASOCC.
 - 2) Radiologic technology professional organizations such as American Society of Radiologic Technologists (ASRT). Call ASRT (800) 444-ASRT for further information.

JOB OPPORTUNITIES

Each instructor should assist students in finding jobs where possible and should share student need and placement with other staff.

RADIOLOGIC TECHNOLOGY PROGRAM STANDARDS

No applicant shall be admitted who has not met the academic, physical/mental health, and immunization requirements outlined in the college catalog or as determined by the program.

Applicant must not be under the treatment for substance abuse currently, nor within the six months prior to the date of application. It is the intention of the Coast Community College District to provide an environment that maximizes academic achievement and personal growth. The District recognizes that alcohol and other drug use or abuse poses a significant threat to the health, safety and well-being of users and the people around them. OCC is committed to a drug-free campus so that students and staff can work in a drug-free environment. There are state laws and the College Code of Conduct, which specifically prohibit the use, possession, distribution, or sale of drugs or alcohol on college property or any **college sponsored activity or event**. District policy prohibits the use of alcohol and other drugs on District property regardless of its location. The use of tobacco is also prohibited in all District buildings and vehicles.

The College and program also have a zero tolerance policy regarding the possession or use of any weapon while on campus or during clinical assignments.

Applicant must be able to perform the specific physical manipulative and/or sensory functions as required by the Radiologic Technology program.

Read carefully the following statements identifying the standards appropriate to the profession of Radiologic Technology and sign at the bottom. Your signature certifies your ability to comply with these standards. Failure to comply with these standards can result in program dismissal.

STUDENT RADIOLOGIC TECHNOLOGIST

POSITION SUMMARY: The student radiologic technologist learns how to accurately demonstrate body structures on a radiograph or other receptor by determining proper exposure factors, manipulating medical imaging equipment, evaluating the radiographic image/quality, and providing for patient protection, safety, and comfort during radiographic procedures. The student technologist also assists the physician team member in specialized procedures, which often require the administration of chemical mixtures to the patient for enhanced viewing of the anatomy and physiology of body systems.

ESSENTIAL TECHNICAL STANDARDS AND/OR FUNCTIONS FOR RADIOLOGIC TECHNOLOGY STUDENTS

PHYSICAL DEMANDS

In order to ensure student and patient safety and welfare, the radiologic technology student must be able to:

1. **Stand and/or Walk** in an erect posture for up to 8 hours per day.
2. **Lift** a minimum of 35 pounds from floor level to waist level.
3. **Lift** a minimum of 10 pounds from waist level to shoulder level.
4. **Carry** a minimum of 20 pounds directly on the arms or hands while walking a distance of 100 feet.
5. **Bend or Flex** the upper trunk forward up to 45 degrees, and **Flex** the lower torso into a squatting position.
6. **Rotate** the upper trunk up to 30 degrees to the right or left from a neutral position while standing or sitting.
7. **Reach** a maximum of 72 inches above floor level and/or a full-arms reach.
8. **Push and/or Pull** objects and equipment weighing up to 250 lbs.; i.e., portable x-ray machine.
9. **Manipulate** radiographic and medical equipment and accessories utilizing fingering and/or reaching, pulling, extending.
10. Utilize the sense of **Hearing and/or Lip Reading** to effectively communicate with the patient and health care team.
11. Utilize the sense of **Vision** in all levels of the radiology department or hospital lighting, which varies from low levels of illumination to amber/red lighting to bright light levels.

NON-PHYSICAL DEMANDS

1. **Respond** quickly and appropriately to emergency situations.
2. **Communicate** effectively at all times (both verbally and in writing) with physicians and patients and staff using the English language.
3. **Tolerate** strong, unpleasant odors.
4. **Handle** stressful situations related to technical and procedural standards and patient care situations, so that job performance is not compromised.
5. **Provide** physical and emotional support to the patient during radiographic procedures.
6. **Conduct oneself** in a professional manner, be on time for required clinical assignments, adhere to dress codes, and always maintain a neat and well-groomed appearance, free of body odors, maintaining appropriate hygiene, both in clinical and classroom.
7. **Adhere to** all medico-legal policies related to the administration of radiologic technology.

INTELLECTUAL CAPACITY

Demonstrates the capacity to learn by:

1. Performing radiologic examinations according to clinical objectives.
2. Administering safe patient care.
3. Assessing patient status for performing certain types of radiological examinations, and communicate findings to the appropriate supervisor.
4. Responding appropriately in new and emergency situations.

SPECIFIC PHYSICAL NEEDS

The radiography student must possess the following capabilities:

1. **Self-mobility** with the ability of propelling wheelchairs, stretchers, etc, alone or with assistance as available. The student must be ambulatory and able to maintain a center of gravity when met with opposing force as in lifting, supporting, and transporting a patient. The student must be able to transport patients within the department and in the clinical education center at large.
2. **Visual acuity** that allows the student to (a) distinguish whether the x-ray beam is perpendicular, horizontal, or angled through the anatomical area being examined, (b) perform the required radiography procedures that involve the preparation of contrast agents for introduction into anatomic structures such as syringes or IV bottles, (c) determine the correct dosage of contrast according to product labels, (d) identify the correct patient by reading patient identification arm bands and/or charts, (e) correctly set the x-ray generator controls to obtain optimum diagnostic quality radiographs, (f) perform data entry tasks using digital and computer terminals, and (g) view and evaluate the recorded images for the purpose of identifying proper patient identification, positioning, radiographic technique, And radiographic quality.
3. **Hearing acuity and/or Lip Reading** that is sufficient to communicate with the patients and the health care team. The student must be able to hear and respond to patient questions and directions from department and hospital staff.
4. **Manual dexterity** that allows the student to grasp and manipulate small objects required to perform radiographic procedures and operate radiographic equipment such as locks, beam limiting devices, radiation protection devices, vials, syringes, intravenous systems, catheters, dressings and sterile trays. The student must also be able to properly handle and process radiographic images using automatic processors.
5. **Orally communicate** in English in a voice that is clear and loud enough to be understood by a person in the radiology department in surgery, in the clinical education center at large, or on the telephone.

Applicant Statement:

Having read and understood the above statements, I certify that I have no physical or emotional conditions that would prevent me from performing the above listed standards. I will adhere to the above standards and fully understand that **non-compliance in any one area will result in Program dismissal.**

Applicant's Name (please print)

Student Signature

Date

In accordance with the Americans With Disabilities Act, (ADA) Public Law 101-336, the Orange Coast College Radiologic Technology Program makes every effort to make reasonable accommodation to any qualified individual with a disability. All accommodation requirements will be coordinated with DSPS on campus. The program will not discriminate against any individual because of age, gender, ethnic background, sexual orientation, political affiliation, or disability.

RADIOLOGIC TECHNOLOGY PROGRAM POLICIES THE

PROGRAM FACULTY WILL:

1. Strive to provide meaningful learning experiences to all students.
2. Maintain an ongoing evaluation of the student related to their aptitudes.
3. Freely meet with individual students or groups for any purpose.
4. On an individual basis attempt to guide each student in his/her academic and professional career.

STUDENT RESPONSIBILITIES:

I understand that I must comply with the following standards. If I fail to do so, I am aware that I may be placed on probation or dismissed from the program.

1. Maintain a 2.0 GPA overall.
2. Earn a "C" or better in all required Rad Tech program courses.
3. Classroom/clinical absences must not **exceed four (4) per semester**. Four (4) absences constitute a critical incident report and more than four (4) absences could result in dismissal from the Radiologic Technology program. This includes lecture, laboratory, and clinical classes. Should this occur, students may pursue the grievance process as outlined in the college catalog.
4. Must not accept excessive outside employment, which might jeopardize successful program completion (recommend no more than 20 hrs/wk). Modification of required clinical assignment because of outside employment **will not be permitted**. Outside employment must be so scheduled as not to conflict with clinical schedule.
5. Have a means of reliable transportation to the clinical assignment.
6. Demonstrate continued satisfactory clinical performance, as defined by the clinical instructors/coordinators.
7. Have sufficient communication skills (both verbal and written) to meet all required clinical objectives and to effectively communicate with patients, physicians, and clinical staff.
8. Maintain a satisfactory professional appearance and behavior in the clinical areas.
9. Demonstrate readiness to enter the health care profession as evidenced by emotional maturity, responsibility, and willingness to learn and completion of all program requirements, clinical objectives and competencies.
10. The student will be required to have completed a physical examination and immunization before the first day of clinical assignment. The cost of the physical examination shall be the student's responsibility. The Student Health Center can provide some services to the student.
11. Prior to beginning clinical education:
 - a. Each student will be required to complete an MR Safety/Compatibility Questionnaire in RadT 105 Radiation Safety and to notify the Program of any changes in status regarding MR Safety.
 - b. Successfully complete AI H 115 (Patient Care), RadT 165, Beginning Radiologic Practice, RADT 105 Radiation and Imaging Safety with a grade of 'C' or better.

12. **For successful program completion**, the student must complete the following:

- 1) All clinical objectives including required procedure evaluations for 1st and 2nd year.
- 2) Program required clinical hours.
- 3) All Rad Tech program courses,
- 4) ARRT required core clinical competencies, radiographic exams, and patient care procedures.
- 5) All General Education requirements to meet OCC A.S. degree. These general education requirements must be completed **no later** than the spring semester of the 2nd year of the program in order to be eligible for the required Examinations.

NOTE: No student will be permitted to sit for post program exams until all of the above requirements have been met.

Student Name (print please)

Student Signature

Date

Criminal Background Check

All students are required to complete a criminal background check to start the program. The background check includes, fingerprinting, Social Security number and address verification, DOJ & FBI criminal history, state sex offender and a Medicare/Medical sanctioned fraud list (OIG/GSA search). The background check will be performed by a District approved service. Failure to pass the check can result in program dismissal. The student can pursue the action through the college due process/grievance process.

Confidentiality of Student Records

All records/documentations (classroom and clinical) pertaining to enrolled students will kept be confidential according to program policy. Student information is protected under FERPA law.

Non- work/staffing position statement

Students are not to be considered nor assigned as imaging radiographers during their enrollment in clinical education. **No student is to be utilized in lieu of regularly scheduled staff.**

Compliance statement for Clinical policies and procedures

I declare that I have read all the information contained within the Student Clinical Handbook and will comply with all program policies/procedures. Failure to do so will result in disciplinary action including program dismissal. I have the right to pursue the college due process grievance procedure.

Student Name (print please)

Student Signature

Date

RADIOLOGIC TECHNOLOGY POLICY Pregnancy Policy

Purpose:

To establish guidelines to be followed by pregnant radiation workers (Student Radiologic Technologists.)

Policy: Radiation Safety for Pregnant Student Radiologic Technologists

State Radiation and Nuclear Regulatory Commission Regulations, (available to the student in each clinical affiliate) require that the fetus of a radiation worker not receive a dose equivalent in the excess of 1.5 rem (500 mrem or 5 mSv) during the entire pregnancy. Additionally, these regulatory bodies have urged that the monthly fetal dose equivalent not exceed 0.05 rem (50 mrem) over the course of the pregnancy.

Students are **advised** to declare their pregnancy in writing, to a program official (Director/Clinical Coordinator) as soon after conception as practical. **This is a voluntary declaration and will not affect the student's status within the program.** Upon program notification an additional radiation monitoring device will be ordered. This additional monitoring device is to be worn at the waist level, and inside any lead apron worn. This badge will monitor the fetal dose. The regulatory-issued film badge should continue to be worn at the collar level, outside any lead apron to estimate the worker's head (whole body) dose.

It is important to remember that reduced radiation limits go into effect at the time the pregnancy is declared and not at the time of conception. The program cannot declare the pregnancy for you. You are **not required** to declare the pregnancy, however the radiation safeguards your baby deserves cannot be applied until the pregnancy is **declared in writing.** In addition, you may at any time **withdraw your declaration of pregnancy in writing.**

To assure that fetal dose does not exceed this 50 mrem/month limit, the pregnant student's dosimetry report will be monitored monthly. Should the student request it, modifications will be made to the student's clinical schedule.

Radiologic Technology students who follow proper rules of distance and shielding should never exceed 50 mrem to the abdomen per month. Pregnant student radiologic technologists, if they have not had the following diseases or immunization, should not have contact with patients who have the following:

- | | |
|---|-----------------------------|
| 1. Chickenpox | 3. Measles (Rubeola) |
| 2. Herpes Zoster, Shingles
(if student has not had chickenpox) | 4. German Measles (Rubella) |

These are infections in which there is a definite congenital syndrome that occurs after maternal infection.

The Pregnancy Declaration can be withdrawn at anytime by the student.

I acknowledge that I have received a copy of the Program Pregnancy Policy. My signature signifies that I understand the policy and will follow the guidelines. I understand that pregnancy is not cause for program dismissal, but may require an extension of clinical and/or didactic courses.

Student Name (Print)

Student signature

Date

RADIOLOGIC TECHNOLOGY PROGRAM
Student Declaration of Pregnancy Status

Name: _____ Clinical Site: _____

In signing this form, it is acknowledged that:
The Program officials provided me information regarding fetal radiation exposure. I was given the opportunity to ask questions, which were satisfactorily answered. I understand the total fetal dose **must not exceed** 500 millirem (5mSv). I agree to wear the fetal radiation detection device at the clinical site and during on-campus labs.

I understand the Radiologic Technology Program and my Clinical Affiliate will take such precautions deemed necessary to protect me and the fetus safely from excess radiation exposure during my pregnancy. **I understand that it is my responsibility to take appropriate precautions while in clinical training.**

I understand that pregnancy is not a reason for program dismissal, but may require an extension of clinical and/or didactic courses for reasons of radiation safety.

Declaration:

I **voluntarily declare** that I am approximately _____ months pregnant. Estimated due date is _____. Written proof of pregnancy, including any special considerations required by my physician has been provided to both program director and current clinical educator.

Student Options:

1. Clinical schedules and rotational assignments shall remain unchanged.
2. Written request by student for modified clinical assignment or schedule. Modifications to the **clinical schedule or rotational assignments shall be voluntary**.
3. Voluntarily withdraw from the program and return following pregnancy.

I understand that option #2 may require additional clinical time following my pregnancy.
I understand that option #3 may well be conditional on time away from the program and clinical space available.

If I am in the program when my pregnancy has terminated, I shall notify program officials by completing the bottom portion of this form. **State option selected** (see list above)_____.

Student Name (print please) Student Signature Date

This is to advise the program that I am **no longer** pregnant and no longer need special radiation safety considerations.

Student Name (print please) Student Signature Date

CLINICAL VENIPUNCTURE PROGRAM POLICY

To address the ARRT and Radiation Health Branch, (Calif. Dept. of Public Health) requirements for venipuncture and contrast media administration, Orange Coast College has incorporated venipuncture education into the second year curriculum. With satisfactory completion of this curriculum sequence the student meets the mandate of HSC 106985 and ARRT patient care competencies.

Students will be required to perform a total of 10 successful venipunctures on either phantoms or humans. All students will complete a total of 4 venipunctures in lab before attempting venipuncture on humans. If the student is unable to complete 6 venipunctures on humans they will need to complete the 10 venipunctures in lab.

The requirements for venipuncture clinical experience are:

1. Clinical participation will be permitted **only** if the clinical affiliate has a policy permitting students to perform venipuncture procedures. Otherwise, students will perform venipuncture at an alternate clinical site or in lab.
2. Clinical venipuncture will start after the student has successfully completed the venipuncture orientation.
3. Students **must be under direct supervision** for both venipuncture and the subsequent administration of contrast media.
4. If the student is unsuccessful, after the second stick attempt, the venipuncture procedure must be completed by appropriate health care personnel.
5. Completion of the Student Intravenous Access Record is required to document venipunctures performed:
 - a. Students will use the appropriate documentation required by their respective clinical site to document the venipuncture activity.
 - b. If the student is successful then the venipuncture will be recorded on the Intravenous Access Record, which verifies proficiency for that procedure.
 - c. If the student accumulates more than **3 failed procedures** as documented by the check list, additional attempts to perform contrast administration will be at the discretion of the clinical facility.
6. Adherence to policies:
 - a. The above outlined procedures must be followed for each procedure performed.
 - b. Students can only perform venipuncture for contrast media administration, during a normal scheduled clinical assignment.
 - c. Students must comply with the clinical affiliate's venipuncture policy.
 - d. Venipuncture site restricted only to upper extremity veins per state law.
 - e. Supervision requirement must be by appropriate healthcare personnel as determined by the clinical affiliate and applicable legislation..
7. Policy implementation date – Spring Semester (January 2013 revised).

Student Name (print please)

Student Signature

Date

CELLPHONE POLICY

The use of a personal cell phone, Bluetooth, Blackberry, iPhone, iPod, or other personal electronic device (PDA) for personal use may present a hazard or distraction to the user, co-workers, patients, and visitors. This policy is meant to ensure that the use of these devices will not disrupt clinical or didactic education and supports patient safety.

POLICY

Unless otherwise authorized, personal cell phones and other personal electronic devices must be in the silent or vibration mode at all times, in all classrooms, laboratories, and patient care areas especially while interacting with patients and clinical staff. **Individual Clinical Sites have the right to have students place their cell phones in storage during their clinical rotations.**

While incidental personal use is allowed, it must be limited to break and lunch periods in non-patient care areas whenever possible.

In addition to telephone services, many cell phones or personal electronic device providers offer additional functions and/or services including, but not limited to text messaging, web browsing, digital photography, audio-visual, and television. Students should not use any of these services in the clinical setting except during breaks and lunches and in non-patient care areas. On campus, these activities will be addressed by individual faculty. **Student use of a cell phone or other digital electronic device camera may never be used for patient photography or photographs of acquired images.**

Student Name (print please) Student Signature Date

FIT FOR CLINICAL DUTY

The Program has a responsibility to ensure patient and student safety when there is concern about a student's ability to perform their duties due to an impairment of any kind.

POLICY

Should Clinical Staff or a Clinical Educator feel a student is unable to perform their assigned duties in a safe manner, the Clinical Educator will seek a meeting with the student to determine possible causes. If the Clinical Educator feels the student should be removed from the clinical rotation, the Clinical Educator or designated staff member will notify the College and find transportation home for the student. Documentation of the incident by the Clinical Educator is required.

Prior to returning to their clinical assignment, the student must meet with the appropriate campus entities, including faculty. Based on the outcome of these meetings the Program may seek Program dismissal for the student.

As stated in the School of Allied Health Professions Student Manual, a clinical site can request a student to submit to a drug or alcohol screening test at the clinical site should circumstances warrant such an action. Should a student be found to be under the influence of an illegal drug or alcohol during a clinical assignment they will be removed from the Program immediately. This action is consistent with the Orange Coast College policy of zero tolerance. Any matter involving the student and potential program dismissal will adhere to the concept of due process including a formal conference in which the student will be given opportunity to present his/her case.

Student Name (print please) Student Signature Date

COMMUNICABLE DISEASE POLICY FOR STUDENTS

The Coast Community College District deals with communicable diseases in a manner, which balances the rights of the individual with concern for the public health of the college environment. The District uses the most recent edition of Control of Communicable Disease in Man, the report of the American Public Health Assoc., as its source for the definition of communicable disease and period of communicability. It is the responsibility of all students to comply with the following:

1. Medical Diagnosis – The Student Health Center staff may request the student suspected of having a communicable disease to obtain a diagnosis.
2. Contact with Health Department – Following the diagnosis, the Student Health Center staff shall comply with regulations of the Orange County Health Department.
3. Exclusion and Return to District Programs – In compliance with Orange County health Department standards and California Education Code regulations, a student with a communicable disease may be excluded from District programs. A written medical release is required for return to District colleges.

The primary role of the Coast Community College District in communicable disease control is educational. Proof of immunization shall not be a requirement as a condition for admission except in specific areas as prescribed by law. The Student Health Center in conjunction with the Orange County Health Department could offer immunization for specific diseases as needed. The Orange County Health Department may offer free immunization.

MEDICAL LEAVE POLICY

If during a clinical education course, a medical leave becomes necessary, the student must provide written notification to the program. This notification should state the estimated length of requested leave and a physician's verification.

Return to the program and clinical assignment requires a written physician's release and must state "**with no restrictions**". No student will be permitted to return to a clinical assignment unless he/she can resume full unrestricted duties. Returning students must meet with program officials to determine status for re-entry.

Student Name (print please)

Student Signature

Date

RADIATION CONTROL AND MR SAFETY POLICY

Purpose:

To provide information and to establish radiation and MR safety guidelines for Student Radiologic Technologists.

All clinical facilities associated with the OCC Radiologic Technology Program have been approved by the California Department of Health Services, Radiologic Health Branch, as meeting the requirements of Title V of the California Administrative Code, Chapter 5, Subchapter 4, Radiation Control Standard.

All students are given instruction in radiation protection methods and must pass a safety test before they are permitted to use radiation producing equipment. Students are required to always adhere to radiation safety rules. Students are responsible for their safety as well as the safety of their patients. Per the Radiation and MR Safety Manual students will be always supervised when utilizing the energized lab on campus.

Radiation detection devices (dosimeter badges) are provided for each student by the program. These badges must be worn at all times while at the clinical facility and during campus laboratory activities. Students who fail to wear their film badges to either clinical or laboratory assignments, will be denied access and will be marked absent.

Records of all “student personal radiation exposure histories,” are provided to the college by the film badge supplier and shall be kept on file by program officials. **The student is required to initial their bi-monthly badge report to verify their radiation exposure. Dosimetry reports are kept by the Program indefinitely.**

If a student has lost a film badge, the student will be issued a pocket dosimeter by the program until a new dosimeter has been received. The pocket dosimeter must be worn during all laboratory and clinical assignments. Daily readings must be recorded on the appropriate form (see page 21).

The program will adhere to the NCRP recommendations from report 91, which states that radiation exposure as part of an educational experience, should not exceed 1.0 mSv annually or 2.0 mSv for the total program. Monitoring will be documented by bi-monthly film badge readings. Any reading in excess of 0.3 mSv in reporting period will be investigated and the student receiving such will be counseled regarding correct radiation safety practices.

Students are not to hold patients during radiographic procedures, additionally, students are to not hold image receptors during procedures.

Students receive instruction in MR Safety practices and complete an MR Safety Checklist prior to starting clinical with the understanding they are required to notify the program if their status regarding MR safety changes.

Student Name (print please)

Student Signature

Date

STUDENT and WORKERS Compensation Related Injury

Definition: Any **injury** that occurs while at an off-site related educational experience as an **enrolled student** in an **approved Orange Coast College course**. Can include: allied health clinical training, internships, field study experiences.

General Guidelines and Procedures:

1. The Coast Community College District provides worker's compensation coverage for students, who are assigned to a clinical education center. The coverage is in effect while the student is **on-site** at the clinical facility. The student must be officially enrolled in the designated clinical course in order to have valid coverage. No student is permitted to attend any clinical course until they have completed the required enrollment procedure at Orange Coast College.
2. This insurance covers an injury the student may receive during the course of a clinical assignment. **Injury must occur during the student's assigned clinical class time.**
3. Severity of the injury determines whether the student should receive treatment at the clinical site or be referred to Orange Coast College. (example of a severe on- site injury would be a needle stick.)

After Injury

1. Follow procedures established at the clinical site for emergency treatment which may include:
 - a. At hospital sites: immediate treatment may be provided at their employee health or emergency room (**only if approved by site**). **The student must inform the health care provider they are an OCC student and have workers compensation coverage.** The employee health or ER departments should call OCC Personnel office (714) 432-5670 for verification of coverage or off-site referral.
 - b. For minor injuries or non- hospital sites, students may do the following:
 1. Visit the OCC Personnel department in the Administration Building: ask for a referral to an approved Workers Compensation Clinic.
 2. Visit the OCC Student Health Center: indicate the injury occurred during clinical assignment and ask for a referral to an approved Workers Compensation Clinic.
 3. Call the OCC Personnel department and ask for a referral to a Workers Compensation Clinic (714) 432-5670.
2. To file a worker's compensation claim (**mandatory**), the student must adhere to the following:
 - a. **Report** injury to appropriate supervisor/clinical educator at the student's clinical site.
 - b. **Complete** required report form/documentation as required by the clinical affiliate.
 - c. **Get** medical attention as needed. See above options.
 - d. **Personally report** injury to OCC Personnel office (Administration Building) in person or by telephone (714) 432-5670, regarding your claim within 24 hours. If the incident occurs during the weekend, it must be reported the next working day. The student needs to provide Personnel Services with a copy of any form or receipt from the medical facility providing care.
 - e. A **written summation** of the incident by the student and a copy of all forms completed at the clinical site **must be submitted within one week** of the occurrence to the OCC faculty member responsible for their course (**program coordinator**, clinical coordinator, field study/internship instructor). Follow-up documents from the Coast Community College District may be required. Faculty should notify their Division Dean.
3. **Failure to follow the above procedures could result in the student being responsible for all medical expenses incurred.**

Student Name (print please)

Student Signature

Date

PROFESSIONAL LIABILITY INFORMATION

1. The Coast Community College District provides at no cost professional liability coverage for students who are assigned to a clinical education center.
2. This coverage addresses an injury or mishap that could occur to a patient while the student is performing their clinical responsibilities. This coverage is in force **only** during specific clinical assignments. **Note: The student must be officially enrolled in the designated clinical course in order to have valid coverage. No student is permitted to attend any clinical course until they have completed the required enrollment procedure at Orange Coast College.**
3. Additionally, students enrolled in the Radiologic Technology Program are required to maintain their own additional individual liability insurance. A policy will have to be purchased before the start of clinical training in October of the first semester. The policy will have to be renewed prior to the start of the second year.
2. The College District has identified a particular provider that all students are to use. Specific enrollment information will be provided during the first four weeks of the Program.
3. In the event such an injury/mishap should occur, the student must adhere to the following protocol:
 - a. Immediately report the incident to the appropriate supervisor/clinical educator at the student's clinical facility.
 - b. Complete required report form/documentation as required by the clinical facility.
 - c. Notify Program faculty within 24 hours. If the incident occurs during the weekend it must be reported the next school day to Program Director (714) 432-5540 or clinical coordinator(714) 432-5757.
 - d. Student must provide copies of all related incident report/documentation to program faculty.
 - e. A **written summation** of the incident **by the student** must also be provided to program director.
4. Handling of the claim will be facilitated by program faculty in conjunction with CHS Division personnel in compliance with Coast Community College policies.

Student Name (print please)

Student Signature

Date

**Standards for an Accredited Educational Program in Radiologic Sciences
Joint Review Committee in Education in Radiologic Technology**
The Radiologic Tech Program at Orange Coast College is a fully accredited program and adheres to requirements set forth by the California Radiologic Health Branch and the JRCERT.

To maintain full accreditation status the program must maintain the following:

Standard One – Accountability, Fair Practices, and Public Information

The sponsoring institution and program promote accountability and fair practices in relation to students, faculty, and the public. Policies and procedures of the sponsoring institution and program must support the rights of students and faculty, be well-defined, written, and readily available.

Standard Two - Institutional Commitment and Resources .

The sponsoring institution demonstrates a sound financial commitment to the program by assuring sufficient academic, fiscal, personnel, and physical resources to achieve the program’s mission.

Standard Three – Faculty and Staff

The sponsoring institution provides the program adequate and qualified faculty that enable the program to meet its mission and promote student learning.

Standard Four – Curriculum and Academic Practices

The program’s curriculum and academic practices prepare students for professional practice.

Standard Five – Health and Safety

The sponsoring institution and program have policies and procedures that promote the health, safety, and optimal use of radiation for students, patients, and the public.

Standard Six - -Programmatic Effectiveness and Assessment: Using Data for Sustained Improvement.

The extent of a program’s effectiveness is linked to the ability to meet its mission, goals, and student learning outcomes. A systematic, ongoing assessment process provides credible evidence that enables analysis and critical discussions to foster ongoing program improvement.

Compliant Procedure – Non compliance with JRCERT standards

Objective: If non-compliance of JRCERT standards occurs, students will have a mechanism to address complaints and correct the non-compliance

1. current JRCERT programs standards shall be available to all students
2. complaints of non-compliance shall be submitted in writing to Program Director. Within 10 days of receipt of complaint, the Program Director will investigate and take appropriate action. The Program Director shall then respond to the complaint in writing.
3. In the event that the above action is not satisfactory, the person initiating the complaint may take the matter first to:
- 4.

A) CHS Division Dean (714) 432-5531

If not satisfactorily resolved, then to:

B) Vice President of Instruction (714) 432-5016

If the problem is still not resolved satisfactorily, the student can then contact:

C) JRCERT (312) 704-5300

Signature of student

Print Name

Date

STANDARDS OF ETHICS OF THE AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS

A: CODE OF ETHICS

This CODE shall serve as a guide by which Radiologic Technologists may evaluate their professional conduct as it relates to patients, colleagues, and other members of the medical care team, health care consumers and employers. The CODE is intended to assist radiologic technologists in maintaining a high level of ethical conduct.

1. The Radiologic Technologist conduct himself/herself in a professional manner, responds to **patient's needs**, and supports colleagues and associates in providing quality patient care.
2. The Radiologic Technologist acts to advance the principle objective of the profession to **provide services** to humanity with full respect for the dignity of mankind.
3. The Radiologic Technologist **delivers patient care** and service unrestricted by the concerns of personal attributes of the nature of the disease or illness, and without discrimination regardless of sex, race, creed, religion, or socioeconomic status.
4. The Radiologic Technologist practices technology founded upon theoretical knowledge and concepts, utilizes equipment and accessories consistent with the purpose for which they have been designed, and **employs procedures and techniques appropriately**.
5. The Radiologic Technologist assesses situations, exercises care, **discretion and judgment**, **assumes responsibility for professional decisions**, and acts in the best interest of the patient.
6. The Radiologic Technologist acts as an agent through **observation and communication** to obtain pertinent information for the physician to aid in diagnosis and treatment management of the patient, and recognizes that interpretation and diagnosis are **outside the scope of practice for the profession**.
7. The Radiologic Technologist utilizes equipment and accessories, employs techniques and procedures, performs services in accordance with an accepted standard of practice and **demonstrates in limiting the radiation exposure to the patient, self and other members of the health care team**.
8. The Radiologic Technologist **practices ethical conduct** appropriate to the profession, **protects the patient's rights** to quality radiologic technology care.
9. The Radiologic Technologist **respects confidence entrusted** in the course of professional practice, respects the patient's right to privacy, and reveals confidential information only as required by law or to protect the welfare of the individual community.
10. The Radiologic Technologist continually strives to improve knowledge and skills by participating in educational and professional activities, sharing knowledge with colleagues and investigating new and innovative aspects of professional practice. One means available to improve knowledge and skill is through professional **continuing education**.

**STANDARDS OF ETHICS OF THE
AMERICAN REGISTRY OF RADIOLOGIC TECHNOLOGISTS**

B: RULES OF ETHICS

The Rules of Ethics form the second part of the **Standard of Ethics**. They are mandatory and directive specific standards of minimally acceptable professional conduct for all present Registered Technologists and Applicants. Certification is a method of assuring the medical community and the public that an individual is competent to practice within the profession. Because the public relies on certificates and registration issued by the ARRT, it is essential that Registered Technologists and Applicants act consistently with these rules of Ethics. These Rules of Ethics are intended to promote the protection, safety and comfort of patients. **The Rules of Ethics are enforceable.**

1. **Compliance with State and Federal Law.**

A Registered Technologist or Applicant shall abide by state and federal laws. A conviction of, or a plea of guilty to, or a plea of nolo contendere to a crime which either is a felony or is a crime of moral turpitude is a violation of this rule.

2. **Maintenance of Valid State License or Registration.**

A Registered Technologist or Applicant shall at all times maintain a valid state license or registration to the extent required in the location(s) where the Registered Technologist or Applicant practices, and it shall be a violation of this Rule if the Registered Technologist's or Applicant's license or registration with any state is to any extent whatsoever revoked, suspended, conditioned, limited, qualified, subject to terms of probation, or restricted by a court, department, board, or administrative agency. A failure to comply with this Rule shall result in automatic denial of an Applicant's application for examination and certification by ARRT or in automatic revocation of the Registered Technologist's certification and registration with ARRT, as the case may be, unless the Registered Technologist or Applicant, by clear and convincing evidence, demonstrates that such denial or such revocation by ARRT would be clearly inappropriate. Decisions by ARRT are final.

3. **Duty to Submit Truthful Information to ARRT.**

A Registered Technologist or Applicant shall not submit any false or misleading information to ARRT in connection with any application or other information submitted to ARRT.

4. **Appropriate Patient Care.**

A Registered Technologist or Applicant shall provide appropriate patient care, and depending on the specific facts and circumstances of the allegedly standard or inappropriate care, the failure to do so may be a violation of this Rule.

5. **The Impaired Registered Technologist or Applicant.**

A physically, mentally or emotionally impaired Registered Technologist or Applicant should withdraw from those aspects of practice affected by the impairment. If the Registered Technologist or Applicant does not withdraw, it is the duty of the other Registered Technologists or Applicants who know of the impairment to take action to assure withdrawal of the impaired Registered Technologist or Applicant.

SCHOOL OF ALLIED HEALTH PROFESSIONS
CODE OF PROFESSIONAL ETHICS AND BEHAVIOR

RADIOLOGIC TECHNOLOGY PROGRAM

Health care professionals engaged in the performance of patient care must strive to maintain the highest personal and professional standards. The following conditions define the basic ethical and moral behavior that an allied health professional should conform to:

1. Respect all confidences that you may receive from your patients. Never discuss in public or during your breaks or in the elevator any incident that may have occurred in the medical facility or give out any information about your patients. All inquiries pertaining to your patient's condition, care or prognosis from family or friends must be referred to your supervisor or nursing staff.
2. Do not discuss your supervisor or team workers with other personnel or with patients.
3. Respect the patient's need for privacy at all times. Knock gently before entering the patient's room. Screen and drape your patient before all procedures. Provide adequate draping for examinations and treatments.
4. Give information contained in the patient's chart only to those people directly involved with the patient's care. The patient's chart is privileged and private information.
5. Show respect for your fellow workers at all times. Be loyal to your employer. Respect your co-workers and patients by referring to them by their surname unless otherwise requested. Never refer to patients by nicknames, illness or room number.
6. Accept responsibility graciously. Anticipate the patient's needs. Do not exceed your professional scope of practice.
7. Properly caring for patient's valuables will prevent the possibility of later embarrassment to yourself and the hospital. Treat the patient's personal effects, i.e., money, jewelry, clothes, dentures, glasses etc., as you would your own.
8. Assume the responsibility for your mistakes, errors, or misjudgments. Report them at once to your supervisor and college program coordinator, and fill out the appropriate report. Failure to do so may place you, your supervisor, the patient, the medical facility, and the college in jeopardy.
9. Treat each person with equal consideration and respect. Discrimination because of sex, race, creed, color, age, religion, socioeconomic or sexual orientation status has no place in patient care. Avoid promoting personal viewpoints to others. Do not allow personal likes or dislikes to affect the quality of care you give to your patient.
10. Respect the patient's religious beliefs and requests.
11. Avoid comments or actions that may be offensive or misinterpreted.

12. Do not discuss your personal or family life and problems with your patients.
13. Avoid loud, noisy behavior.
14. Treat the patient's family and visitors with courtesy and respect.
15. Do not accept gratuities in the form of money, gifts or tips from your patients.
16. Do not eat or drink in the patient care areas.
17. Be judicious regarding the use of medical supplies. Do not take home medical supplies, such as scrubs, linens, pens, hand lotion, etc.
18. Do not take medication from the hospital or patient or ask physicians to write prescriptions for you.
19. Do not diagnose or prescribe a treatment for any patient or for your family or friends. To do so is to practice medicine without a license.
20. Being under the influence of alcohol or drugs is grounds for dismissal. Any observed misuse of drugs should be reported to your supervisor immediately.
21. Remain at your assigned place of duty, leaving only when specifically authorized to do so, such as for lunch and rest breaks.
22. Be polite and courteous when answering the phone. Channel all phone calls to the appropriate person. Doctor's telephone orders are to be documented according to policy. Do not use the business phones for personal calls.
23. The allied health professional shall continually strive to increase and improve their knowledge and skills by participating in educational and professional activities.
24. The allied health professional shall be familiar with existing State and Federal laws governing particular areas of practice.

Student Name (please print)

Student Signature

Date

RADIOLOGIC TECHNOLOGY, ASSOCIATE IN SCIENCE DEGREE

Banner Code: 1_AS_RAD

Control Number

Financial Aid Eligible

The Radiologic technologist captures images of human anatomy utilizing digital, x-ray film, or video for diagnostic use by a radiologist or other medical specialist. Graduates of the program are eligible for examination by the American Registry of Radiologic Technologists. Successful applicants have the right to use the title "Registered Radiologic Technologist" (RRT)(ARRT). In order to practice in California, the RRT must also apply for licensure by the Department of Health Services in Sacramento. Completion of the Associate in Science degree program qualifies the student for eligibility for the state C.R.T. Examination. A bachelor degree program has been articulated with CSU Northridge. The Orange Coast College Radiologic technology program is accredited by:

The Joint Review Committee on Education in Radiologic Technology
20 N. Wacker Drive, Suite 9
Chicago, IL 60606-2911

tel: (312) 777-5353
Fax: (312) 777-5353

And approved by the California Department of Public Health and is affiliated with numerous hospitals in Orange County. Classrooms are well equipped and include on-campus energized x-ray laboratories.

Program application process is accomplished by taking program prerequisite, Allied Health A010. This short-term course is mandatory for all prospective program applicants. The Radiologic technology program starts only in the fall semester of every school year.

The Radiologic technology program is a full-time (two years including one summer session and two intersessions) program. Successful program completion requires the following:

1. completion of all required radiologic technology courses as outlined in catalog,
2. completion of approximately 1500 clinical hours, and
3. completion of all requirements for an Associate in Science degree as required by Orange Coast College.

These specific program completion requirements must be satisfied within the two-year time frame of the Radiologic technology program. Eligibility for the post program state and registry examinations is dependent upon meeting these requirements.

This program requires the student to participate in clinical experience concurrent with classroom courses. Clinical responsibilities will be arranged by the Radiologic technology faculty and will include evening and/or weekend assignments. The student receives no salary for this clinical experience but will receive course credit toward program completion. Clinical sites will be within a 30 mile radius of the school and transportation is the responsibility of the student and may include parking fees.

Radiologic technology is a rapidly expanding allied health profession. Employment possibilities include hospitals, imaging centers industry, and sales.

Program Admission

1. Allied Health A010 course - application and orientation.
2. The student must complete the general education requirements for an Associate in Science Degree requirements and the program prerequisites prior to acceptance to the program.

Program Outcomes

1. Graduate students who are clinically competent and ready to begin a successful career in the Radiologic Sciences.
2. Students will be able to demonstrate professional and ethical behaviors.
3. Students will exhibit the communication skills necessary to effectively perform the duties of a Radiographer in a variety of health care environments.
4. Students will demonstrate independent critical thinking skills to solve clinical practice related problems to optimize diagnostic outcomes.

Associate in Science Degree Requirements

1. **UNIT REQUIREMENT** - 60 UNITS, with at least a 2.0 grade point average. At least 12 of the units must be earned at OCC, with a minimum of one course taken for a letter grade. At least 3 units in an advanced course from the program must be completed at OCC. A student must be enrolled at the time of application for graduation. Units earned at an accredited college or university on a credit/no credit basis will be counted toward the degree requirements of the college, to a maximum of 15 units.
2. **MAJOR REQUIREMENT** - Complete the AS major requirements.
3. **MATHEMATICS REQUIREMENT** - Demonstrate competence in mathematics by either obtaining a satisfactory grade (grade of "C" or better or "pass") in a mathematics course at or above the level of Intermediate Algebra as demonstrated by prior coursework, or by demonstrating competency that is comparable through the completion of a college-level math course that has Intermediate Algebra as a prerequisite: Psychology A160 or Math A100 or higher with the exception of Math A22.
4. **GENERAL EDUCATION REQUIREMENT** - Students may choose to complete Option 1 (OCC AS GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-science-general-education-option-1/>), Option 2 (CSU GE) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-2/>), or Option 3 (IGE C) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-3/>) (<https://catalog.cccd.edu/orange-coast/general-education-patterns/associate-degree-general-education-option-3/>) to satisfy the general education requirement. See the General Education Patterns section of this catalog for more information.

Program Prerequisites

Course	Title	Units
ALH A01	Health Occupations	0.5
ALH A111	Medical Terminology	3

Course	Title	Units
BIOLA221	Anatomy-Physiology ¹	4
RADT A100	Radiologic Physics	2
OCC AS General Education		18
Total Units		27.5

Course	Title	Units
<i>Required Courses</i>		
ALHA115	Patient Care	2.5
RADT A165	Beginning Radiologic Practice	1.5
RADT A170	Radiographic Positioning and Critique	3
RADT A171	Clinical Lab 1	2
RADT A180	Radiographic Imaging	3
RADT A105	Radiation and Imaging Safety	1
RADT A172	Clinical Lab 2	2
RADT A175	Radiographic Positioning and Critique 2	3
RADT A176	Clinical Lab 3	7
RADT A185	Radiographic Pathology	2
RADT A195	Fluoroscopy	1
RADT A177	Clinical Lab 4	4.5
RADT A265	Principles of Digital Imaging and Computer Applications	2
RADT A270	Radiographic Positioning and Critique 3	2.5
RADT A271	Clinical Lab 5	9
RADT A276	Clinical Lab 6	2
RADT A216	Advanced Radiologic Patient Care	2
RADT A277	Clinical Lab 7	7
RADT A285	ARRT Board Preparation	1
RADT A290	Applied Physics & Quality Control	1
RADT A275	Radiographic Positioning and Critique 4	2
Total Major Units		61
Requirement		Units
Program Major Units		70.5
AS General Education Option 1, 2, or 3		Varies
Total Minimum Degree Units		85.5

¹ BIOL A221 can double count for OCC AS Area B.

Radiologic Technology Suggested Electives:

ALH A120 Human Diseases
PHIL A120 Ethics

Program Sequence

These sequences at Orange Coast College are general course curriculum maps for students to finish all major and general education requirements for two-year completion of degrees, and/or fulfillment of transfer requirements. The course sequence may include course prerequisites and other placement requirements. **Students are advised to meet with an Orange Coast College Counselor to review course selections and sequences to ensure that completion of this program will meet a student's transfer and career goals.**

For terms less than 15 units, students should meet with a counselor to reconfigure their sequence to maintain financial aid eligibility with a full-time course load.

Course	Title	Units
Year 1 RRRR		
Semester 1		
OCC AS GE AREA B - CHOOSE ONE		3
ALH A010	Health Occupations	0.5
BIOL A221	Anatomy-Physiology	4
OCC AS GE AREA C1- CHOOSE ONE		3
OCC AS GE AREA D- CHOOSE ONE		3
Units		13.5
Semester 2		
ALH A111	Medical Terminology	3
RADT A100	Radiologic Physics	2
OCC AS GE AREA C2- CHOOSE ONE		3
OCC AS GE AREA A2- CHOOSE ONE ¹		3-4
Select one of the following or satisfy Math competency (completion of High School Algebra 2 with a "C" or better); (hours: 3-4) ²		
MATH A030 or MATH A045	Intermediate Algebra or Combined Elementary and Intermediate Algebra	
Units		11-16
Year 2		
Semester 1		
ALH A115	Patient Care ³	2.5
RADT A105	Radiation and Imaging Safety	1
RADT A165	Beginning Radiologic Practice	1.5
RADT A170	Radiographic Positioning and Critique	3
RADT A171	Clinical Lab 1	2
RADT A180	Radiographic Imaging	3
Units		13
Semester 2		
RADT A172	Clinical Lab 2	2
RADT A195	Fluoroscopy	1
RADT A175	Radiographic Positioning and Critique 2	3
RADT A176	Clinical Lab 3	7
RADT A185	Radiographic Pathology	2
Units		15
Summer		
RADT A177	Clinical Lab 4	4.5
Units		4.5
Year 3		
Semester 1		
RADT A265	Principles of Digital Imaging and Computer Applications	2
RADT A270	Radiographic Positioning and Critique 3	2.5
RADT A271	Clinical Lab 5	9
Units		13.5
Semester 2		
RADT A276	Clinical Lab 6	2
RADT A216	Advanced Radiologic Patient Care	2
RADT A275	Radiographic Positioning and Critique 4	2
RADT A277	Clinical Lab 7	7
RADT A285	ARRT Board Preparation	1
RADT A290	Applied Physics & Quality Control	1
Units		15
Total Units		85.5-90.5

¹ OCC AS GE AREA A2 - Required if 100-level MATH will not be taken to meet Math competency. If MATH A100 or higher will be taken, then needs to take 3-4 degree applicable elective units

² Highly recommended for Allied Health programs, some state licenses will require Algebra 2 or higher-level math to be completed at the college level. If 100-level Math courses (any math except MATH A220) satisfy AS Math Requirement and OCC AS GE AREA A2

³ Acceptance into the OCC Radiologic Technology program required to begin major coursework (Cohort Restriction)

COURSE DESCRIPTIONS

RAD T 100 - Radologic Physics

The fundamentals of radiation and radiological physics. Operation of medical radiographic X-ray units. Study of the effects of radiation in humans. Introduction to health-physics instrumentation

RAD T 105 - Radiation and Imaging Safety

A study of the effects of radiation in humans and the principles of protection as applied to radiography. Introduction to health-physics instrumentation with a study of radiation control regulations.

RAD T 165 - Beginning Radiologic Practice

Introduction to the radiology environment emphasizing professionalism, a humanistic approach to patients, medical/radiology records responsibilities, and medical/legal principles. Student obligations to clinical education are identified.

RAD T 170 - Radiographic Positioning and Critique 1

Introduction to radiographic positioning principles, study of contrast media, acquaintance with x-ray apparatus, laboratory practice and film critique of chest, abdominal studies, and upper extremities.

RAD T 171 - Clinical Lab 1

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Radiographic skills in chest and abdomen procedures will be emphasized.

RAD T 172 - Clinical Lab 2

Clinical experience in a radiology department of an affiliated training site with supervision of certificated radiology and health care personnel utilizing a condensed format. Radiographic skills to include assisting with routine contrast media studies of the GI and GU tracts..

RAD T 175 - Rad Positioning and Critique 2

Radiographic positioning principles, laboratory practice, and film critique of the lower extremities, vertebral column, and basic skull. Overview of common pathologies of identified areas.

RAD T 176 - Clinical Lab 3

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Radiographic skills to be emphasized will be fluoroscopic procedures, GU tract, upper and lower extremities, and routine spinal column.

RAD T 177 - Clinical Lab 4

Clinical experience in an affiliated radiology department under the supervision of certificated radiology and health care personnel. Radiographic skills to be emphasized will be routine skull radiography, portable radiography, minor special procedures, and introduction to pediatric and trauma radiography.

RAD T 180 - Radiographic Imaging

Introduction to radiologic technology, radiographic image formation; principles of exposure technique and essentials of radiographic quality.

RAD T 185 - Radiographic Pathology

Advanced study, identification, and critique of common radiographic pathologies in major body systems. This study assists the learner in providing quality patient care.

RAD T 195 - Fluoroscopy

Study of knowledge and skills required to qualify student for fluoroscopy component of state permit. Review of imaging concepts (analog and digital), x-ray beam quantity and quality, and radiation protection of fluoroscopy.

RAD T 216 - Advanced Patient Care

Multi-skill preparation for the Radiologic Technology student including management communication skills; Venipuncture, with injection of contrast media; basic electrocardiography; and the business of radiology. Three hours lecture, three hours laboratory

RAD T 265 - Digital Imaging & Computer Applications

Introduction to digital imaging, CT and MRI and computer systems as utilized in radiology departments. Overview of digital and analog devices with emphasis on computers and required peripheral equipment. Basic imaging principles as applied to computerized tomography and magnetic resonance to include physics, imaging protocols, R/F electronics and gradient coil design and use. Software and display strategies for each modality will be discussed. Course does not include clinical experience.

RAD T 270 - Rad Positioning and Critique 3

Radiographic positioning, film critique of advanced skull to include sinuses, TMJ's, mastoids, mandible, facial bones, bony thorax and pelvic girdle. Introduction to ancillary imaging modalities including sectional anatomy.

RAD T 271 - Clinical Lab 5

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Emphasis on independent radiography and decision making. Cranial studies and torso exams will be emphasized.

RAD T 275 - Rad Positioning and Critique 4

Introduction to advanced imaging principles and procedures to include diagnostic specials, interventional angiography, CT and MR. Sectional anatomy as related to these imaging procedures will be discussed. Principles of mammographic imaging per California State (RHB) regulations. Introduction to quality assurance principles and techniques. Elements of professional development.

RAD T 276 - Clinical Lab 6

Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Emphasis is on independent radiography and decision making. Professional growth and exit skills are expected.

RAD T 277 - Clinical Lab 7

Final capstone - Clinical experience in an affiliated radiology department under the supervision of certified radiology and health care personnel. Emphasis on independent radiography and decision making. Professional growth and program exit skills expected.

RAD T 285 - CRT/ARRT Board Preparation

Comprehensive categorical review of diagnostic radiologic technology in preparation for state and national certification boards.

RAD T 290 - Applied Physics & Quality Control

Applied principles of physics for current radiographic equipment including image viewing and recording systems, and tomography. Understanding of the process and concepts of quality control as it relates to radiologic technology. Review of imaging concepts (analog and digital), x-ray beam quantity and quality, and radiation protection.

CLINICAL AFFILIATES

Orange Coast Memorial Medical Center
Clinical Preceptor: Jason Thomas
9920 Talbert Avenue, Fountain Valley, CA 92692
(714) 378-7571

Children's Hospital Orange County
Clinical Preceptor: Lesley Mercado, Pheap Phan
1201 W. La Veta Avenue, Orange, CA 92868
(714) 800-3737 Ext: 19085

Huntington Beach Med. Center
Clinical Preceptor: Mojgan Etaati, Robert Cox
17772 Beach Blvd., Huntington Beach, CA 92647 (714) 843-5035

West Anaheim Medical Center
Clinical Preceptor: Terri Linder
3033 W. Orange Avenue, Anaheim, CA 92804 (714) 229-4060

Mission Hospital Reg. Med. Center
Clinical Preceptor: Anthony Luong
27700 Medical Center Rd., Mission Viejo, CA 92675
(949) 364-1400 x 7625

St. Joseph's Hospital
Clinical Preceptor: Del Lipiz
1100 W. Stewart Dr, Orange, CA 92668 (714) 771-8142

UCI Medical Center
Clinical Preceptor: Henry Nguyen, Wendell Mercene
101 City Drive South, Orange, CA 92668 (714) 456-5513

Orange County Global
Clinical Preceptor: Jimmy Mendoza
1001 N. Tustin Avenue, Santa Ana, CA 92705 (714) 953-3500 x3390

West Coast Radiology Center
Clinical Preceptor: Charlie Tran
1100 A N. Tustin Ave., Santa Ana, CA 92705 (714) 835-6055

Kaiser Permanente – Irvine
Clinical Preceptor: Richard Ang
6640 Alton Parkway, Irvine, CA (949) 932-7146

Hoag Orthopedic Institute
Clinical Preceptor: William Fallica
16250 Sand Canyon Avenue

CLINICAL EDUCATION POLICIES AND PROCEDURES

I. Philosophy

The clinical phase of the Rad Tech program is considered to be the cornerstone for the acquisition of technical knowledge and skills. It is here the student will have the opportunity to learn the "Art and Science" of radiography with its real world applications.

The Radiologic Technology faculty will expect the students to perform all duties and responsibilities during the clinical training to the best of their ability and with professional demeanor. Clinical education is considered a college course that meets off-campus at a specific location and time frame. The student is expected to adhere to the published class schedule. Any variation in clinical training schedule must be submitted in writing and approved by the clinical educator. Disciplinary action will be taken against any student who violates this policy. The student receives no salary for this clinical training but will receive course credit towards completion of the Rad Tech program. Location of clinical assignments will be arranged by the Rad Tech faculty. The arranged clinical hours (see description of required clinical education hours) will be determined by the clinical educator at the student's clinical education center.

II. Evaluation

During the course of the clinical training, the student will be expected to gain "hands on" experience and technical skill in performing radiographic procedures. Evaluation of the student's clinical ability will be done on a periodic basis by the clinical educator, radiology staff, and program faculty. During each clinical semester, the student will have two formal evaluations: 1) mid-semester and 2) end of semester. These formal evaluations will be completed by the clinical educator with assistance from the Radiologic Technology staff. The purpose of these evaluations is: 1) to assess student's technical ability and document their progress and 2) to determine the clinical grade for that given clinical course.

Evaluations will be done on an individual basis and will be shared with each student. In addition to the semester evaluations, the student will be required to satisfactorily complete two competency lists. The first list is due at the **end of the 1st year** of training and will determine the student's eligibility to progress into the 2nd year phase of the program. The second list is due at the **end of the 2nd year of training** and will determine the student's eligibility for successful program completion. Since these competency lists are program requirements, no student will be allowed to complete the program without these competencies. If the student fails to complete the program competencies, the ARRT required competencies, and the state Fluoroscopy requirements within the program's normal 2-year time frame, **the clinical training phase will be extended.**

Students will also be given the opportunity to evaluate their clinical education centers and the Rad Tech program. Student anonymity will be adhered to.

III. Clinical Documentation and Paperwork

STUDENT RECORD SECURITY:

In order to comply with The Family Educational Rights and Privacy Act (FERPA) and Health Insurance Portability and Accountability Act (HIPAA) students' educational records and health records must be kept secure and only accessible by program faculty with legitimate educational interest or in cases of medical emergency.

The following items must be kept in a secure location at the clinical site that can only be accessed by program faculty.

1. Student Clinical Profile form
2. Copies of the student background check card and photo ID card
3. All Performance Evaluations until the end of the term. At the end of each academic term performance evaluations will be returned to the individual student, added to the clinical grade packet, submitted to campus program faculty and filed in a secure location on campus.

All aspects of the student's clinical educational experience must be documented as required by the Department of Public Health and JRCERT (Joint Review Committee) as part of the program's accreditation. Students will be required to maintain complete and up-to-date records verifying their clinical training. Documentation is required for the following:

- 1) clinical hours worked
- 2) types and numbers of radiographic procedures performed

A separate section of this manual contains the required forms needed for such documentation. The student's responsibility will be to complete these forms as needed during the clinical phase of their training. Required forms will be kept at the student's clinical site at all times. They are not to be taken home. At the end of each clinical course, the student will submit the required forms during the clinical final exam. Date and campus location will be announced.

Failure to comply with required clinical documentation and paperwork completion will result in **an unsatisfactory grade** for that clinical course. The student is expected to maintain all records up-to-date and will be graded down accordingly if this standard is not maintained.

All clinical forms and documentation will become a part of the student's permanent record and will be filed in an appropriate location on campus.

IV. Clinical Training Policies

A. Clinical Assignment

Students will begin the clinical training phase of the program in the ninth week of the Fall semester 1st year. **Clinical placement is contingent on successfully completing**; AIH 115 Patient Care, RadT 105 Radiation and Imaging Safety, and RadT 165 Beginning Radiologic Practice.

Clinical assignments are determined by the Rad Tech faculty. This assignment will be for the first year of training. At the beginning of the 2nd year, the student will be given a new assignment at a different clinical education center. This rotational concept supports the Rad Tech program's philosophy of providing the student with well-rounded educational experiences.

If during the course of the clinical training, a student experiences difficulties, a formal conference will be held. Reassignment to a different clinical site could be an option per decision of the Rad Tech faculty. If however, a student is dismissed from clinical or classroom for cause, the result will be total program dismissal. Dismissal from the clinical phase of the program will occur when the student receives more than two(2) critical incident reports in any clinical course. (See Pages 40 and 41.)

During clinical training the student should refrain from using a cell phone or other electronic device unless approved by their clinical instructor.

B. Attendance

1) Beginning in Rad T 172 the student is allowed at least one absence per clinical course; four (4) week courses will be allowed one absence while eight (8) and sixteen (16) courses will be allowed two (2). Any absence beyond the allowed number will be required to be made up; ideally in the rotation missed when the absence occurred. If the rotation is not available a similar rotation should be selected. In order to promote professional behaviors students are encouraged to request necessary days off in advance whenever possible.

All make-up time must be scheduled in writing with approval by the clinical educator and clinical coordinator before the make-up is allowed. Failure to do this will result in no insurance coverage during this make-up assignment (see page 22-23 for insurance information) and the make-up assignment **WILL** be deemed in-valid by program faculty to count toward the time missed. To receive a clinical grade, all make-up time must be completed **before** the end of that clinical course. **When possible make-up time will be in the rotation missed.**

In the event a student is unable to report for his/her clinical assignment the student must notify the clinical educator and/or the supervisor on duty at their clinical education center and the clinical coordinator no later than **30 minutes** prior to the start of their assignment except in the event of an unforeseen emergency. In the event of an emergency the student or a member of the student's family should contact the clinical education center and program faculty as soon as possible.

2) Students who report for clinical assignment after their scheduled starting time will be considered **Tardy**. In the event a student will be tardy for the start of their clinical assignment the student must notify the clinical educator and/or the supervisor on duty at their clinical education center no later than **30 minutes** prior to the start of their assignment except in the event of an unforeseen emergency. In the event of an emergency the student or a member of the student's family should contact the clinical education center and program faculty as soon as possible.

All tardies must be made up. The scheduling of the make-up time missed due to being tardy shall be determined by the clinical educator. If a student is tardy three times within a given clinical course, a written warning will be issued. If two additional tardies occur, a critical incident will result.

3) Students who do not report for clinical assessment nor contact the clinical faculty regarding their absence will be issued a critical incident report.

4) Students who do not contact the clinical education center at least 30 minutes before the start of their assignment if they are to be late or absent will be given a written warning. Two (2) written warnings for this offense will result in a critical incident.

5) If a student stays beyond their assigned hours to complete a procedure such additional hours will be noted on the student's time sheet. Should a student decide, on his own to remain on duty, no additional time accrued will be noted.

6) With the exception of perfect clinical attendance, students will be expected to adhere to the published class schedule for clinical hours and duration.

C. Required Clinical Education Hours

The Radiologic Technology faculty will assign you to your clinical education site prior to the beginning of RT 171 and RT 271. The clinical preceptor at your assigned site will be responsible for your daily clinical schedule.

Any variation in the clinical schedule must be submitted in writing (use green form) and approved by your clinical educator and the submitted to the clinical coordinator. The approval must be given before the student can change his schedule. Failure to do so will result in a critical incident to be filed. Students will be allowed to request **one schedule change for a 4 to 8 week course and two for 16 week courses.** Schedule change requests must be made at least 1 week prior to date.

Normally, a student **should not** be requesting any variation in the established clinical schedule. Clinical training is considered a college course with specific class hours, scheduled at an off-campus location. Changing the course schedule is not the student's prerogative. Each clinical course has a specific hour requirement that must be met for satisfactory course completion. If the student fails to complete the required hours an unsatisfactory grade will be issued. Any deviation from this policy must have specific Program Director approval.

D. Clinical Continuance

Should a clinical site choose to end their clinical affiliation with the college prior to a student finishing their clinical education, the affected student(s) will be placed at another clinical site in order to finish the required clinical requirements.

First year of the program

CLINICAL 1	RT 171	2 days/wk (Mon & Wed) for 8 weeks (8 hour day) starting approximately mid October.
CLINICAL 2	RT 172	32 hrs. arranged for 4 weeks during Intersession (8 hour day).
CLINICAL 3	RT 176	3 days/wk (Tues, Thurs, Fri) for 16 weeks (8 hour day).
CLINICAL 4	RT 177	4 days/wk arranged, for 8 weeks (8 hour day). Will include evening assignments (after 7 PM) and 2 weekend assignment.

Second year of the program

CLINICAL 5	RT 271	4 days/wk. (Tues., Thurs., Fri. and one 8 hour day to be arranged either Saturday or Sunday
CLINICAL 6	RT 276	32 hrs. arranged for 4 weeks (8 hour day) and will include 2 weekend/evening.
CLINICAL 7	RT 277	3 days/wk; Mon., Wed. & either Saturday or Sunday unless attending an optional rotation or exempt rotation, for 16 weeks (8 hour day). Could include an evening assignment.

***All arranged days** will be at the direction of the clinical preceptor. Students **ARE PROHIBITED** from attending a clinical assignment on any recognized school holiday. Final exams week is appropriate time period for required make-up time.

1850 hours of clinical experience is required to meet California standards and satisfactory completion of Orange Coast College program

NOTE: A satisfactory clinical grade and evaluation must be granted before continuing to the next clinical course. **Program dismissal will result** if a student receives an overall clinical course grade and/or any one section of the clinical objectives is lower than a “B” or at minimum earning lower than 80% of the possible points.

D. Dress Code

As a professional, the Rad Tech student is expected to present a well-groomed appearance. Students in uniform are expected to demonstrate their professionalism at **all times** by:

1. Clean and pressed attire, clean and polished shoes
2. Clean hands and fingernails. Nails must **not exceed** 1/4 inch past fingertips. Only solid color, non-fluorescent nail polish (chipped polish must be removed). Artificial nail enhancements **are not permitted**, including but not limited to: artificial nails, acrylics, appliqués, gels, tips, wraps. These requirements complied with TJC/CDC recommendations
3. Neat and clean hairstyles are required.
 - Beards, sideburns, and mustaches must be well-trimmed and clean
 - Hair that touches the collar must be pulled back and off the collar
4. Appropriate jewelry in keeping with professional standards. Body jewelry is discouraged and **must comply** with assigned clinical site policies.
5. Tattoos/body adornments must be fully covered by a student’s clinical uniform.

Uniform - A **dark blue** uniform top and bottoms are required. The top must have the Program logo embroidered on it, no exceptions. The Program will provide the embroidery; the student will supply the uniform. Shoes must be mostly white or black shoes (no cloth tennis shoes). An OCC student ID badge is required at all times. A current dosimeter badge is required at all times.

- * The wearing of surgical scrub clothes is only **permitted during** surgery and special procedures clinical assignments. The unauthorized wearing of scrub clothes or uniforms without embroidery during any clinical assignment will result in **violation** of the program dress code and will result in disciplinary action.
- ** Failure to comply with these established standards can result in dismissal from the clinical education site.
- *** Should you be assigned to a clinical education center whose dress code is more restrictive than the program standards as outlined above, you are expected to comply with their requirements.
- **** If a student reports to their clinical assignment **without name tag and/or current film badge or inappropriate attire**, they will be sent home. All time missed must be made up.

E. Standard Precautions Compliance

Students are to consistently observe standard precaution requirements during clinical assignment. Hand washing is the single most important means of preventing the spread of pathogens (as much as 90%). Hands must be washed at the start of daily clinical assignment, between patient contacts, before performing invasive procedures, after removing gloves at the completion of a task or when soiled by blood or body fluids and the end of the clinical day. Additionally radiographic equipment must be clean using appropriate cleaning solution and in compliance with department protocols. Adherence to these requirements is for the protection of both the patient and the student.

F. Student Grievance Policy

Should a student have a Grade Grievance they have one (1) year from the assignment of the grade to initiate a formal response (per College Policy). All other Grievances have to be initiated within one (1) month of the occurrence:

Step 1 - make appointment with clinical educator, faculty member and/or program director to discuss their Grievance. If no resolution with ten (10) days:

Step 2 - If unsatisfactory resolution, within ten (10) days make appointment with Division Dean, Consumer and Health Sciences, for further input. If no resolution with ten (10) days:

Step 3 - If unsatisfactory resolution, within ten (10) days make appointment with Dean of Students/College Grievance Officer for review and discussion of matters not resolved in the previous steps. A written complaint/grievance can be filed. This grievance must be responded to within twenty (20) working days. If no resolution

Step 4 - Appeal to College President.

The Radiologic Technology program adheres to the established student grievance procedures as outlined in the college catalog. Any matter involving the student and potential program dismissal will adhere to the concept of due process including a formal conference in which the student will be given opportunity to present his/her case. For JRCERT non-compliance issues the student can utilize the procedure outlined on page 24.

G. Clinical Supervision Policies:

During clinical assignment there are two types of supervision:

1. **Direct Supervision:**

Definition: a registered radiographer (with two (2) years post-grad experience) who:

- Is physically present in the room during the conduct of the procedure.
- Reviews the procedure in relation to the student's achievement
- Evaluates the condition of the patient in relation to the student's knowledge
- Reviews and approves the procedure and/or image.

2. **Indirect Supervision**

Definition: a registered radiographer is immediately available to assist the students regardless of the level of student achievement. "Immediately available" is interpreted as the physical presence of the radiographer adjacent to the room or location where a radiographic procedure is being performed. This availability applies to all areas where ionizing radiation equipment is in use on patients

Students must **perform all examinations under direct supervision** until they have successfully demonstrated competency status. Competency is verified by completing a **minimum of four** successful procedure evaluations of the same body area and having that exam signed off on a exam evaluation form. Once a student has passed a competency check-off, he/she may perform the examination under indirect supervision after the first 500 clinical hours have been completed.

Regardless of the level of supervision, the following will **always** apply:

- a. Prior to the start of any exam, the supervising radiographer will assess the student's ability to perform the procedure as well as the patient's condition. If conditions do not warrant the student performing the procedure, the student will then **assist** the radiographer. This exam **can NOT** be used as an evaluation.
- b. All repeat radiographs, for any reason, must be **directly supervised** by a registered radiographer physically present in the room. **All repeat films must be taken under direct supervision regardless of the student's performance level.** California Radiation Health and Safety Code and Program accreditation guidelines **do not** permit a student to perform any repeat exposures unless a registered radiographer is with them. **There are NO EXCEPTIONS.**
- c. **All repeat radiographs must be initialed on the student's daily clinical log by the technologist who supervised the repeat film.**
- d. All new procedures must be directly supervised.
- e. First 500 hours of training requires direct supervision. Once a student achieves competency status, general (indirect) supervision is permitted **except** for portable radiography as stated Section F.
- f. Portable radiography/fluoroscopy (c-arm) requires **direct supervision** regardless of student's supervision status and location of the examination.

- g. Fluoroscopy: Radiologic technology students shall not independently perform diagnostic fluoroscopic procedures, students may only operate the fluoroscopy unit under direct supervision. While performing fluoroscopy students are required to wear radiation protective apparel and a radiation monitoring device at the collar outside the apron.

G. Standards of Critical Incident:

The following are guidelines for when a critical incident should be issued. This is NOT an all encompassing list, but provides direction for when such a disciplinary action should be taken.

CRITICAL INCIDENT IN RADIOGRAPHY

- 1) Rarely produces good quality films and has unusually high repeat factor.
- 2) Has no more than one (1) occasion: x-rayed the wrong patient or body part resulting in excess radiation exposure to the patient.
- 3) Has no more than one (1) occasion: failed to use proper radiation protection practices and/or dose reduction techniques as indicated by Title 17 of the California/Radiation Safety Code and hospital policy.
- 4) Has no more than one (1) occasion: been abusive and/or destructive to equipment resulting in service repair beyond normal maintenance.

CRITICAL INCIDENT IN PATIENT CARE

- 1) Has on one (1) or more occasions jeopardized the safety of patients, visitors, co-workers or self by failing to observe established hospital safety rules and policies regarding procedures.
- 2) Has on one (1) or more occasions failed to maintain patient confidentiality as outlined by hospital policy.
- 3) Has on one (1) or more occasions failed to follow verbal and/or written instructions resulting in significant adverse effect to patient care.

CRITICAL INCIDENT IN COMMUNICATION

- 1) Has on two (2) or more occasions failed to communicate, cooperate and/or relate in a professional manner towards patients, visitors or staff in a manner consistent with hospital staff standards.

CRITICAL INCIDENT IN APPEARANCE

- 1) The student has on more than three (3) occasions violated Hospital/Orange Coast College dress code policies as outlined in the student clinical manual or hospital policies.

CRITICAL INCIDENT IN DEPENDABILITY

- 1) Tardiness (defined as in excess of 10 minutes) that occurs three times within a given clinical course will result in a **WRITTEN WARNING**. Two additional tardies within the same semester will result in a **CRITICAL INCIDENT**.

CRITICAL INCIDENT IN ATTENDANCE

- 1) One (1) **UNEXCUSED** absence in a clinical course will constitute a critical incident. **Unexcused absence is defined as an absence in which the student does not contact the clinical site nor comply with department policy regarding notification of clinical absence.**
- 2) Four (4) absences in a given clinical course would result in a critical incident **unless documented by physician's note or other documentation or emergency.**

Student Name (print please)

Student signature

Date

PROGRAM COMPLETION REQUIREMENTS

A. Conditions for Program Completion

The Rad Tech program is an associate degree program that requires the student to successfully complete **both** program requirements and general education requirements. The Radiologic Technology program expects program graduates to sit for the ARRT Registry examination after successful program completion.

Eligibility for program completion is determined by the graduation office. If the student is declared ineligible for program completion, the student will not be able to sit for the required external exams until all deficiencies has been met.

To assess eligibility, each student will have a pre-graduation check completed in the spring semester of the first year. Any deficiencies noted at that time must be addressed and resolved by the **end of the 2nd year spring semester**. Failure to comply with this policy will result in the student being declared ineligible for program completion.

Upon satisfactory program completion and verification of such, the appropriate program documents will be released. The state CRT license will be sent directly to the student from the Department of Public Health (Radiologic Health Branch), **only after** verification from the American Registry of Radiologic Technologists (ARRT) that the registry exam has been passed. Program completion documents are available at the end of the final 2nd year semester only upon verification of successful completion of all required program **and** AS courses. The associate degree will be sent to the student from the graduation office at the college. Release of these documents will be done in a timely manner, however, verification of program completion must be completed before any document release. The student should realize that **not all** documents will be available on last program day. **A three to six week delay** could occur. Students are advised not to accept employment until they have received their ARRT **and** state CRT license. The Rad Tech program only has responsibility for verification of program completion. Final verification is the responsibility of the GRADUATION OFFICE.

Student Name (please print)

Student Signature

Date

CREDENTIALING

CREDENTIALING of health manpower takes four forms - **accreditation** of educational programs, **certification/registration** of personnel by the profession, and **licensure** by a government agency. The three aspects are closely interrelated. State practice acts, establishing the procedures for licensing, usually contain educational requirements. Professional associations, too, usually require that the applicant satisfy certain educational qualifications. For purposes of clarity, the following definitions are presented:

- * **Accreditation** - The process by which an agency or organization evaluates and recognizes an institution or program of study as meeting certain predetermined criteria or standards. Orange Coast College radiologic technology program is accredited by the Joint Review Committee on Education in Radiologic Technology and California Radiologic Health Branch.

- * **Licensure** - The process by which a **government agency** permission to persons to engage in a given profession or occupation by certifying that those licensed have attained the minimal degree of competency necessary to ensure that the public health, safety, and welfare will be reasonably well protected. All practicing technologists and physicians are licensed by the California Dept. of Public Health, Radiologic Health Branch.

- * **Certification** - The process by which a **nongovernmental agency or association** grants recognition to an individual who has met certain predetermined qualifications specified by that agency or association. Such qualifications may include: (a) graduation from an accredited or approved program; (b) acceptable performance on a qualifying examination or series of examinations; and/or completion of a given amount of work experience. Graduates of accredited schools may apply to the **American Registry of Radiologic Technologists** for the opportunity to sit for their examination. This organization is jointly sponsored by the American Society of Radiologic Technologists and The American College of Radiology. Upon passing the ARRT exam, a person is a certified radiologic technologist (RT-R).

- * **Registration** – This is the annual procedure **required by ARRT** to maintain initial certification. ARRT will continue to register the certification of individuals who meet the following three requirements: 1) agree to comply with the ARRT Rules and Regulations, 2) maintain the Standards of Ethics and, 3) meet the continuing education requirements of 24 hours in a two year cycle. **Only technologists who are registered** (renewed within the past year) may designate themselves as ARRT Registered Technologists and use the initials “RT” after their name.

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Successful A.R.R.T. applicants may apply for membership in The American Society of Radiologic Technologists (ASRT) and The California Society of Radiologic Technologists (CSRT). The true professional is a member of both.

APPLICATION PROCESS FOR POST PROGRAM EXAMS

Upon successful program completion, the student is eligible for the following:

1. **CRT** – Certified radiologic technologist. Certificate issued by Radiologic Health Branch (RHB), Sacramento
2. **Fluoroscopy** – specialized permit only recognized by California. Issued by RHB.
3. **ARRT(R)** – National registration exam given by American Registry of Radiologic Technologists, Minnesota

The requirements for CRT and ARRT are:

1. Submit completed ARRT application signed by Program Director along with necessary fee, **prior** to program completion date. Completed application/fees **must be sent directly** to the ARRT.
2. Eligible applicant schedules ARRT exam date as directed by the ARRT. (the ARRT registry is a computer- based exam). Test date, time and location is scheduled at the convenience of the student however, the ARRT **cannot be taken until all program requirements including clinical hours and AS degree have been completed**. The student has a 90-day window from program completion date within which to take the ARRT.
3. The ARRT will notify the student of their score. The student will then need to send a copy of the ARRT and CRT application to the RHB. RHB will **mail directly** to the graduate the CRT license.
4. Upon receipt of **both** ARRT and CRT, the graduate can now legally begin work as a Diagnostic Radiographer.

The requirements for the state fluoroscopy permit are:

1. Submit completed application, fee, and copy of their ARRT certification directly to RHB.

Note: 1. Before any exam results are released, the Program Director must sign verification of student's satisfactory completion of all program requirements. The Program Director must also sign exam applications as verification of achievement by each student.

2. Eligibility to set for the above noted post-program examinations and issuance of said certifications and licensure is not the responsibility of the Program. The graduating student must meet the eligibility requirements set forth by the responsible entity.

Student Name (please print)

Student Signature

Date

OUTCOMES ASSESSMENT

Accreditation requires that the Program maintain a policy of constant outcomes assessment. This is achieved through a variety of means. You the student participate in outcomes assessment through surveys and other data collection mechanisms. At the end of each semester you will complete several on-line surveys. There will be surveys for each didactic class you enroll in; including those with labs. Additionally, you will complete a survey about your clinical education and experiences. The web address for the surveys will be provided in class.

Each survey has a unique password that accesses the correct survey, so it is important that you use the correct survey for each course/class and clinical evaluation. These will be provided at the appropriate times.

During your first year spring, second year fall, and second year spring semesters you will complete a Mid-Semester Evaluation. These can be found on the following pages.

At the completion of the Program, you will need to complete the Graduate Exit Survey and return it with your clinical paperwork. This survey is at the end of this section.

In the Spring, after graduation, you will be asked to complete a 9 Month Follow-up Survey. This survey assesses the graduates opinions about the Program after they have been employed. You will be notified by postcard when the survey is available. The postcard will contain the web address for accessing the survey.

The web address for the nine month follow-up survey will be emailed to you at the appropriate time.

Should you have any questions regarding Outcomes Assessment fell free to talk the faculty about them.

DAILY CLINICAL CASE RECORD

It is **required** that you keep a record of the kinds and numbers of examinations you perform during your clinical training. Some cases you will perform independently, some with a varying amount of supervision, and in some instances, you will perform as a technologist team member. It is vital that you have a broad and varied clinical training experience. By keeping a day-to-day, month-to-month accounting of your experiences, you will be able to readily identify any voids in your clinical practicum.

1. Day slips are available at each hospital. Keep one in your pocket and check off each case you perform or participate in.
2. On a daily or weekly basis, transfer the day slip information onto the monthly sheet, and retain daily slips in your file for future retrieval of cases.
3. Although your hospital attempts to provide you with learning experiences that are compatible with the objectives for each clinical course, your personal record keeping will reveal to you whether or not you are experiencing a well rounded education.
4. **Each student must assess his progress, identify voids, and aggressively assert himself/herself when the case assignments are made.**
5. The student SHOULD NOT record cases that were observed ONLY. If the student “handed cassettes” and was at the technologist’s elbow during the study, it should be recorded. Mere “looking on” does not qualify.
6. Additional documentation is required on the clinical case record, includes number and cause of repeat radiographs.
7. All repeat radiographs must be verified by the technologist who **directly supervised** the repeat film. Their initials are **written next to the number of repeated films** needed to be taken.

CLINICAL FINAL FORMAT

Below you will find listed the requirements for the paperwork necessary to complete your present clinical assignment. This paperwork is to be submitted in the specific order listed and delivered to OCC by each individual student for evaluation at the designated clinical exam. A clinical grade will be issued upon review and satisfactory completion of these documents. **Incomplete submission of documents will result in a non-passing clinical grade.**

FALL AND SPRING SEMESTER

1. Master Time Sheet: **Copy**, dated and signed. Complete absences/tardies section.
2. Clinical Attendance Sheet: Originals, signed, and totaled.
3. Anecdotal Notes: Original, “greenies”, mounted on correct page, submit only if notes have occurred during the term.
4. Critical Incident Report: Original, submit only if form has been issued.
5. Evaluations: Original, submit only if clinical site does independent evaluation of student. Originals of Mid-semester evaluations go here (both forms).
6. Monthly Clinical Experience Log: Print hard copy of “yearly total” page of excel file (one or two pages preferred).
7. Daily Clinical Logs: Original, daily sheets completed and sorted by date.
8. Student Orientation Sheet: To clinical facility (Fall semester only).
9. Procedure Evaluation Forms: Original, blue evaluation form (**completed only**). RT 176 Nursing/Patient Care objectives go here (original).
10. Procedure Evaluation Checklist: **Copy**, all entries signed and dated.
11. Clinical Objectives: Original, signed by clinical educator, reviewed with student.
12. Student Course and/or Clinical Site Evaluations: Must be completed on-line by the end of the semester. If not completed clinical grade will not be issued. Web address will be provided in class.

INTERSESSION

1. Master Time Sheet: **Copy**, dated and signed. Complete absences/tardies section.
2. Clinical Attendance Sheet: Originals, signed, and totaled.
3. Anecdotal Notes: Original, submit only if student has “greenies”.
4. Critical Incident Report: Original, submit only if form has been issued.
5. Monthly Clinical Experience Log: Print hard copy of “yearly total” page of excel file (one or two pages preferred).
6. Procedure Evaluation Forms: Original, blue evaluation form (**completed only**)
7. Daily Clinical Log: Original, daily sheets completed and sorted by date.
8. Clinical Objectives: Original, signed by clinical educator, reviewed with student.

SUMMER SESSION

1. Master Time Sheet: Original, dated and signed. Complete absences/tardies section.
2. Clinical Attendance Sheet: Originals, signed, and totaled.
3. Anecdotal Notes: Original, submit only if student has “greenies”.
4. Critical Incident Report: Original, submit only if form has been issued.
5. Evaluations: Original, submit only if clinical site does independent evaluation of student.
6. Monthly Clinical Experience Log: Print hard copy of “yearly total” page of excel file (one or two pages preferred).
7. Daily Clinical Logs: Original, daily sheets completed and sorted by date.
10. Procedure Evaluation Forms: Original, blue evaluation form (**all even if uncompleted**)
11. 1st year Performance Evaluation Checklist: Original, all entries signed and dated.
13. Clinical Objectives: Original, signed by clinical educator, reviewed with student.
14. Repeat Rate Analysis and Log: Original
15. **Separate copies** of the following: #1) master time sheet #2) master exam sheet with 1st yr totals #3) 1st yr competency list. These are to be **submitted to your 2nd yr clinical educator** at the start of the new clinical assignment.
16. Dosimeters(s) from summer clinical assignment
17. Student Course and/or Clinical Site Evaluations: Must be completed on-line by the end of the semester. If not completed clinical grade will not be issued. Web address will be provided in class.

FINAL SPRING SEMESTER – SECOND YEAR STUDENTS ONLY

1. Master Time Sheet: Original, dated and signed. Complete absences/tardies section.
2. Clinical Attendance Sheet: Originals, signed, and totaled.
3. Anecdotal Notes: Original, greenies, mounted on correct page. Submit only if student has “greenies”.
4. Critical Incident Report: Original, submit only if form has been issued.
5. Evaluations: Submit only if clinical site does independent student evaluation. Mid-semester evaluations go here (both forms).
6. Monthly Clinical Experience Log: Print hard copy of “yearly total” page of excel file (one or two pages preferred).
7. Daily Clinical Logs: Original, daily sheets completed and sorted by date.
8. Competency Forms: Patient Care/Nursing procedures, QC procedures
9. Procedure Evaluation Forms: Original, green evaluation form (**all even if uncompleted**).
10. 2nd Year Procedure Evaluation Checklist: Original, all entries signed and dated.
11. RT 277 Clinical and Peds Rotation Objectives: Original, signed by clinical educator, reviewed with student.
12. Repeat Rate Analysis: Original, all entries completed.
13. Student Course and/or Clinical Site Evaluations: Must be completed on-line by the end of the semester. If not completed clinical grade will not be issued. Web address will be provided in class.

The following documents are submitted separate:

1. Graduate Exit Survey:
2. ARRT Core Competencies and all completed terminal evaluations:
*** important - submit all ARRT forms in separate 3 ring paper folder ***
3. May dosimeter and holder

Note: The nine month post program survey is **required** nine months after program completion on-line.

CLINICAL EVALUATION INSTRUCTIONS

Evaluation of the student's clinical progress is essential to his/her development as a Radiologic Technologist and should be looked upon as a positive learning tool. By identifying student strengths and building upon them, the student can better overcome potential weaknesses.

Evaluation, within any given clinical course, should occur in the following manner:

1. **Monthly Evaluation**

The monthly attendance sheet has a comment and evaluation section at the bottom of the page. At the end of the month, the clinical educator will evaluate your progress during that month per your specific clinical assignment.

2. **Procedure Evaluation Form - For Practical Application of Learning**

To be used when the student is independently performing a radiographic procedure. The form should be given to the designated person (a technologist with a minimum of two years clinical experience) who will be evaluating the student **before** the student starts the procedure. For each procedure evaluation, the student must first complete a minimum of three successful examinations of a body area prior to procedure evaluation – see procedure evaluation form for specific directions.

In the first year, **blue** evaluation forms **are required**. The student is evaluated under direct supervision. After student demonstrates proficiency under direct supervision of a given radiographic procedure (as documented by signature on procedure evaluation checklist and after the 500 hour mark of the program) the student can perform the exam under indirect supervision.

Second year students are required to re-demonstrate their proficiency, under indirect supervision on **green** evaluation forms. See respective procedure evaluation checklist and green evaluation forms for instructions and criteria.

3. **Mid Semester Evaluation**

During the eighth week of the semester, the clinical educator will complete a mid-semester evaluation on each student. The purpose of this evaluation is to provide feedback to the student regarding clinical progress to date and a grade indicator. Specific goals for the remaining eight weeks will be formulated at this time. The student will also have an opportunity for input by completing a self mid-semester evaluation and discussing such with the clinical educator.

4. **Clinical Objectives - Semester End**

These objectives are designed to be the final semester review and will determine the student's clinical course grade. All objectives should be met for satisfactory course completion. During the last week of the semester, the educator will complete these forms

and share such with the student during the semester end conference. The student will be given an opportunity for input by completing said forms in pencil before submitting them to the clinical preceptor.

Each clinical course has specific learning objectives or goals. In each instance they are compatible with or parallel to the classroom instructional program. On the clinical evaluation forms, you will find objectives that answer three (3) questions: what, how, and how well. There are frames related to radiographic skills, patient care techniques, departmental procedures, your personal appearance and attitudes, as well as dependability and professional growth. **All objectives are designed to be met!** Obviously they are more easily met in the beginning and become progressively more difficult as you mature to the level of a "registry eligible" staff technologist.

By reading the objectives **at the beginning** of clinical course, you can determine what is required of you. You are expected to conduct your day-to-day experiences in such a manner so as to meet the pre-determined performance standards.

5. **Procedure Evaluation Checklist**

This document is used as a sign-off sheet to verify proficiency in performing radiographic procedures. Before the exam can be signed off as a proficient, there must be a completed procedure evaluation form (see #2) verifying that this procedure has been previously evaluated. No exam will be signed-off without this requirement being met. The procedure evaluations are used as terminal competencies for the end of the 1st year phase of the program and determining satisfactory program completion. No student will complete the program without this evaluation requirement being met.

6. **ARRT Competencies**

For successful program completion and to meet ARRT exam eligibility requirements, student must demonstrate competencies as stated on the ARRT and PT Care Skills required radiographic procedures. These final evaluations will be scheduled during the second year clinical courses (RT 271, RT 276, RT 277).

If a student fails to complete the ARRT Mandated competencies by the end of the last clinical course, successful program completion has not been achieved. **Clinical training will be extended and the student will be ineligible to set for the External Exam(s).**

7. **Student Evaluation of Radiology Department**

You too have the opportunity to evaluate. At the end of each clinical course, you are required to complete the radiology department evaluation form. By your candid comments we can identify strengths and weaknesses among our clinical affiliates and within the program. The survey can be

found at: <http://climate.dis.cccd.edu/classclimate/indextud.php>

All evaluation forms are due at semester's end along with other required documentation during clinical final exam. If the college fails to receive the required clinical records, **an unsatisfactory grade is assigned**, which will bar you from program continuation.