MEDICAL RADIOGRAPHY PROGRAM
CLINICAL EDUCATION MANUAL

Updated August 31, 2023

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SECTION 1 INTRODUCTION

The most current electronic version of this manual, and other current information related to Camosun College MRAD clinical education, can be found at https://camosunmrad.opened.ca/.

This manual contains important information about the Camosun College Medical Radiography (MRAD) clinical education program. Policies and procedures outlined in the manual pertain to all clinical facilities attended by Camosun College students. For more program information, including academic policies and procedures, please visit http://camosun.ca.

These policies and procedures are established by Camosun, with references from Island Health and the BC Practice Education Guidelines. This information is designed to assist Clinical Instructors/Designates in mentoring MRAD students by:

- promoting standardization of clinical education
- informing Clinical Instructors/Designates of Camosun MRAD clinical policies and responsibilities
- informing Clinical Instructors/Designates of the student's clinical objectives and expectations
- ensuring continuity between practical learning at Island Health and didactic learning at Camosun College while maintaining a nationally recognized standard of education

Overarching responsibilities of the Clinical Instructors/Designates include:

- Collaborating with Camosun College Clinical Liaisons (CLs) for ongoing clinical education improvement and cohesion of learning between the two organizations
- Promoting a welcoming environment that supports the student to meet the program's practicum objectives and competencies
- Encouraging the student to ask questions to seek clarifications and engage in critical thinking opportunities
- Supervising the student to ensure learning procedures are conducted in a safe manner for the student, staff and patients
- Imparting knowledge and demonstrating skills in a professional and positive manner
- Regularly evaluating and providing timely feedback to the student
- Identifying, documenting and communicating, in an objective manner, any student practice concerns to the CL and/or site Leader or Manager
- Continually seeking to develop clinical instructional strategies by participating in meetings and education opportunities

Adapted from "A Preceptor's Guide for Success" (Island Health, 2017)

Clinical education in MRAD is supported by medical imaging staff in two ways:

1. Partnering a student with a CAMRT-certified MRT staff technologist who does not hold a formal Clinical Instructors/Designate role.
2. Partnering a student with a CAMRT-certified MRT Clinical Instructor/Designate who has volunteered for additional responsibilities and duties with respect to clinical education.

ROLES AND DUTIES OF THE CLINICAL PRECEPTOR

Clinical Instructors/Designates play an integral role in the development of each MRAD student. Each activity and interaction between Clinical Instructor/Designate and student should have underlying goals of progressing the student towards competence as an MRT and enhancing the professional relationship between Instructor/Designate and student.

Duties of the Clinical Instructor/Designate to achieve these goals include, but are not limited to:

- Leading or delegating orientation to each new facility, department or modality, including workflow, layout, imaging equipment and staff introductions
- Working collaboratively with the student to set immediate and long-term learning objectives
- Identifying specific examples where a student showed a need for improvement
- Observing and demonstrating techniques for correction as needed
- Assessing performance of verbal image critiques
- Performing portfolio image audits
- Performing special modality case reviews
- Evaluating the student using competency assessments
- Completing formative evaluations as per the evaluation cycle
- Collaborating with the CL to develop a clinical schedule prior to the start of term
- Managing the clinical schedule during the term and adjusting as needed, within the schedule guidelines, to enable students to meet requirements
- Ensure that student support is in place when the student is scheduled without a Clinical Instructor/Designate present
- Collaborating with CL to create, execute, and monitor learning contracts

The Clinical Instructor/Designate's and student schedules should be aligned so that there is protected weekly time to complete some of these activities without distractions. The amount of protected time varies greatly from one clinical level to the next. It is predicted that at the beginning of Level 1, approximately one scheduled day per week per student is sufficient time to fully engage in these activities. This time is *may* decrease as a student progresses through each clinical level and thus, as their competence increases. However, with increasing expectations within each clinical level, students may need steady support throughout the program.

ROLES AND DUTIES OF THE STAFF TECHNOLOGIST

Staff technologists are essential to the success of the clinical program. In order to complete the clinical requirements, it will be necessary for students to work closely with assigned staff technologists to achieve the intended goals. MRAD students spend 50% of program education in the clinical setting, much of that time with staff technologists. It is the student's responsibility to keep staff technologists informed of their current skill level and pertinent requirements.

Duties of the staff technologist within clinical education include, but are not limited to:

- Sharing knowledge and skills relevant to the student's current skill level
- Observing and demonstrating techniques for correction as needed
- Identifying specific examples where a student showed a need for improvement
- Communicating to the Clinical Instructors/Designates or the CL when there is a student practice concern
- Validating the student's level of performance for cases in which they participated
- Encouraging students to integrate into the department workflow
- Modelling professional workplace behaviours

ROLES AND DUTIES OF THE CLINICAL LIAISON

Each term, there are two Camosun College instructors who support clinical education in their roles as Clinical Liaison (CL). Usually, one CL supports students in South Island at VGH, RJH and SPH. Another CL supports students in Central-North Island at CDH, NRGH, CRH and CVH. Liaisons are responsible for the preparation, maintenance and support of clinical education courses: MRAD 130 (CP1), MRAD 260 (CP2), and MRAD 290 (CP3).

Duties of the Clinical Liaison include but are not limited to:

- Before each clinical term
  - Reviewing BC Practice Education Guidelines, Island Health and Camosun College policies to ensure clinical courses align to policies
  - Collaborating with Clinical Instructors/Designates and other site staff for education or training regarding clinical education
  - Collaborating with Clinical Instructors/Designates and site supervisors to create clinical schedules
  - Ensuring students have completed pre-placement requirements prior to practicum start
  - Revising and printing clinical documents
  - Providing students' clinical items to receiving sites (clinical books, dosimeters, IDs and access cards)
- During the clinical term
  - Supporting Clinical Instructors/Designates (course requirements, evaluation or teaching strategies, if a student is struggling, regular check-ins, etc.)
  - Supporting students (extra help if they are struggling or feeling like they may not meet course requirements, conflict resolution between students/preceptors/other technologists, regular check-ins, etc.)
  - Marking course assignments and assigning final course grade

ORGANIZATIONAL CHART – MRAD PROGRAM

The Camosun College Medical Radiography Program is part of the Department of Allied Health and Technologies (AHT). AHT, along with many other health disciplines, is a department within the School of Health and Human Services (HHS).

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The Clinical Liaison assigned during the current term is the first point of contact for any practicum-related questions. Program-wide concerns should be addressed to the program leader or chair.

SECTION 2 CLINICAL EDUCATION GUIDELINES

CLINICAL SITE SELECTION PROCESS

Clinical placements are distributed across Vancouver Island and there are a limited number of seats available in each region. The site selection process is in place to ensure students have equitable access to opportunities they need to develop their clinical competence and complete their course requirements.

To ensure a fair and consistent approach for all students in the program, the following assumptions are made when students accept a seat in the program:

- Students accepted assigned clinical site placements, subject to availability and capacity.
- Students will provide their own transportation, meals, and accommodations while completing their clinical placement.
- When necessary to complete a portfolio requirement, students may be scheduled for occasional shifts at another site (which may include out of city). The purpose of this is to ensure access to learning opportunities that may only be available at certain locations. Clinical Liaisons (program faculty members who coordinate clinical practicums) inform students when these opportunities are available or necessary to complete course requirements.
- The healthcare setting is subject to unpredictable events, such as communicable disease outbreaks, critical staffing shortages, equipment malfunctions, and other scenarios. In the event one of the placement sites is affected by an unforeseen circumstance, the affected student(s) will be notified, and the program will work with the health care organization to make alternate arrangements.

This information is emphasized in the program information session, on the website, and during the site selection process at the beginning of the program. For more information on program participation requirements, please visit https://calendar.camosun.ca/preview_program.php?catoid=7&poid=811.

The program attempts to align student clinical experiences with their preferences; however, there is no guarantee this accommodation can be granted. To be as fair as possible, the program uses randomization to determine who gets placed at high demand locations (typically Victoria sites are the highest demand). This information is collected before assigning placement sites and to help successful applicants make informed choices about accepting a seat in the program.

We recognize that circumstances and preferences may change over the two years in the program. The program considers requests for special accommodations on a case-by-case basis. However, the same principles inform our decision-making throughout the entire program.

If at any time during the program a student experiences an unexpected extenuating circumstance (such as an acute change in health status, or any other human rights exception) they should notify the program immediately to discuss site placement considerations. Financial hardship or the desire to live closer to home is not considered a mitigating circumstance. All students pay the same tuition.

SUPERVISION

The level of clinical supervision is based on student progress, which is recorded in the Clinical Portfolio. Students must be fully and directly supervised until competency for an exam type or work area is achieved and documented.

Types of supervision (PEG for BC, Supervision of Students, 2021)

- Direct Supervision: The supervisor is physically present to either directly observe and support or intervene as needed.
- Indirect Supervision: The supervisor is accessible to provide guidance, direction, and support as needed, and to regularly review student progress through debriefing

For *all* procedures in which a student participates, an MRT must approve images and give permission for the student to dismiss the patient. In addition, when completing procedures in RIS, there must be a technologist included as the primary responsible person. The supervising technologist will be named the primary responsible party on RIS, verify the correct images are sent to PACS and oversee input of information into the RIS system.

During CP1, and during all rotations in special imaging modalities (FL, OR, CT), students must perform procedure related activities under DIRECT SUPERVISION.

In CP2 and CP3, there is a possibility for students to gain the ability to work under indirect supervision. At minimum, the student must have completed and logged the exam as unassisted at least once to be able to work under indirect supervision for that exam.

However, indirect supervision is earned on a case by case basis, at the discretion of the MRT. In addition, the ability to work under indirect supervision may be retracted at any time.

To ensure that students are working within their scope of documented competence, requisitions should be assessed to determine that students have the capability to independently perform the procedure with reasonable success. Repeat exposures require the approval of an MRT and images must still be reviewed with an MRT prior to dismissing the patient.

It is the responsibility of the student to ensure appropriate supervision is in place for each procedure. The student should discuss the case with the technologist to clarify the level of supervision required. If students are found to be working without proper supervision on repeated occasions, a learning contract will be put in place.

LEVELS OF PARTICIPATION

Unassisted

The student is deemed to have completed a procedure at an unassisted level by performing the core aspects of the procedure independently, including:

- Selecting examination from the worklist
- Setting control panel
- Positioning patient
- Aligning x-ray beam to part and image receptor
- Placing personal radiographic marker
- Collimating radiation field
- Using accessory equipment as needed (grid, filter, sponges, etc.)

These criteria are found on the "Unassisted Case Validation" form in the student pocketbook.

Students will more likely succeed in completing these steps independently when a similar examination type has already been performed at the assisted level or the patient complexity/acuity is low.

Assisted

The student is deemed to have complete a procedure at the assisted level if some criteria on the above list were performed independently. They are expected to observe or assist the technologist with steps of the procedure not performed independently.

Assisted cases will most likely to occur when experience with the examination type is limited or there is a sudden change in patient status or an unexpected complication.

Observed

When a student participates in an examination at the "observed" level, they are expected to engage in all steps of the procedure and there likely will be minimal patient interaction. The student should still seek to assist with simple tasks such as room set up and clean up, opening patient file at the workstation, completing paperwork, etc.

Observed cases will most likely occur when a new examination type is encountered or when the patient complexity and/or acuity are too high.

Participating at the "observed" level should be kept to a minimum. Students should have a hands-on approach to participation as much as safely possible.

CLINICAL SCHEDULES AND ABSENCES

During each Clinical Practicum, students are required to attend clinical for 30 clinical hours per week for 15 weeks. Clinical Instructors/Designates must record absences on each formative evaluation. Students must ensure that any schedule changes are recorded on the posted schedule prior to submission to the Clinical Liaison (CL). There is risk of the student receiving an incomplete grade for the course if attendance requirements are not met.

Week 16 (flex week) occurs at the end of term and attendance may be elective or required. Students are strongly encouraged to elect to stay for extra practice. Attendance of flex week may be required if the student:

- misses more than 4 days during the entire term
- misses 1 or more days in OR or FL
- does not meet expectations on the final formative evaluation
- does not complete course requirements by the end of week 15

Attendance is a course requirement that is evaluated on each formative evaluation. All criteria must be met on each formative evaluation to receive a passing rating.

SCHEDULE GUIDELINES

Clinical Instructors/Designates and CLs should work collaboratively to develop a schedule that considers both the department's and the program's needs. Each schedule considers consistency and equality of shifts and student time with shared Clinical Instructors/Designates.

Scheduling for clinical practicum should follow these parameters:

- 16 total weeks of clinical practicum (including flex week)
- 30 clinical hours per week
- Students should not be scheduled for stat days, unless requested by the student
- One scheduled day of non-clinical academic time each week
    - During CP3, students may opt to attend clinical on academic days. This should be requested through the Clinical Instructor/Designate.
    - The Clinical Instructor/Designate may also recommend that students attend clinical on an academic day for extra practice. This is optional for the student. However, if the recommendation is part of a learning contract, the student must attend.
    - The Clinical Instructor/Designate should ensure that students attending clinical on an academic day does not hinder other students' opportunities for cases.
- Dedicated FL, OR and CT week(s) are scheduled
    - CP1: 1 week each of FL and OR
    - CP2: Approximately 2 weeks each of FL and OR; 1 week of CT
    - CP3: Approximately 2 weeks each of FL and OR; 4 weeks of CT
- Changes to the base schedule must be noted on the schedule
    - One student per site is responsible to submit the schedule with any revisions to D2L on the same day Formative Evaluations are due

If a student requests a schedule change, these guidelines should be taken into consideration:

- The Clinical Instructor/Designate should set the expectation with the student on how much notice is given for any schedule change requests
- Personal reasons generally should not be acceptable as a reason for request

- Clinical days missed for appointments, illness, and other circumstances will be recorded as days absent – disclosure of the nature of missed clinical time is not necessary
- Switches that result in interfering pre-scheduled Clinical Instructor/Designate time with another student should be avoided
- Switches that may be perceived by a student as a potential advantage that cannot also be offered to them should be avoided
- Missed clinical time can be made up any day, provided that the student does not work more than 30 hours that week
- As part of a learning contract for one student, Clinical Instructors/Designates and CLs may make alterations to the schedule for any student at that site, as long as all students continue to progress given the schedule changes
- Requests to perform procedures at another site during weeks 1-15 are generally not approved
- Cross site requests during flex week 16 may be approved, as long as all professional and portfolio requirements are met, the receiving site agrees to take student, and no other students at that site will be negatively impacted
- All cross-site requests must go through the CL

ABSENCES

Students must inform their Clinical Instructor/Designate if they are unable to report for a scheduled clinical day. This must be done prior to the beginning of the clinical day. Chronic failure to notify appropriate personnel may trigger the need for a learning contract to be put in place.

Extenuating circumstances involving prolonged absences may require additional clinical hours but will be assessed on an individual basis. A doctor's note validating ability to return to clinical is required when returning after a prolonged absence due to health or injury issues.

Casts are not acceptable at any of the clinical facilities; however, individual cases will be considered as to students' ability to perform without injury to self or patients.

WEATHER CANCELLATIONS

Closures of the college due to inclement weather may result in cancellation of clinical activities. However, due to the geographical spread of the clinical practicum facilities, students and Clinical Instructors/Designates may use their discretion regarding commuting safety. Factors that influence this decision include road conditions, transit availability, official recommendations, and weather predictions. Missed days due to weather may be required to be made up.

CONFIDENTIALITY OF PATIENT INFORMATION

It is understood that Clinical Instructors/Designates and students will discuss and reflect on details of specific procedures. All information related to patients must be treated as confidential. This information may be in written, verbal, electronic, or other form.

Confidentiality applies to everything hospital personnel and students learn in the exercise of their duties and refer to both important and seemingly unimportant information. This includes, but is not limited to, the nature of the patient's illness and its cause, the treatment the patient is receiving, and everything the patient discloses with a view to giving a better understanding of their health condition. Confidentiality also extends to everything learned during the course of the patient examination, e.g., patient reactions and all aspects of their condition. Even the knowledge that an individual is in the hospital must not be volunteered. Patient information disclosed in conversation or during an altered state of consciousness, such as the patient's financial state, home conditions, domestic difficulties, etc. are also considered confidential.

Patient confidentiality also applies to the transmission, use, and management of patient digital x-ray images. All images to be used for off-site student assessment purposes must have all patient and clinical site demographics removed and with express permission of school or Island Health personnel. Sharing x-ray images via social media, email or other unapproved electronic or hard-copy avenues is never permitted.

All students and Island Health employees are required to successfully complete the Island Confidential Information Management course. This confirms that the individual has read the policy and fully understands the expectations and consequences of non-compliance of this policy. VIHA Confidentiality Policy

PATIENT SAFETY

Patient safety is paramount and any concerns or allegations related to patient safety (physical and emotional) will be investigated by the appropriate authorities (hospital administration, Camosun College administration, and/or law enforcement). During the period of investigation, students may be withdrawn from clinical until a decision regarding continuation in the program is determined. Students have the right to be informed in a timely, confidential manner of relevant practice issues (PEG for BC, Student Practice Issues, 2021).

STUDENT SAFETY

STUDENT INJURIES

WorkSafeBC coverage is extended to all students in practice education. A practicum is defined as an integral component of a program which is required for program completion and certification. It is an unpaid and supervised work experience which takes place at the host employer's premises or place of business. Out-of-province clinical practicums are not covered by WorkSafeBC.

1. The student must report the injury to the Clinical Instructor/Designate and the CL; the CL will submit a report to the school.
2. The student is strongly encouraged to medical treatment as appropriate.
3. The student must complete a Form 6A "Worker's Report of injury or Occupational disease to Employer". https://www.worksafebc.com/en/resources/claims/forms/workers-report-of-injury-or-occupational-disease-to-employer-form-6a?lang=en
4. The Form 6A must be faxed to the Camosun Occupational Safety & Health Coordinator, at 250-370-3664. The process must be started as soon as possible.

DOSIMETER EXCHANGE AND RETURN OF CLINICAL DOCUMENTS/ITEMS

Students are provided with dosimeters during each practicum. Dosimeters are exchanged once during each term (December 1, March 1, and June 1) and then returned to Camosun College at the end of each term.

Midterm exchange:

- Clinical Instructors/Designates receive new dosimeters, list and prepaid return envelope from Camosun College School of Health and Human Services (HHS) administration
- Clinical Instructors/Designates will:
    - Verify new badge serial numbers match numbers written in the list in the package, and initial to document verification
    - Hand out new badges to students and collect expired badges
    - Verify expired badge serial numbers match the numbers written in the list below; initial in box to document verification
    - Notify Clinical Liaison of any missing expired or new badges
    - Insert checklist and all expired dosimeters into pre-paid, pre-labelled envelope/parcel and return to Camosun College

End of term return of clinical items:

- Clinical Instructors/Designates receive checklist and prepaid return mailer from HHS administration
- Students will return all clinical items (Clinical Portfolio, Student Pocketbook, dosimeter, Island Health ID and Island Health security access card) to Clinical Instructors/Designates and initial checklist to document handover
- Clinical Instructors/Designates will:
    - Initial the checklist to document receipt of clinical items from students
    - Return clinical items and signed checklist to Camosun College using the provided prepaid mailer

At the end of each term, Clinical Instructors/Designates are responsible for collecting clinical documents and items to return to the college by mail. Clinical documents must not remain at the clinical sites outside of a student's clinical term.

STUDENT MISCONDUCT

Students are expected to meet Camosun College Student Conduct standards while in clinical education. Students may be dismissed for activities such as verbal abuse, dishonesty, theft or breach of confidentiality.

Camosun College Student Misconduct Policy

STUDENT/TECHNOLOGIST/PRECEPTOR RELATIONSHIPS

As students in a program that leads to a professional career, conduct which consistently demonstrates courtesy and respect is expected. All students have the right to expect this of their peers, instructors, and clinical staff and it must be reciprocated by the student. A professional relationship must be maintained at all times.

It is intended that students are responsible for their clinical education with Clinical Preceptors providing the resources for students to reach their goals. Resources can include but are not limited to extra demonstrations, learning objective suggestions, schedule alterations, and formative feedback. Students are expected to be continually aware of their own requirements and seek the necessary experiences to meet the required objectives.

LEARNING CONTRACTS

Clinical education is considered a learning environment. In collaboration between the CL and Clinical Instructors/Designates, a learning contract may be developed, with specific expectations, if the student is considered to be at risk of not successfully completing the clinical course.

Some learning needs/behaviours which may trigger a learning contract include but are not limited to:

- practice that risks the safety of patients, staff, or other students
- unsatisfactory or inconsistent progress in achieving clinical requirements
- performing procedures outside of documented competency
- unprofessional or unethical behavior and/or practice
- breach of confidentiality
- unsanctioned or excessive absence from clinical
- chronic tardiness
- non-compliance with hospital/department policies
- non-compliance with Camosun/student policies

The learning contract outlining the problem and improvement plan will be monitored by the CL, with feedback from the Clinical Instructor/Designate. The plan will include:

- specifics of the learning need or behaviour
- plan for improvement – what must be accomplished, resources available, evidence of success
- time limits and the consequences if the learning need/behaviour is not resolved
- responsibilities of the student, Clinical Instructor/Designate, and CL in the execution and monitoring of the learning plan

Depending on the nature of the student practice issue, the student may be asked to leave the clinical setting. Follow-up documentation of student progress/success will be completed by the CL, with feedback from the Preceptor, at the end date of the learning contract.

Adapted from "Student Practice Issues" (Practice Education Guidelines for BC, 2021)

MEDICAL RADIOGRAPHY PROGRAM MAPPING

Year 1		
September – December	**January – April**	**May – August**
Term 1: on campus	Term 2: Clinical Practicum 1	Term 3: on campus
Year 2		
September – December	**January – April**	**May – August**
Term 4: Clinical Practicum 2	Term 5: on campus	Term 6: Clinical Practicum 3

SECTION 3 STUDENT PREPARATION AND EXPECTATIONS

CLINICAL PRACTICUM 1 PREPARATION AND EXPECTATIONS

Students complete the following didactic and lab components in Term 1 in preparation for CP1:

- MRAD 117 Introduction to Radiographic Procedures
  - Positioning of entire skeleton (minus specific facial bones i.e. TMJs, mandible etc.)
    - Routine scenarios and ambulatory patients, limited introduction to scenarios requiring adaptation
    - Students demonstrate routine projections on lab partners
    - Limited practice with axillary shoulder, chest x-ray with portable machine
  - Critique of common projections (have not yet covered critique of skyline, tunnel, scaphoid, AC joints, sternum, SC joints, SI joints, and other less common projections)
  - Basic definitions of image quality
- MRAD 119 Principles of Radiographic Imaging 1
- MRAD 106 Anatomy and Physiology for the Radiographer
- AHLT 112 Patient Management for Allied Health
- AHLT 104 Professional Communication for Allied Health
- MRAD 108 Clinical Preparation 1
  - Learning and professionalism in the clinical environment
  - Hospital/imaging teams and environments
  - Critical thinking and problem solving
  - Clinical requirements

Course descriptions:
https://calendar.camosun.ca/preview_program.php?catoid=23&poid=3758&returnto=2036

Upon entry into CP1, students are expected to be able to do the following:

- Communicate and interact with staff, patients and other students in a professional manner
- Review requisitions with technologists and predict appropriate exam protocol
- Identify basic information presented on a patient requisition
- Identify common functions on an x-ray tube and workstation

In CP1, the emphasis is on becoming comfortable and proficient with patient interactions and department workflow. With practice, students should reach proficiency in the following by the end of term:

- Apply theory learned in Term 1 in the workplace
- Perform all skeletal exams on ambulate and cooperative patients required for the portfolio
- Critique all skeletal exams required for the portfolio
- Use correct relevant scientific terminology
- Use basic HIS/RIS functions – exam start, exam completion, patient portering, etc.
- PACS usage – retrieve previous images, confirm image archival
- Assist in patient transfers and basic patient care
- Choose correct kV ranges for manual techniques
- Observe Fluoroscopy and Operating Room areas to build context for learning next term

During CP1, students are NOT expected to be proficient in the following:

- Adaptive/traumatic procedures
- Discuss sub-optimal image quality due to digital causes (e.g. algorithm errors, EXI/S# errors, etc.)
- Choose correct mAs for manual techniques
- Identify pathologies
- Adjust techniques based on patient pathologies
- Judge image acceptability as per site protocols
- Complete FL or OR procedures unassisted

CP1 is the foundation upon which to further develop in these areas. Students are not expected to be proficient in the full range of competencies expected of the entry-level technologist at the end of CP1. However, with adequate supervision and careful guidance, CP1 students can benefit greatly from being involved in more challenging cases and are encouraged to participate within their own limitations.

CLINICAL PRACTICUM 2 PREPARATION AND EXPECTATIONS

Students complete the following didactic and lab components in Term 3 in preparation for CP2:

- MRAD 157 Advanced Radiographic Procedures
  - Adaptive/Trauma positioning
  - Fluoroscopy/Operating Room procedures
  - Image critique (digital image quality, adaptive techniques)
- MRAD 159 Principles of Radiographic Imaging 2
- MRAD 156 Relational A&P for Technologists – Part A
- MRAD 173 Pathology for Radiographers – Part A
- AHLT 165 Physics of Medical Imaging and Radiation Therapy
- AHLT 134 Legal & Professional Ethics for Allied Health (online concurrently with CP1)
- MRAD 148 Clinical Preparation 2

Course descriptions:
https://calendar.camosun.ca/preview_program.php?catoid=23&poid=3758&returnto=2036

Upon entry into CP2, students are expected to be able to do the following:

- Discuss requisitions with technologists to confirm exam protocol
- Explain x-ray procedures to patients
- After orientation, perform ambulate exams unassisted

In CP2, the emphasis is on building on skills, multitasking, and becoming integrated within the department workflow in a timely manner. **With practice, students should reach proficiency in the following by the end of term:**

- Apply theory learned in Term 3 in the workplace
- Discuss and perform most skeletal exams on adaptive, trauma, portable examinations
- Critique all skeletal exams required for the portfolio, including image quality due to digital causes
- Use more advanced RIS/HIS/PACS features: PowerChart, Modify Exam, Cancel Exam, Reset Exam, Create Requisition, Exam Validation
- Assist in patient transfers and all required patient care (e.g. safely handling lines and tubes)
- Perform routine FL and OR procedures
- Choose correct kV ranges for manual techniques

- Discuss correct mAs ranges for manual techniques
- Recognize images that contain abnormalities, may identify some common pathologies
- Recognize if the pathology needs an increase or decrease in technical factors
- Discuss image acceptability with MRT
- Observe in CT to build context for learning next term

During CP2, students are NOT expected to perform the following:

- Dismiss a patient without technologist approval
- Lead adaptive/trauma cases without adequate practice
- Perform FL, OR, mobile or CT procedures without direct supervision
- Complete CT procedures unassisted

CLINICAL PRACTICUM 3 PREPARATION AND EXPECTATIONS

Students completed the following didactic and lab components in Term 5 in preparation for CP3:

- MRAD 277 Computed Tomography Procedures
- MRAD 279 Principles of Computed Tomography
- MRAD 266 Introduction to Cross Sectional Anatomy
- MRAD 273 Pathology for Radiographers – Part B
- MRAD 256 Relational A&P for Technologists - Part B
- MRAD 254 Interprofessional Exploration for Technologists (online concurrently with CP2)
- MRAD 268 Professional Preparation for Imaging Technologists
- HLSC 264 Interprofessional Practices

Course descriptions:
https://calendar.camosun.ca/preview_program.php?catoid=23&poid=3758&returnto=2036

Upon entry into CP3, students are expected to be able to do the following:

- Review requisition, offer predicted exam protocol, and confirm with MRT
- Answer common questions from patients
- After orientation, perform exams on ambulate patients with confidence
- After orientation, perform more common adaptive procedures

In CP3, the emphasis is on demonstrating routine in their practice, while making procedure-related decisions independently and with confidence. With practice, students should reach entry-level proficiency in the following by the end of term:

- Apply theory learned in Term 5 in the workplace
- Seamlessly embedding personal practice within the department workflow
- Lead adaptive, traumatic and mobile radiographic procedures
- Troubleshoot technical errors relating to PACS, RIS, and HIS
- Predict patient transfer and care needs and integrate predictions into planning the procedure
- Demonstrate understanding of where specific lines/tubes should be visualized on the radiograph (e.g. ETT, NG, PICC, etc.)
- Choose acceptable technical factors for manual techniques
- Predict and then confirm image acceptability with MRT
- Perform routine CT procedures required for the portfolio

During CP3, students are NOT expected to perform the following:

- Perform FL, OR, mobile or CT procedures without direct supervision
- Perform radiographic procedures alone in the x-ray department

ORIENTATION PERIOD – ALL PRACTICUM LEVELS

Clinical Instructors/Designates should use the provided "General Orientation Worksheet" to help guide student orientation. If the Clinical Instructor/Designate is unavailable to orient the students during any of their regularly scheduled Clinical Instructor/Designate days, another designate should be appointed. Clinical Instructors/Designates may need extra days scheduled with students during the orientation period so that there is seamless transition into the workplace. This is especially important during CP1. Orientation periods are scheduled for the first two weeks in Clinical 1 and first week in Clinical 2 and 3.

Clinical supplies provided by the Clinical Liaison will be given to Clinical Instructors/Designates ahead of the start of term. The Clinical Instructors/Designates will give these items to the students on the first day of orientation:

- Island Health student ID
- Island Health security access card
- Radiation dosimeter
- Clinical portfolio
- Clinical pocketbook

A comprehensive orientation is vital to ensure students can start integrating into the daily workflow of the department in a timely manner. Please see the "General Orientation Worksheet" for orientation activities.

Other preparation activities prior to clinical practicums include:

- PHSA Learning Hub courses:
    - SPECO Curriculum
    - Island Health Student Practice Curriculum
    - Other Learning Hub courses as required
- Maskfit Test
- TB Test
- CRC
- Basic Life Support
- Current immunizations

Clinical sites may request proof of immunization in the case of an outbreak. If the student cannot produce proof, they may be asked to leave the clinical facility until the outbreak is declared over. This absence may impact the student's ability to complete clinical requirements, and may require additional clinical hours, or could result in non-completion of the clinical course and a failing grade.

SECTION 4 CLINICAL PORTFOLIO AND POCKETBOOK

The Clinical Portfolio of Clinical Experience and Competence (or logbook) is a record of the student's competency and progression of skills. The portfolio requirements must be completed each term in order to meet course outcomes and receive course completion.

The Student Pocketbook is to be used by the student to record procedures completed to later present to the Clinical Instructor/Designate. If accepted by the Clinical Instructor/Designate, the procedure information can then be transferred to the portfolio. Only the Clinical Instructor/Designate should enter updates in the portfolio.

Because of the sensitive information included within the Clinical Portfolio and Pocketbook, these clinical books must remain at hospital sites in a secure location at all times.

For each practicum, requirements are laid out such that one requirement gives students the knowledge to work towards the next requirement. In addition, each requirement asks for a specific level of participation: assisted or unassisted.

If, nearing the end of term, a student is not able to obtain a required specific body part for the portfolio, a discussion with the Clinical Instructor/Designate and Clinical Liaison should take place. In some circumstances, a similar alternate procedure or a simulation can be performed. This will be decided on a case-by-case basis.

CLINICAL PRACTICUM 1 PORTFOLIO - NOVICE

There are 3 levels of knowledge and skill that CP1 students are required to successfully complete in sequential order:

- Step 1: Case 1 Oral Image Critiques
- Step 2: Case 2 Image Audits
- Step 3: Competency Assessments

CASE 1 ORAL IMAGE CRITIQUES

The student is responsible to practice image analysis before presenting Case 1s to the Clinical Instructor/Designate. Students may present cases in which they performed assisted or unassisted. Images presented need not be optimal, but must be diagnostic. For each Case 1 presented for inclusion in the Clinical Portfolio, the student must be able to independently critique images using correct scientific terminology (see sample critique template in the portfolio). The student is not required to independently answer questions pertaining to image quality and the identification of pathology. This should instead be a discussion between the Clinical Instructor/Designate and the student.

Near the beginning of term, novice students may need to be prompted through the image analysis process, but should answer all questions correctly once prompted. As the term progresses, their ability to independently proceed through the analysis should also progress. Inability to do so would warrant a repeat for that body part. It is understood that if students are performing consistently well in the categories of part and projection, collimation and markers, Clinical Instructors/Designates do not need to ask these image critique questions at later image critique sessions.

CASE 2 UNASSISTED CASE IMAGE AUDITS

After successfully completing an oral image critique of an anatomical part, students may attempt Case 2s. Inclusion of Case 2s in the portfolio is a 2-step process: the student must have performed the exam unassisted, and the Clinical Instructor/Designate will audit the image to determine if it is acceptable.

Validation of completing the exam unassisted must be signed by an MRT on the XR Unassisted Case Validation form (found in the pocketbook).

Acceptability of images is based on the criteria for acceptability (see table in portfolio or appendix in this manual). Students must be prepared to answer questions pertaining to image critique or procedural steps.

If the image is sub-optimal, the student must provide a rationale that is accepted by the Clinical Instructor/Designate. Once accepted by the Clinical Instructor/Designate, the case information may be entered in the portfolio.

If the Clinical Instructor/Designate rejects the case for entry into the portfolio, they must ensure the student understands why and set expectations for next time. This should be recorded in the "rejected cases" section of the portfolio.

COMPETENCY ASSESSMENTS

The next level of student achievement is the competency assessment. CP1 students may attempt assessments on routine scenarios requiring minimal adaptations. Evaluators will use a comprehensive checklist to assess the student's performance on all aspects of the exam, including safety, professionalism, and efficiency. Successful completion proves that the student would be able to act competently in that particular situation. *It is important to note that successful competencies can be retracted if the student later demonstrates regression in skill for that particular part/scenario. This would necessitate a repeat competency assessment for that particular part/scenario.*

Critical criteria on the competency assessment form highlight skills that are essential to the successful and safe completion of an examination. All "critical criteria" must be met on each assessment to receive a passing score.

The competency assessment has been created with the flexibility to assess students quantitatively and qualitatively. For each assessment, students must **achieve the minimum numerical score AND** have a quality of performance rating at the **Advanced Beginner level**. Sometimes, the numerical checklist may not fully capture the student's ability to be efficient and organized while maintaining high standards of safety. This qualitative assessment allows evaluators the flexibility to mark the student's performance as sub-standard even if they meet all the items on the checklist.

For example:

Before the first image, the student fails to set the exam technique before positioning the patient. When they return to the control panel to make the exposure, they realize the menu is not set to the correct projection. They set the correct menu item, return to check position, or reposition because the patient has moved. Then they make the exposure. Next, they return to the patient to position for the next projection, but have again forgotten to set the technique. They therefore have to reposition again upon returning to control panel to expose.

Upon completion of the exam, the student may have successfully completed all skills on the competency assessment (full points for the numerical score), and ultimately maintained safety of the patient. However, they have demonstrated a novice level of efficiency and organization due to forgetting to set the technique multiple times. This student would qualitatively be assessed at the "Novice" level, not meeting the required "Advanced Beginner" level to pass the assessment. This student would then not receive a pass, and would need a repeat assessment for that body part.

When the student does not pass a competency assessment, this is an important learning opportunity for feedback and improvement. There are no penalties to the student when repeat assessments are needed. However, many repeated attempts should be addressed and analysed for patterns or chronic issues.

During CP1, the rating of Entry-Level is not attainable and the highest level of achievement is Advanced Beginner.

The student and evaluator must both clearly agree on the intention of the level of participation before beginning a procedure (e.g. unassisted vs. competency assessment). All competency assessment attempts must be recorded and kept in the portfolio, including unsuccessful attempts.

CLINICAL PRACTICUM 2 AND 3 PORTFOLIO – ADVANCED BEGINNER

Students entering CP2 will receive a portfolio that is cumulative between CP2 and CP3. Students must complete requirements in this portfolio in sequential order:

Radiography requirements:

- Step 1: Unassisted Case Image Audits (repeated in CP2 and CP3)
- Step 2: Competency Assessments (cumulative between CP2 and CP3)

Special modalities requirements (cumulative between CP2 and CP3):

- Step 1: Case Reviews
- Step 2: Unassisted Cases
- Step 3: Competency Assessments

RADIOGRAPHY UNASSISTED CASE IMAGE AUDITS

These are identical to Case 2s required in CP 1 – image audits in CP2 is a 2-step process: the student must have performed the exam unassisted, and the Clinical Instructor/Designate will audit the image to determine if it is acceptable.

Though a full image critique is not required, students should be prepared to answer questions (such as image evaluation criteria or procedural steps) pertaining to any unassisted case presented for submission in the portfolio.

Validation of completing the exam unassisted must be signed by an MRT on the XR Unassisted Case Validation form (found in the pocketbook).

Acceptability of images is based on the criteria for acceptability (see table in portfolio or appendix in this manual). Students must be prepared to answer questions pertaining to image critique or procedural steps.

If the image is sub-optimal, the student must provide a rationale that is accepted by the Clinical Instructor/Designate. Once accepted by the Clinical Instructor/Designate, the case information may be entered in the portfolio.

If the Clinical Instructor/Designate rejects the case for entry into the portfolio, they must ensure the student understands why and set expectations for next time. This should be recorded in the “rejected cases” section of the portfolio.

In CP2, students may record routine scenarios requiring minimal adaptations at the beginning of term. Students should work towards higher acuity patients as the term progresses. This may depend on the opportunities available at each clinical site.

In CP3, students should aim to record clinical scenarios requiring a higher level of adaptation (such as trauma or

non-ambulatory) even at the beginning of term. Students should also aim to record any body part that was not obtained during CP2 – for example, if a wrist was performed without a scaphoid in CP2, a wrist with a scaphoid should be performed in CP3.

Inclusion of Case 2s in the portfolio is a 2-step process: the student must have performed the exam unassisted, and the Preceptor will audit the image to determine if it is acceptable.

RADIOGRAPHY COMPETENCY ASSESSMENTS

Competency assessments during CP2 and CP3 focuses on how students manage and adapt to procedures in various scenarios, many requiring procedure adaptations. Evaluators will use a comprehensive checklist to assess the student's performance on all aspects of the exam, including safety, professionalism, and efficiency. Successful completion proves that the student would be able to act competently in that particular situation. *It is important to note that successful competencies can be retracted if the student later demonstrates regression in skill for that particular part/scenario. This would necessitate a repeat competency assessment for that particular part/scenario.*

Because radiography competency assessments are cumulative between CP2 and CP3, each assessment is only completed once between the two terms. As such, **students must demonstrate an Entry-to-Practice level** of competence for each assessment. It is recognized that students may achieve the less complex assessments in CP2 (e.g. routine or mobile), while the more complex scenarios (e.g. trauma and multiple parts) may be completed in CP3.

Each body region (upper extremities, lower extremities, spine, chest, etc.) requires successful competencies demonstrated in multiple scenarios (routine, adaptive, mobile, etc.). Each body region should not use the same body part more than twice. For example, a wrist may be used for the routine and adaptive scenario, but may not be used again for another scenario.

Critical criteria on the competency assessment form highlight skills that are essential to the successful and safe completion of an examination. All "critical criteria" must be met on each assessment to receive a passing score.

The competency assessment has been created with the flexibility to assess students quantitatively and qualitatively. For each assessment, students must **achieve the minimum numerical score AND** have a quality of performance rating at the **Entry-to-Practice level**. Sometimes, the numerical checklist may not fully capture the student's ability to be efficient and organized. This qualitative assessment allows evaluators the flexibility to mark the student's performance as sub-standard even if they meet all the items on the checklist.

For example:

The student reads the requisition to prepare the room and predict the protocol for a trauma hip exam. The student asks for help to transfer the patient onto the exam table to perform the AP pelvis projection, and then proceeds to return the patient to the stretcher for the x-table hip projection. They must be guided that it would be safer to take the AP Chest projection on the table before moving the patient off the table. When they eventually have the patient back on the stretcher for the x-table hip, the patient is unable to raise the unaffected leg and the student has to be guided again on the next course of action for the Clements-Nakayama projection. However, they are able to complete the Clements-Nakayama projection without assistance.

Upon completion of the exam, the student may have successfully completed all skills on the competency assessment (full points for the numerical score), and ultimately maintained safety of the patient. However, they have demonstrated an Advanced Beginner level of efficiency and organization due to the need for guidance in concepts in which they have previous knowledge (e.g. positioning for Clements-Nakayama). This student would qualitatively be assessed at the "Advanced Beginner" level, not meeting the required "Entry-Level" rating to pass the assessment. This student would not pass, and would need a repeat assessment for that body part.

When the student does not pass a competency assessment, this is an important learning opportunity for feedback

and improvement. There are no penalties to the student when repeat assessments are needed. However, many repeated attempts should be addressed and analysed for patterns or chronic issues.

The student and evaluator must both clearly agree on the intention of the level of participation before beginning a procedure (e.g. unassisted vs. competency assessment). All competency assessment attempts must be recorded and kept in the portfolio, including unsuccessful attempts.

SPECIAL MODALITY CASE REVIEWS

Students must perform verbal case reviews with any MRTs for procedures in the Operating Room, Fluoroscopy and CT to demonstrate an understanding of the procedural steps of required procedures. Specific points of discussion are found in the Student Pocketbook. These discussions are meant to be brief and take approximately 5 minutes.

Case Reviews can be discussed for cases in which the student's level of participation was assisted or unassisted. A successful Case Review of a particular exam type must be completed before attempting to perform that exam type unassisted.

SPECIAL MODALITY UNASSISTED CASES

Special modality cases performed unassisted must meet all criteria on the respective FL, OR or CT Unassisted Case Validation form found in the pocketbook. Students may record primarily routine scenarios.

A conversation between the Clinical Instructor/Designate and the student should occur before the special procedures rotation to discuss which FL and OR exams would be the most appropriate to log in the portfolio. Considerations for the most frequently occurring cases in the department should be taken in account.

MRTs may assist students with any steps related to contrast injection during contrast-enhanced CT scans.

If the Clinical Instructor/Designate rejects the case for entry into the portfolio, they must clearly explain the rationale to the student, and set expectations for next time. This should be recorded in the "rejected cases" section of the portfolio.

SPECIAL MODALITY COMPETENCY ASSESSMENTS

Because special modality competency assessments are cumulative between CP2 and CP3, each assessment is only completed once between the two terms. As such, **students must demonstrate an Entry-to-Practice level** of competence for each assessment.

A competency assessment of a particular procedure may only be attempted once the case review and unassisted of that same procedure has already been successfully completed. Students may record primarily routine scenarios.

Critical criteria on the competency assessment form highlight skills that are essential to the successful and safe completion of an examination. All "critical criteria" must be met on each assessment to receive a passing score.

The competency assessment has been created with the flexibility to assess students quantitatively and qualitatively. For each assessment, students must achieve the minimum numerical score **AND** have a quality of performance rating at the **Entry-to-Practice level**. Sometimes, the numerical checklist may not fully capture the student's ability to be efficient and organized. This qualitative assessment allows evaluators the flexibility to mark the student's performance as sub-standard even if they meet all the items on the checklist.

The student and evaluator must both clearly agree on the intention of the level of participation before beginning a procedure (e.g. unassisted vs. competency assessment). All competency assessment attempts must be recorded and kept in the portfolio, including unsuccessful attempts.

FORMATIVE EVALUATIONS – ALL LEVELS

Formative evaluations provide ongoing formal feedback on student professionalism, knowledge development and technical skills. This feedback is completed by the Clinical Instructor/Designate and submitted to the Clinical Liaison by the student.

The rating scale found in the portfolio (and in the appendix at the end of this document) can be referenced for completing the evaluation. Students must maintain a level of at least "Meets Expectations" on each evaluation (score of 5 or more). If a student is not meeting expectations, the Clinical Instructor/Designate should provide specific examples of why and/or when this occurred and specific actions for improvement.

If a student is consistently not meeting expectations, a discussion between the Clinical Instructor/Designate, CL and student will determine causes. A learning plan may be implemented by the CL, in collaboration with the Clinical Instructor/Designate and student, to set goals for success.

The frequency of formative evaluations changes at each practicum level. Please refer to the Clinical Portfolio for the number of evaluations needed at each level.

SECTION 5 ASSOCIATIONS & ACCREDITATION

PROFESSIONAL ASSOCIATIONS

Canadian Association of Medical Radiation Technologists (CAMRT)
1300-180 Elgin Street
Ottawa, Ontario K2P 2K3, Canada
1-613-234-0012 or Toll free 1-800-463-9729
www.camrt.ca

Canadian Association of Medical Radiation Technologists – BC Division (CAMRT-BC)
Provincial Manager: Sarah Erdelyi serdelyi@camrt.ca
1-613-234-0012 ex. 231 or Toll free 1-800-463-9729
www.camrt.ca/bc

OVERVIEW OF THE CAMRT

The CAMRT is the national professional association for MRTs in Canada. The CAMRT-BC is the professional association for MRTs in British Columbia. Together, the CAMRT and CAMRT-BC support members by delivering essential association services, such as advocacy, education and networking, outreach, communications, and more.

BC PROVINCIAL MANAGER

The functions of the CAMRT-BC are supported and guided by the Provincial Manager, who lives and works in BC, and is connected to the CAMRT office through technology and organizational supports. The Provincial Manager collaborates with the MRT educational programs across BC to organize student outreach activities, annual commencement celebrations for new graduates, and more.

STUDENT MEMBERSHIP

Students are encouraged to join the professional association. Student memberships include membership with both the CAMRT and CAMRT-BC associations. Students can register for free at www.camrt.ca and gain many of the benefits of full practice membership, such as access to journals, volunteer opportunities, and more. (Note that students are not covered by CAMRT's Professional Liability Insurance Policy).

STUDENT VOLUNTEER OPPORTUNITY

Students are encouraged to get involved in their future professional community.

CAMRT-BC is seeking student volunteers from each MRT program in BC to become Site Ambassadors. Site Ambassadors receive communications from the Provincial Manager and more, which can then be shared with hospital staff and peers while attending clinical. https://www.camrt.ca/bc/about-camrt-bc/site-ambassadors/.

CAMRT COMPETENCY PROFILE AND CERTIFICATION

Certification with CAMRT requires that students are clinically competent and have successfully written the certification examination.

As the certifying body, CAMRT develops the National Competency Profile for Entry-Level Medical Radiation Technologists (MRTs) in Canada. The profile describes the practice requirements of MRTs at entry-to-practice, to provide safe, effective, compassionate and ethical patient care in a variety of work environments.

The competency profile establishes a standard for entry to the profession, and a foundation upon which to build additional competencies, efficiency and higher levels of practice. The primary uses are to:

- Develop a blueprint for the CAMRT certification examinations
- Provide a guide for the curriculum of accredited education programs
- Provide a standard for the accreditation of education programs.
- Additionally, students may use the profile as a tool to help benchmark and reflect on their learning progress.

Access the Competency Profile at https://www.camrt.ca/certification-4/current-competency-profiles/.

ELIGIBILITY FOR EXAMINATION

To be eligible to write the CAMRT certification examination, candidates must:

- Complete an accredited medical radiation technology (MRT) program in one of the four exam disciplines.
- Have graduated from the accredited program within the last 5 years.

Additionally, the CAMRT verifies program completion for all registered candidates. Candidates who register for an exam but will not complete their program before the exam date must notify CAMRT.

EXAM DATES AND APPLICATION

All certification exam information is available through the CAMRT website: https://www.camrt.ca/certification-4/

The certification examinations are written in January, May, and September. Dates of exams are posted on the website well in advance.

EXAM PREPARATION

The CAMRT Exam Preparation Guide addresses both the certification process and the content of the exam. Candidates are advised to review the guide thoroughly.

https://www.camrt.ca/certification-4/graduates-of-canadian-accredited-programs/exam-preparation-resources/exam-preparation-guide/

Questions about the CAMRT certification examination should be directed to: certification@camrt.ca

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In addition, we'd like to thank Shannon Salsman, RTR, supervisor and Clinical Instructor at Nanaimo Regional General Hospital for her contributions.

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APPENDICES

ORAL IMAGE CRITIQUE TEMPLATE – ADAPTED FROM "RADIOGRAPHIC IMAGE ANALYSIS" (MCQUILLEN MARTENSEN, 2020)

During CP1, the student must independently discuss points 1-5 using correct scientific terminology.

During CP2 and CP3, the student must independently discuss all points using correct scientific terminology.

1. **Part and Projection**
   a. Projection, part and angle of the central ray with respect to the IR
2. **Centering and Required Structures**
   a. Where should the CR be centered? Where is the CR actually centered in this image?
   b. What structures are required? Are there just enough structures included, too many, or not enough?
   c. Describe any corrective actions if there was too many or not enough structures included.
3. **Collimation**
   a. How many sides of collimation are seen?
   b. Is the collimation open just enough, too much, or not enough?
4. **Markers and Annotations**
   a. What markers and/or annotations should be included? Are required markers visible on this image?
   b. Describe any corrective actions if required markers are not visible.
5. **Patient Positioning**
   a. Describe how the structures *should* look on this projection.
   b. Describe, and prove, any positioning errors relative to these movements, where applicable:
      - Rotation or tilt (sagittal plane or coronal plane tilt)
      - Flexion/Extension or Elevation/Depression
      - CR angulation
   c. If applicable, prove how you differentiated similar looking anatomy (e.g. lateral talar dome from medial talar dome, lateral femoral condyle from medial femoral condyle).
   d. Describe any corrective actions.

Points 6 and 7 should be a discussion between the Clinical Instructor/Designate and the Novice student:

6. **Image Quality**
   a. Is the image within acceptable EI parameters?
   b. Was the kV used within acceptable parameters?
   c. Was the mAs used what you would expect, considering patient factors?
   d. Does the displayed image contrast allow each structure to be distinct from another (e.g. bone vs. ST vs. air)?
   e. Has the image contrast been affected by image noise?
   f. Describe any corrective actions to increase image quality (technique factors, grids, centering, collimation, etc.)
7. **Foreign Bodies, Artifacts or Pathologies**
   a. Describe any visible foreign bodies, artifacts or pathologies.
   b. Describe corrective actions, if any.

CRITERIA OF ACCEPTABILITY – FOR IMAGE AUDITS

	Completely Not Demonstrated	Minimally Demonstrated	Mostly Demonstrated	Completely Demonstrated
COLLIMATION **Four sides of collimation demonstrated (except in extenuating circumstances e.g. obese patient)**	**reject**	**reject**	**reject**	**accept**
RADIATION PROTECTION **No excess structures or black space surrounding required structures; lead protection visible (according to site policy)**	**reject**	**reject**	**reject**	**accept**
MARKER PLACEMENT Correct personal lead side marker visible on the radiograph and not obscuring pertinent anatomy	**reject**	**reject**	**may accept, with rationale**	**accept**
POSITIONING OF PART The part was positioned correctly, with no demonstrations of incorrect rotation, tilt, elevation or depression, flexion or extension, etc.	**reject**	**reject**	**may accept, with rationale**	**accept**
BEAM ALIGNMENT Central ray travelling in correct direction (e.g. horizontal, vertical, 30^{o} caudad, etc.	**reject**	**may accept, with rationale**	**may accept, with rationale**	**accept**
CENTERING POINT Correct centering point of anatomy demonstrated at the center of the IR	**reject**	**may accept, with rationale**	**may accept, with rationale**	**accept**
PACS DISPLAY Displayed in the correct orientation as per site protocol	**reject**	**may accept, with rationale**	**may accept, with rationale**	**accept**
IMAGE QUALITY Exposure indicator (EI) is within diagnostic range and demonstrating adequate contrast resolution in area of interest	**reject**	**may accept, with rationale**	**may accept, with rationale**	**accept**
ARTIFACTS No evidence of removable or preventable artifacts or foreign bodies	**reject**	**may accept, with rationale**	**may accept, with rationale**	**accept**
PATHOLOGY Any pathology, such as a fracture line or prosthesis, is seen in its entirety	**reject**	**may accept, with rationale**	**may accept, with rationale**	**accept**

XR COMPETENCY ASSESSMENT FORM – NOVICE

Student's Name:		**Date:**
Evaluator's Name:		**Is this a repeat? Yes/No** *(circle)*
Anatomical Part:		**Accession #:**

Any missed **critical criteria*** (**bold)** results in the need for a **repeat attempt**.

Professional Conduct		Evaluator to mark as skill/behaviour is demonstrated/observed
Overall Professionalism*	○	Upheld *Respectful Workplace*; demonstrated professional mannerisms and gracious attitude when receiving feedback; upheld legal requirements, *Code of Ethics* (confidentiality, privacy, etc.)
SECTION SCORE	**/1**	
Interpret the Request		Evaluator to mark as skill/behaviour is demonstrated/observed
Investigate and Verify	○	Review the provided clinical history, verified appropriateness and completeness of request, consulted with technologist to clarify request
Initiate*	○	Matched request to worklist and selected corresponding procedure/protocol at the workstation
SECTION SCORE	**/2**	
Plan the Procedure		Evaluator to mark as skill/behaviour is demonstrated/observed
Think	○	Contemplated implications of patient's history, condition, location and method of transport
Prepare	○	Prepared patient; set imaging environment; assembled equipment for efficient execution
Adapt	○	Changed exam plan as required (altered patient status, patient limitation, etc.)
Supervision*	○	Ensured technologist ready to observe **BEFORE** interacting with patient
SECTION SCORE	**/4**	
Establish the Patient Relationship		Evaluator to mark as skill/behaviour is demonstrated/observed
Patient Identification*	○	Confirmed the patient's identity using at least two identifiers (and according to site policy)
Greeting – SNOD*	○	Greeted the patient, disclosing role (Camosun student), name, technologist's name
Pregnancy Status*	○	Established the pregnancy status for females 11-55 and documented as per site protocol
Procedure Confirmation	○	Verified nature of exam with patient using open-ended questions; obtained any additional history
Explanation and Consent*	○	Explained procedure to patient using appropriate language; obtained informed consent (permission to touch, answered questions, etc.)
SECTION SCORE	**/5**	
Execute the Procedure		Evaluator to mark as skill/behaviour is demonstrated/observed
Infection Control*	○	Adhered to infection control policies
Patient Preparation	○	Inspected patient for potential artifact-generating materials
Body Mechanics	○	Utilized proper body mechanics while operating the imaging equipment and positioning the patient
Patient Care and Safety	○	Throughout the procedure, monitored patient comfort and responded to patient needs
For all projections:	***(must demonstrate criterion on all projections to receive point)***	
Positioning	○	Independently positioned patient for each projection; only one repeat exposure allowed during entire exam; exposure made after approval given by evaluator
Radiation Protection*	○	Restricted the primary beam to only include volume of interest using collimation (ALARA); utilized radiation protection as per site policy
Markers*	○	Accurately placed personal radiographic markers and annotated image according to site policy
Patient Instructions	○	Ensured patient cooperation by carefully instructing the patient (body movements, breathing instructions, etc.)
Palpation	○	Explained reasoning behind touching, used appropriate palpation technique, and touched only as necessary
Technical parameters	○	Set prior to positioning patient (kVp, mAs/AEC, SID, grid, filter, etc.)
SECTION SCORE	**/10**	

Conclude the Procedure		Evaluator to mark as skill/behaviour is demonstrated/observed
Image Verification*	○	Verified acceptability of all images with the technologist before dismissing patient
Patient Dismissal	○	Described the post-procedural instructions to the patient
PACS	○	Ensured image(s) transferred to PACS and displayed as per site protocol
Documentation	○	Completed patient documentation as per site policy
Communication		Communicated any significant findings to the appropriate personnel (N/A for CP1)
Clean-up	○	Cleaned and adequately restored the procedure room in preparation for the next patient
Timeframe/Organization	○	Procedure was completed in a reasonable timeframe; approach/strategy was logical/justifiable
SECTION SCORE	**/6**	
TOTAL SCORE	**/28**	***Add the score from each section. Minimum pass score is 26.***
Comment on student's performance in terms of efficiency, communication skills, safety and quality.		

Rate Student's Performance *Considering the comments above, rate the performance from 0-8. Entry level rating is not attainable during CP1.* *Minimum pass rating is 5.* _____	**Unsafe** **0-2 RATING**	**Novice** **3-4 RATING**	**Advanced Beginner** **5-8 RATING**	***Entry-level*** ***9-10 RATING***
	Missed one or more critical criteria. Did not demonstrate foundational knowledge and skills required for safe practice. Demonstrated a lack of understanding or ability to follow instructions or technologist had to step in to complete the procedure.	Met all critical criteria. Would still require direct supervision in this situation. Sought minimal guidance from technologist; however, able to follow through with instructions. Demonstrated at least some multitasking and a somewhat efficient process.	Met all critical criteria. Would be able to function with indirect supervision in this situation. Sought clarification regarding complex decisions; however, was able to perform procedure independently thereafter. Demonstrated multitasking and a mostly efficient process. Ready to move on to higher acuity patients and more challenging scenarios.	*Met all critical criteria* *Would be able to function independently in this situation.* *Demonstrated knowledge, ability and independence as an entry-level technologist, sought assistance only for safety reasons.* *Demonstrated multitasking and a streamlined, efficient process.*

Assessment Result:

☐ Pass: Advanced Beginner competence demonstrated AND scored at least 26

☐ Repeat attempt needed (*indicate specific area for improvement):*

_____

_____

Evaluator Signature:

Student Signature:

XR COMPETENCY ASSESSMENT FORM – ADVANCED BEGINNER

Student's Name:		**Date:**
Evaluator's Name:		**Is this a repeat? Yes/No** *(circle)*
Anatomical Part:		**Accession #:**
Case Type: Routine, Mobile, Trauma, Pediatric, or Multiple *(circle)*		
Any missed **critical criteria*** (**bold)** results in the need for a **repeat attempt**. Evaluator to mark each skill once demonstrated/observed.		
Professional Conduct		
Overall Professionalism*	○	Upheld *Respectful Workplace*; demonstrated professional mannerisms and gracious attitude when receiving feedback; upheld legal requirements, *Code of Ethics* (confidentiality, privacy, etc.)
SECTION SCORE	**/1**	
Interpret the Request		
Investigate and Verify	○	Identified relevant history, verified appropriateness and completeness of request, consulted with technologist to clarify request
Initiate*	○	Matched request to worklist and selected corresponding procedure/protocol at the workstation
SECTION SCORE	**/2**	
Plan the Procedure		
Think	○	Contemplated implications of patient's history, condition, location and method of transport
Prepare	○	Prepared patient; set imaging environment; assembled equipment for efficient execution
Adapt	○	Changed exam plan as required (altered patient status, patient limitation, etc.)
Supervision*	○	Ensured technologist ready to observe **BEFORE** interacting with patient
SECTION SCORE	**/4**	
Establish the Patient Relationship		
Patient Identification*	○	Confirmed the patient's identity using at least two identifiers (and according to site policy)
Greeting – SNOD*	○	Greeted the patient, disclosing role (Camosun student), name, technologist's name
Pregnancy Status*	○	Established the pregnancy status for females 11-55 and documented as per site protocol
Procedure Confirmation	○	Verified nature of exam with patient using open-ended questions; obtained any additional history
Explanation and Consent*	○	Explained procedure to patient; obtained informed consent (permission to touch, answered questions, etc.)
SECTION SCORE	**/5**	
Execute the Procedure		
Infection Control*	○	Adhered to infection control policies
Patient Preparation	○	Inspected patient for potential artifact-generating materials
Body Mechanics	○	Utilized proper body mechanics while operating the equipment and positioning the patient
Patient Care and Safety	○	Monitored patient comfort and responded to patient needs
For all projections *(must demonstrate criterion on all projections to receive point):*		
Positioning	○	Independently positioned patient for each projection; only one repeat allowed during entire exam
Radiation Protection*	○	Restricted the primary beam to only include volume of interest using collimation (ALARA); utilized radiation protection
Markers*	○	Accurately placed personal lead markers and annotated image according to site policy
Patient Instructions	○	Ensured patient cooperation by carefully instructing the patient (body movements, breathing instructions, etc.)
Palpation	○	Explained reasoning behind touching, used appropriate palpation technique, and touched only as necessary
Technical parameters	○	Set prior to positioning patient (kVp, mAs/AEC, SID, grid)
SECTION SCORE	**/10**	

Conclude the Procedure		
Image Verification*	○	Verified acceptability of all images with the technologist **before** dismissing patient
Patient Dismissal	○	Described the post-procedural instructions to the patient
PACS	○	Ensured image(s) transferred to PACS and displayed as per site protocol
Documentation	○	Completed patient documentation as per site policy
Communication	○	Communicated any significant findings to the appropriate personnel
Clean-up	○	Cleaned and adequately restored the procedure room in preparation for the next patient
Timeframe/Organization	○	Procedure was completed in a reasonable timeframe; approach/strategy was logical/justifiable
SECTION SCORE	**/7**	
TOTAL SCORE	**/29**	***Add the score from each section. Minimum pass score is 27.***
Comment on student's performance in terms of efficiency, communication skills, safety and quality.		

Rate Student's Performance *Considering your comments above, rate the student's performance from 0-10.* *Minimum pass rating is Entry-Level – 9* _____	**Unsafe** **0-2 RATING**	**Novice** **3-4 RATING**	**Advanced Beginner** **5-8 RATING**	**Entry-level** **9-10 RATING**
	Missed one or more critical criteria. Did not demonstrate foundational knowledge and skills required for safe practice. Demonstrated a lack of understanding or ability to follow instructions or technologist had to step in to complete the procedure.	Met all critical criteria. Would still require direct supervision in this situation. Sought minimal guidance from technologist; however, able to follow through with instructions. Demonstrated at least some multitasking and a somewhat efficient process.	Met all critical criteria. Would be able to function with indirect supervision in this situation. Sought clarification regarding complex decisions; however, was able to perform procedure independently thereafter. Demonstrated multitasking and a mostly efficient process. Ready to move on to higher acuity patients and more challenging scenarios.	Met all critical criteria Would be able to function independently in this situation. Demonstrated knowledge, ability and independence as an entry-level technologist, sought assistance only for safety reasons. Demonstrated multitasking and a streamlined, efficient process.

Assessment Result

☐ Pass criteria met: ***Entry-level*** competence rating demonstrated *and* scored at least 27

☐ Repeat attempt needed (*indicate specific area for improvement):*

_____

_____

Student Signature: _____

Evaluator Signature: _____

FL COMPETENCY ASSESSMENT FORM

Student's Name:		**Date:**
Evaluator's Name:		**CP2 or 3** *(circle)*
Procedure and Accession #:		**Is this a repeat? Y/N** *(circle)*
Any missed **critical criteria*** (**bold)** results in need for repeat attempt. Evaluator to mark each skill once demonstrated/observed.		
Professional Conduct		
Overall Professionalism*	○	Upheld *Respectful Workplace*; demonstrated professional mannerisms and gracious attitude when receiving feedback; upheld legal requirements, *Code of Ethics* (confidentiality, privacy, etc.)
SECTION SCORE	**/1**	
Interpret the Request		
Investigate and Verify	○	Identified relevant history, verified appropriateness and completeness of request, consulted with technologist and/or radiologist to clarify request
Initiate*	○	Matched request to worklist and selected corresponding procedure/protocol at the workstation
Use of Contrast Media	○	Confirmed indication for any contrast media required and checked for contraindications
SECTION SCORE	**/3**	
Plan the Procedure		
Think	○	Contemplated implications of patient's history, condition, location and method of transport
Prepare	○	Prepared patient; set imaging environment efficient execution; prepared any necessary pharmaceuticals, contrast media or sterile tray
Adapt	○	Changed exam plan as required (altered patient status, patient limitation, etc.)
Supervision*	○	Ensured technologist ready to observe **BEFORE** interacting with patient
SECTION SCORE	**/4**	
Establish the Patient Relationship		
Patient Identification*	○	Confirmed the patient's identity using two identifiers (and according to site policy)
Greeting – SNOD*	○	Greeted the patient, disclosing role (Camosun student), name, technologist's name
Pregnancy Status*	○	Established the pregnancy status for females 11-55 and documented as per site protocol
Procedure Confirmation	○	Verified nature of exam with patient using open-ended questions; obtained additional history
EXPLANATION		
Procedure Education	○	Explained procedure details (e.g. equipment, approximate procedure length, role as technologist, role of radiologist)
Contrast Education	○	Described contrast medium (e.g. consistency, colour, temperature, type and reasons for use)
Communication Skills	○	Demonstrated appropriate level of detail, good flow of explanation, and used language appropriate to patient
PRE-QUESTIONNAIRE		
Patient preparation	○	Confirmed patient followed exam prep instructions as per site protocol; inspected patient for potential artifact-generating materials
Additional History	○	Questioned patient for history relevant to the exam
Informed Consent *	○	Obtained verbal or written informed consent (permission to touch, answered questions, etc.)
SECTION SCORE	**/10**	
Execute the Procedure		
Infection Control*	○	Adhered to infection control policies
Patient Instructions	○	Ensured patient cooperation by assisting the patient on body movement during procedure, relaying radiologist instructions, etc.
Patient Care and Safety	○	Throughout the procedure, monitored patient comfort and responded to patient needs
SECTION SCORE	**/3**	

Conclude the Procedure		
Post-Procedural Instructions	○	Described the post procedural instructions to patient (e.g. diet; stool or bowel movement changes, what to do if experiencing pain later, etc.)
Patient Dismissal	○	Correctly dismissed patient or ensured transport
PACS	○	Ensured images transferred to PACS and displayed as per site protocol
Documentation	○	Completed patient documentation as per site policy
Clean-up	○	Cleaned and adequately restored the procedure room in preparation for the next patient
Timeframe/Organization	○	Procedure was completed in a reasonable timeframe; approach/strategy was logical/justifiable
SECTION SCORE	**/6**	
TOTAL SCORE	**/27**	***Add the scores from each section. Minimum pass score is 25.***
Comment on student's performance in terms of efficiency, communication skills, safety and quality.		

Rate Student's Performance *Considering your comments above, rate the student's performance from 0-10.* *Minimum pass rating is Entry-Level – 9* _____	**Unsafe** **0-2 RATING**	**Novice** **3-4 RATING**	**Advanced Beginner** **5-8 RATING**	***Entry-level*** ***9-10 RATING***
	Missed one or more critical criteria. Did not demonstrate foundational knowledge and skills required for safe practice. Demonstrated a lack of understanding or ability to follow instructions or technologist had to step in to complete the procedure.	Met all critical criteria. Would still require direct supervision in this situation. Sought minimal guidance from technologist; however, able to follow through with instructions. Demonstrated at least some multitasking and a somewhat efficient process.	Met all critical criteria. Would be able to function with indirect supervision in this situation. Sought clarification regarding complex decisions; however, was able to perform procedure independently thereafter. Demonstrated multitasking and a mostly efficient process. Ready to move on to higher acuity patients and more challenging scenarios.	Met all critical criteria Would be able to function independently in this situation. Demonstrated knowledge, ability and independence as an entry-level technologist, sought assistance only for safety reasons. Demonstrated multitasking and a streamlined, efficient process.

Assessment Result

☐ Pass criteria met: ***Entry-level*** competence rating demonstrated and scored at least 25

☐ Repeat attempt needed (*indicate specific area for improvement):*

_____

_____

_____

Student Signature: _____

Evaluator Signature: _____

OR COMPETENCY ASSESSMENT FORM

Student's Name:		**Date:**
Evaluator's Name:		**CP2 or 3** *(circle)*
Procedure and Accession #:		**Repeat? Y/N** *(circle)*
Any missed **critical criteria*** (**bold)** results in need for repeat attempt. Evaluator to mark each skill once demonstrated/observed.		
Professional Conduct		
Overall Professionalism*	○	Upheld *Respectful Workplace*; demonstrated professional mannerisms and gracious attitude when receiving feedback; upheld legal requirements, *Code of Ethics* (confidentiality, privacy, etc.)
SECTION SCORE	**/1**	
Interpret the Request		
Investigate and Verify	○	Identified relevant history, verified appropriateness and completeness of request, consulted with technologist to clarify request
Initiate*	○	Predicted and retrieved required equipment, discussed equipment orientation and setup, etc.
SECTION SCORE	**/2**	
Plan the Procedure		
Think and Prepare	○	Attached c-arm and monitor and turned on equipment, entered patient information into the workstation, ensured sterile drape available for c-arm
Adapt	○	Changed plan as required (unforeseen equipment limitations or changes in surgeon's preferences, etc.)
Supervision*	○	Ensured technologist ready to observe before interacting with surgical team
SECTION SCORE	**/3**	
Establish the Patient Relationship		
Patient Identification*	○	Confirmed the patient's identity using two identifiers and/or present when patient and procedure verified by surgical team
Pregnancy Status*	○	Confirmed pregnancy status for females 11-55 with surgical team and documented as per site protocol
Procedure Confirmation	○	Verified procedure with surgical team and listened attentively to surgeon's setup instructions
SECTION SCORE	**/3**	
Execute the Procedure		
Infection Control*	○	Maintained sterile field, informed others if they contaminated the sterile field, adhered to infection control policies, etc.
Communication	○	Followed surgeon's instructions and communicated any obstacles preventing C-arm movement
Body Mechanics	○	Utilized proper body mechanics while operating the imaging equipment and maneuvering C-arm
Patient Care and Safety	○	Throughout the procedure, ensured patient safety
Operation of C-arm	○	Accurately aligned imaging system to patient
Technical parameters	○	Selected correct imaging protocol and set technical parameters prior to acquisition as necessary (kVp, mAs, dose reduction, pulse fluoro, etc.)
Radiation Protection*	○	Adhered to best practices for patient, self and surgical team (ALARA; time, distance, shielding)
SECTION SCORE	**/7**	
Conclude the Procedure		
Documentation	○	Completed patient documentation as per site policy
PACS	○	Ensured image(s) transferred to PACS and displayed as per site protocol
Communication	○	Communicated significant findings to the appropriate personnel as needed
Clean-up	○	Cleaned and stored the equipment in preparation for the next procedure
Organization	○	Procedure approach/strategy was logical/justifiable
SECTION SCORE	**/5**	
TOTAL SCORE	**/21**	***Add the scores from each section. Minimum pass score is 19.***

Comment on student's performance in terms of efficiency, communication skills, safety and quality.	_____ _____ _____ _____			
Rate Student's Performance *Considering your comments above, rate the student's performance from 0-10.* *Minimum pass rating is Entry-Level – 9* _____	**Unsafe** **0-2 RATING**	**Novice** **3-4 RATING**	**Advanced Beginner** **5-8 RATING**	***Entry-level*** ***9-10 RATING***
	Missed one or more critical criteria. Did not demonstrate foundational knowledge and skills required for safe practice. Demonstrated a lack of understanding or ability to follow instructions or technologist had to step in to complete the procedure.	Met all critical criteria. Would still require direct supervision in this situation. Sought minimal guidance from technologist; however, able to follow through with instructions. Demonstrated at least some multitasking and a somewhat efficient process.	Met all critical criteria. Would be able to function with indirect supervision in this situation. Sought clarification regarding complex decisions; however, was able to perform procedure independently thereafter. Demonstrated multitasking and a mostly efficient process. Ready to move on to higher acuity patients and more challenging scenarios.	Met all critical criteria Would be able to function independently in this situation. Demonstrated knowledge, ability and independence as an entry-level technologist, sought assistance only for safety reasons. Demonstrated multitasking and a streamlined, efficient process.

Assessment Result

☐ Pass criteria met: ***Entry-level*** competence rating demonstrated and scored at least 19

☐ Repeat attempt needed (*indicate specific area for improvement):*

_____

_____

_____

Student Signature: _____

Evaluator Signature: _____

FORMATIVE EVALUATION RATING GUIDE – NOVICE

Below Expectations	Needs Improvement	Meets Expectations	Exceeds Expectations or Advanced Beginner
1-2	**3-4**	**5-8**	**9-10**
Unsafe or unprepared to resume next rotation.	Minimal or inconsistent progression toward the next level.	Steady progression toward the next level. **Emerging: 5-6** **Consistent: 7-8**	Consistently working at the advanced beginner level.
Indicators/examples: • *Does not follow instructions, policies, or guidelines* • *Caused a safety incident* • *Does not seek appropriate supervision* • *Unprofessional*	*Indicators/examples:* • *Struggling to maintain reasonable level of achievement* • *Needs a lot of prompting to seek appropriate learning opportunities*	*Indicators/examples:* • *Regularly presents new cases for image critique or image audit* • *Continuously strives for personal improvement and seeks out learning opportunities* • *Appropriately prepares for each learning activity, new modality, competency assessment, or other as relevant*	*Indicators/examples:* • *Completed all portfolio requirements early* • *Able to function independently in all/most routine situations* • *Demonstrates highly efficient workflow* • *Makes effective decisions and is ready to take on more challenging situations*
Action Needed: • *Should be removed from clinical site until plan for remediation has been laid out.* • *Any safety incident or other serious incident must be reported to Clinical Liaison right away; even if evaluation form is not yet due.*	*Action Needed:* • *May continue to next rotation; however, plan for remediation must be laid out in a timely manner to demonstrate improvement on next formative evaluation.* • *Written feedback may be requested.*		
NC		Minimum score of 5 on final formative evaluation to receive COM grade in MRAD 130.	

FORMATIVE EVALUATION FORM – NOVICE

Student's Name_____ **Evaluator's Name**_____

Date (last day of rotation) _____ **Procedure area(s)** _____

Based on the current rotation, evaluate the student using the following rating scale:
Below Expectations 0-2; Needs Improvement 3-4; Meets Expectations 5-8; Exceeds Expectations 9-10
see "Guidelines for Determining Formative Evaluation Rating" p. 25/26 on how to apply rating scale)

Professionalism and Responsibility
Expectations:

- *demonstrates punctuality according to posted schedule and communicates whereabouts*
- *makes productive use of time and takes initiative to participate in procedures*
- *works cooperatively as member of team and openly receives feedback and suggestions for improvement*
- *demonstrates accountability for actions and takes personal responsibility for learning*
- *adheres to program and clinical site policies and guidelines*

Rating 0-10:	Comments

Overall Clinical Competence (Knowledge, Skills, and Judgement)
Expectations:

- *demonstrates increasing knowledge and applies knowledge to practice situations*
- *shows improvement from one shift, one case, or one rotation to the next*
- *maintains appropriate level of completion of portfolio requirements*
- *communicates effectively with patients and staff*

Rating 0-10:	Comments

Status of Completion of Course Requirements

Image Critiques (Case 1s): _____*/22*	**Image Audits (Case 2s):** _____*/22*
Competency Assessments: _____*/6*	*Days missed this evaluation period:* _____

Result:
☐ At least **Meets Expectations**
☐ Remediation plan required (4 or less on any criteria); provide comments and notify Clinical Liaison

Student Signature _____ Evaluator's Signature _____

Date Reviewed _____

FORMATIVE EVALUATION RATING GUIDE – ADVANCED BEGINNER

Below Expectations	Needs Improvement	Meets Expectations	Exceeds Expectations or Entry Level
1-2	**3-4**	**5-8**	**9-10**
Unsafe or unprepared to resume next rotation.	Minimal or inconsistent progression toward the next level.	Steady progression toward the next level. **Emerging: 5-6** **Consistent: 7-8**	Consistently working at the entry-to-practice level.
Indicators/examples: • *Does not follow instructions, policies, or guidelines* • *Caused a safety incident* • *Does not seek appropriate supervision* • *Unprofessional*	*Indicators/examples:* • *Struggling to maintain reasonable level of achievement* • *Needs a lot of prompting to seek appropriate learning opportunities*	*Indicators/examples:* • *Regularly presents new cases for portfolio requirements* • *Continuously strives for personal improvement and seeks out learning opportunities* • *Appropriately prepares for each learning activity, new modality, competency assessment, or other as relevant*	*Indicators/examples:* • *Completed all portfolio requirements early* • *Able to function independently in all/most routine situations* • *Demonstrates highly efficient workflow* • *Makes effective decisions and is ready to take on more challenging situations*
Action Needed: • *Should be removed from clinical site until plan for remediation has been laid out.* • *Any safety incident or other serious incident must be reported to Clinical Liaison right away; even if evaluation form is not due yet.*	*Action Needed:* • *May continue to next rotation; however, plan for remediation must be laid out in a timely manner to demonstrate improvement on next formative evaluation.* • *Written feedback should be provided.*		

CP2	NC	Must attain minimum rating of 8 for each assessment criteria on final evaluation to receive COM grade in MRAD 260.
CP3	NC	Must attain minimum rating of 9 for each assessment criteria on final formative to receive COM grade in MRAD 290.

FORMATIVE EVALUATION FORM – CP2

Student's Name_____ **Evaluator's Name**_____

Date (last day of rotation) _____ **Procedure area(s)** _____

Based on the current rotation, evaluate the student using the following rating scale:
Below Expectations 0-2; Needs Improvement 3-4; Meets Expectations 5-8; Exceeds Expectations 9-10
(see "Guidelines for Determining Formative Evaluation Rating" in this portfolio on how to apply rating scale)

Professionalism and Responsibility

- *demonstrates punctuality according to posted schedule and communicates whereabouts*
- *makes productive use of time and takes initiative to participate in procedures*
- *works cooperatively as member of team and openly receives feedback and suggestions for improvement*
- *demonstrates accountability for actions and takes personal responsibility for learning*
- *adheres to program and clinical site policies and guidelines*

Rating 0-10:	**Comments**

Overall Clinical Competence (Knowledge, Skills, and Judgement)

- *demonstrates increasing knowledge and applies knowledge to practice situations*
- *shows improvement from one shift, one case, or one rotation to the next*
- *maintains appropriate level of completion of portfolio requirements*
- *communicates effectively with patients and staff*

Rating 0-10:	**Comments**

Status of Completion of Portfolio Requirements

	XR	FL	OR
Case Reviews		/4	/2
Unassisted	/27	/4	/2
Competency Assessments	/20	/1	/1
		Attendance: days missed this evaluation period _____	

Result:

☐ **Meets Expectations or higher**

☐ Remediation plan required (4 or less on any criteria); provide comments and notify Clinical Liaison

Student Signature_____ Preceptor or Designate Signature_____

Date Reviewed_____

FORMATIVE EVALUATION FORM – CP3

Student's Name_____ **Evaluator's Name**_____

Date (last day of rotation) _____ **Procedure area(s)** _____

Based on the current rotation, evaluate the student using the following rating scale:
Below Expectations 0-2; Needs Improvement 3-4; Meets Expectations 5-8; Exceeds Expectations 9-10
(see "Guidelines for Determining Formative Evaluation Rating" in this portfolio on how to apply rating scale)

Professionalism and Responsibility

- *demonstrates punctuality according to posted schedule and communicates whereabouts*
- *makes productive use of time and takes initiative to participate in procedures*
- *works cooperatively as member of team and openly receives feedback and suggestions for improvement*
- *demonstrates accountability for actions and takes personal responsibility for learning*
- *adheres to program and clinical site policies and guidelines*

Rating 0-10:	**Comments**

Overall Clinical Competence (Knowledge, Skills, and Judgement)

- *demonstrates increasing knowledge and applies knowledge to practice situations*
- *shows improvement from one shift, one case, or one rotation to the next*
- *maintains appropriate level of completion of portfolio requirements*
- *communicates effectively with patients and staff*

Rating 0-10:	**Comments**

Status of Completion of Portfolio Requirements (cumulative from CP2 where applicable)

	XR	FL	OR	CT
Case Reviews		/4	/2	/10
Unassisted	/27	/4	/2	/10
Competency Assessments	/20	/1	/1	/3

Attendance: days missed this evaluation period _____

Result:

☐ **Meets Expectations or higher**

☐ Remediation plan required (4 or less on any criteria); provide comments and notify Clinical Liaison

Student Signature_____ Preceptor or Designate Signature_____

Date Reviewed_____