



## Online Advanced Healthcare Modeling Course Agenda

### 1. Patient Simulation

- Patient Simulation concepts
  - Patient characteristics
  - Patient history
- Build Patient Simulation models
  - Incorporate patient-specific data into model calculations
- Analyze a Patient Simulation model
- Review patient and cohort pathways with tracking reports

### 2. Discrete Event Simulation

- Build a Discrete Event Simulation (DES) model
- Use time-to-event distribution sampling in place of Markov event probabilities
- Analyze a DES model
- Review patient and cohort pathways with tracking reports

### 3. Model Review/Debugging

- Review model details “at a glance” through the Dashboard
- Output internal calculation details to the console for validation

### 4. Exporting Models and Results to Excel

- Export a Markov model to an independent Excel model
- Export results from any model to Excel

### 5. Model Calibration

- Tune your model to match observed outputs via calibration

### 6. Subgroup Analysis & Bootstrapping

- Integrate real patient data for simulated patient characteristics through bootstrapping
- Filter simulation results to study subgroups within a heterogeneous cohort