

Phil 57 section 3
 Fall 2010

Propositional Logic Translation Guide

English	PL Translation
It is not the case that P.	$\sim P$
P and Q. P but Q. Although P, Q.	$(P \bullet Q)$
P or Q. Either P or Q.	$(P \vee Q)$
If P, then Q.	$(P \rightarrow Q)$
P if Q.	$(Q \rightarrow P)$
P only if Q.	$(P \rightarrow Q)$
Only if P, Q.	$(Q \rightarrow P)$
P if and only if Q. P just in case Q.	$(P \leftrightarrow Q)$
Neither P nor Q.	$\sim(P \vee Q)$
It is not the case that both P and Q.	$\sim(P \bullet Q)$
Both not P and not Q.	$(\sim P \bullet \sim Q)$
P is necessary for Q.	$(Q \rightarrow P)$
P is sufficient for Q.	$(P \rightarrow Q)$
P is both necessary and sufficient for Q.	$(P \leftrightarrow Q)$
P unless Q.	$(P \vee Q)$ $(\sim P \rightarrow Q)$