

DEPARTMENT Mechanical Engineering

DATE SUBMITTED 10/2/00

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 ME
Course Number _____ Course Number 507

Check All That Apply.

Summer Fall Ag Winter Spring

Proposed Title Laser Processing
Variable Title Yes No

Abbreviated Title Laser Processing
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	3		Auto-tutorial			Thesis		
Secondary			Ind. Study			Observation		
Laboratory			Clinic			Matis Based		
Lab. Prep.			Experiential					

CAMPUS(ES) INVOLVED

- Calumet
Fort Wayne
Indianapolis
North Central
West Lafayette
Off Campus

COURSE DESCRIPTION (PREREQUISITES INCLUDED): Introduces

ME 507 Laser Processing Sem. 1. Class 3, cr. 3 (Offered in alternate years). Prerequisite: ME 315 or equivalent.
This course is intended to introduce background knowledge in laser science and laser technology and fundamentals involved in laser processing and manufacturing. The following topics are discussed: laser fundamentals, industrial laser systems and processes, and the laser-induced thermal, thermo-mechanical, and thermo-acoustic effects. The course also discusses emerging areas of laser applications, such as microscale laser processing, ultrafast laser processing, and the related energy transport analyses. Laboratory and video demonstration sessions are used to enhance the overall understanding of the course materials. Professor X. Xu.

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 <u>C.D. Sutton</u> Date <u>10/11/00</u> Appr. for Faculty #929 C.D. Sutton, Chair
Indianapolis Department Head _____ Date _____	Indianapolis School Dean _____ Date _____	Undergrad Curriculum Committee _____ Date _____
North Central Department Head _____ Date _____	North Central Vice Chancellor _____ Date _____	APPROVED 4/19/01 Date Approved by Graduate Council _____
West Lafayette Department Head <u>E. Daniel Horner</u> Date <u>9/26/00</u>	West Lafayette School Dean <u>Z. J. King</u> Date <u>10/6/00</u>	Graduate Council Secretary <u>Marilyn D. Hunt</u> Date <u>5/8/01</u>
Graduate Area Committee Convener <u>Nathleen C. Howell</u> Date <u>4/19/01</u>	Graduate Dean _____ Date _____	West Lafayette Registrar <u>Debra Shuts</u> Date <u>5/14/01</u>

