



UNIVERSIDADE ESTADUAL DE MARINGÁ
PROGRAMA DE PÓS-GRADUAÇÃO EM FILOSOFIA - MESTRADO

PROGRAMA DE DISCIPLINA

Nome da Disciplina: Topics in Logic	Código: DFL4047
Professor: Evandro Luis Gomes / 2023	Carga horária: 30 h/a
Área de concentração: Filosofia	Créditos: 2
Linha de Pesquisa: Metafísica e Conhecimento	Nível: Mestrado
1. EMENTA	
<p>Investigation of the main philosophical problems related to logic, especially the links between reason, logic and language. Analysis of the notion of proposition, of the truth bearers and of the nature of logical principles. Historical analysis of the approach to fundamental logical problems such as the notion of logical consequence, the notion of implication and the advent of quantification theory. Philosophical examination of the key elements in the logical-formal characterization of theories, such as consistency, completeness and decidability.</p>	
2. PROGRAMA	
<p>ABOUT EMI</p> <p>This course will employ English as a Medium of Instruction (EMI) methodology in order to reach a larger public of students and to provide to our students a classroom experience in English. Both goals assist the internationalization policy of the Graduate Philosophy Program (PGF) at the State University of Maringá. There are three definitions of EMI which encompasses (i) change of language of instruction; (ii) change of language of instruction enhancing group work and interactive activities; and (iii) change of language and teaching style combined with change of student population, thought as a way of accommodating diversity in students enrolled in the course. This course is planned for students that do not have English as their first language. Although, EMI tools allow classroom interaction in their first language, some level of proficiency in English is required. We stress that the course is also designed to improve participants English language skills providing support for vocabulary learning/comprehension, using structure words, and checking comprehension with use of visual aids/slides. Finally, by changing the language of instruction, we intend to present and study advanced topics in logic, history and philosophy of logics and philosophy subject-matters in foreign language.</p> <p>PREREQUISITE</p> <p>Students should speak at an upper basic level of English and have basic notions of logic.</p> <p>CONTENT OUTLINE</p> <p>A History of Paraconsistency from Heraclitus to da Costa</p> <p>0 Introduction to historiography of logic</p> <p>Part I The pre-history of paraconsistent logic</p> <p>1 Logico-paraconsistent elements in ancient authors</p> <p>1.1 Contradiction and non-triviality from Heraclitus to Plato</p> <p>1.2 Contradiction and non-triviality in Aristotle</p> <p>1.3 The <i>ex falso</i> in Megaric and Stoic logics</p> <p>2 Logico-paraconsistent elements in medieval authors</p>	

- 2.1 Boethius and the *ex falso*
- 2.2 Positions contrary to the *ex falso* in Scholastic logic (Gerland of Besançon, Peter Abelard, Robert of Melun, Robert Bacon, Petrus Hispanus, Henry of Ghent, William of Ockham, Nicholas of Autrecourt)
- 2.3 Positions favorable to the *ex falso* in Scholastic logic (The *Parvipontani* – Adam of Balsham and William of Soissons; Alberic of Paris, Nicholas of Paris, Matthew of Orléans, Robert Kilwardby, Walter Burleigh, John Buridan, Pseudo-Scotus)
- 2.4 The mistaken eponymy
- 2.5 Strengthening Scholastic perspectives on the contradiction and the *ex falso* (Thomas Aquinas, Paul of Venice)

Part II Contemporary paraconsistency

- 3 Prelude to non-classical logics
 - 3.1 Renascentist grounds for paraconsistency (Nicholas of Cusa)
 - 3.2 Perspectives on *ex falso* in Iberic scholasticism (Domingo de Soto, Pedro da Fonseca)
 - 3.3 Traces of the analysis of inconsistency in some modern authors (Leibniz, Hume, Kant, and Hegel)
- 4 The stage of paraconsistency
 - 4.1 On the path of contemporary logic (Vasiliev, Łukasiewicz and Wittgenstein)
 - 4.2 Perspectives on the *ex falso* in contemporary logic (Russel and Quine)
 - 4.3 Foreseeing paraconsistency (Mannoury, Skolem, Halldén, Moisil, Nelson)
 - 4.4 The discussive logic of Stanisław Jaśkowski
 - 4.5 The paraconsistent logic of Newton da Costa
- 5 The multiple facets of paraconsistent logic
 - 5.1 da Costa's logic school
 - 5.2 Paraconsistent developments in antinomic logics (Asenjo, Priest)
 - 5.3 Paraconsistent developments in relevance logics (US and Australasian school)
 - 5.4 Paraconsistent developments in Nelson's logics
- 6 Theoretical and technological applications for paraconsistent logic

3. REFERÊNCIAS BIBLIOGRÁFICAS

- ARISTOTLE. *Categories, On interpretation, Prior Analytics*. Translated by H. P. Cooke, Hugh Tredennick. Cambridge (MA), London: Harvard University Press, 1938. (Loeb Classical Library, 325).
- ARISTOTLE. *Metaphysics*. Edited and translated by W. D. Ross. New York: Oxford University Press, 1953.
- ARISTOTLE. *Posterior Analytics, Topica*. Text and translation by Hugh Tredennick and E. S. Forster. Cambridge (MA), London: Harvard University Press, 1960. (Loeb Classical Library, 391).
- ARISTOTLE. *Prior Analytics*. Translated, with introduction, notes, and commentary by Robin Smith. Indianapolis: Hackett, 1982.
- BLANCHÉ, R. DUBUCS, J. *História da lógica de Aristóteles à Bertrand Russell*. Lisboa: Edições 70, 1985.
- BOCHENSKI, I. M. *A history of formal logic*. 2nd ed. Translation from German and edited by Ivo Thomas. Notre Dame: University of Notre Dame Press, 1970.
- BRANQUINHO, J. MURCHO, D. GOMES, N. G. *Enciclopédia de Termos Lógico-filosóficos*. São Paulo: Martins Fontes, 2006.

- COSTA, N. C. A. da. *Ensaio sobre os fundamentos da lógica*. São Paulo: Edusp/Hucitec, 1980.
- COSTA, N. C. A. da. *Lógica Indutiva e Probabilidade*. São Paulo: Edusp/Hucitec, 1993.
- GOMES, E. L. D'OTTAVIANO, I. M. L. *Para além das Colunas de Hércules: uma história da paraconsistência de Heráclito a Newton da Costa*. Campinas: Editora Unicamp, 2017. (CLE, 80; Unicamp Ano 50, 50)
- HAACK, S. *Philosophy of Logics*. Cambridge: Cambridge University Press, 1978.
- KNEALE, W. KNEALE, M. *O desenvolvimento da lógica*. 4ed. Coimbra: Fundação Calouste Gulbenkian, 1991.
- MATES, B. *Stoic Logic*. 2nd ed. Berkeley, Los Angeles: University of California Press, 1961.
- McCALL, S. (ed.) *Polish logic: 1920-1938*. With an introduction by Tadeusz Kotarbisnki. Translated by B. Bruchman. Oxford: Clarendon Press, 1967.
- QUINE, W. V. O. *Filosofia da lógica*. Rio de Janeiro, RJ: Zahar, 1972.
- QUINE, W. V. O. *O sentido da nova lógica*. Curitiba: UFPR, 1996.
- VAN HEIJNOORT, J. *From Frege to Gödel: a source book in mathematical logic, 1879-1931*. Cambridge, MA: Harvard University Press, 1967.

4. CRITERIOS DE AVALIAÇÃO:

The students will be held to:

- Attend most sessions of the course.
- Produce a review of the preceding session, explain two concepts among a given list.
- Produce a final essay summarizing all main content points studied in the course.

The assessment results delivery is established in the academic calendar; however, it can be anticipated with justified reasons.

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