Advanced ExtendSim Training
Database Techniques & Programming
Agenda

Master some of ExtendSim's most powerful capabilities:

- Gain advanced skills with the ExtendSim internal database
- Learn how to maximize usage of equation-based blocks
- Create custom components in the ExtendSim development environment

Using hands-on exercises, you will not only learn how to navigate ExtendSim internal relational databases, but how to structure a database in your own model. Plus, learn how to wake up your blocks through the databases' Link Alerts feature, configuring compiled logical statements as you get in-depth into the programming of equation-based blocks. In addition, this course covers the common uses and features of the ExtendSim programming language (ModL), as well as the mechanics of block creation.

agenda

Day 1: Database Topics

- Why a database is important
- Database design
- Creating databases, tables, fields, and records
- Parent/child relationships
- Database indexes
- Reading and writing data using Value blocks

Day 2: Database Topics Continued

- Reading and writing data using Item blocks
- Dynamic linking between an ExtendSim database and data
- Hierarchical blocks and scalable models
- Advanced routing techniques using the database
- Importing and exporting data - Data Import Export

Day 3: Equation Blocks

- Introduction to Equation blocks and the ModL language
- Input and output variable types
- Operators
- Variables and data types - local, static, global, and system variables
- Equation Debugger
- Common functions - math and animation functions
- Control statements - If statement and For loop
- Common database functions - reading and writing data using Equation blocks
- Equation messaging

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Day 4: Custom Blocks

- *Hello World* tutorial
- Creating a custom block and custom library
- Dialog items
- Functions and procedures
- Messages and message handlers
- Continuous simulation architecture
- Discrete event simulation architecture
- Event posting architecture
- Connector messaging
- Make your own blocks

Day 5: Advanced Equation Blocks

- Queue Equation
- Query Equation and Query Equation (I)

prerequisites and prepping for the course

Essential ExtendSim Training, or, on instructor approval, a comparable proficiency is required. It will also be beneficial to be comfortable with the database concept and be familiar with programming concepts and terminology (C++ recommended).

course materials supplied

- Laptop computer for each student's use
- Course manual with case studies
- Solution files for all case studies and exercises

after the course

- You'll receive a Certificate of Completion.
- Plus, if you have a few more questions within the first year after completing this course, you qualify for a free online coaching session from your trainer.