



**Request for Undergraduate Course Addition - Page 2**  
**Additional Information Required for Undergraduate Course Addition**

College: COHP

Department/Division: Medical Imaging

Alpha Designator/Number: MI 308

Provide complete information regarding the new course addition for each topic listed below. Before routing this form, a complete syllabus also must be attached addressing the items listed on the first page of this form.

1. Identify by name the faculty in your department/division who may teach this course.

Rita Fisher, PhD RT (R)(CT)(CV)(ARRT)

2. If your department/division requires additional faculty, equipment, or specialized materials, attach an estimation of money and time required to secure these items.

No additional funding required

3. If this course will be required by a department/division other than your own, identify by name.

N/A

4. If there are any agreements required to provide clinical experience, attach details and signed agreements.

No additional agreements will be needed for this class

5. If library resources are deemed inadequate, attach a plan to overcome this. The plan must include the cost as stated by the Dean of Libraries.

No additional Library Resources to be provided by Marshall University

6. EQUIPMENT/SUPPLIES NEEDED TO TEACH THIS COURSE (this does not refer to additional equipment/supplies that need to be purchased; simply what materials are needed in order to teach this course successfully.):

Computer, LCD Projector, Projector Screen, White Board, Markers, Handouts, CD Rom's

No additional equipment or supplies will need to be provided by Marshall University

7. ADDITIONAL GRADUATE REQUIREMENTS IF LISTED AS AN UNDERGRADUATE OR GRADUATE COURSE (please also submit to Graduate Council course addition for 5xx graduate component):

None

8. PROVIDE A COMPLETE BIBLIOGRAPHY INCLUDING ALL PUBLICATIONS RESEARCHED TO CREATE THIS COURSE AND WHAT PUBLICATIONS MAY BE BENEFICIAL TO STUDENTS TAKING THIS COURSE (separate page).

See attached sheet

## **BIBLIOGRAPHY:**

American College of Radiology Committee on Quality Assurance in Mammography. *Mammography Quality Control Manual*. Reston, Va: American College of Radiology; 1999.

Product code P-QAM99

Blickman H. *Pediatric Radiology*. 2nd ed. St. Louis, Mo: Mosby-Year Book Inc; 1998.  
ISBN 0815109938

Browne MN. *Asking the Right Questions: A Guide to Critical Thinking*. 7th ed. Upper Saddle Rivers, NJ: Prentice Hall; 2004.  
ISBN 0131829939

Burton EM. *Essentials of Pediatric Radiology*. New York: Thieme Medical Publishers; 1999.  
ISBN 0865778027

Bush Jr, William, King BF Jr, Krecke KN. *Radiology Life Support (RAD-LS)*. New York, NY: Oxford University Press; 1999.  
ISBN 0340741589

Diestler S. *Becoming a Critical Thinker: A User Friendly Manual*. 4th ed. Upper Saddle River, NJ: Prentice Hall; 2005.  
ISBN 0131779982

Drafke MW, Nakayama H. *Trauma and Mobile Radiography*. 2nd ed. Philadelphia, Pa: FA Davis; 2001.  
ISBN 080360694X

Durand KS. *Critical Thinking: Developing Skills in Radiography*. Philadelphia, Pa: FA Davis Co; 1999.  
ISBN 0803603436

Hodge JC. *Musculoskeletal Imaging: Diagnostic & Therapeutic Procedures*. Basel, Switzerland: Karger Landes Systems; 1997.  
ISBN 1570594171

Hughes W. *Critical Thinking: An Introduction to the Basic Skills*. 3rd ed. Peterborough, Ontario: Broadview Press; 2000.  
ISBN 1551112515

McQuillen-Martensen K. *Exercises in Radiographic Critique*. Philadelphia, Pa: WB Saunders Co; 1996.  
ISBN 0721649815

Nosich GM. *Learning to Think Through: A Guide to Critical Thinking Across the Curriculum*. Upper Saddle River, NJ: Prentice Hall; 2001.  
ISBN 0130304867

Scheffer KJ. *Better X-Ray Interpretation*. Springhouse, Pa: Springhouse Corp; 1997.  
ISBN 0874348684

Weill FS, Manco-Johnson ML. *Imaging of Abdominal and Pelvic Anatomy*. New York, NY: Churchill Livingstone; 1997.  
ISBN 0443052387

White L. *Critical Thinking in Practical/Vocational Nursing*. Albany, NY: Delmar/Thomson Learning; 2002.  
ISBN 0766834581

Wicke L. *Atlas of Radiologic Anatomy*. 7th ed. Teterboro, NJ: Icon Learning Systems; 2004  
ISBN 1929007469

## COURSE SYLLABUS OUTLINE

### Course Title and Number: MI 308 Radiographic Image Analysis

Semester and Year: Spring 2010

Day/Time: M W 10:00-10:50

\*Course with Special Designation: none

Text Information: McQuillen and Martensen: *Radiographic Image Analysis*, 2<sup>nd</sup> ed. Saunders. Handouts

Computer Requirements: access to the internet:

Instructor: Name: Dr. Rita Fisher  
Office: Room 212  
Office Hours: As arranged  
Phone/email: 526-1259, [rfisher@st-marys.org](mailto:rfisher@st-marys.org)

### Course Description:

Image analysis content is designed to provide a basis for analyzing radiographic images. Included are the importance of minimum imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Lecture.

### Credits 2:

**Prerequisites:** MI 204, MI 205, MI 208, MI 303, MI 304.

**Co-requisites:** None

### Desired Learner Outcomes/Objectives:

1. When finished with this course you should be able to: Discuss the elements of a diagnostic image.
2. Identify the steps in the decision-making process used in image analysis.
3. Describe an effective image analysis method.
4. Describe the role of the radiographer in image analysis.
5. Apply the process for evaluating radiographs for adequate density, contrast, recorded detail and acceptable limits of distortion.
6. Differentiate between technical factor problems, procedural factor problems and equipment malfunctions.
7. Critique images for appropriate technical and procedural factors, and recommend corrective actions if necessary.
8. Critically evaluate various situations that occur in ordinary practice and select the best option that meets ethical and legal Standards including radiation protection and production of a diagnostic radiographic image.

### Evaluation/Measurement/Assessment of Learner Outcomes:

1. 6 Image Analysis Exams: Exams will be administered to cover the content material found in the text, delivered in lecture and any additional materials. Exams will be multiple choice, true/false and short answer.
2. 1 Situational Judgment Analysis exam. Students must achieve a minimum grade of 90% on the SJT exam. Students who fail to meet the minimum standard, must retake the exam. The two exams will be averaged together for grading purposes.

Your demonstrated daily preparation, participation, and punctuality can raise or lower your final grade.

### Grading Policy:

Image Analysis Exam (6)	65% of grade
SJT Homework analysis	10% of grade
SJT Exam	25% of grade

Grades will be determined by the following scale:

89.3-100	A
79.3-89.2	B
69.3-79.2	C
Below 69.2	F

### Policy Statements:

- 1. Attendance:** Regular attendance is expected. Students who miss more than two classes will receive a one letter drop in the final grade. You cannot pass the course with more than four absences. You must be present at the beginning of the class and stay until the end of class in order to be counted present. *The School of Medical Imaging follows Marshall University inclement weather policy. Refer to the Student Handbook.*
- 2. Preparation, participation, punctuality.** All preparation material should be completed prior to its scheduled discussion in class. All class sessions will be conducted with the assumption that all appropriate readings and/or assignments have been completed. Doing the preparation work prior to class will allow you to identify specific topics with which you need the most help, and you can then raise the pertinent questions when the topic is scheduled for class time. Not all assigned information will be reviewed in class. Additionally, information that may not have been assigned may be reviewed in class. If you have a question about a particular subject, you have the responsibility of using class time to get your questions answered. This necessitates having attempted the work prior to class. Class time should be used to clarify issues; it is difficult to know what issues you need to have clarified if you have not prepared.
- 3. Academic integrity:** Please refer to the Student Handbook. Students may not copy or utilize prior exams as study material unless provided by the instructor for review. Students who obtain copies of old exams from current or former students will be sanctioned.
- 4. Make-up assignments: Late assignments will not be accepted.** Students who miss scheduled exams may make them up only in the event of a medical emergency or by prior arrangement with the instructor.
- 5. Missed classes:** If you are absent, it is your responsibility to find out from a classmate what notes, handouts, assignments, or other course material you missed and to make arrangements with me to receive handouts.
- 6. Office hours:** Instructors are available to meet individually by appointment.
- 7. Learning Disabled Students:** consideration toward learning disabled students will be in accordance to SMI Student Handbook policies. Please make certain the instructor is made aware of any special needs.
- 8. Computing policy at SMMC:**
  - Authorized users of SMMC or other clinical affiliates institutional networks are those individuals who have been granted a username and password. Unauthorized use of usernames or passwords is prohibited
  - Use of computer systems in the clinical setting is limited to authorized patient data entry. Unauthorized access or attempts to access privileged patient information is a HIPAA violation and may result in dismissal from the SMI.
  - Students are provided access to the Internet through computers located in the School of Nursing Library, the computer lab and the SMI office. **Internet access is limited to assigned research projects.** Students may not access personal e-mail accounts (such as Hotmail or Yahoo) from these computers. Non school related use of the internet is prohibited. Students may access the internet via computers located in the Mojo/vending area in the hospital.
  - Internet access at SMMC is monitored by Information Services. Any attempts to download material of an obscene nature may result in dismissal from the SMI.
  - Students have access to computers located in the computer lab next to the SMI classroom. Students may not store information of the hard drive of these computers.
  - Users must adhere to the ethical standards governing copyright, software licensing, and intellectual property.
  - Suspected violation of these guidelines constitutes unacceptable use of information resources, and may violate other institutional policies and/or state and federal law including HIPPA. Suspected or known violations should be reported to the appropriate supervisory authority. The SMI and/or law enforcement agencies will process violations.
  - Violations may result in revocation of computing resource privileges, academic dishonest proceedings, disciplinary action or legal action.
  - Violations are subject to the appeal or grievance process.
  - Students should refer to MCTC computer policy in the MU Student handbook

### Proposed Course Schedule.

Dates and content are subject to change as the semester progresses. Changes will be announced in class as far in advance as possible.

Week	Date	Topic	Reading Assignment/Exam
		Guidelines	Chapter 1
		Chest/Abd	Chapter 2
		Upper Extremity	Chapter 3 (on exam 2)
		<b>EXAM 1</b>	
		Upper Extremity	Chapter 3
		Shoulder	Chapter 4
		<b>EXAM 2</b>	
		Lower Extremity	Chapter 5
		Hip/Pelvis	Chapter 6
		<b>EXAM 3</b>	
		C/T Spine	Chapter 7
		L Spine	Chapter 8
		<b>Exam 4</b>	
		Cranium	Chapter 10
		<b>Exam 5</b>	
		Sternum/Rib	Chapter 9
		Digestive System	Chapter 11
		<b>Exam Six</b>	
		Critical Thinking Exercise	
		<b>SJT Exam</b>	