

### 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 310 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: Clinical Practice V

Alpha Designation/Number:

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Title Abbreviation:

C	L	I	N	I	C	A	L		P	R	A	C	T	I	C	E		V				
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(Limit of 25 characters and spaces.)

Course Description (Limit of 30 words): Content is designed to provide the knowledge base necessary to perform standard imaging procedures. Clinical practice is sequential. Students will be introduced to special imaging modalities.

Co-requisite(s): MI 307, MI 308, MI 309, MI 310 First Term to be offered: Spring 2010

Prerequisite(s): MI 210, 301, 305; Admission to the Medical Imaging Program Credit Hours: 4

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 310

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), Professional radiographers per JRCERT Standard Six

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

Carlton RR, Greathouse JS. *Delmar's Principles of Radiographic Positioning & Procedures Pocket Guide*. Albany, NY: Delmar Publishers; 2005.  
ISBN 0766862461

Chiu LC, Lipcamon JD, Yiu-Chiu VS. *Clinical Computed Tomography for the Technologist*. 2nd ed. New York: Raven Press; 1995.  
ISBN 0781702356

Cornuelle AG. *Competency Manual for Radiographic Anatomy & Positioning*. New York: McGraw-Hill Inc; 1998.  
ISBN 0838582397

Biedrzycki, A., *The Radiography Procedure and Competency Manual*. 1st ed. Philadelphia, Pa: F.A. Davis; 2000.  
ISBN 0803606729

Eisenberg RL, Dennis CA, May CR. *Radiographic Positioning*. 2nd ed. Boston, Mass: Little, Brown and Company; 1995.  
ISBN 0316224995

Frank ED., Long, BW, Smith, BJ. *Merrill's Atlas of Radiographic Positions & Radiologic Procedures*. 11th ed. St. Louis, Mo: Mosby; 2007.  
ISBN 032304210-4

Frank ED., Long, BW, Smith, BJ. *Merrill's Pocket Guide to Radiography*. 6th ed. St. Louis, Mo: Mosby; 2007.  
ISBN: 0323042090

Frank ED, Long, BW, Smith, BJ. *Mosby's Radiography Online: Anatomy and Positioning for Merrill's Atlas of Radiographic Positioning & Procedures*. 11th ed. St. Louis, Mo: Mosby; 2007.  
ISBN-10: 0323044921 and ISBN-13: 978-0323044929

Frank ED, Long, BW, Smith, BJ, Hall Rollins, J. *Workbook for Merrill's Atlas of Radiographic Positions & Radiologic Procedures*. 11th ed. St. Louis, Mo: Mosby; 2007.  
ISBN: 0323042163

Lufkin R. *Teaching Atlas of Head & Neck Imaging*. New York, NY: Thieme Medical Publishers; 2002.  
ISBN 0865776911

Madigan ML. *Pocket Manual for Radiographic Anatomy & Positioning: An Integrated Approach*. New York: McGraw-Hill Co; 1998.  
ISBN 0838582370

Ramsey RG. *Teaching Atlas of Spine Imaging*. New York: Thieme Medical Publishers Inc; 1999.  
ISBN 0865777780

## COURSE SYLLABUS OUTLINE

### Course Title and Number: MI 310 Clinical Practice V

Semester and Year: Spring 2010

\*Course with Special Designation: none

Text Information: Bontrager: Radiographic Positioning and Related Anatomy, 5<sup>th</sup> Edition. 2006. Pocket Atlas or Merrill's Pocket Atlas. Student Clinical Notebook.

Computer Requirements: access to the internet

Instructor: Name: Clinical Instructors (various), Karen Foster, Clinical Coordinator

Office:

Office Hours: As arranged

Phone/email: see clinical schedule

**Course Description: Credits: 4 HR\*** Continuation of MI 206, 210, 301 and 305. Emphasis is placed on evidence based practice knowledge whereby students are able to synthesize all aspects of clinical practice and make appropriate decisions regarding imaging procedures. Clinical rotations will be M-F for seven hours. Students will have one evening (1:00-9:00 pm) rotation. Students will demonstrate competency on a minimum of one mandatory and two elective exams as identified by the American Registry of Radiologic Technologists (ARRT). One competency should be completed during an evening rotation. Students will also demonstrate clinical knowledge and competence by successfully completing six terminal comps selected from each category as defined in the clinical handbook.

CR Hr: 4\* (Approximately 220 clock hours. Credit hours are based on 1 credit hour/40 clock hours in the clinical setting.)

Prerequisites: Admission to Medical Imaging Program, MI 206, 210, 301 and 305.

Co-requisites:

1. Demonstrate evidence based practice skills by appropriate assessment of imaging procedures..
2. Choose patient and family education strategies appropriate to the comprehension level of patient/family.
3. Evaluate the patient's status and condition before, during and following the radiologic procedure to demonstrate competence in assessment skills.
4. Document care in the patient's record..
5. Prepare the technologies and methodologies for the performance of radiologic procedures.
6. Demonstrate competency in the principles of radiation protection standards to include time, distance, shielding and radiation monitoring..
7. Support safe, ethical and legal practices by integrating the radiographer's scope of practice and practice standards into clinical practice setting including HIPPA.
8. Differentiate between emergency and non-emergency procedures.
9. Adhere to national, institutional and/or department standards, policies and procedures regarding care of patients, provision of radiologic procedures and the reduction of medical errors.
10. Ensure that performance reflects professional competence in the selection of technical factors to produce quality diagnostic images with lowest radiation exposure possible.
11. Correctly perform venipuncture under direct supervision
12. Analyze radiographic images for accuracy and identification of pathologic conditions
13. Demonstrate evidence based practice skills by accurately interpreting exam requisitions, appropriate selection of technical factors based on pathology and accurate critical analysis of the resulting images.

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

1. Students are assessed through a combination of specific clinical competency evaluations and clinical instructor evaluations.

### Mandatory Competencies:

**Students must demonstrate competency in two (2) mandatory exams and two (2) elective exams and 6 terminal exams. Exam competency grades will be averaged to determine 40% of semester grade. Refer to the clinical notebook for a list of mandatory and elective procedures.**

- a. Clinical instructors must record points earned for each competency. Competency can not be achieved in an exam that requires a repeat of any view.
- b. Students may not perform a competency on an exam on which they haven't covered in class.
- c. Competency implies that the student is able to perform an examination without direct supervision. It does not imply efficiency. Students who have achieved competency are expected to continue to perform an exam. A student who cannot perform an exam after they have been designated "competent" will have the original competency revoked and must begin the process again. Students may be asked to demonstrate their competence and efficiency at any point by a clinical instructor. At the conclusion of the second and fourth semester, students will be expected to further demonstrate competence and efficiency via the terminal competency examination.

The terminal comp will be a practical demonstration. A minimum score of 85% must be achieved for a passing grade. The terminal comp will be averaged into the total clinical competency portion of the grade.

### Instructor Evaluations

2. Students receive an evaluation by the clinical instructor at the end of each clinical site rotation. Each student will receive from 3-5 clinical instructor evaluations each term.
3. Students will be evaluated on radiographic anatomy, positioning knowledge, and film critique on all required competencies by the affiliate clinical instructor.
4. Imaging Objectives: Students will be required to submit an objective analysis following their mobile and surgical rotation and each advanced imaging rotation. Any student who fails to achieve the imaging objectives will be required to meet with the Clinical Coordinator and determine whether the student should repeat the rotation or submit a paper outlining the key objective criteria. Students will begin advanced imaging rotations with RS 215 and RS 220.

### Record Keeping

Accurate record keeping is necessary in order to assess a student's progress through the program. It is the student's responsibility to obtain the appropriate forms and submit them in a timely manner to the program office. Failure to maintain accurate records and to submit them will result in a deduction in the clinical grade. Students will keep a 3-ring binder with them while in the clinic. The binder will contain:

1. **Competency forms.**
  - a. The student will retain all competency forms and will turn them in to the office or the **clinical instructor** as they are completed. **Comp forms CANNOT be left with a staff radiographer or a "Comp Tech"**. Credit for the competency will not be given until the student submits the form. The original will be placed in the student's file. A copy may be requested for the student's record.
  - b. **Under no circumstances should a comp form or binder be left in a public area (i.e. the processing or reception areas). The student will receive a clinical demerit on the first offense. Second offenses will result in further disciplinary action.**
  - c. Blank forms will be available in the program office.
2. **Competency List:** as a competency examination is completed, it should be checked off the list and initialed by the supervising CI or "comp tech". This will provide you with an exact record of your completed competencies. The competency list will include check off areas for practice exams.

3. **Venipuncture form**
4. **Rotation evaluations.** Rotations which require an additional evaluation are listed on the master schedule. It is the student's responsibility to present the form to the appropriate staff for completion and to return the completed form to the office. Failure to submit the required forms will result in a deduction in the clinical grade.

**Grading Policy:**

Specific Competency Evaluations	40%
Averaged Clinical Instructor Evaluations	50%
Record Keeping	10%

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:**

- a. **All clinical absences must be made up prior to the end of the semester.** Excused absenteeism (see hand book) will not incur a grade deduction if made up in a timely manner. Each unexcused absence will result in a 5% deduction in the clinical grade. Any absenteeism not made up prior to the end of the semester will result in a grade of I. Students will have one month to make up the absence of the I will convert to a grade of F. Any grade deduction will be applied accordingly
- b. Students are allowed up to 8 hours of personal time each semester. Although personal time must be made up, the missed time will not incur a grade deduction. Clinical rotations will follow the Marshall University weather policy. If the student will be late due to weather, they must contact the program and the clinical site accordingly.
- c. Students must notify both the clinical site and the program office if they are going to be absent or substantially late for a clinical rotation. A demerit will be issued if the student notifies the office but not the clinical site. A one day suspension will be given to any student who fails to notify both the office and clinical site. Consider this your warning notice.
- d. Students are considered tardy if one minute late for the assigned clinical rotation. Demerits will be issued on the 3<sup>rd</sup> incidence and all subsequent occurrences for the duration of the semester.

**2. 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.

**3. Office hours:** Instructors are available to meet individually by appointment.

**4. 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.

**5. Direct Supervision**

- a. A registered radiographer reviews the request for the examination, and evaluates the condition of the patient in relation to the student's level of achievement.
- b. A registered radiographer reviews and approves the radiographs.
- c. A registered radiographer will be present during the conduct of the procedure.
- d. A registered radiographer will not allow the student to make an obvious mistake, e.g. incorrect positioning, improper radiation practice, inappropriate technique selection or other such errors that put the patient at risk.

## 6. Indirect Supervision

- a. Supervision that is provided by a registered radiographer immediately available to assist the student regardless of the level of student achievement.
  - b. "Immediately available" refers to the presence of a registered radiographer adjacent to the room or location where the procedure is being performed.
  - c. Students may be permitted to perform a procedure with indirect supervision only after demonstrating competency in that procedure.
7. **Repeat Policy:** Unsatisfactory radiographs shall be repeated in the presence of a qualified radiographer.
8. Students must adhere to all clinical policy and procedures described in the Student Handbook. Individual clinical facilities may have additional policies that must be adhered to.
9. In accordance with HIPPA regulations, students may be required to sign additional confidentiality agreements for individual clinical facilities. Regardless of the facility, patient confidentiality must be maintained at all times.
10. Students should refer to the student handbook section on clinical education for other policy and procedures specific to clinical education.

## 11. 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 Schedule.**

Clinical schedules will be provided prior to clinical rotations.

**Clinical rotations occur at SMMC, CHH, VA Hospital, HIMG and Quality Mobile**