

CASPER COLLEGE COURSE SYLLABUS  
RDTK 1945

**MRI Clinical Education I**

Semester/Year: **FA 2015**

Lecture Hours: 0

Lab Hours: 13.5 Hours  
Week

Credit Hours: 3

Class Time: Assigned

Days: Assigned

Room: Clinical Location

**Class meets: 9/12, 10/10, 11/21**

Instructor's Name: Laurie Weaver/Jennifer Harshman

Instructor's Contact Information:

Office Phone:  
Laurie 268-2587

Email: [lweaver@caspercollege.edu](mailto:lweaver@caspercollege.edu)

**Please contact Jenny via e-mail**  
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Office Hours: **Fall hours TBA**

**Course Description:** Clinical education involves a practical learning experience in the patient care environment. Students participate in pre-scheduled time periods and practice their MRI skills in a hospital or clinic setting. Students will be under the supervision of an experienced MRI technologist. Emphasis will be placed on equipment utilization, exposure techniques, patient care, evaluation of MR procedures, evaluate image quality, MR safety practices, contrast administration, positioning protocols and image acquisition. A specified number of clinical exam competencies will be required.

**Prerequisites:** Acceptance into the program, RDTK 1940 Intro to MRI

**Goal:** Clinical education provides the student with a competency based hands on education that is necessary to become proficient as an entry level MRI technologist. This course will prepare the student for the ARRT National Exam Certification in Magnetic Resonance Imaging by offering clinical settings with state of the art equipment and a variety of procedures. This experience will provide students an opportunity to obtain high quality MRI images in a supervised setting, and provide excellent patient care.

**Outcomes:**

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) to archive and send images.
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 findings.

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 reduce possible acoustic damage.
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.

**Methodology:** Hands on clinical lab, case study

**Evaluation Criteria:** Clinical competency exams, repetition check off and clinical performance evaluations are required.

1. Students must complete **7 mandatory General Patient Care activities and 8 mandatory MRI Safety Requirements before performing competency exams on patients.**

**Competency Exams: Students are required to complete a total of 18 mandatory competency exams, 10 elective competency exams, and 7 mandatory quality control tests, during the fall and spring semesters, earning a grade of 85% or higher on each one. You must have at least 10 competencies completed by the end of this fall semester. The remaining comps and requirements will be due at the end of the spring semester.**

2. Students are required to obtain a minimum of 200 clinical hours for Clinical Education I. Failure to do so will result in an F grade for the course. **To stay on track, you should have 100 hours by midterm, failure to do so will adversely affect your midterm grade.**

3. Two clinical evaluations are to be submitted by a clinical site technologist. One is due at midterm and must be submitted by **October 2**. The second will be at the end of the semester and must be submitted by **December 4**.

4. It is the student's responsibility to ensure all competencies are filled out by the technologist they worked with in the Casper College Moodle class online. Only licensed, registered MRI technologists can test your competency on any given exam.

**Grade Scale:** Grade percentage scale:      A = 92-100  
  B = 83- 91  
  C = 75- 82  
  F = 0- 74

80% of your grade is calculated from the grades you earned on your competency exams. 20% is earned from your evaluations. Evaluations are to be submitted on time – late evaluations will receive a 5% deduction. You must have 200 hours at the end of both the Fall and Spring semesters (400 hours total). Lack of clinical hours will result in failing the class. Also, missing a required class date will result in a 3% deduction per day missed unless previous arrangements are made with the instructor. **Casper College may collect samples of student work demonstrating achievement of the above outcomes. Any personally identifying information will be removed from student work.**

Required Text, Readings, and Materials: Instructor Handouts

Class Policies: Last Date to Change to Audit Status or to Withdraw with a W Grade: **November 12,**

**Student Rights and Responsibilities:** Please refer to the Casper College Student Conduct and Judicial Code for information concerning your rights and responsibilities as a Casper College Student.

**Chain of Command:** If you have any problems with this class, you should first contact the instructor to attempt to solve the problem. If you are not satisfied with the solution offered by the instructor, you should then take the matter through the appropriate chain of command starting with the Department Head/Program Director, the Dean, and lastly the interim Vice President for Academic Affairs.

**Official Means of Communication:** Casper College faculty and staff will employ the student's assigned Casper College email account as a primary method of communication. Students are responsible to check their account regularly. This is also, where you will find course evaluation links during course evaluation periods.

**Academic Dishonesty/On Line Education Integrity:** Casper College demands intellectual honesty in all courses. Only admitted and registered Casper College students who have been assigned logins and passwords are allowed access to online courses. These secure logins verify the identity of the student. Proven plagiarism or any form of academic dishonesty associated with the academic process may result in course failure, dismissal from a program, or expulsion from Casper College, or other consequences. See the Casper College Student Code of Conduct for more information on this topic. **All competencies must be filled out by a licensed and registered MRI technologist. Students must clock-in and clock-out while at their clinical site. This is a zero tolerance policy – failure to comply will result in dismissal from the program.**

**ADA Accommodations Policy:** If you need academic accommodations because of a disability, please inform me as soon as possible. See me privately after class, or during my office hours. To request academic accommodations, students must first consult with the college's Disability Services Counselor located in the Gateway Building, Room 344, (307) 268-2557, bheuer@caspercollege.edu . The Disability Services Counselor is responsible for reviewing documentation provided by students

requesting accommodations, determining eligibility for accommodations, and helping students request and use appropriate accommodations.

Course Content

## **MAGNETIC RESONANCE IMAGING CLINICAL EXPERIENCE REQUIREMENTS**

Students will be required to spend 13.5 hours per week in the clinical setting for a total of 200 clinical hours. **The minimum daily time spent at the clinical site is 4 hours.** A specified number of competency exams will be required. Class requirements are outlined on the [ARRT Handbook link](#), and [ARRT Clinical Experience Requirements link](#).