

**Symsys 200 (Symbolic Systems in Practice)**  
**Methods in Symbolic Systems (2/3/2012)**

<b>Method type</b>	<b>Courses</b>	<b>Goals</b>	<b>Markers</b>
philosophical (analytical)	Phil 80	Define concepts, refine understanding, persuade, question conventional thinking, “quicken the sense of the queer”, “say things that are true but annoying”	claims, arguments; evidence based on introspection or common knowledge
formal (axiomatic)	Phil 150, 151, CS 154, Stat 116	Represent propositions and arguments rigorously enough so that no rational person could disagree that the conclusion follows from the premises; prove consistency, independence, soundness, completeness	definitions, axioms, theorems, proofs; mathematical and logical symbols
computational	CS 106, 107, 121/221	Automate the derivation of output data from input data; process information; simulate a process; find efficient algorithms	program code, descriptions of procedures/algorithms and of data, analysis of algorithms and computational complexity analysis
experimental	Psych 55	Test hypotheses or possibilities in a way that allows for causal inferences	random assignment into conditions
observational	Ling 1, 141	Collect and classify data from naturally occurring phenomena in which no variables are under the researchers' control	analysis of data generated by a natural process
hybrid methods	Ling 120, CS 103	Combine two or more methods in order to answer a question better than can be done with a single type of method	presence of markers from more than one of the above