

Schedule

Day 1—Saturday November 14, 2009

Course Hours: 9 am—5 pm | Wine and Cheese: 5 pm—6:30 pm (Koerner's Graduate House, Thea's Lounge, UBC)

9:00 am— 12:00 pm	Morning Session (includes 15 minute break)
12:00 pm	Lunch
1:00 pm— 5:00 pm	Afternoon Session (includes 15 minute break)
5:00 pm—6:30 pm	Wine and Cheese Event (Koerner's Graduate House, Thea's Lounge, UBC)

Topics Covered

1. Introduction

- What is discrete-event simulation and why is it useful?
- Examples of its application in health care
- Examples of an emergency room simulation in Arena
- Statistics and probability refresher
- Modeling basics
- How do we create simulation models?
- Monte Carlo simulation
- Steps in a successful simulation study
- Challenges in health care simulation modeling

2. Input Modeling

- Data Collection
- Fitting distributions to data
- The importance of considering variability
- Generating randomness in the model

3. Output Activities

- Choosing starting and ending conditions for the model
- Analysis of a single scenario
- Comparing two systems
- Optimizing among several alternatives

4. Verification and Validation

- Checking that our model does what we want it to do
- Checking that our model reflects reality
- Face validity, graphical techniques, and statistical techniques
- Sensitivity analysis

Day 2—Sunday November 15, 2009

Course Hours: 9 am—4 pm

9:00 am	Guest Presentation— Vincent Chow from the BC Cancer Agency will talk about the simulation work that his group is doing to improve patient flow.
10:00 am	Class Exercise: building and analyzing an Arena model of a health care clinic
12:00 pm	Lunch
1:00 pm	In class exercise continued
4:00 pm	Workshop Concludes