Systems Engineering Graduate Certificate Program

This certificate program is designed to address industry's increased needs for engineers who have expertise in Systems Engineering. It will prepare today's engineers to be competitive in taking on the new challenges facing the industry so that our companies can compete globally.

The certificate is a Purdue University certificate that would appear on a student's transcript upon completion.

Who should join the program?
Practicing engineers who joined the workforce after bachelor's degree, newly graduated engineers, and existing graduate students would be interested in obtaining training in this area in order for them to be current in solving demanding systems engineering problems. The proposed certificate program will provide them with the required technical skills.

Requirements to complete the graduate certificate program

- Total requirement: 12 credit hours
- Minimum overall GPA: Successful completion of the certificate requires at least a B average over all courses counting toward the certificate.
- Minimum grade: Courses with a grade of C- or less must be taken again to count towards the certificate. The minimum grade that will be accepted in any single course is C. For transfer credits, only the courses taken that result in a grade of B or better may be transferred for this certificate program.

CURRICULUM

There are two courses in the core area, three courses in the primary area, and a number of courses in the related area. The certificate requires completion of two courses in the core area, at least one course in the primary area, and any remaining course in the related area.

Take the core area courses, including:

- ME 53501 Introduction to Systems Engineering Principles
- ME 53502 Systems and Specialty Engineering

Take at least one course in the primary area from the following list:

- ME53504 Systems Driven Product Development
- ME53503 Model Based Systems Engineering
- ME57101 Probabilistic Engineering Design

Take at most one course from the following list of the related area:

- ME 57500 Theory and Design of Control Systems
- ME 58100 Numerical Methods in Mechanical Engineering
- ME 59100 Mechanical Engineering Projects I
- ME 50601 Design Optimization Methods
- ECE 57000 Artificial Intelligence
- ECE 56500 Computer Architecture
- ECE 58000 Optimization Methods for Systems and Control
- ECE 60200 Lumped System Theory
- ECE 68000 Modern Automatic Control
- STAT 51100 Statistical Methods I
- STAT 51200 Applied Regression Analysis
- STAT 51400 Designs of Experiments
- PBHL B561 Introduction to Biostatistics I