

DEPARTMENT Agricultural and Biological Engineering

DATE SUBMITTED 5/9/01

DATE EFFECTIVE Summer '01

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

**PURPOSE**

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

**EXISTING:**

**PROPOSED:**

**SEMESTERS OFFERED**

Subject Abbreviation ABE      Subject Abbreviation ABE  
 Course Number 450      Course Number 450

Proposed Title Finite Element Method in Design and Optimization

Variable Title Yes  No

Abbreviated Title Fin Elem Meth Dsgn Opt

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

Check All That Apply.

Summer     Fall     Ag Winter     Spring

**CROSS LISTED COURSES**

**CREDIT TYPE**

**COURSE ATTRIBUTES: Check All That Apply.**

1. Fixed Credit:      Cr. Hrs. 3
2. Variable Credit Range:  
 Minimum Cr. Hrs. \_\_\_\_\_  
 (Check One) To  Or   
 Maximum Cr. Hrs. \_\_\_\_\_
3. Equivalent Credit:    Yes  No
4. Thesis Credit:      Yes  No

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
- 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):**

Sem. 1. Class 3, cr. 3. Prerequisite: ABE 330 or consent of instructor.  
 Fundamentals of the finite element method as it is used in modeling, analysis and design of thermal/fluid and mechanical systems; one- and two-dimensional elements; boundary value problems, heat transfer and fluid flow problems; structural and solid mechanics problems involving beam, truss, frame, plate and shell elements; computer-aided design and optimization of machine components, structural elements and thermal/fluid system.

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	Date
Indianapolis Department Head	Date	Indianapolis School Dean	Date	Appr. for Faculty	#944
				<u>C.D. Sutton</u>	<u>2/14/01</u>
North Central Department Head	Date	North Central Vice-Chancellor	Date	Undergrad Curriculum Committee	Date
		<u>Paul A. Brant</u>	<u>5/10/01</u>		
West Lafayette Department Head	Date	West Lafayette School Dean	Date	Date Approved by Graduate Council	
		<u>X.J. Wiggins</u>	<u>2/27/01</u>		
Graduate Area Committee Convener	Date	Graduate Dean	Date	Graduate Council Secretary	Date
				<u>Debra Sheets</u>	<u>5/30/01</u>
				West Lafayette Registrar	Date