



## MOSIM - Arena Advanced Modeling

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### 1. Course description

The workshop on Advanced Modeling with Arena is taught by experienced Arena Simulation professionals and consists of an even balance of lectures and hands-on workshops. Here's how it breaks down:

#### Morning – Data Driven Models

Data driven modeling techniques are used to build flexible simulation models where the model logic resides in the data rather than in the model code.

During this workshop we will incrementally build a generic Job Shop model that could contain hundreds of work centers, thousands of part types and as many job sequences. Less than 20 Arena modules will be necessary to build the model. This exercise was inspired from coaching Arena users at Pratt & Whitney Canada.

#### Afternoon – Agent Based Modeling in Arena

Although Arena does not do “pure” agent based, entities in Arena can be very intelligent. Agent based modeling in Arena opens an all-new set of modeling tools and techniques. When the logic is too complex, turn to Agent Based Modeling techniques.

During the workshop, we will build a simulation model of an Emergency Department in the context of a university hospital where a physician as to see patients as well as interacting with delegates. This exercise was inspired from [Morgan Lim's work in 2013](#).

### 2. Methodology

- Demonstration of advanced modeling techniques in Arena (25%).
- Hands-on exercises with Arena (75%).