TO: Faculty of College of Engineering
FROM: Faculty of the School of Nuclear Engineering
RE: Changes in Graduate Course NUCL 62000 – Mtls Phen Nuc Systems title

The Faculty of the School of Nuclear Engineering has approved the course title change listed below. This action is now submitted to the Engineering Faculty with a recommendation for approval.

FROM: NUCL 62000, Mtls Phen Nuc Systems
Sem. 1, Class 3, Cr. 3
Restriction: Must be enrolled in the School of Nuclear Engineering, Prerequisite: NUCL 52000

Materials phenomena unique to nuclear reactor environments and examined quantitatively. The relation between these phenomena and the structure and properties of engineering materials is discussed. Coupled phenomena are considered in relation to materials modeling codes.

TO: NUCL 62000, Advanced Topics in Radiation Damage
Sem. 1 Class 3, Cr. 3
Restriction: Must be enrolled in the School of Nuclear Engineering, Prerequisite: NUCL 52000

Materials phenomena unique to nuclear reactor environments and examined quantitatively. The relation between these phenomena and the structure and properties of engineering materials is discussed. Coupled phenomena are considered in relation to materials modeling codes.

REASON: Course material is not accurately reflected in the original title.

Ahmed Hassanein, Department Head
Paul L. Wattelet Professor
School of Nuclear Engineering
#### DEPARTMENT
School of Nuclear Engineering

#### EFFECTIVE SESSION
Fall 2013

#### INSTRUCTIONS:
Please check the items below which describe the purpose of this request.

1. New course with supporting documents (complete proposal form)
2. Add existing course offered at another campus
3. Expiration of a course
4. Change in course number
5. Change in course title
6. Change in course credit/Type
7. Change in course attributes
8. Change in instructional hours
9. Change in course description
10. Change in course prerequisites
11. Change in semesters offered
12. Transfer from one department to another

#### PROPOSED:

<table>
<thead>
<tr>
<th>Subject Abbreviation</th>
<th>NUCL</th>
<th>Subject Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course Number</td>
<td>62000</td>
<td>Course Number</td>
</tr>
<tr>
<td>Long Title</td>
<td>Advanced Topics Radiation Damage</td>
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<tr>
<td>Short Title</td>
<td>Adv Tips Rad Damage</td>
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</tbody>
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Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

#### TERMS OFFERED
Check All That Apply:
- [ ] Summer
- [ ] Fall
- [ ] Spring

#### CAMPUS(ES) INVOLVED
- [ ] Calumet
- [ ] Cont Ed
- [ ] N. Central
- [ ] Tech Statewide
- [ ] Ft. Wayne
- [ ] Indianapolis
- [ ] W. Lafayette

#### CREDIT TYPE

1. Fixed Credit: Cr. Hrs.
2. Variable Credit Range: Minimum Cr. Hrs. To Maximum Cr. Hrs.
3. Equivalent Credit: Yes
4. Thesis Credit: Yes

#### COURSE ATTRIBUTES:
Check All That Apply

1. Pass/Not Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable
4. Credit by Examination
5. Designator Required
6. Special Fees
7. Registration Approval Type
8. Variable Title
9. Remedial
10. Honors
11. Full Time Privilege
12. Off Campus Experience

#### COURSE DESCRIPTION (INCLUDE REQUISITES):

The students will learn:

1. Performance of nuclear materials in reactor environments
2. Effects of various radiations on materials damage and lifetime
3. Methods and techniques to extend the lifetime, safety, and reliability of reactor components

#### Signatures

Calumet Department Head: Date
Calumet School Dean: Date
Calumet Undergrad Curriculum Committee: Date

Ft. Wayne Department Head: Date
Ft. Wayne School Dean: Date
Ft. Wayne Chancellor: Date

Indianapolis Department Head: Date
Indianapolis School Dean: Date
Undergrad Curriculum Committee: Date

West Lafayette Department Head: Date
West Lafayette School Dean: Date
North Central Chancellor: Date

Graduate Area Committee Convener: Date
Graduate Dean: Date
Graduate Council Secretary: Date

West Lafayette Registrar: Date
To: Purdue University Graduate Council
From: Faculty Member: Dr. Ahmed Hassanein
Department: School of Nuclear Engineering
Campus: West Lafayette
Date: September 23, 2013
Subject: Proposal for New Graduate Course—Documents Supporting Registrar's Form 40

Contact information if questions arise
Name: Dr. Ahmed Hassanein
Phone Number: 496-9731
E-mail: hassanein@purdue.edu

Course Number: NUCL 620
Campus Address: NUCL 140C

Course Title: Advanced Topics Radiation Damage

A. Justification for the Course
   ☑ Explain how this course relates to other courses offered in the department or other departments and how this course fulfills a recognized need.

   ☑ This course is intended primarily for students
   Choose one: from within this department

B. Level of the course:
   ☑ Justify request for graduate course level by indicating anticipated enrollments of undergraduate and graduate students.

   Anticipated Undergraduate Student Enrollment: None
   Anticipated Graduate Student Enrollment: 100%

C. Prerequisites: (if none, please explain reasons for absence)
   ☑ NUCL 520

D. Course Instructor:
   ☑ Instructor's Name: Dr. Ahmed Hassanein

E1. Course Outline:
   ☐ (An outline of topics to be covered and an indication of the relative emphasis or time devoted to each topic is necessary. If laboratory or field experience is involved, the nature of this component should be explained as well).

E2. ☐ Method of Evaluation or Assessment:

F. Reading List:
   ☐ A reading list or bibliography should be limited to material the students will be required to read in order to successfully complete the course. It should not be a compilation of general reference material.