

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 410 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: Research in Medical Imaging

Alpha Designation/Number:

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Title Abbreviation:

R	E	S	E	A	R	C	H		M	E	D	I	C	A	L		I	M	A	G	I	N	G
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(Limit of 25 characters and spaces.)

Course Description (Limit of 30 words): Capstone Course. Research methods and information literacy.

Co-requisite(s): Variable

First Term to be offered: Spring 2010

Prerequisite(s): Statistics, 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: _____

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Additional Information Required for Undergraduate Course Addition

College: COHP

Department/Division: Medical Imaging

Alpha Designator/Number: MI 409

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:

AMA Manual of Style: A Guide for Authors and Editors. 10th ed. New York, NY: Oxford University Press; 2007
ISBN 0195176332

Bailey DM. *Research for the Health Professional: A Practical Guide*. 2nd ed. Philadelphia, Pa: F.A. Davis Co; 1997.
ISBN 0803601514

Depoy E., Gitlin LN. *Introduction to Research: Understanding and Applying Multiple Strategies*. 3rd ed. St. Louis, Mo: Elsevier
Mosby; 2005.
ISBN 0323028535

Galvan JL. *Writing Literature Reviews: A Guide for Students of the Social and Behavioral Sciences*. 3rd ed. Los Angeles, Calif:
Pyrczak Publishing; 2005.
ISBN 1884585663

Publication Manual of the American Psychological Association. 5th ed. Washington, DC: American Psychological Association;
2001.
ISBN 1557988102

Pyrczak F, Bruce RR. *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioral Sciences*. 3rd
edition. Los Angeles, Calif: Pyrczak Publishing; 2000.
ISBN 1884585248

COURSE SYLLABUS OUTLINE

Course Title and Number: MI 410 Research Methods in Medical Imaging

Semester and Year: Spring 2010

*Course with Special Designation: Capstone, Writing Across the Curriculum

Text Information: Bailey DM. *Research for the Health Professional: A Practical Guide*. 2nd ed. Philadelphia, Pa: F.A. Davis Co; 1997, Pyrczak F, Bruce RR. *Writing Empirical Research Reports: A Basic Guide for Students of the Social and Behavioral Sciences*. 3rd edition. Los Angeles, Calif: Pyrczak Publishing; 2000.

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: Research methods and information literacy are important because the health care profession is continually changing, which requires the radiologic technologist to possess new knowledge to function competently. The radiologic technologist should contribute to the body of knowledge and be able to effectively analyze resources to promote growth in the profession. The attitude of lifelong learning enables the radiologic technologist to stay in step with the current health care environment and be prepared to help foster the future and increase awareness of the profession in the global community. This content is geared to increase and disseminate intellectual inquiry, information literacy and the use of scholarly research methods

Credits: 3

Prerequisites: Senior status, ARRT, Statistics

Co-requisites: None

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

1. Analyze research articles to determine the accuracy and validity of findings.
2. Integrate information literacy concepts into a research project.
3. Critique research projects to determine appropriateness and usefulness to the profession.

Evaluation/Measurement/Assessment of Learner Outcomes:

Students will prepare a research project based on their particular focus, draft a proposal, collect and analyze data and submit a paper suitable for publication in Radiologic Technology, the professional journal of the ASRT or other appropriate professional publication.

Students learn the peer review process by critiquing one another's proposals and data analysis and provide feedback to the submitter.

Grading Policy:

Research proposal	25%
Data collection and analysis	25%
Paper draft	25%
Final paper submission	25%

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.

- I. Analysis of Research Articles**
 - A. Assessing appropriateness of article for source material
 - Scholarly (peer-reviewed) publications
 - Newsmagazines, other non-peer-reviewed
 - B. Assessing quality of information
 - Research design
 - Research bias
 - Study validity
 - C. Assessing value of article
 - Application for future research and recommendations
 - Implications for professional practice
- II. Information Literacy Concepts**
 - A. Research quality
 - Technical accuracy
 - Reader comprehension
 - Scholarly
 - Relevance to professional practice
 - Effectiveness of writing style
 - Appropriateness of form and style
 - B. Systematic literature analysis
 - Determining sources of information
 - Using information search strategies
 - Assessing value and appropriateness of source material
 - C. Paper organization
 - Appropriate title
 - Title page
 - Abstract
 - Introduction
 - Definition of terms
 - Literature review
 - Research design or methodology
 - Hypothesis or purpose of research
 - Results or analysis
 - Conclusions, discussions and recommendations
- III. Preparing a Research Project**
 - A. Topic selection
 - Analysis of current literature on topic
 - Identification of clinical practice issues
 - B. Information search strategies
 - Identifying information sources
 - Types of searches (manual, electronic – (Ovid, PubMed, etc.)
 - C. Ethical principles and legal consideration
 - D. Types of research projects
 - Literature review
 - Survey
 - Descriptive/technical
 - Case study projects
 - Abstracts
 - Posters [Dissemination format – not project type, the first 5 types can be in poster format]
 - Qualitative (observation or interview)
 - E. Review of the literature
 - Analysis of source material
 - Integration of material into project
 - F. Research design and data collection
 - 1. Qualitative
 - 2. Quantitative
 - 3. Mixed methods

- G. Data Analysis
 - Terms (sensitivity, specificity, predictor values, false +/-, etc.)
 - Statistical methods – determine significance of data
 - Qualitative methods
 - Triangulation of multiple data sources
- H. Dissemination of findings
 - Format
 - Abstract
 - Article
 - Poster
 - PowerPoint presentation
 - Others
 - References, (e.g. American Medical Association or AMA, American Psychological Association, or APA) and illustrations (images, charts, etc.)
- I. Preparation of draft and revisions of project
- J. Submission for publication
 - Peer-reviewed
 - Other (editorial, columns, etc.)