

DEPARTMENT Nuclear Engineering DATE SUBMITTED 02-16-2001 DATE EFFECTIVE Fall 2001

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

PURPOSE

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

EXISTING:

PROPOSED:

SEMESTERS OFFERED

Subject Abbreviation _____ Subject Abbreviation NUCL
Course Number _____ Course Number 575

Check All That Apply.

Summer Fall Ag Winter Spring

Proposed Title Neural Computing in Engineering

Variable Title Yes No

Abbreviated Title Neural Computing Engr

Abbreviated title will be entered by the Office of the Registrar if omitted. (22 CHARACTERS ONLY)

CROSS LISTED COURSES

CREDIT TYPE

COURSE ATTRIBUTES: Check All That Apply.

- Fixed Credit: Cr. Hrs. 3
- Variable Credit Range:
Minimum Cr. Hrs _____
(Check One) To Or
Maximum Cr. Hrs _____
- Equivalent Credit: Yes No
- Thesis Credit: Yes No

- Pass/Not Pass Only
- Repeatable for Credit
- Available for Credit by Examination
- Designator Required
- Special Fees
- Approval Required for Enrollment
Department
Instructor

Instructional Type	Class Hours	FTE	Instructional Type	Class Hours	FTE	Instructional Type	Class Hours	FTE
Primary	<u>3</u>		Auto-tutorial			Thesis		
Secondary			Ind. Study			Observation		
Laboratory			Clinic			Mats Based		
Lab. Prep.			Experiential					

CAMPUS(ES) INVOLVED
Calumet
Fort Wayne
Indianapolis
North Central
West Lafayette
Off Campus

COURSE DESCRIPTION (PREREQUISITES INCLUDED): Admission by consent of instructor.

Mathematical fundamentals of computing with neural networks. Survey of engineering applications. Computational metaphors from biological neurons. Artificial neural networks modeling of complex, non-linear and ill-posed problems. Emphasize engineering utilization of neural computing to diagnostics, control, safety, and decision-making problems. Professor Tsoukalas.

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

Fort Wayne Department Head _____ Date _____ Fort Wayne School Dean _____ Date _____ Fort Wayne Chancellor C.D. Sutton Date _____
Appr. for Faculty #947
C.D. Sutton, Chair 4/4/01

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

APPROVED 11/15/01

North Central Department Head _____ Date _____ North Central Vice Chancellor _____ Date _____ Date Approved by Graduate Council _____

West Lafayette Department Head [Signature] 2/23/01 Date _____ West Lafayette School Dean [Signature] 16 April Date _____ Graduate Council Secretary Marilyn D. Heist 1/4/02 Date _____

Graduate Area Committee Convener [Signature] 11/15/01 Date _____ Graduate Dean _____ Date _____ West Lafayette Registrar Debra Sheets 2/11/02 Date _____