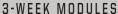# MODEL-BASED SYSTEMS ENGINEERING FOUNDATIONS AND APPLICATIONS TO THE PRODUCTION ENTERPRISE

The online Model-Based Systems Engineering Foundations and Applications to the Production Enterprise series has been designed to meet the industry's need for a workforce prepared to perform efficiently in a model-based digital enterprise, especially in a production engineering context. The series consists of a set of seven modules that can be taken as a group or as a subset consisting of only those modules that align with an individual's job responsibilities, and/or interests. The modules are asynchronous but instructor-facilitated, providing learners with an opportunity to interact with both the instructor and other students.

Learners will watch short videos, read materials provided, participate in guided discussions, and complete online quizzes, and other assignments. Learners will earn a Purdue certificate after receiving a score of at least 80% on all required assignments.

3-WEEK MODULES **100% ONLINE** **TAUGHT BY PURDUE EXPERTS**

Modules

· Introduction to Systems Engineering (SE) and MBSE for Production Systems
· Engineering a System with Systems Modeling Language (SysML)
· SysML Implementation and Applications
· Quantitative Methods Supporting MBSE
· Production Engineering and MBSE
· Digital Engineering and the Model-Based Enterprise
· MBSE Capstone Project

FAST FACTS

· 10-15 hours participation per module
· $500 per module
· Seven-module package cost: $3,150

What you'll learn

· Fundamental concepts in SE and MBSE
· The ongoing transition to model-based systems in production and manufacturing engineering
· Systems modeling with SysML and development models used in MBSE
· Modeling preparation and organization
· How to develop analytical skills for data analysis, interpreting simulation results, and making effective design and business decisions
· How to identify manufacturing characteristics when creating SysML Diagrams and how to provide information on manufacturing domains models
· Digital enterprise infrastructure, the digital thread, MBSE and product lifecyle management (PLM) integration, traceability and change management

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