

Request for Undergraduate Course Addition

Prepare **one** paper copy with all signatures and forward to the University Curriculum Committee Chair. Additionally, immediately following attainment of the College Curriculum Chair signature, send **one** identical ELECTRONIC COPY sans signatures in PDF format with all supporting documentation converted to PDF format by email to the University Curriculum Committee chair for electronic distribution.

College: COHP Department/Division: Medical Imaging Alpha Designator / Number : MI 406 Graded: CR/NC:

Contact Person: Dr. Shelia Kyle, Vice President Phone: 304-526-1412
St. Mary's Center for Education

Dr. Rita Fisher _____ 304-526-1259
Director – School of Medical Imaging

NEW COURSE DATA:

New Course Title: MRI Procedures and Equipment

Alpha Designation/Number:

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Title Abbreviation:

M	R	I				P	R	O	C	E	D	U	R	E	S				
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(Limit of 25 characters and spaces.)

Course Description (Limit of 30 words): Focus on advanced patient care skills including ACLS, imaging procedures and equipment in Computed tomography.

Co-requisite(s): MI 404, MI 409 First Term to be offered: Spring 2010

Prerequisite(s): Senior Status or ARRT certification Credit Hours: 3

Course(s) being deleted in place of this addition (*must submit course deletion form*): None

CHECKLIST/REQUIREMENTS:

1. After completing this two page form in its entirety, include a complete syllabus and route through the departments/committees below.
2. A complete syllabus can be from when this course was previously taught as a special topics course or by creating a new, intended syllabus to use with the course. The sample syllabus must at a minimum address the following areas:
 - a. COURSE OBJECTIVES
 - b. COURSE OUTLINE
 - c. SAMPLE TEXT(S) WITH AUTHOR(S) AND PUBLICATION DATE
 - d. INSTRUCTIONAL METHODS (Lecture, Lab, Internship, Practicum, etc...)
 - e. EVALUATION METHODS (Unit/Chapter, Midterm, Final, Projects, etc...)
3. If this course will replace a course that is required by another department, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
4. If this course will be similar in title or content to another department's courses, please send a memo to the affected department and include it with this packet, as well as, the response received from the affected department.
5. Send a copy of this completed form to the Marshall University Catalog Editor.

SIGNATURES: (If disapproved at any level, do not sign. Return to previous signer.)

Department Chair/Division Head _____	Date: _____
Registrar: _____	Date: _____
Librarian: _____	Date: _____
College Dean: _____	Date: _____
College Curriculum Chair _____	Date: _____
University Curriculum Committee Chair: _____	Date: _____
Faculty Senate Chair: _____	Date: _____
VP Academic Affairs/VP Health Services: _____	Date: _____

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

College: COHP

Department/Division: Medical Imaging

Alpha Designator/Number: MI 406

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:

- Bickley LS, Szilagyi PG. *Bates' Guide to Physical Examination and History Taking*. 9th ed. Philadelphia, Pa: Lippincott Williams & Wilkins; 2007.
ISBN 0781767180
- Braun CA., Anderson CM. *Pathophysiology: Functional Alterations in Human Health*. Philadelphia, Pa: Lippincott Williams & Wilkins; 2007.
ISBN 0781762502
- Brown MA. MRI: Basic Principles and Application. John Wiley & Sons. 2003.
ISBN 0471533101
- Bushong, SC. *Computed Tomography*. McGraw-Hill 2000
ISBN 9780071343561
- Bushong S. *Magnetic Resonance Imaging: Physical and Biological Principles*. 2nd ed. St. Louis, Mo: Mosby; 1996.
ISBN 0323014852
- Chiu LC, Lipcamon JD, Yiu-Chiu VS. *Clinical Computed Tomography for the Technologist*. 2nd ed. New York: Raven Press; 1995.
ISBN 0781702356
- Damjanow I. *Pathology for the Health-Related Professions*. 2nd ed. St. Louis, Mo: W.B. Saunders; 2000.
ISBN 0721681182
- Elkin MK, Perry AG, Potter PA. *Nursing Interventions and Clinical Skills*. 3rd ed. St. Louis, MO: Mosby; 2003
ISBN 0323022014
- Eisenberg RL, Johnson NM. *Comprehensive Radiographic Pathology*. 4th ed. St. Louis, Mo: Mosby Elsevier; 2007.
ISBN 0801661420
- English PT. *MRI for Radiographers*. New York: Springer Publishing Company; 1995.
ISBN 0387197508
- Faulkner, WH. *Rad Tech's Guide to MRI: Basic Physics, Instrumentation and Quality Control*. Blackwell Publishing. 2002.
ISBN 9780632045051
- Gould BE. *Pathophysiology for the Health Professions*. 3rd ed. St. Louis, Mo: Mosby Elsevier; 2006.
ISBN 1416002103
- Halpern B. *Imaging in Musculoskeletal & Sports Medicine*. St. Louis, Mo: Blackwell Science; 1997.
ISBN 0865424187
- Jensen SC., Peppers MP. *Pharmacology and Drug Administration for Imaging Technologists*. 2nd ed. St. Louis, Mo: Elsevier Mosby; 2005.
ISBN 0323030750
- Lipton, ML. *Totally Accessible MRI: A User's Guide to Principles, Technology, and Application*. Springer. 2008
ISBN 9780387488950
- McCance KL, Huether SE. *Pathophysiology: The Biologic Basis for Disease in Adults and Children*. 5th ed. St. Louis, Mo: Mosby Elsevier; 2006.
ISBN 0323035078
- McConnell TH. *The Nature of Disease: Pathology for the Health Professions*. Baltimore, MD: Lippincott Williams & Wilkins; 2006.
ISBN 0781753171
- Schoenhagen P, *Cardiac CT Made Easy: An Introduction to Cardiovascular Multidetector Computer Tomography*. Taylor & Francis, 2008
ISBN 1841846597
- Seeram, E. *Computed Tomography: Physical Principals, Clinical Applications, and Quality Control*. 2nd ed. Saunders. 2001
ISBN 9780721681733
- Weill FS, Manco-Johnson ML. *Imaging of Abdominal and Pelvic Anatomy*. New York, NY: Churchill Livingstone; 1997.
ISBN 0443052387

COURSE SYLLABUS OUTLINE

Course Title and Number: MI 406 MRI Procedures and Equipment

Semester and Year: Spring 2010

*Course with Special Designation:

Text Information: Westbrook et. al. *MRI in Practice*. 2007. John Wiley & Sons; Grey et.al. *CT and MRI Pathology: A Pocket Atlas*. 2003. McGraw-Hill

www.netanatomy.com

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

Course Description: This course will focus on advanced patient care skills including ACLS, imaging procedures and equipment in magnetic resonance imaging.

Credits: 3

Prerequisites: Senior status or ARRT certification.

Co-requisites: MI 404, MI 409

Desired Learner Outcomes/Objectives: When finished with this course you should be able to:

1. Describe the operation of specialized imaging equipment associated with magnetic resonance imaging
2. Identify the various procedures performed in MRI
3. List the parameters used in the current American Heart Association (AHA) Advanced Cardiac Life Support Guidelines.
4. Perform patient education, assessment, communication, preprocedural and postprocedural care and proper charting and documentation.

Evaluation/Measurement/Assessment of Learner Outcomes:

1. Two exams will be administered to cover the content material found in the text, delivered in lecture and any additional materials. Exams will follow the format of the ARRT post-primary exam in MRI http://www.rrt.org/examinations/contentspecs/MRI_CS_2006.pdf

Grading Policy:

Each exam will equal 50% of the final grade.

Grades will be determined by the following scale:

92.3-100	A
84.3-92.2	B
74.3-84.2	C
Below 74.3	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:**
 - a. 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
 - b. 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.
 - c. 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.
 - d. 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.
 - e. 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.
 - f. Users must adhere to the ethical standards governing copyright, software licensing, and intellectual property.
 - g. 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.
 - h. Violations may result in revocation of computing resource privileges, academic dishonest proceedings, disciplinary action or legal action.
 - i. Violations are subject to the appeal or grievance process.
 - j. Students should refer to SOMI computer policy in the CFE Student handbook

Proposed Course Outline

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

Week	Topic	Reading Assignment/Exam
	ACLS	
	ACLS certification exam	
	Introduction to MRI	
	Physical Principles of MRI	
	Exam One	
	Data Acquisition Concepts	
	Instrumentation	
	MRI safety	
	MRI Procedures	
	Exam Two	