Department of Philosophy

Phil 120: Symbolic Logic 1

Katalin Bimbo

[Course description — Winter term (2023/24)]

Logic is a *core area* of philosophy, and it has applications in mathematics, computer science, informatics and linguistics too. This course is a first introduction to formal logic. You will be able to learn some of the *fundamental concepts* of logic such as first-order languages, truth values, logical consequence, logical validity, etc. We will use some *mathematical tools* to talk about a first-order language and its interpretation. To ensure that the course is fully accessible and self-contained, we will quickly review some elementary notions, for instance, sets and cartesian products. A way to prove that an inference is logically correct is to give a proof in what is called a proof system. For the latter, we will use *tableaux*, which are probably the easiest proof system to learn and use. (Tableaux have other advantages for metalogic, which we will not go into in this course. Suffice it to say that they are closely related to special sequent calculuses, which provide a lot of information about proofs.) Last but not least, we will also look at simple English sentences and formalize them in a first-order language to precisely delineate their logical content.

This course has *no prerequisite*.

Scheduled time: T, R 9:30 am–10:50 am

Texts: Texts will be linked in the e-classroom.

For **further information**, please contact the instructor at `<bimbo@ualberta.ca>`.
The (official) **course outline** will be available in the e-classroom during the course.