Category theory not only allows for new technical developments in logic but also suggests a new understanding of the idea of semantics. In functorial semantics suggested by Lawvere (in his thesis) the usual distinction between standard and non-standard models looses its appeal, and categoricity (in the standard sense) no longer looks like a desirable property. The distinction between syntax and semantics is blurred to the effect that theories are viewed as "generic models". The major impact of categories on the model theory can be perhaps expressed through this slogan: ALL morphisms (but not only isomorphisms and embeddings) between models matter.

In the beginning of my talk I shall briefly introduce main categorical notions. The following literature can be also helpful:


This is a fair introduction written for undergrads

See also the entry of Stanford encyclopedia:
http://plato.stanford.edu/entries/category-theory/

this contains a very good bibliography among other things


is the best formal introduction for a philosopher I know


is how categories may be seen from a logician's point of view

Mac Lane, S., 1971, Categories for the Working Mathematician, New York: Springer Verlag

is a standard introduction but it hardly works unless you are a working mathematician indeed

Lawvere's thesis with an extensive introduction written by the author in 2004 is downloadable from here:

http://www.tac.mta.ca/tac/reprints/articles/5/tr5abs.html

Principle points of the thesis are summarized in the following early publications by the author: