New Course Request

Indiana University
Indianapolis Campus

Check Appropriate Boxes: Undergraduate credit [✓] Graduate credit □ Professional credit □

1. School/Division Radiologic Sciences/School of Medicine
2. Academic Subject Code RADI
3. Course Number R413 (must be cleared with University Enrollment Services) 4. Instructor Judith Kosegi
5. Course Title Projects in Nuclear Medicine Technology III
   Recommended Abbreviation (Optional) Projects in NMT III
   (Limited to 32 Characters including spaces)
6. First time this course is to be offered (Semester/Year): Spring 2011
7. Credit Hours: Fixed at 2 or Variable from _______ to _______
8. Is this course to be graded S-F (only)? Yes [✓] No
9. Is variable title approval being requested? Yes □ No [✓]
10. Course description (not to exceed 50 words) for Bulletin publication: Independent readings and research on a selected topic in nuclear medicine. A paper in publishable form must be written and presented at a research meeting.

11. Lecture Contact Hours: Fixed at ______ or Variable from _______ to _______
12. Non-Lecture Contact Hours: Fixed at 2 or Variable from _______ to _______
13. Estimated enrollment: ______ of which ______ percent are expected to be graduate students.
14. Frequency of scheduling: Once per year Will this course be required for majors? Yes
15. Justification for new course: Current course was under the R410 variable credit course title. New course number/description to alleviate confusion.
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.
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: [Signature] Date 1/19/10
Department Chairman/Division Director

Approved by: [Signature] Date 2/7/10
Dean

[Signature] Date ______
Dean of Graduate School (when required)

[Signature] Date ______
Chancellor/Vice-President

[Signature] Date ______
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
I.U. NUCLEAR MEDICINE TECHNOLOGY PROGRAM
School of Allied Health Sciences, Radiologic Sciences Programs
PROJECTS IN NUCLEAR MEDICINE TECHNOLOGY III- RADI R413 (2 credits total)
(Senior Year 2010 - 2011)
SYLLABUS

COURSE: Independent readings and research on a selected topic in nuclear medicine technology. A paper in publishable form must be written and presented at a meeting as part of the project. This course is a continuation of the R410 and R411 courses taken in the junior year. The course will begin in SSI of the senior year but the 2 credits will be assessed in the spring semester of the senior year. The grade for the entire 2 credit course will be assigned at the end of the spring semester.

Course Description: Independent readings and research on a selected topic in nuclear medicine. A paper in publishable form must be written and presented at a research meeting.

COURSE INSTRUCTOR: Judy Kosegi (274-7431), CL-137 (mail goes to CL-120).

COURSE OBJECTIVES: At completion of this course the student will be able to:

1) Write a paper in publishable form.
2) Write an abstract according to Society of Nuclear Medicine (SNM) standards for paper presentations.
3) Give an oral presentation at a research meeting covering the topic.

READINGS:

   - On reserve in Radiologic Sciences office

   - This 2001 document is on reserve in Radiologic Sciences office
   - If you can not find your journal in 2001 go to the updated version at http://www.nlm.nih.gov/tsd/serials/lji.html

3) Information for authors from the J Nucl Med Technol.
   - This source is attached to the syllabus or may be printed off the SNM web site: http://tech.snmjournals.org/misc/ifora.shtml

RESEARCH DATA GATHERING:

A. Data gathering may begin as soon as the Project Proposal has been approved (junior spring segment of the course) and, if needed, the IUPUI Laboratory Animal Review Committee (LARC) or Institutional Review Board (IRB), and hospital approvals have been given. See IRB approval forms and information at:
http://researchadmin.iu.edu/HumanSubjects/IUPUI/hs_forms.html

B. Research must be started by early May and completed by mid-late June, unless approval for late research has been given. It is also imperative that students consult with their research supervisors and/or principle investigators on a regular basis to be sure they are progressing correctly in the gathering of data. The student should do this to be sure they are not making errors that will make their data worthless. There is an attached SIGNATURE FORM which must be signed at regular intervals by your research supervisor and/or principle investigator to show that you are keeping them informed on your progress and that they have been given a copy of the FINAL PAPER.

C. Those who are writing a non-research paper must consult an expert in the topic area (approved in advance by the course instructor) to be sure they are covering the content sufficiently. They only need to get a signature on the SIGNATURE FORM before they turn in the FIRST PAPER.

WRITING REQUIREMENTS:

A. All assignments must be written on a computer. Content, grammar, spelling, punctuation, and sentence structure will be graded on all assignments. All assignments must be kept in a file folder that latches (portfolio type). The student’s name should be on the outside of the folder. All previously graded assignments must be included when turning in a new one. Earlier Projects course writings from the junior year must be included.

STAGES OF PAPER CONSTRUCTION:

A. The FIRST PAPER must be marked FIRST PAPER along with the student’s name on the outside of the folder or cover paper. A copy of each referenced document must be included in the portfolio type folder as well as a copy of the IRB or LARC and hospital approval documents if they are needed for your research. The FIRST PAPER must be included in the portfolio folder with all previously graded assignments from the junior year section of this course. To be acceptable the paper must follow the guidelines described in Information for Authors (attached) from the Journal of Nuclear Medicine Technology. There are very specific rules that must be followed, so read the article and the syllabus carefully to avoid losing points. Research papers must be long enough to cover the subject, without being in excess, plus must include pages as described in Information for Authors under Format Requirements. Non-research papers must be a minimum of ten pages of text plus additional pages for a title page, abstract, a reference listing page, and any tables or graphs (one page each at the end of the paper). Reference citing,
reference listing, tables, and figures must follow very specific rules (refer to the
Information for Authors (attached) and the AMA Manual of Style). For the required paper,
students must follow the rules for graphs and figures (images, drawings, etc) as closely as
possible with available means. In the department we have digital cameras, a scanner, and
high quality gloss paper for printing figures.

B. The FIRST PAPER will be read primarily for structural problems, but if content is
inaccurate or redundant (to fill space) then content will be marked as well. Comments and
suggestions will be written in red ink on the FIRST PAPER. The student should be sure
to check spelling and grammar but be careful with the computer grammar check,
which is often wrong. Include all previously graded assignments, from the junior
section of the course, in the portfolio folder.

1. Research project papers must include the titled sections as indicated in the
Information for Authors (attached), Format Requirements. Be sure each section starts
on its own page and follows the correct order, plus:

   a. The Abstract and Text sections must be double spaced and in font size 12.
   b. A minimum of 5 references is required (put full text copies in folder). Research
      papers may have fewer than 5 references if the Instructor and Research Supervisor
      have approved it, in advance.
   c. A copy of the IRB or LARC and hospital approval documents must also be
      included, if your research requires their approval.
   d. Research papers may be submitted for the Research Award. Refer to the criterion
      in the Clinical Practicum Syllabus.

2. Non-research project papers must include the followed titled sections: (refer to
Information for Authors (attached): Title Page (separate page), Abstract (separate page),
Introduction (purpose of the paper), Topic Discussion, Conclusion or Summary of the
results of the literature reviewed, Acknowledgments (if there are any), and References
(separate page), plus:

   a. The Abstract and Text sections must be double spaced and in font size 12.
   b. A minimum of 5 references is required (put full text copies in folder).
   c. A minimum of 10 pages (not including the title page, reference page, and any
      tables or graphs) is required.

3. It is REQUIRED that your FIRST PAPER is reviewed at the IUPUI TCM (Technical
Communications) Writing Center with in the School of Engineering and Technology
which is located in ET 232. Make an appointment a couple of weeks ahead of time
to be sure you can get an appointment before your paper is due. Go to
https://www.et.iupui.edu/TCMScheduling/ to set up your appointment. Be sure that
they send documentation of their review to the Instructor (Judy Kosegi) at
Radiologic Sciences, CL-120, IUPUI or to my e-mail: jkosegi@iupui.edu. Even
though the paper will be checked at the TCM Writing Center, it is the student’s responsibility to be sure the paper is well written and in a scientific writing style.

a. Although not required, the student may also wish to visit the IUPUI Writing Center (UWC) at 317-278-8171. The Writing Center provides writing assistance to all students and staff of IUPUI, in all disciplines. Help is also available for non-course related writing projects, such as scholarship applications, graduate school applications, and resumes. Handouts and other resources are available on the Writing Center website: http://www.iupui.edu/~uwc/.

4. It is REQUIRED that the student consult with their research supervisor (non-research paper writers should consult an expert in the topic area) to be sure they are adequately covering the content. The supervisor should not be asked to write any part of the paper, just confirm that content is adequately covered. The signature of the research supervisor (or expert for non-research papers) must appear on the attached Signature Form to indicate that they have been consulted about content and allowed to read the paper if they desire to do so.

5. See “C” & “D” under “STAGES OF PAPER CONSTRUCTION” for requirements, which pertain to both the FIRST PAPER and the FINAL PAPER.

C. The FINAL PAPER, along with a copy of each referenced document, is due 2 weeks following the return of the FIRST PAPER. It must be in a folder or with a cover paper marked FINAL PAPER along with the student’s name. A copy of each referenced document must be included in the portfolio type folder. This FINAL PAPER must include corrections made in the FIRST PAPER unless discussed in advanced with the instructor. Include all previously graded assignments in the portfolio type folder. The FINAL PAPER will then be given to an outside reader, primarily for evaluation of content and scientific writing style.

1. It is the student’s responsibility to be sure the paper is accurate, well written, and without significant errors. If the instructor finds a problem in the reading of the FINAL PAPER that was not caught in the reading of the FIRST PAPER, and which the instructor feels the student should have caught, then additional points will be subtracted. Points will also be subtracted for problems that were noted on the FIRST PAPER but not corrected on the FINAL PAPER and for any new errors that appear on the FINAL PAPER.

2. A re-write of the FINAL PAPER may be required if there are too many uncorrected errors or if there are a substantial number of additional problems added since the FIRST PAPER. The paper must be in reasonably acceptable form before it is given to a physician or researcher for a final reading. Five penalty points will be subtracted if a re-write is necessary. Among those things, which might require a re-write of the FINAL PAPER, would be:

a. Many inaccurate references or no references where there should be some.
b. Insufficient data tables, graphs, or images (as needed) to illustrate results.
c. Many grammar, writing, spelling errors.
d. Missing sections, such as a “conclusion”.
e. The Research Supervisor and Principle Investigator (if different), must be given a
copy of the re-done paper and must sign the Signature Form on the back side.
f. The re-written Final Paper and Signature Form will be due back in one week or
additional points will be subtracted.

3. See “D” under “STAGES OF PAPER CONSTRUCTION” for requirements, which
pertain to both the FIRST PAPER and the FINAL PAPER.

D. Requirements for both FIRST and FINAL PAPERS:

1. For procedures to do simple statistical tests read the statistics chapter in your physics
book (refer to required reading), and consult lecture materials from the lecture segment in
the junior spring semester R411 course. Your research supervisor should be able to
advise you as well. You could also contact Dr. Mike Miller (278-0141) and/or the
Stat/Math Center (http://www.indiana.edu/~7Estatmath/contact/index.html).

2. State, in the “Methods” section of your paper, if the research received the Institutional
Review Board (IRB) or Laboratory Animal Review Committee (LARC) institutional
approval. This is only necessary for research involving people or animal data.

3. Reference citing is done by listing the number at the end of the referenced material in
your paper that corresponds to the reference on the reference page. Anything that is not
an original thought must be referenced (not just a direct quotation). However, referenced
material should be paraphrased and very rarely a direct quotation. If the same reference
is used more than once with in a paragraph, it need only be listed by reference number at
the end of the total section that encompasses that material. However, separate paragraphs
using the same reference should each have their own reference citing number. Refer to
the example given below. Be sure to reference anything that is not an original
concept. Refer to the AMA Manual of Style and the Information for Authors
(attached), for additional requirements for referencing. See common referencing
errors.

4. All material submitted must be the original work of the student. Do not plagiarize in
your writing. It is considered academic misconduct and the penalties can be severe.

5. It is the responsibility of the student to assure the accuracy of all cited material.
This includes retaining the fundamental ideas of the original author and accurately
attributing material to the source of origin.

6. Write as succinctly as possible. Scientific writing is short and to the point. It is not like
creative writing. Just the facts should be given without excess verbiage, expressions of
feelings, etc. See some points on scientific writing below:
Writing Assignment Points to Remember:

- Use the fewest words possible to get your point across. Avoid redundancy.
- Use full, clearly written sentences.
- Use two sentences rather than one long convoluted sentence.
- Use past tense when referring to anything which was done in previously published research, such as “The research demonstrated (not demonstrates) that ....”
- Avoid verbiage such as “I think…”, “I feel…”, “It basically…” or “In other words…” Only state what you will “do” or what the research “revealed (demonstrated, indicated, etc.)”.
- Do not use the same word to start too many of your sentences. Example: “This article revealed…. This article showed….”. Also avoid repeating the same phases in your writing, as much as possible.
- Use paraphrasing, not direct quotes.
- When you use an abbreviation you must write it out the first time followed by the abbreviation in parenthesis, such as: “The nuclear medicine technologist (NMT)…” After the first use of the word you may then use the abbreviation only. This does not apply to units of measurement.
- Radionuclides are to be written with the mass number in superscript ($^{131}$I)
- Plan ahead and do not wait until the last minute to meet an assignment. Schedule appointments with your advisors well ahead of time because they are often not available on short notice. Find out right now when they are likely to be on vacation or out of town this summer so you can plan accordingly.
- Do not start a sentence with a number or, instead, write the number out. See page 791 of the *AMA Manual of Style*.

7. **Highlight in color or underline in ink** all material that was referenced in each attached reference document. Be sure the whole reference article (including the reference page), or section of a book (with book title page), is included in your folder when you turn in both the **FIRST PAPER** and the **FINAL PAPER**.

8. **Research papers must have some data and appropriate statistical analysis.** Contact Dr. Mike Miller (278-0141) and/or the Stat/Math Center (http://www.indiana.edu/~Estat/math/contact/index.html):

   - Stat/Math Main Line: (812) 855-4724 or 278-4740 (IUPUI), M-F, 9am-5pm, or After hours, call (812) 855-6789 (UIUC Support Center) for computer assistance

9. See the text referencing example below for how to number a reference within the text.

**Text Referencing Example:**

The following excerpts are from:

Introduction:
Nuclear medicine staff members typically receive a radiation burden to the whole body and hands resulting from the practices of eluting the $^{99m}$Tc/$^{99}$Mo generator and preparing radiopharmaceutical doses, as well as from administration of patient doses and patient contact. In our department, the normal work procedures of radiopharmacy staff require eluting the generator for a source of $^{99m}$Tc-pertechnetate, reconstitution of cold kits with this isotope, and finally withdrawing multiple radiopharmaceutical patient doses from the kit vial. With these tasks, there is considerable radiation exposure to the hands when withdrawing $^{99m}$Tc-pertechnetate activity from the elution vial. The hands receive a much higher radiation dose than other parts of the body (1,2). Attempts to reduce the hand dose have prompted the evaluation of radiation-attenuating surgical gloves (3,4), automated dose dispensing systems (5,6), and a prototype shielding syringe plunger (7). Recent studies have shown that the use of lead syringe shields during the dispensing of radiopharmaceutical patient doses results in a lower dose to the fingers, particularly the index finger (8), where the dose distribution is different (9). The radiation exposure to the hands ...........

In the discussion section of the article some of the same references were used again:
Previous workers have studied the radiation burden to the hands during the preparation of radiopharmaceutical doses, offering practical solutions such as syringe shields (9), radiation-attenuating gloves (3), and syringe plungers (7). However, this report considers the contribution to the total radiation exposure made by high levels of radioactivity in the elution vial, a scenario that is common in reconstituting cold kits and preparing patient doses...........

Note:
References are listed in numeric order the first time they are used. If they are used again they must maintain the same number but may be used out of sequence.
Reference numbers are in italics within parentheses directly after the paraphrased referenced information. Direct quotes are not used. More than one reference number may be contained in parentheses following information obtained from more than one source (see above example). Sentence punctuation follows the reference number. A reference number should only be used once within the same paragraph after the entire section being referenced. These instructions are slightly different from what is explained in the American Medical Association Manual of Style on pages 29-30 where they have the reference numbers as superscripts and following the punctuation. However, for any other unusual reference citing situations follow the AMA Manual of Style on pages 42-43.

10. Avoid common referencing errors, as described below. In addition, review several articles in the Journal of Nuclear Medicine Technology to see how references are used. However, when it comes to listing your references, you will be graded on how well your reference format follows the rules as described in Information for Authors (attached) and to the AMA Manual of Style. A published journal article in the JNMT might have errors so use individual articles as a general guide only.
Common Referencing Errors:

- **Using fewer than 5 references** (without approval of the instructor).

- **Not having a reference page with your references listed in proper order and format.**

- **Listing a document or source on the reference page without referring to any of that material in the paper.** If you can’t use it to support material in the text of your paper, then it should not be on the reference page.

- **Not listing references in numbered order.** List your references on the reference page in the numbered order (1, 2, 3 ------) in which you used them in your paper.

- **Not using a reference accurately.** An example would be a reference stating that, “Fifty five percent of technologists received radiation contamination on their hands which may contribute to image artifacts,” and trying to use that reference to support the researcher’s contention that “Patient urine contamination creates most image artifacts” (1). They are both about contamination but the 55% refers to the number of contaminated technologists not the number of image artifacts. An appropriate reference would be this one: “Fifty five percent of all image artifacts have been the result of patient urine contamination” (1). Another example would be to state in your paper: “SPECT is the procedure of choice for brain scanning” (2). However, reference # 2 actually stated that “SPECT gives an accurate assessment of brain function”. The reference does not say that SPECT is the procedure of choice, only that it is accurate.

- **Referencing something from a journal article that was, itself, information from a reference with in the article.** If the material you want to use has a reference number after it, then it is a reference from another source. You must find the original reference to be sure it is an accurate source and to be able to use it in your paper. For example, you have done a survey to determine technologist salaries and find a statement in an article that says: “Research done in Canada indicated that all technologists are under paid (5)”. To be able to paraphrase that statement as background information for your article, you need to find reference # 5 and reference the original article. The *AMA Manual of Style* says you can used this reference if the original reference is not readily available, but that should be very rare and needs to be discussed with the instructor first.
  
  a. Almost everything in an **Introduction Section** is referenced material and to use it you must find the original reference.

  b. Most of your referencing should come from the **Methods Section** or the **Results and Conclusion Sections**.

- **Not referencing a web site accurately.** When referencing a web site, refer to the *AMA Manual of Style* and follow the examples as closely as possible. The reference should include the author(s) and/or organization web site name, title of section or site,
web address, and when last accessed. However, if some of the information is not available, your reference list must include the title; web address; and when it was last accessed. If it is a published article or book from a web site, then reference it the way you would reference any published material and include the web site information as illustrated in examples given in the *AMA Manual of Style*. However, you should only reference material from a web site that you can not find otherwise. Most journal articles can be printed off as PDF files or found in a library and can be referenced in the usual way. Get books through the library whenever possible. The most common things that are referenced from the web would be government or manufacturer sites.

- **Not listing journal title abbreviations in your list of references according to “List of Journals Indexed in Index Medicus”** ([http://www.nlm.nih.gov/tsd/serials/aji.html](http://www.nlm.nih.gov/tsd/serials/aji.html)). There is also a 2001 copy available on reserve in the Radiologic Sciences office.

- **Not listing your references on a separate page from the text pages.**

11. Be sure to get the **signature form** filled out at the appropriate times and turned in with the **FIRST** and **FINAL** papers.

**E. PUNCTUATION AND GRAMMAR:**

1. See the IU Writing Center to help you with punctuation, grammar, and sentence structure ([http://www.iupui.edu/~uwc/](http://www.iupui.edu/~uwc/)) at 274-2049 for appointments and hotline questions at 274-3000.

   a. Do **not** depend too heavily on your computer to catch your errors. Sometimes the computer is wrong.

      i. There are world wide web sites to help:
         - Purdue University On-Line Writing Lab at: [http://owl.english.purdue.edu](http://owl.english.purdue.edu)

      ii. Use a book on grammar and punctuation such as:
         - *Little, Brown English Book*
         - *Hodges’ Harbrace College Handbook*
         - *The St. Martin’s Handbook*

**SNM ABSTRACT WRITING PROJECT:**

A. The **ABSTRACT SUBMISSION FORM** for the SNM meeting ([http://www.snm.org](http://www.snm.org)) is available “on-line”. Go to “Call for abstracts”. Students will be responsible for following the abstract form and rules. Your **ABSTRACT** must be typed on the form and conform to the rules for abstract submitters.
B. Your SNM ABSTRACT and SUPPORTING DATA AND OR TABLES/FIGURES (IF THOSE WERE NEEDED) must be included with a copy of your graded FINAL PAPER in the portfolio folder to be turned into the instructor. No other previous material is needed.

1. You will need to create an account to be able to create your abstract. You may stop in the creation process at any time and return later to continue. Be sure you follow all the abstract development rules by carefully reading the instructions as you go. Once you have created the abstract, display the preview page and print it out as well as supporting data pages and/or tables/figure pages (if those were needed) to submit to Judy Kosegi by the due date. **Do NOT hit the “submit” button unless you intend to go to the Society of Nuclear Medicine meeting next summer.** Once your abstract has been graded please remove it from consideration because, in the past, they have automatically submitted them to the SNM if they sit on the web site too long.

2. Research and travel funds may also be available from the Undergraduate Research Opportunities Program (UROP), [www.urop.iupui.edu](http://www.urop.iupui.edu). Call the IUPUI UROP Program Assistant, Carolyn G. Key (8 – 5) at 278-0644 (cakey@iupui.edu). The UROP gives awards to support student research: the Research Project and Travel Grant and the Conference Travel Grant. UROP Grant proposals provide funding for conference travel and for research projects. You may apply for a Research Project and Travel Grant, intended for research and creative projects and for travel for research purposes, or for a Conference Travel Grant, intended for travel to a professional conference. Be sure to print out a copy of the Grant Check List and follow it. These rules can change so go to the UROP web site for the most up-to-date information.

3. If the student wishes to submit to other professional meetings to which they are not already required to present, they will be given extra credit if the paper is accepted AND the student presents their research at the meeting. Students should not submit abstracts unless they are reasonably sure that they can go to the meeting. Some department funds are usually available to send students who get their papers accepted but funds must be requested from UROP first. Students who submit to the SNM annual meeting may attend after graduation, at department expense, if funds are available. **However, the student must also apply for UROP funds to help in the cost of travel.** Since the SNM occurs after graduation, no extra credit can be given for acceptance and presentation to that meeting.

**PRESENTATION:**

A. Students will be **REQUIRED** to give a Power Point **PRESENTATION** of their papers **AT A NUCLEAR MEDICINE IN-SERVICE SESSION.** They must dress in professional (not clinical) attire. The presentation should follow the basic layout of their paper abstract and should be no longer than 7 minutes. Only paper highlights should be covered (title slide, methods, results, conclusions, etc.) and appropriate table, graphs etc., shown. Slides should:

1. Be attractive, but not overdone.
2. Only touch on the main points while you fill in the details with your talk.
3. List concepts or points in short phrases, not whole sentences.
4. Be easy to see (colors which show well) and not crowded with too much information.
5. Present graphs or data, as you did in your papers, but put them on a slide.
6. Show digital pictures of images, if using them, which are inserted in to your slides.
7. Present a professional demeanor and dress in professional (not clinical) attire.
8. Be brought on a “Thumb” drive or sent to Judy Kosegi via e-mail before the talk.
9. Be viewed on the classroom screen before hand to be sure slides show well. Slides often look better on a monitor than on a large screen.

B. Students will be REQUIRED to give a Power Point PRESENTATION of their papers at a professional meeting. Those who have done research must submit their papers to THE SPRING CENTRAL CHAPTER SOCIETY OF NUCLEAR MEDICINE (CCSNM) MEETING. Unless the CCSNM changes its rules regarding research versus educational papers, those who did not do research must submit their paper for presentation at the IUPUI RESEARCH DAY (www.research.iupui.edu) affiliated with the Undergraduate Research Opportunities Program (UROP) and education papers will receive less credit. Any research papers not accepted at the CCSNM meeting must be submitted to the IUPUI conference but will also receive less credit. If the deadlines for submission to both meetings is too close to be able to know if a research paper was accepted at the SNM meeting first, then students must also submit to the IUPUI conference. Information on these meetings will be given when they become available. A student may substitute this requirement by giving their paper at any other nuclear medicine related meeting before graduation. UROP funds must be requested if a student needs funds to travel to a meeting. UROP travel funds must be requested well ahead of the meeting at http://www.urop.iupui.edu/uropgrants.html. Radiology may also be able to help with travel expenses not covered by UROP. Extra credit does not apply to any required presentations unless the student earns an award for their presentation.

C. A grade reduction of two whole letter grades will be assessed if the paper is not presented at required conferences, such as the In-service and the CCSNM meeting (if accepted for presentation) or the IUPUI conference if the paper was not accepted at the CCSNM meeting. Only a well documented acceptable excuse (such as illness) will be accepted in place of presentation at a required meeting. In such a case no grade reduction will occur and the student will at least receive the points for getting the paper accepted but no points for presentation will be given. Otherwise, points for acceptance of the paper will not be given unless the paper is also presented at the same meeting.

D. Students will be expected to dress in professional attire (such as for an interview) at both on and off campus presentations (including the In-Service session). Non professional attire could affect the evaluation grade for the In-service presentation.
PUBLICATION (Optional):

A. FINAL PAPERS may be recommended for publication. If a recommended paper is submitted or accepted for publication, before graduation, the student will receive extra credit as described in the Extra Credit section.

GRADES ARE BASED ON THE FOLLOWING CRITERIA:

A. Assignments must be turned in when due (unless excused by the instructor because of illness or other reasonable excuse - documentation required).

B. How well assignments follow the guidelines in this syllabus and in the Information for Authors (attached) as well as the American Medical Association Manual of Style.

C. Documentation that a TCM Writing Center counselor has reviewed the FIRST PAPER.

D. Structural accuracy (spelling, punctuation, sentence structure, and grammar).

E. The FINAL PAPER follows all corrections from the FIRST PAPER before it is given to the content reader.

F. All graded assignments must be in a separate folder with the student’s name on the outside.

G. When each new assignment is turned in, the old assignments (with correction marks) must be included in a portfolio type folder unless stipulated otherwise by the instructor.

H. All instructor comments, for corrections in the assignments, are followed unless changes are discussed with the instructor and it is agreed that the changes are not necessary.

I. Failure to do any required sections will result in a substantial grade reduction or course failure.

J. The Signature Form is turned in, with all required signatures, with the FIRST and the FINAL PAPER

K. The highest grade that a non-research paper can obtain would be a “B+” unless extra credit is earned.

L. Course grades will not be delayed beyond the end of final’s week before graduation from the program even if, after graduation, the paper is accepted at a meeting or for publication.
Chart Showing How Points are Awarded

<table>
<thead>
<tr>
<th>RESEARCH PAPER POINTS:</th>
<th>NON-RESEARCH PAPER POINTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 POINTS FOR RESEARCH</td>
<td>N/A</td>
</tr>
<tr>
<td>UP TO 30 POINTS – FIRST PAPER</td>
<td>UP TO 30 POINTS – FIRST PAPER</td>
</tr>
<tr>
<td>UP TO 30 POINTS – FINAL PAPER</td>
<td>UP TO 30 POINTS – FINAL PAPER</td>
</tr>
<tr>
<td>UP TO 5 POINTS – SNM ABSTRACT SUBMISSION FORM</td>
<td>UP TO 5 POINTS – SNM ABSTRACT SUBMISSION FORM</td>
</tr>
<tr>
<td>UP TO 5 POINTS – PRESENTATION AT IN-SERVICE</td>
<td>UP TO 5 POINTS – PRESENTATION AT IN-SERVICE</td>
</tr>
<tr>
<td>*10 POINTS – ACCEPTED AT A CCSNM MEETING OR 8 POINTS AT A CAMPUS UROP CONFERENCE</td>
<td>*8 POINTS – ACCEPTED AT A CAMPUS UROP CONFERENCE</td>
</tr>
<tr>
<td>20 POINTS – PRESENTED AT A CCSNM MEETING OR 10 POINTS AT A CAMPUS MEETING</td>
<td>10 POINTS – PRESENTED AT A CAMPUS UROP CONFERENCE</td>
</tr>
<tr>
<td>(110 MAXIMUM POINTS)</td>
<td>(88 MAXIMUM POINTS)</td>
</tr>
</tbody>
</table>

* Credit will not be given for acceptance without presentation, unless there is a documented acceptable excuse for not presenting, such as a documented illness.

M. Extra Credit:

1. 5 points for acceptance and presentation of the paper at any college non-required undergraduate research conference
2. 5 points for acceptance and presentation of the paper in poster form at a professional meeting or a college undergraduate conference meeting.
3. 10 points for acceptance and presentation of the paper at a non-required professional meeting.
4. 10 points for any awards won by the paper or poster presented at a meeting.
5. 10 points for any recommended paper submitted in proper format for publication before the end of final’s week before graduation (must be reviewed by the instructor before submission and show documentation of the journal’s receipt of the paper).
6. 10 points for any paper accepted for publication before the end of final’s week before graduation.

N. Grade Scale:

1. A research project is not required; however, it will be very difficult to get an “A” in this course unless you do a research project. If you do a non-research paper the highest grade you can obtain is a “B+”, unless extra credit is earned.

2. Grades are based on the following point system:

<table>
<thead>
<tr>
<th>POINTS</th>
<th>GRADE</th>
<th>POINTS</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 100</td>
<td>A+</td>
<td>74-76</td>
<td>C</td>
</tr>
<tr>
<td>94-100</td>
<td>A</td>
<td>70-73</td>
<td>C-</td>
</tr>
<tr>
<td>90-93</td>
<td>A-</td>
<td>67-69</td>
<td>D+</td>
</tr>
<tr>
<td>87-89</td>
<td>B+</td>
<td>64-66</td>
<td>D</td>
</tr>
<tr>
<td>84-86</td>
<td>B</td>
<td>60-63</td>
<td>D-</td>
</tr>
<tr>
<td>80-83</td>
<td>B-</td>
<td>&lt; 60</td>
<td>F</td>
</tr>
<tr>
<td>77-79</td>
<td>C+</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## SENIOR WRITING PROJECT CLASS SCHEDULE:

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>DATE</th>
<th>TIME</th>
<th>LOCATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete research project</td>
<td>Start by early May</td>
<td>10:00 – 11:30 PM</td>
<td>CL-124</td>
</tr>
<tr>
<td></td>
<td>(or sooner) &amp; complete by mid-June</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Orientation</td>
<td>May 20, 2010 (Th)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dr. Jennings on Writing</td>
<td>June 10, 2010 (Th)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Progress Report (verbal) at the</td>
<td>June 6, 2010 (F)</td>
<td>By appointment</td>
<td>Kosegi’s Office</td>
</tr>
<tr>
<td>Mid-Program Counseling Session</td>
<td></td>
<td>TBA</td>
<td></td>
</tr>
<tr>
<td>Have FIRST PAPER reviewed at the TCM Writing Center &amp; have documentation sent to Kosegi</td>
<td>Schedule at least TWO weeks before the FIRST PAPER is due</td>
<td>TB scheduled by student</td>
<td>ET 232</td>
</tr>
<tr>
<td>FIRST PAPER due</td>
<td>July 8, 2010 (Th)</td>
<td>By 3:00 PM</td>
<td>Kosegi’s Office</td>
</tr>
<tr>
<td>FINAL PAPER due</td>
<td>Two weeks after FIRST PAPER is returned</td>
<td>By 3:00 PM</td>
<td>Kosegi’s Office</td>
</tr>
<tr>
<td>SNM Abstract Form due</td>
<td>November 19, 2010 (F)</td>
<td>By 4:00 PM</td>
<td>Kosegi’s Office</td>
</tr>
<tr>
<td>Presentations &amp; other meetings</td>
<td>Spring 2011 (dates TBA)</td>
<td>TBA</td>
<td>TBA</td>
</tr>
</tbody>
</table>

*NOTE: Additional lectures/discussions may be scheduled as needed.*
PROJECTS IN NUCLEAR MEDICINE TECHNOLOGY III (RADI R413)
SIGNATURE FORM

This SIGNATURE FORM must be signed at regular intervals by your research supervisor (RS) and/or principle investigator (PI) to show that you are keeping them informed on your progress, consulted about content, allowed to read the paper and make suggestions (but not write it) and that they have been given a copy of the FINAL PAPER. A PI is required if IRB is needed.

FOR NON-RESEARCH PAPERS: writers ONLY need to have the signature (third line) of an expert on the topic to indicate that the expert was consulted. Experts must be approved by the instructor. Turn the signature form in with the FIRST PAPER. No other signature is required of non-research writers. Points will be subtracted if the signature is missing.

FOR RESEARCH PAPERS: Turn this form in when the FIRST PAPER is due with the first three signature lines filled in and again when the FINAL PAPER is due with the last signature lines filled in. Points will be subtracted if signatures are missing.

THE RESEARCH SUPERVISOR, PRINCIPLE INVESTIGATOR, OR EXPERT SHOULD NOT WRITE ANY PART OF YOUR PAPER. THEY ARE ONLY TO GIVE ADVICE AND DIRECTION.

1) Consulted research supervisor during data gathering stage to be sure data is being gathered correctly:

<table>
<thead>
<tr>
<th>Signature</th>
<th>Print Name</th>
<th>Date</th>
</tr>
</thead>
</table>

2) Consulted research supervisor at the end of data gathering to be sure data looks proper and accurate:

<table>
<thead>
<tr>
<th>Signature</th>
<th>Print Name</th>
<th>Date</th>
</tr>
</thead>
</table>

3) Consulted research supervisor (or an expert for non-research) about the contents of the FIRST PAPER before it is turned in:

<table>
<thead>
<tr>
<th>Signature</th>
<th>Print Name</th>
<th>Date</th>
</tr>
</thead>
</table>

4) *Gave a copy of the FINAL PAPER to both the research supervisor (RS) and principle investigator (PI), if they are not the same person:

<table>
<thead>
<tr>
<th>Signature (RS)</th>
<th>Print Name</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature (PI)</th>
<th>Print Name</th>
<th>Date</th>
</tr>
</thead>
</table>

* Re-do step # 4 if there is a re-write of a Final Research Paper by giving the RS and PI another copy and getting their signatures and the dates signed on the backside of this form.