



## SVSTEM DYNAMICS track Overview & Agenda

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In *System Dynamics*, the basic concepts of systems thinking and system dynamics modeling will be introduced, with an emphasis on early model building. We will ground students in a brief overview of the broader process of system dynamics model-building organized into four steps: (1) system conceptualization to define the problem of interest, (2) model formulation to represent its structure, (3) model simulation to examine its behavior, and (4) policy analysis to identify effective ways to change the system structure and behavior to alleviate/solve the problem. Supported by brief lectures, hands-on activities, example models (in class), and key readings and structured activities (out of class), we expose students to foundational building blocks of SD model-building and guide them in beginning to apply these concepts to a problem of interest.

By the end of the week, participants in the SD track will be able to:

- Describe how system dynamics models help assess public health problems and evaluate interventions as well as the iterative system dynamics process
- Report the hypothesized or tested 'structure' and 'behavior' of dynamically complex problems using system dynamics notation
- Experience building 2-3 system dynamics models "from scratch" and confidence that you know enough to use provided resources to do it again
- Gain a basic proficiency in key system dynamics model formulations, which with practice, will help you understand and ultimately build more sophisticated system dynamics models

SESSION	TOPICS	ACTIVITIES
0 – Workshop prep	Review support materials for workshop	Download SD software
1 – Monday AM	System structure	Drawing reference mode and CLD resources
2 – Tuesday AM	Introduction to SD	Draw SFD
3 – Tuesday PM	Model formulation and calibration	Build it in Vensim
4 – Wednesday AM	Delays in models	Run tests with models for delays structure
5 – Wednesday PM	Meet more models	Start to formulate your own idea about a dynamically complex problem and related SD model (SFD/CLD)
6 – Thursday AM	Model formulation	Sample Vensim model/tests
7 – Thursday PM	Model formulation continued	Your own ideas and formulations
8 – Friday AM	Student presentations	

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