

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

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

**RE:** Change to Undergraduate-Level Course IE 33000 Prerequisites

**From:** IE 33000 – Probability And Statistics In Engineering II

Term Offered: Fall, Spring, Summer; Lecture 3, Cr. 3

Prerequisites: ENGR 13100 or ENGR 14100 or (EPCS 11100 and EPCS 12100) or ENGR 12600 or ENGR 12100;

Description: Introduction to statistical inference and experimental design. Correlation, regression, single and multi-factor ANOVA, non-parametric methods. Applications to statistical quality control.


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Term Offered: Fall, Spring, Summer; Lecture 3, Cr. 3

Prerequisites: ENGR 13100 or ENGR 14100 or ENGR 16100 or (EPCS 11100 and EPCS 12100) or ENGR 12600 or ENGR 12100;

Description: Introduction to statistical inference and experimental design. Correlation, regression, single and multi-factor ANOVA, non-parametric methods. Applications to statistical quality control.

**Reasons:** Recent changes in First Year Engineering honors coursework (i.e., ENGR 16100 and 16200) necessitate adding the corresponding first design course to the list of prerequisites.

 4/24/18

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Abhijit Deshmukh  
Professor and Head  
School of Industrial Engineering

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**PURDUE UNIVERSITY**

REQUEST FOR ADDITION, EXPIRATION,  
OR REVISION OF AN UNDERGRADUATE COURSE  
(10000-40000 LEVEL)

Print Form

Office of the Registrar  
FORM 40 REV. 5/11

DEPARTMENT Industrial Engineering

EFFECTIVE SESSION Fall 2018

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

- |   |   |
|---|---|
| <input type="checkbox"/> 1. New course with supporting documents          | <input type="checkbox"/> 7. Change in course attributes (department head signature only)  |
| <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 type="checkbox"/> 11. Change in semesters offered (department head signature only) |
| <input type="checkbox"/> 6. Change in course credit/type                  | <input type="checkbox"/> 12. Transfer from one department to another                      |

**PROPOSED:**

**EXISTING:**

**TERMS OFFERED**

Check All That Apply:

Subject Abbreviation \_\_\_\_\_ Subject Abbreviation IE \_\_\_\_\_  
 Course Number \_\_\_\_\_ Course Number 33000  
 Long Title Probability And Statistics In Engineering II  
 Short Title Prob & Stat In Engr II

Fall     Spring     Summer

**CAMPUS(ES) INVOLVED**

- |                                       |  |
|---------------------------------------|--|
| <input type="checkbox"/> Calumet      | <input type="checkbox"/> N. Central              |
| <input type="checkbox"/> Cont Ed      | <input type="checkbox"/> Tech Statewide          |
| <input type="checkbox"/> Ft. Wayne    | <input checked="" type="checkbox"/> W. Lafayette |
| <input type="checkbox"/> Indianapolis |  |

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

**CREDIT TYPE**

**COURSE ATTRIBUTES: Check All That Apply**

1. Fixed Credit: Cr. Hrs. 3.000  
 2. Variable Credit Range: \_\_\_\_\_  
 Minimum Cr. Hrs. \_\_\_\_\_  
 (Check One) To  Or   
 Maximum Cr. Hrs. \_\_\_\_\_  
 3. Equivalent Credit: Yes  No

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

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

Cross-Listed Courses  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

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

Introduction to statistical inference and experimental design. Correlation, regression, single and multi-factor ANOVA, non-parametric methods. Applications to statistical quality control.  
 ENGR 13100 or ENGR 14100 or ENGR 16100 or (EPCS 11100 and EPCS 12100) or ENGR 12600 or ENGR 12100;

**\*COURSE LEARNING OUTCOMES:**

Be able to: use statistical software packages (e.g. Minitab, R) to perform statistical tests; compute and interpret statistical confidence, tolerance, and prediction intervals given engineering and scientific data; conduct and interpret parametric statistical tests (e.g. t-test, ANOVA) on engineering and scientific data; conduct and interpret non-parametric statistical tests on engineering and scientific data; conduct and interpret regression analysis on engineering and scientific data; determine the appropriate statistical test or procedure to use on engineering and scientific data; design basic factorial experiments; and conduct basic statistical process control analysis.

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 Faculty Senate Chair _____	Date _____	Vice Chancellor for Academic Affairs _____	Date _____
West Lafayette Department Head _____	Date _____	West Lafayette College/School Dean _____	Date _____
		West Lafayette Registrar _____	Date _____