In this course you will learn how to build (program) simulations using agent-based models (ABMs) using NetLogo™. You will also have an introduction to systems dynamics (SD) modeling using ABMs. This is a programming course, but it is assumed that (most of) you are not familiar with programming. There are no prerequisites.

ABMs are becoming increasingly important, as the systems we now study are becoming increasingly complex. Demands of simulations now require the multi-level modeling of hundreds, thousands, or even millions of individually acting “agents” when you press RUN.

For many problems, assumptions of perfect markets, homogeneous agents, and long-run equilibrium conditions may not hold. Thus, ABMs fill a niche that other approaches cannot fill; therefore, they are used to complement to other approaches, not to replace them. ABMs are used in economics, public health, policy development, defense, marketing, movie special effects, politics, sports industry, and government to name a few. However, the fundamental concepts are simple.

For the more research-oriented in the crowd, ABMs are used for theory building as well as theory testing. ABMs are a computational sandbox in which you can engage your imagination. The tools we will employ are very user-friendly. This course is the playground. Join us?

- Undergraduate BBA elective
- Counts toward Analytic Consulting and Business & Society secondary area depths at GBS
- No prerequisites
- Slots open to Emory College (permission required)

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