## 1. One Compartment Model of Blood Alchohol Content

The objective in this exercise is to create a spreadsheet that uses a discrete dynamical system consisting of a single equation with arbitrary input in each time interval to create a simplistic model of blood alchohol content (BAC). The input will represent intake of alchohol at that point in time, and the recursive formula f should take into account the elimination of alchohol from the system.

$$y_{n+1} = f(y_n) + a_n$$

- You can choose any time interval you like.
- You can decide which factors to incorporate into the elimination model.
- You can decide what additional parameters (age, weight, percent body fat, etc.) you would like to incorporate.

Once your spreadsheet is constructed, you should use it to model two or three different intake scenarios.

Each team should plan on submitting their spreadsheet to the eLearn dopbox for today's assignment by the end of class.

Each team will be asked to briefly present their results.