Middlesex Community College
School of Radiologic Technology
SYLLABUS - CRN 3404

I. Course Title: **MRI*202 - MRI Pathology (CRN3404)**

II. Credits: **1**

III. Prerequisites: Admissions to the Magnetic Resonance Imaging (MRI) Program, and ARRT Registered Radiographer, or Nuclear Medicine (Certification in Nuclear Medicine Technology Certification Board (NMTCB), or Radiation Therapy, or Sonography (Registration through the American Registry for Diagnostic Medical Sonography) (ARDMS).

IV. Semester: Fall 2019

V. Instructor: AnnaMaria Brancato (DiPetiro), Bsc, R.T.(R) (MR) (MRSO)
Office Hours: By appointment
Phone: 860 - 810-5827 7:30a.m. – 8:00 p.m.
Email: abrancato@mxcc.commnet.edu

VI. Course Description: The major pathologic conditions diagnosed by magnetic resonance imaging are presented. Emphasis is placed on the brain, vascular system of the neck and head, and the spine as detected by MR imaging. Differentiation between normal and pathologic tissues on MR scans, as well as the associated symptoms and origin of each type of pathology presented. Disease progression and treatment options are also discussed.

VII. Course Text: MRI in Practice, 5th Ed., Westbrook,Talbot: Wiley & Sons, 2018
Handbook of MRI Scanning, Burghart,Finn: Elsevier Mosby 2011
Review Questions for MRI, Roth and Faulkner: Wiley-Blackwell 2012

VIII. Course Objectives: At the end of this course, the student will be able to:
1. Differentiate between the axial, coronal, and sagittal planes of the body on magnetic resonance images.
2. distinguish between normal and pathologic tissues on MR scans
3. Identify pathology as demonstrated on MR images
4. Describe the origin of each pathology presented
5. List symptoms associated with each pathology and condition
6. Describe the disease progression for specific pathologies

IX. Course Goals:

1. Provide students with the opportunity to differentiate between axial, coronal, and sagittal planes of the body.
2. Provide students with the opportunity to distinguish between normal and pathologic tissues on MR images.
3. Provide students the opportunity to identify pathologic conditions on MR images.
4. Provide students the opportunity to describe the origin of each pathology presented in this unit
5. Provide students the opportunity to recognize and list the symptoms associated with each pathology/condition in this unit
6. Provide students the opportunity to describe the disease progression for pathologies in this unit.

X. General Unit Outline:

1. Clinical Skills

a. Practice positioning of routine and non-routine procedures.
b. Demonstrate proficiency on different patient procedures.

2. Image analysis and critique
   a. Analyze image using acceptable established criteria
   b. Differentiate between optimum and acceptable contrast enhancement of structures per established criteria.
3. Oral and Written communications
   a. Demonstrate written documentation techniques using clinic site specific protocols
   b. Practice communication techniques based on patient's physical and mental ability.
4. Patient Care Skills
   a. Practice patient care and assessment in preparation for examinations
   b. Demonstrate appropriate contrast media usage for protocol based on established criteria.

XII. Course Presentation:

This course consists of the following components:

1. Assignments	50%
2. Papers	25%
3. Final Exam	25%

XIII. Grading Scale:

A = 94 - 100	B- = 81- 84	D+ = 69 -72
A- = 91 - 93	C+ = 79 - 80	D = 64-68
B+ = 88 - 90	C = 77- 78	D- = 60 - 63
B = 85 -87	C- = 73-76	F = 59 and below

A "C"* or Better is required in all Radiology and General Education Courses in Order to Progress in the Program A grade of Incomplete "I" is given in extenuating circumstances. Incomplete grades must be satisfactorily completed prior to the start of the next semester to progress in the program. Failure to meet all requirements will result in a grade of "F" and dismissal from the program. Also, a grade of "F" will be given when a student is dismissed from the program for unsafe clinical infractions.The radiography program uses a competency-based grading system. Competence is the ability of the student to demonstrate a skill or knowledge that is consistent with the standards and abilities required of an entry-level radiographer. In radiology class work, a grade of "C" designates competence. In clinical an overall final average of "C" in ALL evaluated areas indicates competence. In addition to the overall "C" average, each clinical competency examination requires a minimum of an 80% for successful completion of the procedure.

ADDITIONAL COLLEGE INFORMATION: IMPORTANT COLLEGE POLICIES!! PLEASE READ CAREFULLY!

For information about the college's policies and procedures regarding academic honesty, accessibility/disability services, attendance, audio-recording in the classroom, grade appeals, religious accommodations, weather and emergency closings, and more, please go to the following website: https://mxcc.edu/catalog/academic-policies /

Also, please become familiar with the policies regarding nondiscrimination, sexual misconduct, and general student conduct at the following website: www.mxcc.edu/nondiscrimination/

MRI*202 MRI Pathology I

Week #	Assignment(s)
1	**- Module 11** **- Module11_Assignment1**
2	**- Module11_Assignment1**
3	**- Module11_Assignment1**
4	**- Module 11_Presentation 1** **- Module11_Assignment2**
5	**- Module 11_ Presentation 2** **- Module11_Assignment3**
6	**- Module11_Presentation 3** **- Module11_Assignment 4**
7	**- Module 11_ Assignment 5**
8	**- Module 11_Assignment5**
9	**- Module11_Assignment 5**
10	**- Module11 Assignment Quiz**
11	**- Module 11_Presentation 4** **- Module11_Assignment6**
12	**- Module 11_Presentation 5** **- Module11 Assignment 7**
13	**- Group Discussion**
14	**- Final Exam Review Group Discussion**
15	**Final Exam**

***SUBJECT TO CHANGE WITH/WITHOUT NOTIFICATION**

NOTES:

- During this clinical course students will be assigned rotation through different MRI areas at clinical affiliates.
- Students will be directly supervised and evaluated by a staff radiographer or program official during this clinical semester on patient interaction, communication, positioning skills and technical ability.
- Students will be required to complete any remaining procedures necessary to be eligible to sit for the national registry examination, ARRT (American Society of Radiologic Technologists)

Effective: 8//2019