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

DEPARTMENT: School of Aeronautics and Astronautics
EFFECTIVE SESSION: Fall 2016

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

1. New course with supporting documents
2. Add existing course offered at another campus
3. Explication of a course
4. Change in course number
5. Change in course title
6. Change in course credit type
7. Change in course attributes (department head signature only)
8. Change in instructional hours
9. Change in course description
10. Change in course requisites
11. Change in semesters offered (department head signature only)
12. Transfer from one department to another

PROPOSED:

Subject Abbreviation: AAE
Course Number: 25100
Long Title: Introduction to Aerospace Design

EXISTING:

Subject Abbreviation
Course Number

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

CREDIT TYPE
1. Fixed Credit: Cr. Hrs.
2. Variable Credit Range: Minimum Cr Hrs. (Check One) To Maximum Cr Hrs.
3. Equivalent Credit: Yes No

1. Pass/No Pass Only
2. Satisfactory/Unsatisfactory Only
3. Repeatable
4. Credit by Examination
5. Special Fees

SCHEDULE TYPE
Lecture Recitation Presentation Laboratory Lab Prep Studio Distance Clinic Experiential Research Ind Study Pract/Clin

Schedule Type
Minutes Per Mtg 50
Meetings Per Week 3
Weeks Offered 16
% of Credit Allocated 100

COURSE ATTRIBUTES: Check All That Apply
6. Registration Approval Type
Department Instructor
1. Variable Hrs
2. Honors
3. Full Time Privilege
4. Off Campus Experience

TERMS OFFERED
Check All That Apply:
Summer Fall Spring

CAMPUS(ES) INVOLVED
Calumet
East Chicago
Purdue
West Lafayette

RECEIVED
FEB 18 2016
OFFICE OF THE REGISTRAR

COURSE DESCRIPTION (INCLUDE REQUIREMENTS/RESTRICTIONS):
Prerequisites: Undergraduate level ENGR 13200 Minimum Grade of B- or ENGR 14200 Minimum Grade of B- or EPSC 13100 Minimum Grade of C- and Undergraduate level ENGR 14200 Minimum Grade of B- or EPSC 13200 Minimum Grade of C- (may be taken concurrently) and Undergraduate level AAE 20000 Minimum Grade of B- (may be taken concurrently). The role of design in aerospace engineering. Introduction to aerodynamics, performance, propulsion, structures, stability and control, and weights. Layout and general arrangement of aerospace vehicles. Design concept generation and solution. Computational methods for design. Trade studies and numerical optimization. Empirical design processes involving aircraft, spacecraft, or both. Technical presentations and preparation for aerospace administration.

COURSE LEARNING OUTCOMES:
1. Acquire and apply basic technical knowledge about aerospace engineering. 2. Develop intuition about aerospace engineering and aerospace systems. 3. Understand and implement the design process for aerospace systems. 4. Use computers in aerospace design. 5. Solve problems as part of a team. 6. Design an aerospace vehicle system. 7. Give oral presentations and write technical reports required of design engineers.

Office of the Registrar 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 Chancellor Date

West Lafayette Department Head Date
West Lafayette College School Dean Date

West Lafayette Registrar Date

OFFICE OF THE REGISTRAR

[Signature]

[Signature]
TO: The Faculty of the College of Engineering
FROM: The School of Aeronautics and Astronautics
RE: Change to Existing AAE 25100 Introduction to Aerospace Design Prerequisite

The faculty of the School of Aeronautics and Astronautics have approved the following changes to an existing course. This action is now submitted to the Engineering Faculty with a recommendation for approval.

From: AAE 25100 Introduction to Aerospace Design
Sem. 1, 2, Cr 3; Lecture 3
Undergraduate level ENGR 13200 Minimum Grade of D- or ENGR 14200 Minimum Grade of D- or EPCS 12100 Minimum Grade of D- and Undergraduate level CGT 16300 Minimum Grade of D-, and Undergraduate level AAE 20000 Minimum Grade of S [may be taken concurrently]


To: AAE 25100 Introduction to Aerospace Design
Sem. 1, 2; Lecture 3, cr. 3
Undergraduate level ENGR 13200 Minimum Grade of D- or ENGR 14200 Minimum Grade of D- or EPCS 12100 Minimum Grade of D- and Undergraduate level CGT 16300 Minimum Grade of C-, Undergraduate level CS 15900 Minimum Grade of C- [may be taken concurrently] and Undergraduate level AAE 20000 Minimum Grade of S [may be taken concurrently]


Reason: In AAE 25100 students are expected to use MATLAB and C programming skills to develop aircraft and spacecraft design and analysis code. CS 15900 covers MATLAB, C, and basic engineering programming skills, which makes it a necessary concurrent prerequisite.