PURDUE UNIVERSITY
REQUEST FOR ADDITION, DELETION, OR REVISION OF A COURSE

DEPARTMENT: School of Nuclear Engineering

DATE Submitted: 12/06/00
DATE EFFECTIVE: 01/01/01

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

PURPOSE

1. Deletion of a course
2. New course with supporting documents
3. Add existing course offered at another campus
4. Change in course number at same level
5. Downgrading of course level
6. Upgrading of course level
7. Change in course title
8. Change in semesters offered
9. Change in course credit/length
10. Change in course attributes
11. Change in instructional hours
12. Change in prerequisites
13. Change in description of course content
14. Transfer of course from one dept. to another

EXISTING:

Subject Abbreviation: -----------------
Course Number: ---------------

PROPOSED:

Subject Abbreviation: NUCL
Course Number: 511

Proposed Title: Reactor Theory and Kinetics
Variable Title: Yes [X] No [ ]

Abbreviated Title: Reactor Thy & Kinetic

SEMMESTERS OFFERED:

Check All That Apply.
Summer Fall Ag Winter Spring [X]

CROSS LISTED COURSES

CREDIT TYPE
1. Fixed Credit: Cr. Hrs. 3
2. Variable Credit Range:
   Minimum Cr. Hrs. (Check One) To
   Maximum Cr. Hrs.
3. Equivalent Credit: Yes [X] No [ ]
4. Thesis Credit: Yes [X] No [ ]

COURSE ATTRIBUTES: Check All That Apply.
1. Pass/Not Pass Only
2. Repeatable for Credit
3. Available for Credit by Examination
4. Designator Required
5. Special Fees
6. Approval Required for Enrollment

INSTRUCTIONAL CLASS FTE INSTRUCTIONAL CLASS FTE INSTRUCTIONAL CLASS FTE
Type Type Type Hours Type Hours Type Hours
Secondary [ ] Int. Study [ ] Observation [ ]
Laboratory [ ] Clinic [ ] Math Based [ ]
Lab. Prep. [X] Experiential [X] [X]

CAMPUS(ES) INVOLVED

Calumet
Fort Wayne
Indianapolis
North Central
West Lafayette
Off Campus

Sem. 2. Class 3. Prerequisite: NUCL 510.

Advanced methodologies for neutron flux calculation, nodal methods, introduction to transport theory, transport correction, multigroup theory; introduction to the generation of group constants. Reactor kinetics, perturbation theory, adjoint fluxes, reactivity calculation from perturbation theory, reactivity coefficients due to Doppler effect, temperature and density changes, void coefficient, energy and power coefficients. Microkinetics, theory of reactivity measurements, approximate methods: prompt jump approximation, prompt kinetics. Transients with feedback, safety implications, spatial kinetics.

Professor Downar.

Calumet Undergrad Curriculum Committee Date
Calumet Department Head Date
Calumet School Dean Date
Fort Wayne Department Head Date
Fort Wayne School Dean Date
Indianapolis Department Head Date
Indianapolis School Dean Date
North Central Department Head Date
North Central Vice Chancellor Date
West Lafayette Department Head Date
West Lafayette School Dean Date
Graduate Area Committee Convenor Date
Graduate Dean Date

OFFICE OF THE REGISTRAR

APPROVED 4/19/01
Date Approved by Graduate Council