



COURSE DESCRIPTIONS

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| Code of course: BMI-LOTD-101E.03, BMI-LOTD17-101E |
| Title of course: Logic seminar |
| Lecturer: Márton Gömöri |
| General aim of the course: The course provides an introduction to the basic concepts and methods of formal logic. |
| Content of the course: The course covers the following topics: Truth and valid inference Aristotelian syllogisms Propositional logic Elements of predicate logic Aristotelian vs. recursive definitions Types of relations |
| Grading criteria, specific requirements: Grading is based on homeworks. |
| Required reading: J. Barwise and J. Etchemendy, <i>Language, Proof and Logic</i> . CSLI Publications, 2011. |
| Suggested further reading: L. T. F. Gamut, <i>Logic, Language, and Meaning, Volume I: Introduction to Logic</i> . University of Chicago Press, 1991. |

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| Code of course: BMI-LOTD17-105E.02 |
| Title of course: Metaphysics |
| Lecturer: Dániel Kodaj |
| General aim of the course: An introduction to contemporary metaphysics. |
| Content of the course: In the history of philosophy, metaphysics used to deal with questions that are nowadays investigated by physics and theology. Today, metaphysics studies extremely general concepts that the sciences (as well as ordinary people) often use but rarely if ever define. These concepts include time, causation, identity, part and whole, abstract and concrete, and many other fundamental notions. The seminar introduces some of the basic problems and approaches in contemporary metaphysics. We will talk about colours, parts and wholes, the existence of biological organisms, the idea of fundamental reality, possibility and necessity, the nature of abstract objects, the reality of social categories like gender, and some links between metaphysics and quantum mechanics. |
| Grading criteria, specific requirements: Presentation + essay (1500 words) |
| Required reading: Ásta (2018): <i>Categories We Live By</i> . Oxford University Press. Divers, John (2006): <i>Possible Worlds</i> . Routledge. Hirsch, Eli (2011): <i>Quantifier Variance and Realism</i> . Oxford University Press. Jubien, Michael (1997): <i>Contemporary Metaphysics</i> . Blackwell. Ladyman, James et al. (2009): <i>Every Thing Must Go: Metaphysics Naturalized</i> . Oxford University Press. Merricks, Trenton (2015): <i>Propositions</i> . Clarendon Press. Schaffer, Jonathan (2009): On what grounds what. In Chalmers et al. (eds), <i>Metametaphysics</i> , Clarendon press. van Inwagen, Peter (1990): <i>Material Beings</i> . Cornell University Press. Wilson, Alastair (2020): <i>The Nature of Contingency</i> . Oxford University Press. Wray, Brad (2018): <i>Resisting Scientific Realism</i> . Cambridge University Press. |
| Suggested further reading: Sider et al. (eds) (2008): <i>Contemporary Debates in Metaphysics</i> . Blackwell. van Inwagen, Peter (2009): <i>Metaphysics</i> . Westview Press. |

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| Code of course: BMI-LOTD17-106E.04 |
| Title of course: Philosophy of Mind |
| Lecturer: Zsuzsanna Balogh |
| General aim of the course: The course aims at giving students an introduction into the subject. We will discuss the place it plays within the larger subject of philosophy and its main topics, views and lines of arguments. By the end of the course, students will be familiar with the main topics of philosophy of mind, will be able |

to develop a critical view of topics and understand and explain the different standpoints and decide on the basis of these which ones they agree and which ones they disagree with and why.

The course will be divided into two main blocks: the first one introduces classic theories of what the mind is and how it causes bodily behaviour, while in the second one we will take a look at certain, currently heavily discussed characteristics of consciousness.

This course does not discuss the specific topics at particular length but the aim is to raise the students' interest in further exploring one or more topics.

Successful completion of the course will equip you with the following skills and knowledge:

- Basic knowledge of the subject of philosophy of mind as a discipline of philosophy
- Recognising and describing the different topics of philosophy of mind
- Familiarity with the main topics and the abstract concepts and theories included therein
- Understanding and reconstructing the different standpoints concerning a particular topic

Gaining deeper interest in specific topics and preparing for exploring these

Content of the course:

1. To have a mind

Crane, Tim (2001) – *Elements of Mind* chapter 1.

2. Theories: Substance Dualism – the mind is not physical

Descartes, René (1641) – *Meditations*, II, VI.

Stanford Encyclopaedia entry: <https://plato.stanford.edu/entries/dualism/#SubDua>

3. Theories: Behaviourism – no need for the mind

Ryle, G. (1949). “Descartes’ myth”, in Id. *The Concept of Mind*. University of Chicago Press

4. Theories: Materialism – the mind is physical: Identity theory

Smart, J.J.C. (1959). “Sensations and brain processes”, *The Philosophical Review*, 68(2): 141-156.

Montero, B. and David Papineau, D. (2016), ‘Naturalism and Physicalism’ in: *Blackwell Companion to Naturalism* (2016)

5. Theories: Functionalism – the mind is input and output

Putnam: “The nature of Mental States” in D. Chalmers, ed., *Philosophy of Mind: Classical and Contemporary Readings* (Oxford: Oxford University Press, 2002), pp. 73-79.

6. Mental causation – the mind causes the body to act

Crane, Tim (2003) – Mental causation

http://www.timcrane.com/uploads/2/5/2/4/25243881/ecs_mental_causation.pdf

Robb, D. and Hail, J. (2013) ‘Mental Causation’, in *Stanford Encyclopaedia of Philosophy*, <http://plato.stanford.edu/entries/mental-causation/>

7. Phenomenal consciousness – the non-physical qualities of experience?

David Chalmers (1995) – Facing Up to the Problem of Consciousness (excerpt)

Joseph Levine (1983) – Materialism and Qualia: The Explanatory Gap

Thomas Nagel (1974) – What Is It Like to Be a Bat

8. Intentionality – the mind represents reality

Crane, Tim (2001) - *Elements of Mind*, Ch. 1 'Mind'.

Mark Sainsbury (2018) - *Thinking about Things*, Ch. 1.

9. The extended mind – the mind leaves the head

Andy Clark & David Chalmers (1998) – *The Extended Mind*

Andy Clark (2008) – *Supersizing the Mind*

10. The embodied mind – the mind entails the body

Shaun Gallagher & Dan Zahavi (2008) – *The Phenomenological Mind*, Ch. 7

Grading criteria, specific requirements: You will write an exam essay at the end of the course. You will have to answer three, previously undisclosed topics which were covered in the course. Your answer should include a description of the problem/subject and the main views we discussed. Active participation in class may improve your final grade.

You should read the items on your reading list in preparation for class.

Required reading:

Block, N. – Flanagan O. J. – Güzeldere, G. (eds.): *The Nature of Consciousness*. Cambridge MA, MIT Press, 1997.

Chalmers, D. (ed.): *Philosophy of Mind. Classical and Contemporary Readings*. Oxford–New York, Oxford University Press, 2002

Suggested further reading:

Grayling, A. C. (ed.) (1995). *Philosophy: A Guide Through the Subject*. Oxford University Press.

<http://host.uniroma3.it/progetti/kant/field/index.html>

Code of course: BMI-LOTD17-201E.02

Title of course: Philosophy of Social Science

Lecturer: Anna Réz

General aim of the course: The course offers a general introduction to some of the main contemporary issues discussed within the philosophy of social science. This is an advanced seminar, where previous knowledge in philosophy and/or social sciences is recommended.

Content of the course:

Topics:

- rational choice explanations, game theory and its critics
- explanation and prediction in social sciences
- reductionism, individualism, holism
- values and objectivity

Grading criteria, specific requirements:

All students taking the class for credit must submit at least 5 response papers throughout the semester, which should be handed in before the respective classes (50%). Additionally, short online quizzes will make up the other 50% of the final grade.

Required reading:

- Little, D. Varieties of Social Explanation. An Introduction to the Philosophy of Social Science, ch. 8. Westview Press: Boulder, Colorado.
- Lukes, S. „Methodological Individualism Reconsidered”. In M. Martin - L. C. McIntyre (eds.): Readings in the Philosophy of Social Science, Cambridge (Mass.): MIT Press 1994.
- Machlup, F. “Are the Social Sciences Really Inferior?”, reprinted in M. Martin and L.C. McIntyre, eds. Readings in the Philosophy of Social Science, Cambridge MA: MIT Press, 1994.
- Putnam, H. "Beyond the Fact/Value Dichotomy", in H. Putnam, Realism With a Human Face, Cambridge: Harvard University Press, 1990.
- Sen, A. "Rational Fools", Philosophy and Public Affairs, 6, pp. 317–44., 1976, reprinted in M. Martin and L.C. McIntyre, eds. Readings in the Philosophy of Social Science, Cambridge MA: MIT Press, 1994.
- Taylor, C. "Interpretation and the Sciences of Man", Review of Metaphysics, 25, pp. 3–51., 1971; reprinted in M. Martin and L.C. McIntyre, eds. Readings in the Philosophy of Social Science, Cambridge MA: MIT Press, 1994.
- Watkins, J. W. N. „Historical Explanation in the Social Sciences”. In: M. Martin - L. C. McIntyre (eds.): Readings in the Philosophy of Social Science, Cambridge (Mass.): MIT Press 1994.
- Weisstein, N. “Psychology Constructs the Female”. In: M. Martin - L. C. McIntyre (eds.): Readings in the Philosophy of Social Science, Cambridge (Mass.): MIT Press 1994.

Code of course: BMI-LOTD17-202E.01**Title of course:** Intensive Introduction to Philosophy of Language, for Logicians**Lecturer:** Zsófia Zvolenszky**General aim of the course:**

This course is a reading seminar that provides a speedier, advanced introduction to philosophy of language. Intended for students who have already taken at least one course in logic or linguistics. For students with an interest in logic and linguistics.

Content of the course:

This is a reading seminar about philosophical issues about linguistic meaning and communication. We'll be reading and discussing a new, 2019, textbook, *Philosophy of Language*, written by Zoltán Gendler Szabó and Richmond H. Thomasson.

I. Philosophy of Semantics:

Frege and Tarski

Compositionality

Reference and Quantification

Tense and Modality

Intentionality

II. Philosophy of Pragmatics:

Austin and Grice

Context and Content

Common Ground and Conversational Update

Implicature and Figurative Speech

Assertion and Other Speech Acts

III. Meaning as a Philosophical Problem

Meaning and Use

Externalism and Internalism

Grading criteria, specific requirements:

This course is a seminar with class discussion, student presentations and short writing assignments.

Required reading:

Zoltán Gendler Szabó and Richmond H. Thomasson 2019. *Philosophy of Language* (Cambridge Textbooks in Linguistics). Cambridge UP.

Code of course: BMI-LOTD17-202E.02

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| Title of course: Introduction to Philosophy of Language |
| Lecturer: Zsófia Zvolenszky |
| <p>General aim of the course: Introductory course into philosophy of language for students without prior background in philosophy or logic.</p> <p>Content of the course: Our words, sentences are about - refer to - things in the world: objects, people, events. Plausibly, the <i>meanings</i> of expressions play a central role in explaining this referential feature: for example, it is in virtue of the meaning of the word 'horse' that it refers to horses. But what exactly does this role played by meaning consist in? The answer is not at all straightforward. Consider these two sentences: Joanne K. Rowling is a famous novelist. Robert Galbraith is a famous novelist. How does the meaning of the first sentence differ from the meaning of the second? After all, both are about the same individual: who is called Joanne K. Rowling but has become famous as J. K. Rowling, also writing under the pseudonym 'Robert Galbraith'. Yet - according to Gottlob Frege - the two sentences cannot have the same meaning because someone may rationally believe one (the first, say), without believing the other. This is what Frege's "puzzle" consists in, providing the starting point for 20th-century philosophy of language. In the seminar, our aim is to gain a greater understanding of the nature of meaning, and its relation to reference, truth, communication. The aim of the course is to review and discuss central issues in philosophy of language based on influential primary and secondary texts.</p> <ul style="list-style-type: none"> • Frege on sense and reference, on proper names and definite descriptions • Russell and Strawson on definite descriptions • Kripke on proper names • Kripke and Putnam on natural kind terms • Context-sensitive expressions • Quine on analyticity • Grice on meaning • Austin and Searle on speech acts • Grice on communication • Applications of Grice, Frege, Strawson: for example, pejorative language use <p>Grading criteria, specific requirements: This course is a seminar with class discussion, student presentations, short quizzes and short writing assignments.</p> <p>Required reading: Alongside seminal texts in the philosophy of language (by Austin, Frege, Grice, Kripke, Quine, Strawson, Searle, Putnam), and a recent survey article on racism in language use (by Langton, Haslanger and Anderson), another functions as a "textbook": W. Lycan 2008: <i>Philosophy of Language: A Contemporary Introduction</i>, 2nd edition. London: Routledge. Seminal texts (by Austin, Frege, Grice, Kripke, Quine, Strawson, Searle, Putnam) can be found in the following anthology: P. Martinich and D. Sosa (eds.) 2012: <i>The Philosophy of Language</i>, 6th edition. Oxford, OUP. (Previous editions are ok, except for Frege's "Sense and Reference", which appears in a different translation in earlier editions.) Langton–Haslanger–Anderson's survey article "Language and Race" can be found in the following anthology of essays: G. Russell and D. G. Fara (eds.) 2012: <i>Routledge Companion to the Philosophy of Language</i>. New York, Routledge.</p> |

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| Code of course: BMI-LOTD17-203E.01 |
| Title of course: Metalogic |
| Lecturer: András Máté |
| <p>General aim of the course: Prove the most important metatheorems of logic within a general framework</p> <p>Content of the course: Metalogic investigates properties of formalized theories (so as negation-completeness, semantical completeness, decidability, consistency) within the framework of some (formalized or at least formalizable) theory. This course bases on the theory of canonical calculi by Imre Ruzsa and on the Markov algorithms. It extends to the construction of them, to their connection (interdefinability) and the demonstration of the well-known theorems of metalogic (Gödel's theorems, Church and Tarski theorem) within this framework in an abstract and very general form. We investigate some alternative frameworks and the philosophical importance of these theorems, too.</p> <p>Grading criteria, specific requirements: Test exam (problem solving).</p> <p>Required reading: Imre Ruzsa, <i>Introduction to Metalogic</i>. Budapest, 1993.</p> |

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| Code of course: BMI-LOTD-204E.02 |
| Title of course: A Philosophical Introduction to Set Theory |
| Lecturer: Péter Mekis |
| <p>General aim of the course: The course gives an introduction to the basic concepts and ideas of set theory, with a special focus on its foundational role in the philosophy of mathematics and of logic.</p> <p>Content of the course: We will discuss the following topics:</p> <ul style="list-style-type: none"> - the paradoxes of infinity - the paradoxes of naive set theory - sets vs proper classes - implementation of natural numbers in set theory - well-ordered classes - ordinals vs cardinals - the hierarchy of infinities - the axiom of choice - the continuum hypothesis - well-founded vs non-well-founded set theory - inaccessible cardinals - the limits of set theory <p>Grading criteria, specific requirements: Students will take an oral exam at the end of the course.</p> <p>Required reading:</p> <ul style="list-style-type: none"> - lecture notes by the lecturer - R. Smullyan, <i>Set Theory and the Continuum Problem</i> <p>Suggested further reading:</p> <ul style="list-style-type: none"> - Th. Jech, <i>Set Theory</i> - Y. Moschovakis, <i>Notes on Set Theory</i> - Fraenkel - Bar-Hillel - Levy, <i>Foundations of Set Theory</i> |

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| Code of course: BMI-LOTD17-205E |
| Title of course: Philosophy of Science |
| Lecturer: László E. Szabó |
| <p>General aim of the course: Web site: http://phil.elte.hu/leszabo/PhilSci/2020-2021-1 The course provides an introduction to modern analytic philosophy of science. I shall focus on the central epistemological problems concerning empirical sciences like physics; and I shall discuss these issues on a formal/logical basis. Finally I sketch a naturalized philosophy of science based on what I call physico-formalist philosophy of mathematics -- an account for scientific knowledge, both a priori and empirical, within a purely physicalist ontology.</p> <p>Content of the course: characterization of scientific knowledge science in social context traditional methodology of empirical science scepticism concerning empirical knowledge truth of fact vs. truth of reasoning dichotomy the Kantian tradition philosophy of logic and mathematics scientific theory as partially interpreted formal system semantics of scientific theory the physicalist approach meaning and truth holistic conclusions operationalism and the constitutive a priori empirical underdetermination scientific knowledge in the context of the natural world</p> <p>Grading criteria, specific requirements: Oral exam from the material of the lectures. Video records and the slides of the lectures will be available.</p> <p>Required reading: Alexander Bird: <i>Philosophy of Science</i> (Fundamentals of Philosophy), Routledge, 1998. L. E. Szabó: Meaning, Truth, and Physics, In G. Hofer-Szabó, L. Wroński (eds.), <i>Making it Formally</i></p> |

Explicit, European Studies in Philosophy of Science 6. (Springer International Publishing, 2017) DOI 10.1007/978-3-319-55486-0_9. (Preprint: <http://philsci-archive.pitt.edu/14769/>)

Suggested further reading:

David A. Truncellito: Epistemology, Internet Encyclopedia of Philosophy,

<https://www.iep.utm.edu/epistemo/>

Thomas Uebel: Vienna Circle, *The Stanford Encyclopedia of Philosophy* (Spring 2013 Edition), Edward N. Zalta (ed.) (<http://plato.stanford.edu/entries/vienna-circle/>)

John Vickers: The Problem of Induction, *The Stanford Encyclopedia of Philosophy* (Spring 2013 Edition), Edward N. Zalta (ed.) (<http://plato.stanford.edu/entries/induction-problem/>)

Robert Sinclair: Quine's Philosophy of Science, *Internet Encyclopedia of Philosophy*

<http://www.iep.utm.edu/quine-sc>)

L. E. Szabó: Mathematical facts in a physicalist ontology, *Parallel Processing Letters*, **22** (2012) 1240009 (12 pages), DOI: 10.1142/S0129626412400099 [[preprint](#)]

L. E. Szabó: Formal Systems as Physical Objects: A Physicalist Account of Mathematical Truth, *International Studies in the Philosophy of Science*, 17 (2003) pp. 117-125. (preprint: [PDF](#))

T. Kuhn: Scientific Revolutions, in *The Philosophy of Science*, R. Boyd et al. (eds.), MIT Press 1991, pp. 139-157.

Code of course: BMI-LOTD17-207E.01

Title of course: Philosophy of Science Seminar

Lecturer: Márton Gömöri, László E. Szabó

General aim of the course:

Web site: <http://phil.elte.hu/leszabo/TudfilSzeminarium/2020-2021-1>

The aim of the course is to review and discuss the most important issues in philosophy of science, on the bases of the following readings:

M. Schlick: Positivism and Realism, in *The Philosophy of Science*, R. Boyd et al. (eds.) The MIT Press, Boston 1992.

M. Schlick: Pozitivizmus és realizmus. in *A Bécsi Kör Filozófiája*, Szerk. Altrichter F. (Gondolat, 1972) pp. 93-133.

H. Reichenbach: Meaning, in *Experience and Prediction: An Analysis of the Foundations and the Structure of Knowledge*

P. Bridgman: The Operational Character of Scientific Concepts, in *The Philosophy of Science*, R. Boyd et al. (eds.) The MIT Press, Boston 1992.

A. Garfinkel: Reductionism, in *The Philosophy of Science*, R. Boyd et al. (eds.) The MIT Press, Boston 1992.

T. Kuhn: Scientific Revolutions, in *The Philosophy of Science*, R. Boyd et al. (eds.) The MIT Press, Boston 1992.

Arthur Fine: The Natural Ontological Attitude, in *The Philosophy of Science*, R. Boyd et al. (eds.) The MIT Press, Boston 1992.

M. Colyvan: Indispensability Arguments in the Philosophy of Mathematics, *The Stanford Encyclopedia of Philosophy* (Fall 2004 Edition), Edward N. Zalta (ed.).

W. V. O. Quine: Two Dogmas of Empiricism, *Philosophical Review* 60 (1951) 20–43.

W. V. O. Quine: On Empirically Equivalent Systems of the World, *Erkenntnis* 9 (1975), pp. 313-328.

B. van Fraassen: Arguments concerning scientific realism, Ch. 2 in *The Scientific Image*, Oxford University Press Inc., New York 1980.

W. V. O. Quine: Epistemology Naturalized, in: *Ontological Relativity and Other Essays*, Columbia University Press, New York.

L. E. Szabó: Meaning, Truth, and Physics, In G. Hofer-Szabó, L. Wroński (eds.), *Making it Formally Explicit*, European Studies in Philosophy of Science 6. (Springer International Publishing, 2017) DOI: 10.1007/978-3-319-55486-0_9. (Preprint: <http://philsci-archive.pitt.edu/12891/>)

L. Carroll: "What the Tortoise Said to Achilles" which is available here: <http://www.ditext.com/carroll/tortoise.html>

Selection from Plato's Meno. The text is available from the online library. The item is "The Dialogues of Plato, Volume 1: Euthyphro, Apology, Crito, Meno, Gorgias, Menexenus", please read the section "A Proof of Recollection" (pp. 164-171)

Hilary Putnam, Brains in a vat, http://ieas.unideb.hu/admin/file_2908.pdf

Bruce MacLennan, "Synthetic Ethology - An Approach to the Study of Communication". In *Artificial Life II: The Second Workshop on the Synthesis and Simulation of Living Systems*, Santa Fe Institute Studies in the Sciences of Complexity, proceedings Vol. X, edited by Christopher G. Langton, Charles Taylor, J. Doyne Farmer, and Steen Rasmussen. Redwood City, CA: Addison-Wesley, 1992, pp. 631-658. (Available from the online library.)

Grading criteria, specific requirements:

Preparing from the corresponding papers + a 45-minute seminar talk + active participation in the

discussions.

Code of course: BMI-LOTD17-208E.02

Title of course: Selected Topics in Contemporary Metaphysics

Lecturer: László E. Szabó

Content of the course:

Topics:

- Metaphysics and the knowledge of the world
- Time
- Modality, determinism--indeterminism, probability
- Free will
- Causation
- Properties
- Identity, similarity, persistence
- Laws of nature

Grading criteria, specific requirements:

- oral exam from the material of the lectures
- PhD students, in addition, must write a 5-10 page critical essay (in English) in connection with the main theses I am proposing in the lecture course

Required reading:

- John W. Carroll, Ned Markosian: *An Introduction to Metaphysics*, CUP 2010.
- E. J. Lowe: *A Survey of Metaphysics*, OUP 2002
- J. Heil: *From an Ontological Point of View*. Oxford: Clarendon Press 2003.
- Norman Swartz: *Beyond Experience – Metaphysical Theories and Philosophical Constraints* (Second Edition). Toronto: University of Toronto Press 2001.
- L. E. Szabó: Meaning, Truth, and Physics, In G. Hofer-Szabó, L. Wroński (eds.), *Making it Formally Explicit*, European Studies in Philosophy of Science 6. (Springer International Publishing, 2017) DOI 10.1007/978-3-319-55486-0_9. (Preprint: <http://philsci-archive.pitt.edu/14769/>)
- L. E. Szabó: Mathematical facts in a physicalist ontology, *Parallel Processing Letters*, 22 (2012) 1240009 (12 pages), DOI: 10.1142/S0129626412400099 [[preprint](#)]
- L. E. Szabó: Formal Systems as Physical Objects: A Physicalist Account of Mathematical Truth, *International Studies in the Philosophy of Science*, 17 (2003) pp. 117 – 125 (preprint: [PDF](#))
- L. E. Szabó: What remains of probability?, in D. Dieks, W. Gonzalez, S. Hartmann, M. Weber, F. Stadler and T. Uebel (eds.), *The Present Situation in the Philosophy of Science*, Springer, forthcoming. [[PDF](#)]
- L. E. Szabó: Objective probability-like things with and without objective indeterminism, *Studies in History and Philosophy of Modern Physics* 38 (2007) 626–634 [[Preprint \(PDF\)](#)]
- L. E. Szabó: The Einstein--Podolsky--Rosen Argument and the Bell Inequalities, *Internet Encyclopedia of Philosophy* (2008)
- L.E. Szabó: Intrinsic, extrinsic, and the constitutive *a priori*, *Foundations of Physics* 50, 555–567 (2020). DOI: [10.1007/s10701-019-00281-z](https://doi.org/10.1007/s10701-019-00281-z) (Open Access: <https://rdcu.be/bKxdQ>)
- L.E. Szabó: Physicalism without the idols of mathematics. [Preprint], (2021), <http://philsci-archive.pitt.edu/18901>

Code of course: BMI-LOTD-309E.01

Title of course: Formal Approaches to Wittgenstein's Early Philosophy of Language

Lecturer: Péter Mekis

General aim of the course:

The course provides an introduction to the early Wittgenstein's philosophy with a focus on its formal aspects. We attempt at a formal reconstruction of some of its core ideas meeting the standards of modern formal logic.

Content of the course:

We will discuss the following topics:

- facts vs objects
- logical atomism
- the concept of a state of affair
- form vs content
- the color exclusion problem
- the concept of a picture
- logical space
- the general form of proposition
- mathematical propositions
- solipsism
- the exclusiveness of logical necessity
- the intelligibility of the text of the *Tractatus*

- ethical aspects of the *Tractatus*

Grading criteria, specific requirements:

At the end of the semester each student will give a presentation of a paper of their choice from volume 1 of the *Critical Assessments*.

Required reading:

- L. Wittgenstein: *Tractatus Logico-Philosophicus*
- L. Wittgenstein: *Some Remarks on Logical Form*
- F. Ramsey: *Critical Notice of Wittgenstein's Tractatus*
- E. Stenius: *Wittgenstein's Tractatus. A Critical Exposition of its Main Lines of Thought*
- S. Shanker (ed.): *Ludwig Wittgenstein: Critical Assessments Volume I.*

Suggested further reading:- H-J. Glock: *A Wittgenstein Dictionary*

- A. Kenny: *Wittgenstein*
- L. Wittgenstein: *Notebooks 1916-19*
- M. Black: *A Companion to Wittgenstein's Tractatus*

Code of course: BMI-LOTD-317E.01

Title of course: **Metaphors in Mathematics**

Lecture: Alexa Gopaulsingh

General aim of the course: To explore the role of metaphors in mathematical thinking.

Content of the course: To examine examples of the intertwinement of metaphors and formalism in mathematical thinking, proofs and conjectures.

Grading criteria, specific requirements: Discussions and presentation.

Required reading:None

Suggested further reading: Where Mathematics Comes From by George Lakoff and Rafael Nunez