

**TO:** The Faculty of the College of Engineering

**FROM:** The Faculty of the School of Industrial Engineering

**RE:** Change to IE 53800 prerequisite and term offered

**From:** IE 53800 – Nonlinear Optimization Algorithms and Models

Term Offered: Fall; Lecture 3, Cr. 3

**Prerequisites:** Graduate Standing or Junior/Senior standing and CS 15600 and IE 33500 or IE 50100 or IE 53500

**Description:** Survey of computational tools for solving constrained and unconstrained nonlinear optimization problems. Emphasis on algorithmic strategies and characteristic structures of nonlinear problems. Typically offered Fall.

**To:** IE 53800 – Nonlinear Optimization Algorithms and Models

Term Offered: Spring; Lecture 3, Cr. 3

**Prerequisites:** Graduate Standing or Junior/Senior standing and CS 15900 and IE 33500 or IE 50100 or IE 53500

**Description:** Survey of computational tools for solving constrained and unconstrained nonlinear optimization problems. Emphasis on algorithmic strategies and characteristic structures of nonlinear problems. Typically offered Spring.

**Reason:** The current prerequisites for IE 53800 do not reflect the changes in the Computer Science course numbering. In addition, the course has most recently been offered during the spring semester and will continue to do so for the foreseeable future.

Abhijit Deshmukh 11/14/13

Abhijit Deshmukh  
Professor and Head  
School of Industrial Engineering

APPROVED BY THE CURRICULUM COMMITTEE

ECG Minutes 2/4/14

Date 2/4/14

Chair ECG [Signature] [Signature]

**PURDUE UNIVERSITY**  
REQUEST FOR ADDITION, EXPIRATION,  
OR REVISION OF A GRADUATE COURSE  
(50000-60000 LEVEL)

IE 53800

EFD 17-14

DEPARTMENT Industrial Engineering EFFECTIVE SESSION Summer 2014 LD1430

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

- |   |  |
|---|--|
| <input type="checkbox"/> 1. New course with supporting documents (complete proposal form) | <input type="checkbox"/> 7. Change in course attributes              |
| <input type="checkbox"/> 2. Add existing course offered at another campus                 | <input type="checkbox"/> 8. Change in instructional hours            |
| <input type="checkbox"/> 3. Expiration of a course  | <input type="checkbox"/> 9. Change in course description             |
| <input type="checkbox"/> 4. Change in course number                                       | <input checked="" type="checkbox"/> 10. Change in course requisites  |
| <input type="checkbox"/> 5. Change in course title  | <input checked="" type="checkbox"/> 11. Change in semesters offered  |
| <input type="checkbox"/> 6. Change in course credit/type                                  | <input type="checkbox"/> 12. Transfer from one department to another |

**PROPOSED:**

Subject Abbreviation

Course Number

Long Title Nonlinear Optimization Algorithms And Models

Short Title Nonlinear Optimization Algorithms And Models

Abbreviated title will be entered by the Office of the Registrar if omitted. (30 CHARACTERS ONLY)

**EXISTING:**

Subject Abbreviation IE

Course Number 53800

**TERMS OFFERED**

Check All That Apply:

Fall  Spring  Summer

**CAMPUS(ES) INVOLVED**

Calumet  N. Central  
 Cont Ed  Tech Statewide  
 Ft. Wayne  W. Lafayette  
 Indianapolis

**CREDIT TYPE**

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

**COURSE ATTRIBUTES: Check All That Apply**

1. Pass/Not Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable   
 Maximum Repeatable Credit:
4. Credit by Examination
5. Fees  Coop  Lab  Rate Request   
 Include comment to explain fee
6. Registration Approval Type  
 Department  Instructor
7. Variable Title
8. Honors
9. Full Time Privilege
10. Off Campus Experience

| Schedule Type | Minutes | Meetings Per | Weeks   | % of Credit |
|---------------|---------|--------------|---------|-------------|
|               | Per Mtg | Week         | Offered | Allocated   |
| Lecture       | 50      | 3            | 15      | 100         |
| Recitation    |         |              |         |             |
| Presentation  |         |              |         |             |
| Laboratory    |         |              |         |             |
| Lab Prep      |         |              |         |             |
| Studio        |         |              |         |             |
| Distance      |         |              |         |             |
| Clinic        |         |              |         |             |
| Experiential  |         |              |         |             |
| Research      |         |              |         |             |
| Ind. Study    |         |              |         |             |
| Pract/Observ  |         |              |         |             |

**Cross-Listed Courses**

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**RECEIVED**  
**FEB 25 2014**  
**OFFICE OF THE REGISTRAR**

**COURSE DESCRIPTION (INCLUDE REQUISITES/RESTRICTIONS):**

Survey of computational tools for solving constrained and unconstrained nonlinear optimization problems. Emphasis on algorithmic strategies and characteristic structures of nonlinear problems.

Restrictions: Graduate OR Junior OR Senior classification

Prerequisites: Graduate OR (CS 15900 (minimum grade of D-) AND IE 33500 (minimum grade of D-)) OR (CS 15900 (minimum grade of D-) AND IE 50100 (minimum grade of D-))

|                               |      |                           |      |   |      |
|-------------------------------|------|---------------------------|------|---|------|
| Calumet Department Head       | Date | Calumet School Dean       | Date | Calumet Director of Graduate Studies        | Date |
| Fort Wayne Department Head    | Date | Fort Wayne School Dean    | Date | Fort Wayne Director of Graduate Studies     | Date |
| Indianapolis Department Head  | Date | Indianapolis School Dean  | Date | IUPUI Associate Dean for Graduate Education | Date |
| North Central Department Head | Date | North Central School Dean | Date | North Central Director of Graduate Studies  | Date |

West Lafayette Department Head Abhi Deshmull 11/14/13 Date

West Lafayette College School Dean Michael L. Brown 2/20/14 Date

Graduate Area Committee Convener Phillip S. Pope 2/12/14 Date

Date Approved by Graduate Council Trina L. Keepe 2/24/14 Date

Graduate Council Secretary Sandra Schaffer 3/3/14 Date

West Lafayette Registrar Liam 2/26/14 Date

OFFICE OF THE REGISTRAR

Liam 2/26/14