New Course Request

School of Medicine

Recommended Abbreviation (Optional) Clinical Practicum I

First time this course is to be offered (Semester/Year):

Credit Hours: Fixed at 1 or Variable from ________ to ________

Is this course to be graded S-F (only)? Yes X No

Is variable title approval being requested? Yes ___ No X

Course description (not to exceed 50 words) for Bulletin publication:

This clinical experience is intended to give the student a general overview of clinical activities. The student will observe and assist with day to day activities from the preparation of the patient for treatment through the planning process. Meeting established competency levels is required.

Lecture Contact Hours: Fixed at ________ or Variable from ________ to ________

Non-Lecture Contact Hours: Fixed at 56 or Variable from ________ to ________

Estimated enrollment: 2-5, of which 100% percent are expected to be graduate students.

Frequency of scheduling: once/ year Will this course be required for majors? yes, certificate program

Justification for new course: establishment of new certificate program in medical dosimetry

Are the necessary reading materials currently available in the appropriate library? NO

Please append a complete outline of the proposed course, and indicate instructor (if known), textbooks, and other materials.

If this course overlaps with existing courses, please explain with which courses it overlaps and whether this overlap is necessary, desirable, or unimportant.

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

Department Chairman/Division Director

Dean of Graduate School (when required)

Approved by:

Date

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.

UPS 724 University Enrollment Services Final—White; Chancellor/Vice-President—Blue; School/Division—Yellow; Department/Division—Pink; University Enrollment Services Advance—White
NEW COURSE REQUEST

I. Title: Clinical Practicum I – General Dosimetry Introduction
   Course #: RAON-D606
   Course Director: Colleen DesRosiers, Ph.D.
   Clinical Instructor: Marvene M. Ewing, B.S., CMD
   Prerequisite: Acceptance into the “Graduate Certificate Program in Medical Dosimetry”.

Suggested Course Abbreviation: Clinical Practicum I
Summer Session II 1 credit hour 8 days (7 hrs ea) = 56 hrs (3350 minutes)

II. Course Description and Rationale
This clinical experience is intended to give the student a general overview of clinical activities. The student will observe and assist with day to day activities from the preparation of the patient for treatment through the planning process. Meeting established competency levels is required.

For the medical dosimetrist clinical experience is a must. For the dosimetry student graduating from an accredited dosimetry program there is a requirement of 6 months clinical experience for eligibility to sit for the medical dosimetry exam. For the dosimetry student graduating from a non accredited dosimetry program that requirement is three years. This course will provide the student with “hands on” experience under the supervision of a certified medical dosimetrist.

III. Educational Objectives
Upon completion of this clinical rotation the student will be able to:
   1. Assess, evaluate and formulate priorities in daily clinical practice.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. (5% total grade)

2. Establish concepts of team practice that focus on organizational theories of goal setting, establishing priorities, roles of team members, and conflict resolution.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. (5% total grade)

3. Apply and demonstrate the principles of radiation protection standards

Assessment: Clinical competency, checklist of items which must be performed successfully as supervised by a medical physicist. (10% total grade)

4. Acquire images and transfer data from the CT simulation to the treatment planning computer.
Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)

5. Perform a registration of images for target localization, including CT to CT, CT to PET and CT to MR.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)

6. Use the contouring tools on the Eclipse Treatment Planning workstation and be familiar with multiple ways to perform each contouring task.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)


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8. Show their competency with performing the planning CT's and be able to help trouble shoot when problems arise.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)

9. Acquire CT images and export data to the treatment planning system.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)

10. Perform basic treatment planning at the treatment planning workstation, creating both simple and complex beam arrangements.

Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)

11. Calculate doses and evaluate dose volume histograms for simple plans.
Assessment: Clinical competency, checklist of items which must be performed successfully under direct supervision by a medical dosimetrist. This set of activities builds upon skill set learned in RAON D602. (10% total grade)

IV. Course Content – Syllabus

This rotation will be held in the Department of Radiation Oncology at the Indiana University Simon Cancer Center. The student will spend their time in the Medical Dosimetry Treatment Planning area as well as in the CT and Simulation area.

1. Orientation to the Department of Radiation Oncology
   a. The flow of patient activities from consult to treatment
   b. Introduction to electronic medical record keeping

2. Introduction to the Treatment Planning System
   a. Image Acquisition and Data Transfer
   b. Registration of images.
   c. Contouring tools
   d. Field Design Tools

3. Preparation for Treatment
   a. Positioning and Immobilization
   b. Target Localization
   c. Data Acquisition and Data Transfer

4. Introduction to Planning Techniques
   a. Basic Field Placement
   b. Understanding the Plan Creation and Properties algorithms, heterogeneity corrections
   c. Simple and Complex Beam Arrangements
   d. Dose Calculation of the Treatment Plan
   e. Dose Volume Histogram Evaluation

V. Required and Recommended Texts

No text requirement.
Suggested readings from: Radiation Therapy Planning: Including Problems and Solutions, not yet released (projected Oct 2009), Bentel, G.
Treatment Planning in Radiation Oncology, 2nd edition. Khan, Faiz M.
Sectional Anatomy Text – to be determined.

VI. Evaluation and Grading
Successful completion of all clinical assignments will be evaluated using competency tests. Each competency test will be graded by the clinical instructor and weighted as specified in the Educational Objectives section.

<table>
<thead>
<tr>
<th>Grading Scale</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exceeds expectations</td>
<td>88-100%</td>
</tr>
<tr>
<td>Meets requirements</td>
<td>75-87.99%</td>
</tr>
<tr>
<td>Failing</td>
<td>&lt;75%</td>
</tr>
</tbody>
</table>

The Indiana University grading scale will be applied.

A failure must be repeated and the student will be placed on a probationary status. More than one failure of a specific task may result in termination from the program.

VII. Cheating and Plagiarism:
Students are instructed to make themselves aware of University regulations concerning plagiarism, the maintenance of academic honesty and the definitions of unacceptable behavior and cheating. Academic misconduct of any sort will not be tolerated and will be dealt with as outlined in the **IU/PUI Code of Student Rights, Responsibilities, and Conduct**, which can be viewed at:

[http://www.iupui.edu/code/](http://www.iupui.edu/code/)

Examples of misconduct include but are not limited to:

1. Cheating
   A student must not use or attempt to use unauthorized assistance, materials, information, or study aids in any academic exercise.

2. Fabrication
   A student must not falsify or invent any information or data in an academic exercise including, but not limited to, records or reports, laboratory results, and citations to the sources of information.

3. Plagiarism
   A student must not adopt or reproduce ideas, words, or statements of another person without appropriate acknowledgment. A student must give credit to the originality of others and acknowledge an indebtedness whenever he or she does any of the following:
   a. Quotes another person’s actual words, either oral or written.
   b. Paraphrases another person’s words, either oral or written.
   c. Uses another person’s idea, opinion, or theory, or
   d. Borrows facts, statistics, or other illustrative material, unless the information is common knowledge.

4. Interference
   a. A student must not steal, change, destroy, or impede another student’s work.
   b. A student must not give or offer a bribe, promise favors, or make threats with the intention of affecting a grade or the evaluation of academic performance.

Potential consequences for academic misconduct:

If the instructor has information that one of his/her students committed an act of
academic misconduct, the faculty member will hold an informal conference with the student. The conference will be prompt and private. If the faculty member concludes that the student is responsible for the misconduct, then the faculty member will impose an appropriate academic sanction (i.e., lower or failing grade on the assignment, assessing a lower or failing grade for the course).

VIII. Americans with Disabilities Act:
If you need any special accommodations due to a disability, please contact Adaptive Educational Services at (317)-274-3241. The office is located in CA 001E.