

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 208 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: Pharmacology and Drug Administration for Imaging Science

Alpha Designation/Number:

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Title Abbreviation:

P	H	A	R	M	A	C	O	L	O	G	Y		I	M	G		S	C	I				
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(Limit of 25 characters and spaces.)

Course Description (Limit of 30 words): Content is designed to provide basic concepts of pharmacology including delivery of and pharmacodynamics associated with imaging contrast media.

Co-requisite(s): MI 207, MI 208, MI 209, MI 210, MI 211 First Term to be offered: Spring 10

Prerequisite(s): BSC 227, MI 204; BCLS; Admission to the Medical Imaging Program Credit Hours: 2

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: _____

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Additional Information Required for Undergraduate Course Addition

College: COHP

Department/Division: Medical Imaging

Alpha Designator/Number: MI 208

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)(ASRT)

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:

Bontrager K. *Radiographic Positioning and Related Anatomy*. 6th ed. St. Louis, Mo: Elsevier Mosby; 2005.
ISBN 0323025072

Bontrager K, Lampignano J. *Workbook and Laboratory Manual*, 6th ed. Volumes I and II. St. Louis, Mo: Elsevier Mosby; 2005.
Volume I – ISBN 0323025048; Volume II – ISBN 0323025056

Bontrager K. *Pocket Atlas-Handbook of Radiographic Positioning and Techniques*. 4th ed.
St. Louis, Mo: Elsevier Mosby; 2002.
ISBN 0964172348

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

Jensen S, Peppers M. *Pharmacology and Drug Administration for Imaging Technologists*. 2nd ed. St. Louis, Mo: CV Mosby; 2006.
ISBN-13 978-0-323-03075-5 and ISBN 0-323-03075-0

Lehne, R. *Pharmacology for Nursing Care*, 6th ed. St. Louis, MO. Saunders. 2007 ISBN-13-978-1-4160-2552-8.

Savader S. *Venous Interventional Radiology with Clinical Perspectives*. New York: Thieme Medical Publishers Inc; 1996.
ISBN 0865775990

Torres LS, Dutton AG, Linn-Watson Norcutt TA. *Basic Medical Techniques & Patient Care in Imaging Technology*. 6th ed.
Philadelphia, PA: Lippincott-Raven; 2003.
ISBN 0781731917

Tortorici M. *Administration of Imaging Pharmaceuticals*. Philadelphia Pa.: Saunders; 1996.
ISBN 0721648134

COURSE SYLLABUS OUTLINE

Course Title and Number: MI 208 Pharmacology and Drug Administration

Semester and Year: Spring 2010

*Course with Special Designation: none

Text Information: Jensen and Peppers (2006) Pharmacology and Drug Administration for Imaging Technologists, 2nd Edition.

Computer Requirements: access to the internet:

<http://www.accd.edu/sac/nursing/math/default.html>

http://hsc.uwe.ac.uk/idis2/contrast_agents/CM%20Zip/ContrastMedia_Schering.pdf

<http://www.rtstudents.com/students/index.htm>

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

Course Description: Content is designed to provide basic concepts of pharmacology. The theory and practice of basic techniques of venipuncture and the administration of diagnostic contrast agents and/or intravenous medications is included. This will satisfy one of the six mandatory general patient care clinical competency requirements for the American Registry of Radiological Technology. The appropriate delivery of patient care during these procedures is emphasized.

Credits: 2 Lecture/Demonstration

Prerequisites: BSC 227, MI 202, MI 203, MI 204, proof of BCLS certification

Co-requisites: none

Venipuncture

Though regulations regarding the administration of contrast media and intravenous medications vary in different states and institutions, the official position of the American Society of Radiologic Technologists is that venipuncture falls within the profession's general scope of practice and practice standards and that it, therefore, shall be included in the didactic and clinical curriculum with demonstrated competencies of all appropriate disciplines regardless of the state or institution where such curriculum is taught.

The student shall be assured that:

- Legal statutes allow performance of this procedure by student radiographers
- Professional liability is adequate
- Appropriate, structured, laboratory objectives are identified
- Evaluation and demonstration of competency occurs before this task is performed unsupervised

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

1. Determine the legal ramifications of drug administration and venipuncture for imaging professionals in your state (WV, OH, KY)
2. Understand the physiology of movement of various substances across cell membranes
3. Discuss the manner in which drugs are absorbed, distributed, metabolized, and eliminated in the body
4. Cite and define terms associated with negative responses to drug action
5. Define the categories of contrast agents and give specific examples for each category
6. Describe the adverse pharmacodynamic effects of ROCM
7. Discuss the examples of screening methods used to evaluate patients prior to introduction of ROCM and adverse effects associated with ROCM.
8. Identify the routes used for intravenous injections
9. Demonstrate the procedure used for venipuncture
10. Identify, describe and document complications associated with intravenous drug therapy and appropriate actions to resolve these complications
11. Identify additional drug categories of relevance to radiography including drug, side effects, uses and impacts on medical imaging.

Evaluation/Measurement/Assessment of Learner Outcomes:

1. 6 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. Class participation
3. Homework assignments. There will be a homework assignment with each reading assignment. Some assignments will be completed in class as group projects.
4. Comprehensive final exam. Students who have achieved an A (93.1%) on the exams only may be exempt from the final exam. Written assignment grades **will not** be considered in exemption from the final exam.
5. Successful simulation of venipuncture. Venipuncture is one of the mandatory patient care competencies for the ARRT certification exam.

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

Grading Policy:

Exams: 100 points each	70% of grade
Written assignments (10 pts each)	5% of grade
Venipuncture completion	5% of grade
Final Exam	20% of 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

*The lowest exam score may be dropped.

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 computer policy in the CFE 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	Topic	Reading Assignment/Exam
	Venipuncture	Chapter 8
	Venipuncture	
	Venipuncture Drug Administration	Chapter 8
	Exam One	
	Role of Imaging Professional	Chapter 1 A1
	Principles of Pharmacology	Chapter 2 A 2
	Exam Two	
	Biopharmaceutics	Chapter 3 A 3
	Pharmacodynamics	Chapter 4 A 4
	Exam Three	
	Drug classifications	Chapter 5 A 5
	Exam Four	
	Contrast chemistry	Chapter 6 A 6
	Pharmacodynamics of contrast	Chapter 7 A7
	Exam Five	
	Anxiety meds	Chapter 9 A8
	Emergency meds	Chapter 10 A9
	Exam Six	
	Comprehensive Exam	