Philosophy 134
Spring, 2005
Homework 5

Due: May 16, 2005, in class

1. Explain what it means to say that one system contains another, and that one system is stronger than another.

2. Using a derivation, show that the following is a theorem in *BD*: $\vDash_{BD} \Diamond\Box P \supset P$.

3. Show that the following is a semantical entialment in *S4I*: $\{\Diamond\Box\Diamond P\} \vDash_{S4I} \Diamond P$.

4. Prove the following result: $\{\Diamond P\} \nvDash_{S4I} \Box\Diamond P$.

5. Using a derivation, show that the following is a theorem in *TD*:
$\vDash_{TD} \sim\Box(\Box P \wedge \Box\sim P)$.