**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/type
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: MSE  
Course Number: 505

**PROPOSED:**

Subject Abbreviation: Modeling and Simulation of Materials Processing
Course Number: 505

**SEMMESTERS OFFERED**

- Summer
- Fall
- Ag Winter
- Spring

**PROPOSED TITLE**

Modeling and Simulation of Materials Processing

**ABBREVIATED TITLE**

Modl & Siml Matls Proc

Abbreviated title will be entered by the Office of the Registrar if omitted.

**COURSE DESCRIPTION (PREREQUISITES INCLUDED):**

Sem 2, Class 3, Cr 3. (Offered in alternate years) Prerequisites: MSE 340 or ME 315 or graduate standing. Modeling of various materials processes using finite volume techniques, with an introduction to finite difference and finite element methods. Simulation of microstructural evolution using cellular automata. Links between microscopic and macroscopic modeling. Approximate modeling, uncertainty analysis, and sensitivity analysis as aids to numerical simulation. Limitations on numerical modeling in practical problems. Project work drawn from current problems in materials processing.

**Professor Krane.**

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 Convener Date
Graduate Dean Date

**APPROVED 04/18/02**

Date Approved by Graduate Council

**OFFICE OF THE REGISTRAR**