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| Code of course: **BMI-LOTD-328E.05, BMA-LOTD-328.05** |
| Title of course: **Introduction to Non-Classical Logics** |
| Lecturer: **William Brown** |
| **Content of the course:**  Method of evaluation: Oral exam or presentation at the end of the semesterExam requirements:-For the oral exam: Understanding of the material covered in class.-Presentation: Elaboration and presentation of a small original research work related tothe course.Introduction to non-classical logicsThere are different ways to define what classical logic is, however by classical logic mostlogicians mean propositional logic and first-order logic. Non-classical logics are all the otherlogical 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 thebeginning of the course.Non-classical logics can be obtained in a variety of ways, for instance by various extensionsand modifications on classical logic. New logical constants can be added (for example we canadd a modal operators such as necessity and obtain a modal logic), more than 2 truth valuescan 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 andfamily of systems, etc. Unsurprisingly, non-classical logic is a very large class of logics.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.Some families of logics we will study throughout the semester include: modal logics,many-valued logics, intuitionistic logics, conditional logics, paraconsistent logics, relevantlogics, etc.  **Grading criteria, specific requirements:**  Method of evaluation: Oral exam or presentation at the end of the semester  Exam requirements:-For the oral exam: Understanding of the material covered in class.-Presentation: Elaboration and presentation of a small original research work related tot he course.  **Required reading:**   * Priest, G., An Introduction to Non-Classical Logic. Cambridge University Press, 2ndEdition, 2008. * Gabbay, Handbook of Philosophical Logic, Springer, 2nd Edition. (various chapters acrossseveral volumes, the relevant ones will be mentioned during the classes) * Beal, J.C., Frassen, van B.C., Possibilities and Paradox: An Introduction to modal andmany-valued logic. Oxford University Press, 2003. |