Washtenaw Community College Comprehensive Report

MRI 140 MRI Procedures II
Effective Term: Fall 2015

Course Cover
Division: Math, Science and Health
Department: Allied Health
Discipline: Magnetic Resonance Imaging
Course Number: 140
Org Number: 15600
Full Course Title: MRI Procedures II
Transcript Title: MRI Procedures II
Is Consultation with other department(s) required: No
Publish in the Following: College Catalog , Time Schedule , Web Page
Reason for Submission: New Course
Change Information:
Rationale: This is a required course for the Magnetic Resonance Imaging (MRI) program.
Proposed Start Semester: Winter 2016
Course Description: In this course, students learn the Magnetic Resonance Imaging (MRI) scanning procedures for the chest, abdomen, and pelvis. Topics include scanning pulse sequences, positioning and patient care, sectional anatomy, and pathology. Anatomical structures and the plane that best demonstrates anatomy will be discussed as well as signal characteristics of normal and abnormal structures.

Course Credit Hours
Variable hours: No
Credits: 3
Lecture Hours: Instructor: 45 **Student:** 45
Lab: Instructor: 0 **Student:** 0
Clinical: Instructor: 0 **Student:** 0

Total Contact Hours: Instructor: 45 **Student:** 45
Repeatable for Credit: NO
Grading Methods: Letter Grades
Audit
Are lectures, labs, or clinicals offered as separate sections?: NO (same sections)

College-Level Reading and Writing
College-level Reading & Writing

College-Level Math
Requisites
Prerequisite minimum grade "C"
MRI 120 Procedures I
Enrollment Restrictions
Admission to the Magnetic Resonance Imaging (MRI) Program
Corequisite
MRI 145

General Education
Request Course Transfer

Proposed For:

Student Learning Outcomes

1. List the pulse sequences most commonly used for MRI scanning of the chest, abdomen and pelvis.
   Assessment 1
      Assessment Tool: Department final exam
      Assessment Date: Winter 2019
      Assessment Cycle: Every Three Years
      Course section(s)/other population: All sections
      Number students to be assessed: All students
      How the assessment will be scored: answer key
      Standard of success to be used for this assessment: 80% of the students will score 70% or higher on the outcome related questions.
      Who will score and analyze the data: Departmental Faculty

2. Recognize normal and abnormal anatomy on magnetic resonance (MR) images of the chest, abdomen and pelvis.
   Assessment 1
      Assessment Tool: Department final exam
      Assessment Date: Winter 2019
      Assessment Cycle: Every Three Years
      Course section(s)/other population: All sections
      Number students to be assessed: All students
      How the assessment will be scored: answer key
      Standard of success to be used for this assessment: 80% of the students will score 70% or higher on the outcome related questions.
      Who will score and analyze the data: Departmental Faculty

3. Determine the best coil selection, scan planes, and imaging options for Magnetic Resonance Imaging (MRI) procedures of the chest, abdomen and pelvis.
   Assessment 1
      Assessment Tool: Department final exam
      Assessment Date: Winter 2019
      Assessment Cycle: Every Three Years
      Course section(s)/other population: All sections
      Number students to be assessed: All students
      How the assessment will be scored: answer key
      Standard of success to be used for this assessment: 80% of the students will score 70% or higher on the outcome related questions.
      Who will score and analyze the data: Departmental Faculty

Course Objectives
1. Explain the role of MRI in detecting and staging of hepatic carcinomas.
   Matched Outcomes
2. Explain the role of MRI in detecting and follow up of pancreatic ductal carcinoma.
   Matched Outcomes
3. Determine timing for arterial and venous phases used for dynamic contrast enhanced imaging in the chest, abdomen, and pelvis.
   Matched Outcomes
4. Explain the role of MR enterography in detecting and staging of small and large bowel pathologic processes.
   Matched Outcomes
5. Explain MRI imaging of kidney pathology and function.
   Matched Outcomes
6. Discuss patient care issues and preparations for imaging of the chest, abdomen and pelvis.

Matched Outcomes

7. Identify imaging planes and protocols employed for imaging in the chest, abdomen and pelvis.
   Matched Outcomes
8. Explain the role of MRI in the detection of vessels supplying uterine fibroids.
   Matched Outcomes
9. Explain the role of MRI in the detection of uterine and cervical congenital abnormalities.
   Matched Outcomes
10. Explain the role of MRI in the detection of pelvic pathologies including prostate cancer, endometriosis and adnexal cancers.
    Matched Outcomes
11. Explain the imaging practices for the aorta, IVC and great vessels.
    Matched Outcomes
12. Use clinically acquired images as a basis for discussion of pathology, anatomy, pulse sequences and parameters for MR chest, abdomen and pelvic imaging.
    Matched Outcomes
13. Determine when to use respiratory gating, respiratory compensation, breath hold techniques in MR chest and abdomen imaging.
    Matched Outcomes
14. Explain how to properly use both cardiac and peripheral gating when imaging in the mediastinum.
    Matched Outcomes

New Resources for Course
Course Textbooks/Resources
Textbooks
Manuals
Periodicals
Software
Equipment/Facilities
Level III classroom
Testing Center

Reviewer	Action	Date
Faculty Preparer:		
Connie Foster	*Faculty Preparer*	*Nov 18, 2014*
Department Chair/Area Director:		
Connie Foster	*Recommend Approval*	*Nov 18, 2014*
Dean:		
Kristin Brandemuehl	*Recommend Approval*	*Nov 19, 2014*
Vice President for Instruction:		
Bill Abernethy	*Approve*	*Jan 05, 2015*