

Study Guide for Dr. Blanck's presentation and handout

Although this is not an exhaustive list, you certainly need to know something about the following topics:

- Fick's first and second law of diffusion
- Diagram of the setup for planar source diffusion
- The equation that gives the solution to Fick's 2nd law from a planar source
- Diagram of the setup for step function source diffusion
- The equation that gives the solution to Fick's 2nd law from a step function source
- The relationship between the Gaussian error curve and the error function
- The relationship between the Reynolds number and laminar flow

Be able to sketch the graphs of concentration versus distance for:

- steady state planar diffusion (in one direction)
- plane or point source diffusion (in one or two directions)
- step function diffusion from a plane or point source (in one direction)

I will not ask you any questions about non-planar diffusion or thermal conductivity.