New Course Request

Check Appropriate Boxes: Undergraduate credit ☑ Graduate credit ☐ Professional credit ☐

1. School/Division Nursing & Health Professions
2. Academic Subject Code AHLT
3. Course Number RA07 (must be cleared with University Enrollment Services)
4. Instructor Medical Imaging Faculty
5. Course Title Seminar: Advanced Medical Imaging Technology
   Recommended Abbreviation (Optional)
   (Limited to 32 Characters including spaces)
6. First time this course is to be offered (Semester/Year): Fall 2009
7. Credit Hours: Fixed at 3 or Variable from _______ to _______
8. Is this course to be graded S-F (only)? Yes ☐ No X
9. Is variable title approval being requested? Yes ☐ No X
10. Course description (not to exceed 50 words) for Bulletin publication: Seminar in Advanced Imaging Modalities. Anatomical and procedural instruction concerning the abdomen, pelvis, spine, chest, head, neck and upper and lower limbs (extremities). Specific instruction in pediatric imaging procedural adjustments. Education emphasis throughout the course to be placed on critical thinking responses to procedural challenges.

11. Lecture Contact Hours: Fixed at 3 or Variable from _______ to _______
12. Non-Lecture Contact Hours: Fixed at _______ or Variable from _______ to _______
13. Estimated enrollment: 15 of which 0 percent are expected to be graduate students.
14. Frequency of scheduling: Fall terms Will this course be required for majors? Yes
15. Justification for new course: To allow BSMIT majors to complete didactic degree requirements
16. Are the necessary reading materials currently available in the appropriate library? Yes
17. Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials. Attached
18. If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.
19. A copy of every new course proposal must be submitted to departments, schools, or divisions in which there may be overlap of the new course with existing courses or areas of strong concern, with instructions that they send comments directly to the originating Curriculum Committee. Please append a list of departments, schools, or divisions thus consulted.

Submitted by: ___________________________ Date: 4/15/09

Department Chairman/Division Director

Dean of Graduate School (when required)

Approved by: ___________________________ Date: 4/17/09

Dean

Chancellor/Vice-President

University Enrollment Services

After School/Division approval, forward the last copy (without attachments) to University Enrollment Services for initial processing, and the remaining four copies and attachments to the Campus Chancellor or Vice-President.

University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
Course: AHLT-R 407 Seminar: Advanced Medical Imaging Technology
Professor: Jim H. Howard, R.T. (R), MS.Ed., Clinical Assistant Professor
Office: Northside Hall, Room 405
Office Hours: By Appointment or following class
Telephone: Office: (574) 520-5569
Email: jhoward@iusb.edu
Prerequisite: As stated in the course description
Co-requisites: All courses required: R404, R405, R481-485 (Practicums)
Textbooks: Handbook of MRI Technique (3rd ed.)
Catherine Westbrook
MRI Parameters and Positioning
Torsten B. Moeller and Emil Reif
Normal Findings in CT and MRI
Torsten B. Moeller and Emil Reif

CLASSES BEGIN: August 31, 2009
Holidays/Breaks: Labor Day, September 7, 2009
Thanksgiving Break, November 25-26, 2009
Classes End: December 12, 2009
Final Exam: December XX, 2009

Introduction
The following is a concise presentation of the above-named course. The student should retain this document for the duration of the program.

Course Description
Seminar in advanced imaging modalities: MR anatomical and procedural instruction concerning the abdomen, pelvis, spine, chest, head, neck and upper and lower limbs (extremities). Specific instruction in pediatric imaging procedural adjustments. Educational emphasis throughout the course to be placed on critical thinking responses to procedural challenges.

Grading Procedure
Each examination will be given equal value in the consideration of your final grade and will make up 65% of that grade. All quizzes (one per week over assigned reading and what was covered in the previous class) 10% of our grade (any worksheets, homework, and/or outside assignments collected will count as a quiz). The final exam will constitute the remaining 25%.

All exams will be retained by the professor and attempts will be made to review them the next class day after all students have completed the exam, if time permits. If class time does not permit, the review will take place immediately after class. No further review will be conducted.

The grading scale will be as follows:

<table>
<thead>
<tr>
<th>100</th>
<th>91</th>
<th>82</th>
<th>73</th>
<th>64 - 0</th>
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<tbody>
<tr>
<td>= A+</td>
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<tr>
<td>99 - 93</td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>92 - 83</td>
<td>A-</td>
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<td>82 - 74</td>
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<td>73 - 66</td>
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<td>64 - 0</td>
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PLEASE NOTE: A grade of less than C in this course will require the student to repeat the course during the next semester in which it is offered. If the student does not successfully complete this course the second time with a grade of C or better, they will be dismissed from the program. (See June 2008 Revision Radiography Student Handbook, page 22)
Withdrawal Policy:

Any other policies/procedures not addressed in this syllabus can be found in the IU South Bend Radiography program Student Handbook, page 23.

<table>
<thead>
<tr>
<th>Withdrawal Dates:</th>
<th>Automatic “W” Withdrawal Deadline</th>
<th>September 7-26</th>
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<tbody>
<tr>
<td>Withdrawal with Grade of “W” or “F”</td>
<td>September 28-November 6</td>
<td>November 6</td>
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<tr>
<td>Last Day to Withdraw (5:00 p.m.)</td>
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</table>

*Withdrawal from any core professional radiography course will adversely affect the student’s enrollment in subsequence courses due to the nature of the program. Please see the radiography Student Handbook for details.

Methodology:

- **Lectures:** lectures will be designed around the subject matter assigned. It is intended to amplify and clarify assigned material. The student should have already read the text and filled in the blanks for PowerPoint on this material, PRIOR TO class time.

- **Class Discussion:** good communication is of utmost importance in the learning process. We will stop and discuss any topic that needs to be redressed for clarification at any time. Priority will be given to assigned material for that day. Names may be selected if participation is low.

- **A.V. Material:** it is imperative that a clear understanding of material is given. To aid in their process slides, DVD’s, whiteboard, transparencies, PowerPoint, and other material will be used to enhance the learning process where needed.

- **Individual Advising Sessions:** There is an open door policy. If you need assistance on anything, take advantage of this opportunity - please make an appointment to meet with me.

- **Testing:** each exam and quiz will be comprehensive. They may consist of short answers, true and false, essay, diagrams, matching and/or multiple choices.

- **Lab Procedures:** Labs for this course are to practice procedures learned in the class. They will not be graded; however, you will be evaluated as to your ability to successfully complete the tasks as assigned.

- **Written Presentations:** None

Accommodations:

If you require an accommodation, academic adjustment, or special service due to a disability, please inform the professor.

Attendance:

Attendance is mandatory and part of your semester grade. Those students absent from more than two classes will have their course grade lowered by one letter grade. Cases of documented absences due to health/personal reasons will be reviewed by the professor. It is the student’s responsibility to contact the professor for make-up material following an absence.

Tardy Policy:

Students are expected to be punctual for class and clinical experience. A student will be considered tardy if they have not arrived within four (4) minutes of their scheduled start time.

Students are allowed two (2) tardies for each fall/spring semester. Any tardies beyond this total during the fall/spring semester will result in the assignment of clinical demerits with the possible probation, suspension or dismissal from the program. A repetitive pattern of tardies over successive fall/spring semesters or exceeding a total of six (6) for the academic year will result in the issuance of a Student Violation form with possible probation, suspension or dismissal from the program.

All time missed due to tardies, must be made up within five (5) clinical days of the occurrence. Failure to make up the time missed within the specified time period will result in the issuance of a student violation along with the possible probation, suspension or dismissal from the program.
Cell phones are to be adjusted to a non-audio mode prior to the start of class. Students who neglect to perform this action will be subject to disciplinary action as stated in the Indiana University South Bend Radiography Student Handbook (June 2008 revision), **Rule 25, Rule 11. Failure to Distinguish the Audio Mode of a Cell Phone during Didactic Classes.** In the event that a student has a valid need to be contacted during class, the instructor should be notified prior to class.

**Learning Process:**

This is the responsibility of both the professor and the student. It is the responsibility of the professor to present material in a concise manner utilizing all educational resources available. The student must first be familiar with the material as assigned (pre-class preparation), record the information the professor presents, relate it to the text, and combine them into an easily learned pattern. Once the pattern is set, the student reviews and studies until the material has been learned.

Another responsibility of the student is to maintain a prompt and consistent attendance record. Each and every hour of class is extremely important. Your learning process will be severely impaired if you are not there to acquire the notes from that class. When you do miss a class, it is your responsibility to find out what took place in that class and to obtain notes and assignments.

Remember, the learning process requires the cooperation of all of us. Help me to do my portion by asking questions if you do not understand the material. The only way I can tell if something is confusing or needs additional explanation is to hear from you. Use the open door policy to its fullest. I am always willing and most of the time available to help you understand material. If I am busy with someone else or cannot meet with you at that time, we will set up an appointment for a later date.

**OUTLINE:**

(For an in depth outline, consult the first page of each chapter of the text)

I. Theoretical and Practical Concepts (Part 1 Handbook_  
   A. Parameters and trade-offs  
   B. Pulse sequences  
   C. Flow phenomena and artifacts  
   D. Gating and respiratory compensation techniques  
   E. Patient care and safety  
   F. Contrast agents

II. Abdomen  
   A. Liver and biliary system  
   B. Kidneys and adrenal glands  
   C. Pancreas  
   D. Vascular imaging

III. Pelvis  
   A. Male pelvis  
   B. Female pelvis  
   C. Obstetrics

IV. Spine  
   A. Cervical spine  
   B. Thoracic spine  
   C. Lumbar spine  
   D. Whole spine imaging

V. Chest  
   A. Lungs and mediastinum  
   B. heart and great vessels  
   C. Thymus  
   D. Breast  
   E. Axilla  
   F. Brachial plexus
VI. Head and Neck
   A. Brain
   B. Temporal lobes
   C. Posterior fossa and internal auditory meatus
   D. Pituitary fossa
   E. Orbits
   F. Paranasal sinuses
   G. Pharynx
   H. Larynx
   I. Thyroid and parathyroid glands
   J. Salivary glands
   K. Temporomandibular joints
   L. Vascular imaging

VII. Upper Limb
   A. Shoulder
   B. Humerus
   C. Elbow
   D. Forearm
   E. Wrist and hand

VIII. Lower Limb
   A. Hips
   B. Femur
   C. Knee
   D. Tibia and fibula
   E. Ankle
   F. Foot
   G. Vascular imaging

IX. Pediatric Imaging

X. Problem Solving Exercises