



Student Clinical Practicum Handbook

**Accredited by
The America Registry of Magnetic Resonance Imaging Technologists
(ARMRIT)**

**Med Academy
3420 W 84th Street Suite 104
Hialeah, FL 33018
(786) 271-0987
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Clinical Education

Clinical Education (1000 Clock Hours)

Course Description

The goal of this course is to develop the technical and practical knowledge of student in the clinical environment. Emphasis is placed on patient care and assessment, environmental and department safety, effective oral and written communication, and professional and ethical behavior including patient privacy and the legalities of medical records management. During this term, students can expect to be introduced to the work flow of the radiology department or diagnostic center. In order to gain this knowledge, students will be assigned to participate and observe all facility functions and imaging modalities. During this course the student will emphasize in MRI safety, doctors order interpretation and evaluation, obtain patient medical history and perform MRI procedures.

The Clinical Education course is be divided in 2 sections

Section I

Clinical Applications I	150 Hours
Clinical Externship I	350 Hours

Section II

Clinical Applications II	150 Hours
Clinical Externship II	350 Hours

The **Clinical Applications** consist of 300 hours of didactic instruction. This section is instructed at the school.

The **Clinical Externship** consists of 700 hours. Students will be assigned to a clinical site at a hospital or outpatient center. The students are expected to complete Clinical Externship in twelve (12) months period.

Course Objectives

Upon completion of the clinical education, the student will:

1. Maintain a safe work environment for patients, visitors and health care workers.
2. Properly schedule and prescreen patients.
3. Communicate professionally with patients and staff members.
4. Use standard protocols to perform routine MR examinations.
5. Use Digital Imaging and Communications in Medicine (DICOM).
6. Identify when to modify a protocol and successfully perform the modification.
7. Identify the probable cause of image quality problems and recommend an appropriate solution.
8. Perform and monitor quality assurance tests.
9. Power up and shut down the system.
10. Correlate the requested exam with clinical history and reported physical exam.
11. Ensure patient safety by correlating surgical, accident and occupational history.
12. Properly screen patients for contraindications to MR.
13. Monitor the patient to ensure proper attire and that no unauthorized metals enter the exam room.
14. Maintain a clean, comfortable and safe environment.
15. Employ proper precautions to prevent disease transmission.

16. Monitor linens and supplies and restock when necessary.
17. Demonstrate how to properly prepare a patient for the requested exam.
18. Demonstrate the actions required if a patient requires sedation.
19. Demonstrate the actions required if a patient requires contrast media.
20. Demonstrate the actions required for allergic reactions.
21. Demonstrate the actions required if a patient is claustrophobic.
22. Demonstrate how to use earplugs or headphones to protect patient.
23. Ensure proper setup of MR coils, equipment, table accessories and cushioning.
24. Demonstrate an understanding of a patient's cultural, ethnic or value system differences.
25. Speak with patients in a professional and empathetic manner to alleviate any concerns they express.
26. Demonstrate professional ethics by preserving the patient's modesty.
27. Demonstrate how to give proper instructions to optimize patient comfort and cooperation.
28. Respond appropriately in emergency situations.
29. Recognize patient adverse reactions during MR procedures to contrast administration and act appropriately.
30. Identify and report equipment problems.
31. Adhere to national, organizational and departmental standards, protocols, policies and procedures regarding MR exams and patient care.
32. Ensure that professional performance and competence is reflected throughout an exam.
33. Critique images for appropriate clinical information, image quality and patient information.
34. Demonstrate the appropriate corrective actions to improve inadequate image information.
35. Consistently maintain patient confidentiality standards.
36. Perform safe, ethical and legal practices.

Clinical Education Pre-requisites

- Successfully Complete The following courses:
 - MR Fundamentals
 - MR Safety
 - MR Image Formation
 - Sectional Anatomy
- Attend to the Clinical Orientation Section at the school

Affiliated Clinical Sites

- | | |
|-------------------------------------|---|
| • University of Miami (UMHC) | • Universal Imaging (Miami Lakes) |
| • Bascom Palmer Eye Institute | • Millennium Diagnostics (Hialeah) |
| • Hialeah Hospital (Hialeah) | • Doral Medical Imaging (Doral) |
| • Elite Imaging (Aventura) | • Doral Medical Imaging (Kendall) |
| • Elite Imaging Open MRI (Aventura) | • Total Diagnostic Solutions |
| • Elite Imaging (Miami Beach) | • La Colonia Medical Center |
| • Unlimited Diagnostics (Hialeah) | • Diagnostic Medical Imaging (Pembroke) |
| • Lakes Radiology (Miami Lakes) | • Diagnostic Medical Imaging (Pines) |
| • Medical City (Hialeah) | • Diagnostic Medical Imaging (Hialeah) |

Clinical Site Orientation

Every student will receive a clinical orientation every time the student starts a clinical rotation in a new affiliated clinical site. This orientation will be conducted by the clinical coordinator and the clinical site student supervisor.

The clinical orientation will include:

- Introduction to the staff members and managers
- Tour of the facility
- Review of the clinical site privacy policy
- Review of the institution general health and safety plans
- Review of allergic reactions policies and procedures
- Review of the MRI safety policies and procedures
- Review of the MRI equipment, and patient protection

Clinical Attendance

Student must turn in the attendance log and the procedures log in a monthly basis

The attendance log must include the date, starting and ending time, total number of hours per day and must be signed by the supervising technologist.

- The procedures log must include: procedure performed, date, start and completion time, scan type, and if it was observed (O), or performed under direct supervision (DS) or indirect supervision (IS).

Students must complete the clinical training within a twelve (12) months period unless unusual circumstances occurs. Extensions to the length of training due to unusual circumstances that must be approved by Program Director.

If student does not complete the required number of hours (750) during schedule time, three (3) things might happen:

- First, the student will have to find his own place to complete the remaining hours. The school must approve clinical site and obtain an affiliation Agreement or
- Second, the student must paid an additional \$500 fee to the school per every additional month required for the student to complete the training or
- Third, the student will be withdraw from the program.

Attendance Reports

Clinical attendance logs must be completed daily. Students not recording attendance daily in the attendance log will count as an absence.

Attendance log is to be at the clinical site at all times. Under no circumstances (except if requested by a school official) the student will remove the attendance log from the facility. If attendance log is not at the clinical site at the time of clinical coordinator visit, the attendance for that period will not count, and the student will be marked absent.

If student is attending more than one facility, the student must have an individual attendance log for each site.

The procedures log must be completed daily. Students who do not complete the procedures log on a daily basis will also be considered absent for those days, even if the attendance log is completed.

Students accumulating three (3) absences will be subject to disciplinary action. Students failing to comply with the above process in three (3) occasions, will automatically be terminated from the program.

Student Evaluations

Quarterly Performance Evaluation

Every three months the student will be evaluated by the clinical supervisor. This evaluation includes:

- Punctuality
- Readily and availability
- Uniform and appearance
- Professionalism and manners
- Interest in learning
- Improvement
- Environmental care

Clinical Site Visit Report

A clinical site visit report will be completed by the clinical coordinator every time he or she visits the clinical site. This report will include:

- Was the student present at the clinical site on schedule day
- Was the student properly dressed according to the school uniform policy
- The clinical instructor and other staff members provide a positive feedback from the student
- Is the student showing progress on training and performing to the level of training
- Is the student providing satisfactory patient care according to the level of training
- Is the student taking care of the equipment and maintaining a clean environment

Clinical Competencies

As part of the clinical training, students must demonstrate competence in twelve clinical activities (MRI Procedures). Students will be evaluated on their MRI and patient care skills. Students must be evaluated while scanning actual patients.

There are a total of sixteen procedures to choose from. Out of the sixteen procedures, student must be evaluated in ten procedures. Only procedures listed will be accepted.

As part of the MRI program, students must complete the clinical component portion of the program:

Procedures:

- Head and Neck
 - Routine brain MRI
 - Orbits, Face and Neck MRI
 - Pituitary Gland
 - Internal Auditory Canal MRI
 - Brain or Neck MRA
- Abdomen and pelvis
 - Liver/pancreas/kidneys MRI
 - MRCP
 - Male or Female Pelvis MRI
 - CE MRA or Run Off MRA
- Spine
 - Cervical MRI
 - Thoracic MRI
 - Lumbar MRI
- Musculoskeletal
 - Hip MRI
 - Shoulder MRI
 - Knee MRI
 - Wrist MRI

Patient Care Skills:

- Patient Identification: Identify the patient with more than one source (name, picture ID, wrist band)
- Patient assessment and safety: patient interview, MR safety questionnaire assessment, and anti-noise devices
- Standard (Universal) precautions
- Patient communication: clear and concise directions for patient to understand and follow
- Patient monitoring: monitor the patient during procedure
- Caring disposition: demonstrate compassion and empathy for the patient's condition and vulnerable state. Exhibits understanding, knowledge and gentle care.
- Post examination follow-up: assist the patient off the table; communicate proper post-examination instruction, direct patient to dressing are/exit, and clean exam room.

MRI Skills:

- Evaluation of the doctor's order: type of exam, patient history,
- Equipment manipulation: coil selection, table, control panel, restrain devices
- Position skills: patient position, landmark selection, patient comfort
- Protocol selection: proper protocol, and pulse sequence selection depending on physician indications and patient conditions
- Anatomic coverage: demonstrate required anatomy-anatomic structures optimally
- Parameter optimization: good SNR, high resolution, good image contrast and acceptable scan time
- Performance speed: exam performed within reasonable time frame within consideration of the level of difficulty of procedure and patient condition
- Anatomy identifier: ability to identify anatomic structures in MR image

Student Guidelines

- Wear School uniform at all times
- Wear School ID Badge at all times
- Wear Facility ID badge (If required)
- No cell phones, tablets or any other electronic device is permitted in the patient care area.
- Student in need of making a phone call must ask for permission and step out the patient care area.

Notifications

- Students must notify the clinical coordinator in advance of any schedule change.
- Any schedule change must be approved by clinical coordinator and clinical instructor.
- Student must also notify the clinical coordinator and clinical instructor if not attending to training in any particular day(s).

Clinical Forms

All clinical forms are available online (<https://www.medacademy.education/forms/>)

- Clinical Attendance Log (Form 301)
- Clinical Procedures Log (Form 302)
- Clinical Instructor Evaluation (Form 303)
- Clinical Competency Procedure (Form 304)
- Clinical Site Orientation Form (Form 305)
- Student Clinical Evaluation Form (Form 306)

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Clinical Instructor Evaluation (Form 303)

Clinical Instructor: _____

Evaluator: _____

Date of Evaluation: _____

Purpose: The purpose of this evaluation is to provide feedback of faculty classroom presentation, student interaction, lecture preparation, and other pertinent elements necessary for optimal class facilitation. This evaluation is to be used as a performance evaluation tool for professional improvement and to ensure that faculty are meeting expected instructional standards.

Performance Standards

Clinical Instructor demonstrates efficiency of:	Exceeds Standard	Meets Standard	Below Standard
1. The instructor was on time and readily available during clinic hours. Comments:			
2. The instructor was responsible for including conference time in this clinic (rotation). Comments:			
3. The instructor displayed a courteous and professional manner toward the student and the patients. Comments:			
4. The instructor provided the student with clear, specific feedback about clinical performance. Comments:			
5. The instructor taught performance and thinking skills by assisting in the use of instruments and giving demonstrations. Comments:			
6. The instructor had expertise in the clinic areas assigned. Comments:			

Overall Comments:

Instructor Signature: _____

Date: _____

Evaluator Signature: _____

Date: _____

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Clinical Competency Procedure (Form 304)

Student Name: _____ Date: _____

Evaluated by: _____ Procedure: _____

Pass Equivalent (6.66) Fail (0) Competency Grade: _____

Item #	Description	Pass	Fail
1	Patient Identification: Identify the patient with more than one source (name, picture ID, wrist band)		
2	Patient assessment and safety: patient interview, MR safety questionnaire assessment, and anti-noise devices		
3	Standard (Universal) precautions		
4	Patient communication: clear and concise directions for patient to understand and follow		
5	Patient monitoring: monitor the patient during procedure		
6	Evaluation of the doctor's order: type of exam, patient history,		
7	Equipment manipulation: coil selection, table, control panel, restrain devices		
8	Position skills: patient position, landmark selection, patient comfort		
9	Protocol selection: proper protocol, and pulse sequence selection depending on physician indications and patient conditions		
10	Anatomic coverage: demonstrate required anatomy-anatomic structures optimally		
11	Parameter optimization: good SNR, high resolution, good image contrast and acceptable scan time		
12	Performance speed: exam performed within reasonable time frame within consideration of the level of difficulty of procedure and patient condition		
13	Anatomy identifier: ability to identify anatomic structures in MR images		
14	Caring disposition: demonstrate compassion and empathy for the patient's condition and vulnerable state. Exhibits understanding, knowledge and gentle care.		
15	Post examination follow-up: assist the patient off the table, communicate proper post-examination instruction, direct patient to dressing are/exit, clean exam room		

Comments:

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Clinical Site Orientation (Form 305)

Clinical Site: _____ **Date:** _____

Student Name: _____

1. Introduction to staff members and management.	<input type="checkbox"/>
2. Tour of the facility.	<input type="checkbox"/>
3. Review of clinical site privacy policy.	<input type="checkbox"/>
4. Review of institution general health and safety plans a. Employee first aid b. Material Safety Data Sheet c. Fire plan d. Evacuation plan e. Disaster	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
5. Review of allergic reaction policies and procedures. a. Supervising physician contact information b. Allergic reaction kit c. Vital sign monitoring equipment d. Oxygen access e. Suction equipment	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
6. Review MR Safety policies and procedures. a. Screening process b. MR safety questionnaire c. Reference Manual for MRI d. MR compatible equipment e. MR patients dress code	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
7. Review of MRI equipment, and patient protection. a. MRI Scanner b. RF Coils c. Patient table d. MR Compatible Stretcher and or wheelchair e. Patient protection equipment (insulating pads, anti noise devices) f. Contrast media and IV kit	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

Orientate Signature: _____

Date: _____

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Student Clinical Evaluation (Form 306)

Evaluation Period: _____

Student Name: _____

Date: _____

Evaluated by: _____

Grade: _____

SA - Strongly Agree (10) A – Agree (7.5) N – Neutral (5) D – Disagree (2.5) SD - Strongly Disagree (0)

Question	SA	A	N	D	SD
The student was on time for clinical training.					
The student was readily available during clinic hours.					
The student wears the complete uniform and looks professional during clinical hours.					
The student displayed a courteous and professional manner to patients.					
The student displayed a courteous and professional manner to staff members.					
The student shows interest in learning during the clinical training.					
The student was on time back from breaks.					
The student shows improvement during this clinical training period.					
The student took good care of the equipment during training.					
The student maintained a clean environment in the MRI area during training.					

Comments:

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Clinical Site Visit Report

Clinical Site: _____ **Date:** _____

Student Name: _____

Topic	Yes	No
1. The student was at the clinical site assigned on visited day	<input type="checkbox"/>	<input type="checkbox"/>
2. The Student was properly dressed according to school uniform policy	<input type="checkbox"/>	<input type="checkbox"/>
3. The clinical instructor provided positive feedback of the student	<input type="checkbox"/>	<input type="checkbox"/>
4. Staff members provided positive feedback of the student	<input type="checkbox"/>	<input type="checkbox"/>
5. The student is showing process in training	<input type="checkbox"/>	<input type="checkbox"/>
6. The student is capable of performing MRI procedures according to the level of training	<input type="checkbox"/>	<input type="checkbox"/>
7. The student provides satisfactory patient care according to the level of training	<input type="checkbox"/>	<input type="checkbox"/>
8. The student displayed a courteous and professional manner to patients and staff members.	<input type="checkbox"/>	<input type="checkbox"/>
9. The student takes care of the equipment	<input type="checkbox"/>	<input type="checkbox"/>
10. The student maintains a clean environment	<input type="checkbox"/>	<input type="checkbox"/>

Student Feedback:

Clinical Coordinator Signature: _____

Date: _____

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Clinical Orientation Section Acknowledgment

Student Name: _____

As a student of Med Academy, I certify attending to the Clinical orientation section where the following topics were explained to me:

- a) Copy of the Clinical Practicum Handbook was provided to me.
- b) Clinical policies listed in the Clinical Practicum Handbook were explained to me.
- c) Must wear uniform to all clinical activities.
- d) Must wear ID at all times while are at the clinical sites.
- e) Must wear facility ID at all times while are at the clinical sites (When applicable).
- f) Agree not to use cell phone or any other electronic device in the patient care area.
- g) Protect patient confidentiality
- h) Adhere to the clinical site policies and procedures.
- i) Comply with safety regulation
- j) Maintain the attendance and procedures log up to date.
- k) Understand that the Clinical Training must be completed within a twelve (12) months period unless unusual circumstances occurs.
- l) Understand and comply with satisfactory academic process. To avoid any difficulties, keep your grade and evaluations above 70%.
- m) Maintain the clinical standards and understand the measures which will be taken if I do not maintain these standards.
- n) Demonstrate competency in clinical procedures covered in the length of the course.
- o) Understand that for graduation I must successfully complete all specified clinical requirements for the program of study which includes:
 - Complete all clinical hours listed on the Enrollment Agreement.
 - Maintain a satisfactory progress evaluation throughout the entire clinical training.
 - Demonstrate competency in all clinical procedures covered in the length of the course.

I was informed and advise on all of the above items.

Student's Signature

Date

Clinical Coordinator

Date