

$$\begin{array}{c}
\frac{}{p(a) @ t_a \longrightarrow p(a)@t_a} \text{ax} \\
\frac{\frac{}{p(a) @ t_a \longrightarrow p(a)@t_a} \text{ax} \quad \frac{}{0 \prec t_a \longrightarrow 0 \prec t_a} \text{ax}}{\forall x.p(x) @ t_a \longrightarrow p(a)@t_a} l\forall \\
\frac{\frac{}{0 \prec t_a, \Box \forall x.p(x) @ 0 \longrightarrow p(a)@t_a} r\Box}{\Box \forall x.p(x) @ 0 \longrightarrow \Box p(a)@0} r\Box \\
\frac{\frac{}{\Box \forall x.p(x) @ 0 \longrightarrow \forall x.\Box p(x)@0} r\forall}{\longrightarrow \Box \forall x.p(x) \supset \forall x.\Box p(x)@0} r\supset
\end{array}$$

PHIL 293 – Seminar in Advanced Logical Theory: Pluralism About Logic

Dr Noah Friedman-Biglin
Wednesdays, 6:00 – 8:45 PM

Traditionally, 'logic' has been thought the “science of correct reasoning”. But, what if there is no one thing to which the name 'logic' corresponds? In this course will be to investigate this train of thought, focusing on contemporary discussions of 'logical pluralism'. Along the way, we will think through what it means to be a logic, properly so called, and whether our answer to this question puts pressure on the view that there are many such things.

This course will not assume any familiarity with mathematical logic beyond material covered in a standard lower-division logic course. However, students may wish to prepare for this course by refreshing their technical skills, and perhaps looking at some more advanced material.

No prior background in logic is required for this course, but some familiarity with mathematical logic is recommended.

$\frac{\Gamma, A, B \vdash \Delta}{\Gamma, A \wedge B \vdash \Delta} (\wedge \vdash)$	$\frac{\Gamma \vdash \Delta, A}{\Gamma, B \vdash \Delta, A \wedge B} (\vdash \wedge_1)$	$\frac{\Gamma \vdash \Delta, A}{B, \Gamma \vdash \Delta, B \wedge A} (\vdash \wedge_2)$
$\frac{\Gamma, A \vdash \Delta}{\Gamma, A \vee B \vdash \Delta, B} (\vee \vdash_1)$	$\frac{\Gamma, A \vdash \Delta}{\Gamma, B \vee A \vdash B, \Delta} (\vee \vdash_2)$	$\frac{\Gamma \vdash \Delta, A, B}{\Gamma \vdash \Delta, A \vee B} (\vdash \vee)$
$\frac{\Gamma, B \vdash \Delta}{\Gamma, A \rightarrow B, A \vdash \Delta} (\rightarrow \vdash_1)$	$\frac{\Gamma \vdash A, \Delta}{\Gamma, A \rightarrow B \vdash \Delta, B} (\rightarrow \vdash_2)$	$\frac{\Gamma, A \vdash \Delta, B}{\Gamma \vdash \Delta, A \rightarrow B} (\vdash \rightarrow)$
$\frac{\Gamma \vdash \Delta, A}{\neg A, \Gamma \vdash \Delta} (\neg \vdash)$	$\frac{A, \Gamma \vdash \Delta}{\Gamma \vdash \Delta, \neg A} (\vdash \neg)$	