Process Simulator Basics Course Syllabus

Everything you need to know to get started with Process Simulator. This course teaches how to effectively use Process Simulator, our Visio based simulation tool. Attendees will use Process Simulator to build simulation models, define and run multiple scenarios to determine the best process design, and analyze process performance by viewing summary statistics, bar charts, histograms, and time-series graphs of key process performance indicators.

Introduction: An Introduction to Process Simulator, ProModel's simulation plug-in to Microsoft Visio.

Module 1: A look at the Process Simulator specific toolbars and stencils that are added to Visio. Includes basic flowcharting in Visio.

Module 2: Model building starts with five basic modeling elements: Entities, Arrivals, Activities, Routings, and Resources. This module is an overview of each of these elements in preparation for using them in subsequent modules. Work with the basic modeling elements to build four simple queuing system models side-by-side. These models demonstrate the stochastic behavior introduced with process time variations, resource unavailability, and interdependencies between activities.

Module 3: Implementation of new constructs, statements, and modeling techniques. We build a slightly larger model (a manufacturing paint line) that incorporates the following elements: periodic arrivals, batching, attaching, outlet routings, conditional routings, percentage routings, variables, attributes, system functions, and the LOG statement. This model is built in three phases.

Module 4: Scenario Analysis. Tap into the true power of simulation by easily creating and running multiple scenarios side by side and comparing the scenario results.

Module 5: Implementation of additional modeling techniques and logic elements. We build a model of a Department of Motor Vehicles and incorporate the following additional constructs: scheduled arrivals, resource shifts, and more advanced resource control.

Module 6: Hierarchical Models. Understand what hierarchical modeling is and how to link models and submodels together in Process Simulator. We create a submodel and link it to our Paint Line model. Includes an in-depth discussion of the rules and considerations of hierarchical modeling in Process Simulator.