

Kurzus kódja: BMA-LOTD- 351, BMI-LOTD- 351E
Title of course: Introduction to non-classical logics
Kurzus megnevezése angolul: Introduction to non-classical logics
Location and time: i/224, Thursday 12:00 - 13:30
Kurzus előadója: William Brown

Exam requirements: <ul style="list-style-type: none"> - For the oral exam: Understanding of the material covered in class and the main concepts. - Presentation: Elaboration and presentation of a small original research work related to the course.
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<p>Introduction to non-classical logics</p> <p>There are different ways to define what classical logic is, however by classical logic most logicians mean propositional logic and first-order logic. Non-classical logics are all the other logical systems (except the second and higher-order extensions of classical first-order logic). We will discuss more precisely the definitions of classical and non-classical logic at the beginning of the course.</p> <p>Non-classical logics can be obtain in a variety of ways, for instance by various extensions and modifications on classical logic. New logical constants can be added (for example we can add a modal operators such as necessity and obtain a modal logic), more than 2 truth values can be allowed (and get many-valued logic), various laws of classical logic can be rejected (excluded middle, explosion principle, double negation, etc.) to obtain new systems and family of systems, etc. Unsurprisingly, non-classical logic is a very large class of logics.</p> <p>We will study various extensions and modifications of classical logic, and see what family of (non-classical) logics we thus obtain (and how those families can be defined and classified). Within each of these families we will study various specific logical systems.</p> <p>Here is a (non-exhaustive) list of families of non-classical logics we will study throughout the semester: modal logics, many-valued logics, intuitionistic logics, conditional logics, paraconsistent logics, relevant logics, etc.</p>
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Method of evaluation: Oral exam or presentation at the end of the semester
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Literature: <ul style="list-style-type: none"> - Priest, G., <i>An Introduction to Non-Classical Logic</i>. Cambridge University Press, 2nd Edition, 2008. - Gabbay, <i>Handbook of Philosophical Logic</i>, Springer, 2nd Edition. (various chapters across several volumes, the relevant ones will be mentioned during the classes) - Beal, J.C., Frassen, van B.C., <i>Possibilities and Paradox: An Introduction to modal and many-valued logic</i>. Oxford University Press, 2003.
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