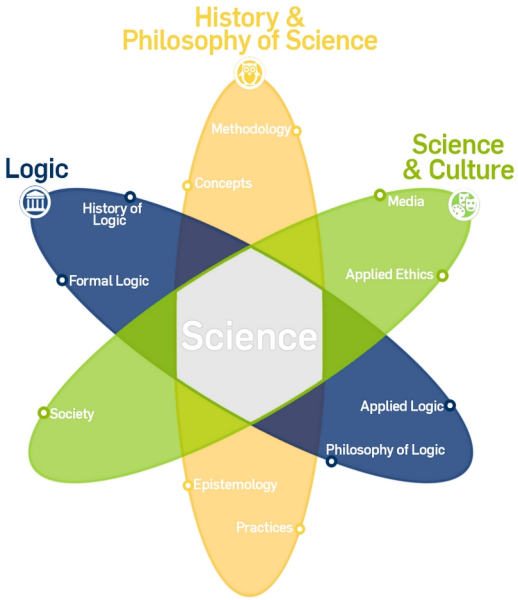
Annotated course catalogue

History & Philosophy of Science and Logic (HPS⁺Logic)



Summer Term 2025

Content

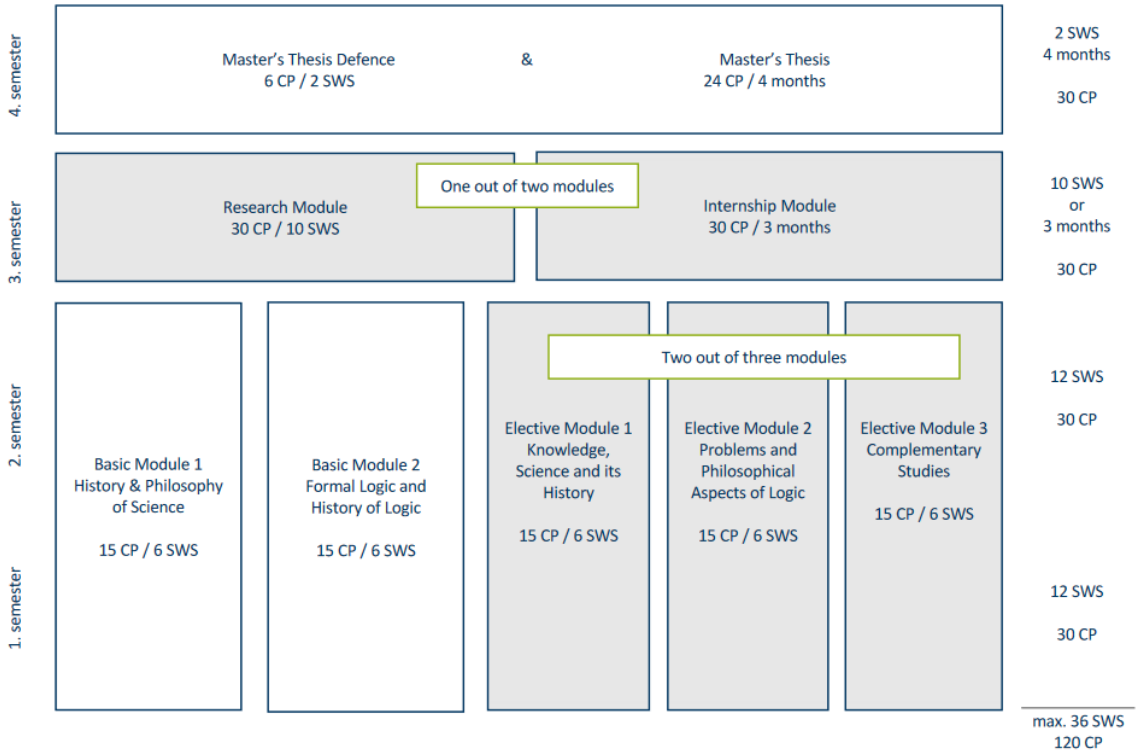
Information on registration in RUB eCampus

To register for the courses in this course catalogue, search for the course in **eCampus** using the course number (**Lehrveranstaltungsnummer**) and register.

You can access eCampus via the WebClient:

https://www.ruhr-uni-bochum.de/ecampus/ecampus-webclient/login_studierende.html

Curriculum



This study plan gives you an initial overview. You will find a detailed description of the individual modules in the module handbook. Therefore, only a **brief description** is given here:

In the first two semesters, you will study the basic modules 1 and 2 as well as two of the three compulsory elective modules. Basic module 1 (History & Philosophy of Science) is always offered in the summer semester and basic module 2 (Formal Logic and History of Logic) in the winter semester. Depending on when you start your studies, you will therefore complete

basic module 1 or 2 first. The courses from the three compulsory elective modules are offered every semester.

In the third semester, you will study **either** the internship module **or** the research module. The internship module gives you the opportunity to complete a three-month internship, about which you will write an internship report. In the research module, on the other hand, you work on your own research-related question in one of the three subject areas of the compulsory elective modules, which also serves as preparation for the Master's thesis. You can complete the research module at the Ruhr University or in the form of a semester abroad, preferably at one of the universities with which we have cooperation agreements. The same naturally applies to the practical module: The internship can be completed in Bochum, elsewhere in Germany or abroad. In both modules, the focus is on your own commitment, but we will also support you in the realisation (finding internships, formulating questions, finding topics, etc.). If you already know that after your Master's degree you would like to pursue a career outside of academia in the narrow sense, but with a scientific connection (e.g., science foundations, museums, education and science ministries, science journalism, university administrations, to name just a few example), then the internship module is ideal for this. If, on the other hand, you are 'drawn' to science itself and you already know, for example, that you would like to Thu a doctorate, then the research module offers you the ideal conditions to start honing your 'scientific profile' during your studies.

Finally, in the fourth semester, you will write your Master's thesis in the final module and present it in a specially designed colloquium.

— Overview —

Basic module 1: *History and Philosophy of Science*

030003	History and Philosophy of Science, I			
	Lecture	Thu 10-12	GAFO 04/271	Baedke
030094	History and Philosophy of Science, II			
	Seminar	Thu 14-16	GABF 04/358	Baedke
030097	Methods in History and Philosophy of Science			
	Blocksemi-nar	22.-25. Sept. 2025 (likely changed to 15-18. Sept), 10-16	TBA	Baedke

Basic module 2: *Formal Logic and History of Logic*

— Lecture to the module will be offered again in the winter term 2025/2026 —

030106	Frege: Foundations of Arithmetic, Logicism and Neo-Logicism			
	Seminar	Thu 10-12	GABF 04/354	Kürbis

Elective Module 1: *Knowledge, Science and its History*

030112	Philosophical Methods: An Introduction			
	Seminar	Thu 10.30-12	GAFO 04/619	Horvath
030053	The Value of Philosophy			
	Seminar	Thu 10-12	GABF 04/358	Steinkrüger
030105	Rationality and weird belief			

	Seminar	Thu 12-14	GA 03/46	Starzak
030096	Changing Understandings of Objectivity in Science			
	Seminar	Wed 10-12	GABF 04/609	Fischer
030095	Forms of knowledge and values in science and society (Spring School, Universität Utrecht)			
	Seminar	13.-17.04.2025, 10-16	Utrecht University	Baedke, Fischer
030113	Integrated History and Philosophy of Science			
	Seminar	10.05.25, 14.06.25, 19.07.25 10:00-16:00	Wasserstr. 221/4	Seselja
030008	Social Epistemology of Science			
	Lecture	Thu 16-18	Wasserstr. 221/4	Seselja
030127	Lecture Series *History and Philosophy of the Life Sciences*			
	Kolloquium	Mo 16-18	*online*	Baedke
030123	Colloquium of History and Philosophy Science / Kolloquium zur Wissenschaftstheorie und Wissenschaftsgeschichte			
	Kolloquium	Thu 18-20	GA 3/143	Baedke, Pulte, Meer
030050	Feminist philosophy of science			
	Seminar	Thu 14:30-16	Wasserstr. 221/4	Seselja
030110	Aktuelle Themen der Erkenntnistheorie und Metaphilosophie			
	Seminar	Wed 16-18:15	GAFO 04/619	Horvath
030076	Platons Theaitetos			
	Seminar	Thu 10-12	GABF 04/352	Sattler
030092	Von Hume und Kant zu Popper und Quine. ‚Klassiker' der Theoretischen Philosophie der Neuzeit und Gegenwart			
	Seminar	Thu 8:30-10	GA 03/143	Pulte

Additional Introductory Courses

030024	Können wir der Wissenschaft vertrauen? Eine Einführung in die Wissenschaftstheorie			
	Seminar	Tue 16-18	GABF 04/716	Wiese

Elective Module 2: *Problems and Philosophical Aspects of Logic*

030114	An introduction to mathematical philosophy			
	Blocksemi-nar	28.07.-01.08.25 09-18	GA 04/187	Sanders
030086	Non-deterministic semantics and its applications			
	Seminar	Mo 14-16	GABF 04/358	Skurt, Vaz Silva
030007	Prädikatenlogik: Logik II			
	Lecture	Wed 14-16	HGA 30	Kürbis
030108	Übung zur Vorlesung Prädikatenlogik: Logik II			
	Exercise	Thu 14-16	GABF 04/354	Kürbis
030088	Logician’s Tool Kit			
	Blocksemi-nar	07.04. 16-18 25.04. + 26.04. 09.05. + 10.05. 27.06. + 28.06. 10-18	GABF 04/358 (only 07.04.)	Skurt, Steinacker
030106	Frege: Foundations of Arithmetic, Logicism and Neo-Logicism			
	Seminar	Thu 10-12	GABF 04/354	Kürbis
211057	Highlights of Theoretical Computer Science			
	Lecture	Tue 14-16 Thu 12-14	MC 1/54 MC 1/84	Walter, Zeume

211061	Logik in der Informatik			
	Lecture and Exercise	See eCampus	See eCampus	Zeume
030091	Research seminar on contradictory logics			
	Seminar	Tue 14-16	GABF 04/354	Wansing
030124	Research Colloquium “Logic and Epistemology”			
	Colloquium	Thu 14-16	GABF 04/354	Kürbis, Skurt

Additional Introductory Courses

030004	Introduction to Logic: Logic I			
	Lecture	Mo 14-16	GA 03/49	Straßer
030049	Set Theory for Philosophers			
	Seminar	Wed 14-16	GABF 04/609	Oddsson

Elective Module 3: Complementary Studies

030103	Game Theory for Philosophy			
	Seminar	Wed 10-12	GABF 04/352	Michelini, Seselja
030054	Introductory Math and Programming for Computational Philosophy			
	Seminar	Tue 10-12	GABF 04/609	Yoo
030089	Decision Theory: A Philosophical Introduction			
	Seminar	Thu 14-16	GABF 04/609	Wang
030090	Advanced Topics in Decision Theory			
	Blocksemi-nar	21.07. + 22.07. 24.07. + 25.07. 12-18	GABF 04/358	Wang

030115	Arguments in Action: Debating			
	Seminar	09.05. 16.05. 30.05. 06.06. 20.06. 11.07. 14:30-17:30	Wasserstraße 221/4	Seselja
030109	Philosophy and Argumentation			
	Seminar	Thu 14-16	GABF 05/703	Horvath
030125	Technikphilosophisches Forschungskolloquium			
	Colloquium	Tue 16-18	GA 3/143	Weydner-Volkmann
030117	Introduction to Pragmatics in Philosophy and Linguistics			
	Lecture	Wed 10-14 bi-weekly Prospective dates: 09.+30.04, 14.+28.05, 04.+25.06 (02.07 or 18.06. to be confirmed)	GABF 04/354	Spychalska
030091	Natural Language Ontology			
	Seminar	Mo 14-16	GA 04/187	Liefke
030116	The experimental investigation of language-related phenomena in philosophy, linguistics, and cognitive science: EEG			
	Seminar	Wed 14-18 bi-weekly Prospective dates: 09.+30.04, 14.+28.05, 04.+25.06 (18.06. or 02.07. to be confirmed)	GABF 04/352	Spychalska

030102	Philosophy of Psychiatry			
	Seminar	Mo 12-14	GABF 04/511	Dung
030073	Feministische Philosophie und Kritik des philosophischen Kanons			
	Seminar	Mo 16-18	GABF 04/716	Breil
030107	Writing a Bachelor or Master Thesis in English			
	Seminar	Fri 14:30-17.45 25.04., 02.+23.05., 13.06., 04.07	Wasserstraße 221	Seselja, Straßer
030129	Colloquium Philosophy of Information and Communication			
	Colloquium	Tue 12-14	GA 04/187	Liefke
030130	Philosophy Meets Cognitive Science: Memory and Language			
	Colloquium	Tue 12-14	GA 04/187	Werning

— Annotation[1] —

1 At the time this course catalog was created, comments were not available for all courses. You can access the course catalogue at https://vvz.ruhr-uni-bochum.de/ and then search for the relevant course using the course number (make sure you have the correct semester at the top left!) and then use the “Veranstaltungdetails” (“Course details”) tab to see if there is a comment now.

Basic module 1: History and Philosophy of Science

030003	History and Philosophy of Science, I			
	Lecture	Thu 10-12	GAFO 04/271	Baedke

History and philosophy of science reflects on the historical and theoretical foundations, methods and aims of science. This includes further subjects like patterns of the historical development and the social structure of science. By tracing major scientific developments from the early modern period to the late 20th century, focusing especially on the exact and life sciences, this two-part module (see below) gives an overview over the present status of history and philosophy of science. It deals with problems of methods and scientific practices (like experimentation), certain key concepts (such as “explanation” and “understanding”), and it examines questions that focus on the significance of the historicity of scientific knowledge and the role of values in science or freedom of science.
The course is an open-format lecture (with seminar-like discussion elements) designed for the MA-program “History & Philosophy of Science and Logic” (HPS+Logic). It is also open to other interested advanced B.A. and M.A. students of philosophy and students from the natural sciences and other subjects (with basic knowledge in theoretical philosophy). The lecture is accompanied by the course “History and Philosophy of Science, II” that serves to deepen and to complement the topics of the lecture. Participation in both parts of the module is highly recommended. For students of HPS+Logic it is a requirement in order to complete the “Basic Module 1”. The language of the lecture will be English. You will be informed about modalities concerning credits in the first session.

030094	History and Philosophy of Science, II			
	Seminar	Thu 14-16	GABF 04/358	Baedke

This course belongs to the lecture “History and Philosophy of Science, I”; further information on the subjects are given there. It extends and deepens special topics of Part I by discussing besides philosophical, especially historical sources. Therefore, attending makes only sense when you also visit Part I. The course is obligatory for students of the master program HPS+Logic, but can also be taken by interested advanced B.A. and M.A. students from philosophy, the natural sciences and other subjects. The language will be English (unless all participants are German-speaking). Literature and modalities concerning credits will be discussed in the first session.

03009	Methods in History and Philosophy of Science

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	Blocksemi-nar	22.-25. Sept. 2025 (likely changed to 15-18. Sept), 10-16	Baedke

This seminar addresses methodological issues in philosophy of science. This includes, among others, ways to conduct philosophy *of* science vs. philosophy *for* science, methods of integrated history and philosophy of science (HPS), argumentation theory as well as experimental and digital methods in philosophy of science. The seminar is obligatory for students of the master program HPS+Logic.

Basic module 2: Formal Logic and History of Logic

030106	Frege: Foundations of Arithmetic, Logicism and Neo-Logicism			
	Seminar	Thu 10-12	GABF 04/354	Kürbis

Frege's 'Foundations of Arithmetic' was the first book exclusively devoted to the philosophy of mathematics. It remains one of, perhaps the, most influential books on the topic. And it is not an overstatement to say that it is still the best. Few books can serve as an introduction as well as a source of inspiration for new research. Frege begins his book by asking what numbers are. Discussing, and mostly rejecting, various views earlier writers had put forward, he finally comes to his own solution, with some help from Hume and Leibniz: numbers are objects and the laws of arithmetic are nothing but laws of logic. This position was later called logicism, a version of which was also espoused by Russell. In this seminar, we will read the entire book from cover to cover, accompanied by Michael Dummett's commentary. Time permitting, we'll look at the more recent developments of Hale's and Wright's neologicism.

Literature:

Essential Reading:
Gottlob Frege: Grundlagen der Arithmetik (Breslau: Koebner 1884). Nachdrucke und Neuausgaben bei Olms, Meiner, Reclam. English translations by Austin (Blackwell 1980) and Jacquette (Routledge 2016)
Michael Dummett: Frege. Philosophy of Mathematics (Oxford: Duckworth 1991)
Further Reading:
Bob Hale and Crispin Wright: The Reason's Proper Study (Oxford University Press 2001)
Richard Heck: Frege's Theorem. (Oxford: Clarendon Press 2011)
Crispin Wright: Frege's Conception of Numbers as Objects (Aberdeen University Press 1983)

Elective Module 1: Knowledge, Science and its History

030112	Philosophical Methods: An Introduction			
	Seminar	Thu 10.30-12	GAFO 04/619	Horvat

In this seminar, we will discuss both general questions about methods, such as “What are methods in the first place?” and “How should methods be evaluated?”, and specific questions about philosophical methods, like “Are there any philosophical methods at all?”, “Are there uniquely or distinctively philosophical methods?”, “What are the main philosophical methods?”. In this context, we will also consider some philosophical methods in more detail, for example, argumentation, conceptual analysis, experimental philosophy, formal methods, and thought experiments. The course will be based on a manuscript version of the introductory volume *Methods in Analytic Philosophy: A Primer and Guide* (edited by Joachim Horvath, Steffen Koch, and Michael G. Titelbaum), which is forthcoming as an open access book with the PhilPapers Foundation. There will be some flexibility for the participants of the seminar to decide which philosophical methods they want to focus on, and for these selected methods we will also discuss further readings. Apart from the ability to read philosophical texts in English, some prior experience with doing philosophy would be helpful for a seminar that reflects on methods as a key aspect of philosophical practice.

030053	The Value of Philosophy			
	Seminar	Thu 10-12	GABF 04/358	Steinkrüger

Since the beginnings of philosophy, its value has been called into question by non-philosophers – and occasionally by philosophers, too. This has triggered responses by philosophers aiming at establishing the value of their discipline. In this seminar we will look at a number of such attempts throughout the history of philosophy with an eye to studying their virtues and their limitations.

030105	Rationality and weird belief			
	Seminar	Thu 12-14	GA 03/46	Starzak

Weird beliefs are beliefs that we take to be far-fetched or even absurd. A prime example is conspiratorial thinking, which is widespread these days and which poses a danger to public debate in democracies. On the one hand it is sometimes claimed that belief in conspiracy theories is immune to counter evidence, such that believers in conspiracy theories are not

open to any arguments against what they believe. On the other hand, people that have weird beliefs are often judged as being irrational to the effect that we don't take them serious and exclude them from public debates. When we encounter someone who holds beliefs which we take to be weird, we tend to explain this with their lack of rationality, i.e. their epistemic irresponsibility or incapability concerning the way they acquired their beliefs, a lack of sensitivity to counter evidence, or with motivated reasoning.
In this seminar we will discuss what weird beliefs are: Is there a common feature to conspiracy theories or do we have to evaluate them individually one by one? In which other contexts do we find weird beliefs? Can we really account for weird belief with a lack of rationality, or can a fully rational person fall prey to weird beliefs as well? If so, how else can we explain weird beliefs? And how can we avoid to believe weird things ourselves?
A reader with the seminar papers will be available via Moodle.

030096	Changing Understandings of Objectivity in Science			
	Seminar	Wed 10-12	GABF 04/609	Fischer

Objectivity is a central concept in both scientific discourse and the philosophy of science. But how has our understanding of objectivity evolved over time, and what are the implications for science and society? This course examines historical and philosophical perspectives on objectivity, from the classical idea of a "view from nowhere" to contemporary debates on the social and value-laden dimensions of science.
Throughout the course, we will explore both theoretical notions and practical cases, encouraging a deeper understanding of how objectivity is applied in real-world scientific contexts. The course provides an introduction to key positions in the philosophy of science, fostering critical engagement with current debates in the field. It is designed for students with a basic understanding of philosophy and for those from natural, social, or humanities disciplines interested in exploring the philosophical underpinnings of objectivity.
The language of instruction will depend on the participants' abilities, but readings will be in English. You will be informed about modalities concerning credits in the first session.

Literature:

Introductory Reading
The following works are recommended as starting points. Additional,

more specialized literature will be explored throughout the course:
John, Stephen (2021). *Objectivity in Science*. Cambridge University Press. [DOI: 10.1017/9781009063647].
Reiss, Julian and Sprenger, Jan (2020). *Scientific Objectivity*. In: Edward N. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2020 Edition). Metaphysics Research Lab, Stanford University. Available online .

030095	Forms of knowledge and values in science and society (Spring School, Universität Utrecht)			
	Blocksemi-nar	13.-17.04.2025, 10-16	Utrecht University	Baedke, Fischer

How does scientific knowledge differ from other forms of knowledge produced in society? What are the values that drive scientific knowledge production? What are the values that give scientific knowledge legitimacy and authority? This spring school focuses on the diversity of past and present scientific and social knowledge systems and on their underlying values.
The school will introduce you to the main philosophical debates on values in different historical contexts, as well as traditional and current demarcation debates, discussions about epistemic diversity and challenges to integrate forms of local, Indigenous, and traditional knowledge with scientific ones. You will develop a critical understanding of the various roles that values play in scientists' knowledge production as well as the analytical skills and historical sensibility that will enable you to analyze past and present value-driven debates across different knowledge systems. For more information, see here: https://utrechtsummerschool.nl/courses/humanities/forms-of-knowledge-and-values-in-science-and-society
This spring school will be held in Utrecht, NL, from 13.-17.04.2025. It can be attended by a selected number of advanced B.A. and M.A./HPS+Logic-students. Before the spring school there will be some online preliminary meetings for the participants.
Please note that the application process has ended already. No further application is possible.

030008	Social Epistemology of Science			
	Lecture	Thu 16-18	Wasserstr. 221/4	Seselja

This course offers a systematic introduction to the social epistemology of science, a field that examines the interplay between social dynamics—both within the scientific community and at the interface of science and society—and scientific inquiry. Through interactive lectures and discus-

sions, we will explore central philosophical problems situated at the intersection of social epistemology and the philosophy of science. Topics include the relationship between science and society, the role of values in scientific inquiry, the social organization of science, the responsibilities of scientists, and expert disagreements. Students will engage with (parts of) scholarly papers in preparation for each class and will give a presentation of their research project at one of the classes in July. The aim of the research project is to apply theoretical insights gained throughout the course to a concrete scientific episode.
The lectures will take place every Thursday, 16:15-17:45 in Wasserstr. 221, 4th floor.
The reading list will be provided at the start of the course.

030113	Integrated History and Philosophy of Science			
	Seminar	10.05., 14.06., 19.07. 10:00 - 16:00	Wasserstr. 221/4	Seselja

The method of historical case studies is one of the central methodological approaches employed by philosophers of science. As Imre Lakatos famously put it "Philosophy of science without history of science is empty; history of science without philosophy of science is blind". But how and why do we conduct historical case studies? Which philosophical questions can benefit from such inquiry, and which conceptual tools can help us to formulate fruitful answers?
In this course you will learn the basics of Integrated History and Philosophy of Science (HPS). In particular, you will learn how to conduct historical case studies to tackle philosophical questions. The seminar will consist of three main blocks, as well as online coaching sessions in between them:
First block (May 10) will be dedicated to the employment of the HPS approach to the study of values in the context of scientific inquiry.
Second block (June 14) will be dedicated to the employment of the HPS approach to the study of scientific pluralism.
After the second block, you will choose a historical case-study, which you will investigate for the remainder of the course.
Third block (July 19) will be dedicated to student presentations in which each student will present the results of their work.
Before each block, you will have to complete an assignment, which will consist of writing short reviews of the assigned readings (Blocks 1 & 2) or slides for your presentation (Block 3). Moreover, at each block you will have to complete an additional assignment during the class: a team-work presentation of one of the readings (Blocks 1 & 2) or the presentation of your research (Block 3).

The reading list will be provided at the start of the semester.

030127	Lecture Series *History and Philosophy of the Life Sciences*			
	Colloquium	Mo 16-18	online	Baedke

In this lecture series current topics in the history and philosophy of the life sciences will be discussed. The lecture series will host talks by international leading experts and local researchers, including philosophers and historians, but also scholars from the social and natural sciences. Participants will also have the opportunity to present their master and doctoral theses. Once per month (3-4 times during the whole term) the participants meet for a reading group meeting (instead of a lecture series talk) in which current research literature is discussed. For students (especially, but not only students of the HPS+Logic program) who want to participate and receive course credits, please write to jan.baedke@rub.de and register via eCampus. Talks will be given in English and online (via Zoom). They will be announced on: https://rotorub.wordpress.com/roto-lecture-series/

030123	Colloquium of History and Philosophy Science / Kolloquium zur Wissenschaftstheorie und Wissenschaftsgeschichte			
	Colloquium	Thu 18-20	GA 3/143	Baedke, Pulte, Meer

The colloquium provides an opportunity to discuss various topics relating to the philosophy and history of science – especially those related to master's theses and dissertations - as well as to present current literature from these and related fields. Guest lectures are planned on various dates; the languages of the lectures are English and German. Interested students from all disciplines are cordially invited to participate. Crediting of the colloquium is possible; if this is desired, please register in eCampus. The date of the first session/lecture will be announced by e-mail. If possible, the colloquium should be held mainly in presence. However, a hybrid format may be offered for individual sessions.

Das Kolloquium gibt Gelegenheit zur Diskussion wissenschaftstheoretischer und -historischer Themen unterschiedlicher Ausrichtung – insbesondere auch solcher, die im Zusammenhang mit Master- und Examensarbeiten sowie Promotionen stehen –, wie auch zur Vorstellung aktueller Literatur aus den genannten und umliegenden Bereichen. Zu verschiedenen Terminen sind Gastvorträge vorgesehen; Vortragssprachen sind Englisch und Deutsch. Interessierte aller Fachrichtungen sind herzlich zur Teilnahme eingeladen. Eine Kreditierung des Kolloquiums ist möglich; wenn diese angestrebt wird, ist eine Anmeldung im Campus-System vorzunehmen.

Der Termin der ersten Sitzung/des ersten Vortrags wird per Mail bekanntgegeben. Das Kolloquium soll nach Möglichkeit überwiegend in Präsenz durchgeführt werden. Es kann jedoch sein, dass für einzelne Veranstaltungen ein Hybridformat angeboten wird.

030050	Feminist philosophy of science			
	Seminar	Thu 14:30-16	Wasserstr. 221/4	Seselja

This block seminar explores key themes and debates in feminist philosophy of science, focusing on how feminist perspectives have influenced and challenged traditional epistemology and methodology of science. The course is divided into two parts:
1) Introduction to the feminist philosophy of science: **every Thursday, 14:30-16:00, starting from June 12** in Wasserstr. 221, 4th floor.
2) The workshop: **July 21-22, 10:00-18:00** (The exact venue of the workshop will be specified at the start of the course).In the first part, over five seminar meetings, students will engage with foundational texts, examining issues such as standpoint theory, the role of values in science, epistemic injustice, and intersectionality in knowledge production. In the second part, we will have a two-day workshop on *Contemporary Trends in Feminist Philosophy of Science*. The workshop will take place on July 21-22 (Monday and Tuesday after the end of the teaching period) and it will feature expert talks on cutting-edge topics, providing students with an opportunity to connect their learning to contemporary discussions and research.

030110	Aktuelle Themen der Erkenntnistheorie und Metaphilosophie			
	Seminar	Wed 16-18:15	GAFO 04/619	Horvath

In diesem Seminar, das auch Elemente eines Kolloquiums enthalten wird, werden wir aktuelle Themen aus der Erkenntnistheorie und der Metaphilosophie sowie verwandten Gebieten diskutieren. Gelegentlich wird es auch Vorträge von externen Gästen (auf Deutsch oder Englisch) geben, die in der Regel führende Experten auf ihrem Gebiet sind. Studierende im fortgeschrittenen Bachelor-, im Master- oder im Promotionsstudium sind im Seminar herzlich willkommen. Darüber hinaus haben die Teilnehmer*innen die Möglichkeit, Themen oder Arbeiten vorzustellen, die für sie von Interesse sind, einschließlich ihrer eigenen Arbeiten, zum Beispiel im Zusammenhang mit ihrer Abschlussarbeit (auf Deutsch oder Englisch).

03007	Platons Theaitetos

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	Seminar	Thu 10-12	GABF 04/352	Sattler

Platons *Theaitetos* ist ein Grundlagentext der Philosophiegeschichte, der das Feld der Epistemologie bis heute prägt. Die zentrale Frage des Dialogs ist „was ist Wissen“? Der *Theaitetos* gibt uns die erste systematische Untersuchung dieser Frage und zeigt, dass wir zu einer Klärung des Wissensbegriffs auch folgende, weitere Fragen stellen müssen: Wie verhält sich Wissen zur Wahrnehmung und zur Begründung? Wie unterscheidet es sich von bloßer Meinung? Kann es nur von gewissen Objekten oder von allem Wissen geben?
Im Seminar wollen wir den Dialog einer genauen Lektüre unterziehen und grundlegende Fragen zum Wissensbegriff diskutieren.

Literatur:
Platon, *Theaitetos*; in der Übersetzung von Friedrich Schleiermacher oder von Ekkehard Martens (Reclam).

030092	Von Hume und Kant zu Popper und Quine. ‚Klassiker‘ der Theoretischen Philosophie der Neuzeit und Gegenwart			
	Seminar	Thu 8:30-10	GA 03/143	Pulte

In der Neuzeit ist zunächst die Erkenntnistheorie, im Zuge des Aufstiegs der empirischen Wissenschaften und der Mathematik später auch die Wissenschaftstheorie, zu einer zentralen Disziplin der Theoretischen Philosophie aufgestiegen. Beide verfolgen in ‚metaphysikkritischer‘ Absicht das Projekt einer Beschreibung, Analyse und Rechtfertigung (allgemeiner und wissenschaftlicher) Erkenntnismöglichkeiten und Erkenntnisleistungen. Im Seminar werden anhand von Schlüsseltexten die Positionen wichtiger neuzeitlicher ‚Klassiker‘ der Theoretischen Philosophie erarbeitet und diskutiert – mit ‚Klassikern‘ sind dabei einschlägige und wirkungsmächtige Vertreter sowohl der rationalistischen, der empiristischen, der transzendentalphilosophischen wie auch der neueren analytischen Philosophie gemeint.
Das Seminar richtet sich an Studierende der Philosophie im BA-Studium (ab dem 3. Studienjahr) und im MA-Studium, besonders auch an Studierende im ‚Master oft Education‘. Grundlagen in der Theoretischen Philosophie, wie sie in der entsprechenden Einführungsvorlesung erworben werden können, sind Voraussetzung für eine sinnvolle Teilnahme.
Die zu behandelnden Quellentexte werden in Moodle bereitgestellt. Detaillierte Informationen zu Aufbau und Inhalt des Seminars und Bedingungen des Scheinerwerbs werden in der ersten Sitzung am 10.04.2025 gegen. Die Teilnahme an dieser Vorbesprechung ist daher unverzichtbar für den weiteren Besuch des Seminars.

Literatur (Anschaffung erforderlich):
Gabriel, Gottfried: Grundprobleme der Erkenntnistheorie. 4. Aufl., Stuttgart 2019 (utb).

Poser, Hans: Wissenschaftstheorie. Eine philosophische Einführung. 2. Aufl., Stuttgart 2012 (Reclam).

Additional Introductory Courses

030024	Können wir der Wissenschaft vertrauen? Eine Einführung in die Wissenschaftstheorie			
	Seminar	Tue 16-18	GABF 04/716	Wiese

Dieses Seminar stellt eine (selektive) Einführung in die Wissenschaftstheorie dar. Dabei werden wir uns auf die Frage konzentrieren, was gute Wissenschaft von schlechter oder Pseudowissenschaft unterscheidet, und inwiefern gute Wissenschaft vertrauenswürdig ist. Insbesondere werden wir Auszüge aus dem Buch *Why trust science?* von Naomi Oreskes lesen und besprechen. Es handelt sich um eine englischsprachige Lektüre, die Seminarsitzungen werden jedoch auf Deutsch stattfinden.
Zentrale Inhalte der Wissenschaftstheorie, die zu Sprache kommen werden, sind u.a.: der logische Empirismus, Karl Poppers kritischer Rationalismus, Thomas Kuhns Theorie der Struktur wissenschaftlicher Revolutionen, sowie Imre Lakatos' Theorie progressiver Forschungsprogramme und Larry Laudans Theorie dynamischer Forschungstraditionen. Vor diesem Hintergrund werden wir uns in der Lektüre von Oreskes' Buch auch Fragen der Wissenschaftssoziologie und Fragen zu Werten in der Wissenschaft zuwenden.
Wer aktiv am Seminar teilnimmt, wird einen Einblick in zentrale Fragen der Wissenschaftstheorie erhalten, sowie lernen, verschiedene Positionen kritisch zu hinterfragen und zu diskutieren. Zudem werden die Teilnehmer*innen Grundlagen des wissenschaftlichen Arbeitens lernen (u.a. Literaturrecherche, Zitieren, Aufbau einer Hausarbeit etc.).
Es werden keine wissenschaftstheoretischen Kenntnisse vorausgesetzt. Vorausgesetzt werden jedoch die Fähigkeit und Bereitschaft, eine englischsprachige Lektüre zu lesen und zu verstehen.

Literatur:
Godfrey-Smith, P. (2021). *Theory and reality: An introduction to the philosophy of science* (2. Aufl.). The University of Chicago Press.
Kornmesser, S., & Büttemeyer, W. (2020). *Wissenschaftstheorie: Eine Einführung*. J.B. Metzler.
Oreskes, N. (2021). *Why trust science?* Princeton University Press.
https://www.ted.com/talks/naomi_oreskes_why_we_should_trust_scientists

Elective Module 2: Problems and Philosophical Aspects of Logic

030114	An introduction to mathematical philosophy			
	Blocksemi-nar	28.07.2025 29.07.2025 30.07.2025 31.07.2025 01.08.2025 09-18	GA 04/187	Sanders

The idea of using mathematics to solve problems in philosophy is perhaps as old as the discipline itself. Recently, there have been concerted and systematic efforts, initiated by e.g. Hannes Leitgeb, to delineate this as a separate sub-field, christened mathematical philosophy.
In this class, we aim to keep the mathematics required basic but will still obtain meaningful results regarding e.g. vagueness and Quine-Putnam indispensability. An important goal is to show the limitations of mathematical philosophy while also stress its rich results.

030086	Non-deterministic semantics and its applications			
	Seminar	Mo 14-16	GABF 04/358	Skurt, Vaz Silva

Non-deterministic semantics, as introduced by A. Avron, I. Lev, B. Konikowska and A. Zamansky, represents a significant generalization over many-valued semantics, extending the traditional matrix semantics approach in a very natural way, by allowing for the possibility that truth-functions assign sets of values rather than single truth-values. Consequently, the truth-values of complex formulas are not uniquely determined by the truth-values of their subformulas. During this course we will introduce participants to the basics of this framework, the so-called Nmatrices, as well as its metatheory. By discussing recent examples of Nmatrices wrt to Modal Logics and Paraconsistent Logics, we will show and highlight their expressive power over matrix semantics. Finally, we will explore generalizing the concept of Nmatrices to so-called RNmatrices (restricted Nmatrices), as introduced by M. Coniglio and G. Toledo, to introduce even more expressive power and show their significance in current research, in particular for logics who do not enjoy finite matrix semantics.
CP can be earned by a graded written exam.

Literature:
A. Avron and A. Zamansky. Non-deterministic semantics for logical systems. In Handbook of Philosophical Logic: Volume 16, pages 227–304. Springer, 2010.

M. E. Coniglio, L. Farinas Del Cerro, and N. M. Peron. Modal logic with non-deterministic semantics: Part I—Propositional case. Logic Journal of the IGPL, pages 281–315, 2019.
M. E Coniglio and G. V. Toledo. Two decision procedures for da Costa's Cn logics based on restricted Nmatrix semantics. Studia Logica, 110(3):601–642, 2022
M. E Coniglio, P. Pawlowski and D. Skurt. RNmatrices for Modal Logics. Forthcoming
H. Omori and D. Skurt. On Ivlev's semantics for modality. In Many-valued Semantics and Modal Logics: Essays in Honour of Yuri Vasilievich Ivlev, pages 243–275. Springer, 2024.

030007	Prädikatenlogik: Logik II			
	Lecture	Wed 14-16	HGA 30	Kürbis

Building on the course 'Grundzüge der Logik. Logik I', this course deepens knowledge of formal logic. Basic concepts such as validity, soundness, completeness, axiomatic proof systems and systems of natural deduction are first introduced and studied using propositional logic, and then extended to first-order predicate logic (with identity). Basic knowledge of logic is assumed. In an exercise to the lecture, which is an integral part of the course, exercises are worked on and discussed.

Literatur:
Herbert B. Enderton: A Mathematical Introduction to Logic, 2nd ed. (San Diego etc.: Harcourt 2001)
Eliot Mendelson: Introduction to Mathematical Logic, 6th ed. (Boca Raton: CRC Press 2015)

030108	Übung zur Vorlesung Prädikatenlogik: Logik II			
	Exercise	Thu 14-16	GABF 04/354	Kürbis

In the exercise to the lecture, exercises mainly from Enderton's book on propositional and predicate logic of the first level are worked on and discussed.

Literatur:
Herbert B. Enderton: A Mathematical Introduction to Logic
Eliot Mendelson: Introduction to Mathematical Logic, 6th ed. (Boca Raton: CRC Press 2015)

030088	Logician's Tool Kit			
	Blocksemi-nar	Einführung: 07.04. 16-18 25.04. + 26.04. 09.05. + 10.05. 27.06. + 28.06. 10-18	GABF 04/358	Skurt, Steinacker

Solving a wide variety of problems in formal logic requires a great deal of knowledge about which logical techniques can or may be used. Therefore, the aim of this course is to introduce students to various logical techniques and representations of logics, be they proof-theoretical, model-theoretical, of algebraic nature or other, so that they can concentrate on a logical problem itself to be solved. In this course we plan on giving an overview of various forms of proof theoretical representations for (classical and non-classical) logics, as there are axiomatic calculi, tableau calculi, systems of natural deduction, sequent calculi. We will discuss algebraic representations and introduce various model theoretic approaches to problems in formal logic. Thus providing a rich tool kit for prospective logicians. Furthermore, in exercises interwoven with the seminar students will practice the acquired logical techniques in a way such that they ideally learn to select the most suitable for a given problem.
CP can be earned by a graded written exam.

Literature:
P. Steinacker and D. Skurt. Darstellungsformen der Logik. Forthcoming

030106	Frege: Foundations of Arithmetic, Logicism and Neo-Logicism			
	Seminar	Thu 10-12	GABF 04/354	Kürbis

Frege's 'Foundations of Arithmetic' was the first book exclusively devoted to the philosophy of mathematics. It remains one of, perhaps the, most influential books on the topic. And it is not an overstatement to say that it is still the best. Few books can serve as an introduction as well as a source of inspiration for new research. Frege begins his book by asking what numbers are. Discussing, and mostly rejecting, various views earlier writers had put forward, he finally comes to his own solution, with some help from Hume and Leibniz: numbers are objects and the laws of arithmetic are nothing but laws of logic. This position was later called logicism, a version

of which was also espoused by Russell. In this seminar, we will read the entire book from cover to cover, accompanied by Michael Dummett's commentary. Time permitting, we'll look at the more recent developments of Hale's and Wright's neologicism.

Literature:
Essential Reading
Gottlob Frege: Grundlagen der Arithmetik (Breslau: Koebner 1884). Nachdrucke und Neuausgaben bei Olms, Meiner, Reclam. English translations by Austin (Blackwell 1980) and Jacquette (Routledge 2016)
Michael Dummett: Frege. Philosophy of Mathematics (Oxford: Duckworth 1991)
Further Reading
Bob Hale and Crispin Wright: The Reason's Proper Study (Oxford University Press 2001)
Richard Heck: Frege's Theorem. (Oxford: Clarendon Press 2011)
Crispin Wright: Frege's Conception of Numbers as Objects (Aberdeen University Press 1983)

21105 7	Highlights of Theoretical Computer Science			
	Lecture	Tue 14-16 Thu 12-14	MC 1/54 MC 1/84	Walter, Zeume

The insights and techniques of modern theoretical computer science have been key for advances in all areas of computer science. In this course, we will discuss some highlights and the techniques that underpin them.
Possible topics that we might cover:

- Computational models (is there life beyond Turing machines?)
- Kolmogorov complexity (what is the shortest program that produces some output?)
- Communication complexity (how many bits must Alice and Bob exchange to jointly solve a problem?)
- Fine-grained complexity (are some easy problems easier than others? and why?)
- Fast multiplication of numbers and matrices (can you beat the high-school method?)

- Randomness (does it really help to compute faster?)
- Circuit lower bounds (why is it so hard to prove that problems are hard?)
- Convex optimization (how to maximize profit if all you can ask are yes/no questions)
- Hardness of approximation (how easy is it to find near-optimal solutions?)
- Cryptography and computation

If you enjoyed your first course in theoretical computer science in the Bachelor's and would like to deepen your knowledge by getting an overview of the fascinating theory of computing, then this course will be exactly right for you.
Current information such as lecture dates, rooms or current lecturers and trainers can be found in the Ruhr University course catalog https://vvz.rub.de and in eCampus https://www.rub.de/ecampus/ecampus-webclient
More information about the course can be found on https://qi.rub.de/courses/highlights_ss25 and on Moodle.

Prerequisites:
Successful completion of an introductory course on theoretical computer science (covering formal languages, basics of complexity theory including NP-completeness and reductions, basics of computability theory). Interest and motivation to learn about theoretical concepts.

Literature:
There is no single textbook for the course. Some good starting points are:

- Arora, Barak. Computational Complexity: A Modern Approach. Cambridge University Press. A preprint is available at: http://theory.cs.princeton.edu/complexity/book.pdf
- Kozen. Theory of Computation. Springer. 2006.

We will give further pointers to the literature where needed.

211061	Logik in der Informatik			
	Lecture and Exercise	See eCampus	See eCampus	Zeume

Die Studierenden lernen wie sich Problemstellungen durch geeignete logische Systeme modellieren lassen. Sie sollen Syntax und Semantik verschiedener logischer Systeme beherrschen und nutzen können. Sie sollen einige klassische logische Kalküle und Algorithmen kennen sowie diese

durchführen können. Sie sollen weiterhin ein grundlegendes Verständnis für die Logik-Programmierung entwickeln und insbesondere einfache Sachverhalte durch Prolog-Programme auszudrücken können.

Inhalt

Logische Methoden spielen in vielen modernen Anwendungen der Informatik eine wichtige Rolle. Aus Datenbanken werden relevante Informationen mit Hilfe auf Logik basierender Anfragesprachen extrahiert; die formale Verifikation von Software und Hardware basiert auf logischen Spezifikationssprachen und Algorithmen für diese; und Methoden für das automatisierte Schlussfolgern in der künstlichen Intelligenz haben ihre Grundlage in der formalen Logik.
In dieser Veranstaltung werden die formalen Grundlagen von modernen Logiken behandelt, mit einem Fokus auf ihrer Anwendung in der Informatik. Neben der klassischen Aussagenlogik und Prädikatenlogik betrachten wir auch Modallogik. Für jede dieser Logiken formalisieren wir Syntax und Semantik, lernen wie sich informatische Szenarien in ihnen modellieren lassen, und betrachten Algorithmen und Kalküle für Unerfüllbarkeit und Folgerungsbeziehung.

Voraussetzungen:
Informatikstudiengänge: Mathematik 1

Literatur:
M. Kreuzer and S. Kühling. Logik für Informatiker. Pearson, 2006
Uwe Schöning. Logik für Informatiker. Spektrum Akademischer Verlag, 2000

030091	Research seminar on contradictory logics			
	Seminar	Tue 14-16	GABF 04/354	Wansing

This seminar is related to the ERC-Advanced Grant project ConLog, Contradictory Logics: A Radical Challenge to Logical Orthodoxy, and contributes to the idea of research-based learning. The seminar is open to M.A. students with an interest in philosophical logic, the philosophy of logic, and the philosophies of language and of science. Students are invited to suggest papers and topics related to negation inconsistent logics. In the 20th century, many systems of non-classical logic have been developed, including inconsistency-tolerant logics, which are typically all subsystems of classical logic. There are, however, logical systems that are radically different from classical logic insofar as they are nontrivial but contradictory. These logics are in glaring conflict with logical orthodoxy since Aristotle, who called the Principle of Non-Contradiction the firmest of all principles. Nontrivial contradictory logics not only permit inconsistencies in theories, but contain provable contradictions.
A prerequisite for a successful attendance in the seminar is some knowledge of non-classical logic and modal logic, including familiarity with

Gentzen-style proof systems and Kripke models. We will discuss ongoing research into non-trivial contradictory logics and their applications in the philosophy of logic, and will read research papers, old and new, dealing with the notions of contradictoriness, consistency, negation, triviality, and related concepts. In the summer term 2025 we will, in particular, discuss some chapters from a still unpublished book manuscript titled “An Introduction to Connexive Logic“. Students can earn credits by presenting a paper or book chapter and will get detailed feedback.

030124	Research Colloquium “Logic and Epistemology”			
	Colloquium	Thu 14-16	GABF 04/354	Kürbis, Skurt

In this colloquium students will have an opportunity to present a paper on a topic of their choice from philosophical logic or epistemology. This paper may or may not be related to an MA thesis. Background knowledge in analytic epistemology and philosophical logic is required. In addition to presentations by students, there will be talks by guests and invited speakers.
CP can be earned by giving an oral presentation.

Additional Introductory Courses

030004	Introduction to Logic: Logic I			
	Lecture	Mo 14-16	GA 03/49	Straßer

This course is an English lecture which covers exactly the same content as "Grundzüge der Logik: Logik I". You can visit this lecture instead of the German version.
Besides learning the basics of logic, you will also have an opportunity to get in touch with academic English in a gentle and slow way. This will give you an advantage when visiting seminars taught in English at a later point in your studies, or when reading philosophical literature in Englisch (for many groundbreaking works no translations exist (yet)). The lecturer is German-speaking, so you can ask questions in German, if you like. The exam can be in German or English, your choice. You can join any exercise sessions of the Grundzüge der Logik Vorlesung.

Literature:
Arnold Oberschelp, Logik für Philosophen, Metzler, Stuttgart, 1997.
Theodor Sider, Logic for Philosophy, Oxford University Press, 2010.
Jan von Plato, Elements of Logical Reasoning, Cambridge University Press, 2013.
Gerhard Schurz, Logik – Grund- und Aufbaukurs in Aussagen- und Prädikatenlogik, De Gruyter, 2018

030049	Set Theory for Philosophers			
	Seminar	Wed 14-16	GABF 04/609	Oddsson

This seminar surveys the fundamental concepts of set theory relevant to logic, mathematics, and analytic philosophy. It covers the elementary theory of ordinals and cardinals, transfinite induction, the Axiom of Choice, its implications, the Continuum Hypothesis, and major set-theoretical paradoxes, such as the Russell Paradox. This aim of the seminar is to offer an intuitive understanding of some of set theory's key results and to enable the students to deal confidently with set-theoretic concepts and symbols.

Literature:
Paul Halmos, Naïve Set Theory
Keith Devlin, The Joy of Sets

Elective Module 3: Complementary Studies

030103	Game Theory for Philosophy			
	Seminar	Wed 10-12	GABF 04/352	Michelini, Seselja

This course explores the fascinating intersection of game theory and philosophy, where strategic thinking meets ethical dilemmas, scientific inquiry, and social dynamics. Game theory, extensively developed over recent decades, has become a powerful tool for addressing philosophical challenges, from collective action to the foundations of rationality.
In this course, you'll gain foundational game-theoretic tools to analyze a range of philosophical problems. We'll begin with accessible formal concepts, such as normal games, bargaining games, and evolutionary games, examining classic scenarios like the Prisoner's Dilemma and the Stag Hunt. In the second part, we'll explore how these tools illuminate pressing philosophical questions: What insights can game theory provide about scientific collaboration and epistemic games? How does evolutionary game theory explain the emergence of trust and cooperation?
Designed for students with no prior mathematical background, this course aims both at providing students with technical tools to handle game theoretical problems and to present how to use them to deal with philosophical problems.

Literature:
For the formal technical part I will mostly follow (but we will cover only few parts):
Leyton-Brown, K., & Shoham, Y. (2022). *Essentials of game theory: A concise multidisciplinary introduction*. Springer Nature. (https://www.gtessentials.org/)
We will choose the philosophical topics to discuss together. Accordingly, I will upload the necessary material on Sciebo. You can find an overview of possible topics related to philosophy in the following article:
Bruin, B. D. (2005). Game theory in philosophy. *Topoi*, *24*(2), 197-208.
Other possible works we could discuss include:
O'Connor, C. (2020). *Games in the Philosophy of Biology*. Cambridge University Press.
Skyrms, B. (2014). *Evolution of the social contract*. Cambridge University Press.
Bicchieri, C. (2005). *The grammar of society: The nature and dynamics of social norms*. Cambridge University Press.

030054	Introductory Math and Programming for Computational Philosophy			
	Seminar	Tue 10-12	GABF 04/609	Yoo

This course, conducted in English, is complementary to "Agent-based Simulations in Philosophy" course (winter semester).
In recent years, many philosophical developments have made use of heavy computer simulations and gigantic data sets. However, it is a big challenge for philosophy students to engage in such studies, especially for those who lack the required foundations, such as computer programming or probability theory. This course aims to equip students with these foundational tools in programming and math, thus empowering students to engage in contemporary philosophical literature.
Thanks to the advances in modern technology and measurement techniques, scientists can carry out theoretical analyses that involve intense computations. Yet, these tools use large data sets and computer calculations and therefore come with the burden of mathematics and computer programming skills. Philosophers, too, have started to adopt methods relying on computers. For instance, epistemologists have started using computer simulation tools to examine knowledge in a social context where multiple agents interact with each other. The main points made in these works are accessible for a broader philosophical audience. But still, they require basic understanding of math and coding for a good comprehension, and furthermore replicating their arguments. This course aims to provide some of those basic requirements.
Participants are not expected to have taken prior math courses. We plan to proceed step-by-step by starting with some seminal papers in the discipline of network epistemology. From then on, we go through matrix algebra, calculus, statistics, and graph theory. An introduction to Julia programming and practices will be included as we conclude each section. Evaluation (both graded and non-graded credits) is done by an exam focusing on key concepts: eigenvalues, differentiation, probability distribution, and centrality measures. Participants can earn extra exam points by submitting their Julia coding practices on these key concepts.

Literature:
(Introduction)
O'Connor, C., & Weatherall, J. O. (2019). *The Misinformation Age: How False Beliefs Spread*. Yale University Press, ch.2, pp 46-92.
Page, S. E. (2018). *The Model Thinker: What You Need to Know to Make Data Work for You*. Basic Books, Ch. 2. (Programming Julia)
Lauwens, B., & Downey, A. (2019). *Think Julia: How to Think Like a Computer Scientist*. O'Reilly Media. https://benlauwens.github.io/ThinkJulia.jl/latest/book.html
Kalicharan, N. (2021). *Julia - Bit by Bit: Programming for Beginners*. Springer International Publishing.
Sherrington, M. (2015). *Mastering Julia*. Packt Publishing. (Matrix Algebra, Calculus, Statistics)

Knut S., Peter H., Arne S., Andrés C. (2022). *Essential Mathematics for Economic Analysis* (6th ed.). Pearson
Chiang, A. C., & Wainwright, K. (2005). *Fundamental Methods of Mathematical Economics* (4th ed.). McGraw-Hill Education.
Strang, G. (2009). *Introduction to Linear Algebra* (4th ed.). Wellesley-Cambridge Press.
Dennis D. Wackerly, William Mendenhall, Richard L. Scheaffer - Mathematical Statistics with Applications-Cengage Learning (2008) (Graph Theory)
Barabási, A.-L. (2016). *Network Science*. Cambridge University Press. http://networksciencebook.com/
Menczer, F., Fortunato, S., & Davis, C. A. (2020). *A First Course in Network Science*. Cambridge University Press.
Jackson, M. O. (2010). *Social and Economic Networks*. Princeton University Press.
Easley, D., & Kleinberg, J. (2010). *Networks, Crowds, and Markets*. Cambridge University Press. (Computational Epistemology)
Weatherall, J. O., O'Connor, C., & Bruner, J. P. (2020). How to Beat Science and Influence People: Policymakers and Propaganda in Epistemic Networks. *The British Journal for the Philosophy of Science*, *71*(4), 1157–1186.
Weatherall, J. O., & O'Connor, C. (2021). Conformity in scientific networks. *Synthese*, *198*(8), 7257–7278.
Zollman, K. J. S. (2007). The communication structure of epistemic communities. *Philosophy of Science*, *74*(5), 574–587.

030089	Decision Theory: A Philosophical Introduction			
	Seminar	Thu 14-16	GABF 04/609	Wang

This course introduces selected topics in decision theory , which has been developed to model normative and descriptive aspects of rational decision-making across various disciplines. Philosophers, in particular, have focused on the foundational issues of decision theory, and the application of its toolbox to solving philosophical problems. In this introductory course, we will explore formal explications and philosophical interpretations of some standard models for rational decisions made under certainty and uncertainty. Topics include rational preference and choice, as well as the von Neumann-Morgenstern and Savage models, along with their representation theorems. A basic knowledge of first-order logic is assumed. Familiarity with probability calculus and set-theoretic reasoning is beneficial but not mandatory.

Literature:

Peterson, M. (2009). An Introduction to Decision Theory, Cambridge: Cambridge University Press.
Kreps, D. M.(1988). Notes On The Theory Of Choice, Boulder: Westview Press.
Savage, L. J. (1954). The Foundations of Statistics, New York: John Wiley and Sons.
Jeffrey, R. C. (1965).The Logic of Decision, New York: McGraw-Hill.

030090	Advanced Topics in Decision Theory			
	Blocksemi-nar	21.07. + 22.07. 24.07. + 25.07. 12-18	GABF 04/358	Wang

This course introduces advanced topics in decision theory, including evidential and causal decision theory, decision-making under risk or ignorance, and dynamic choice. Students are expected to have a solid understanding of introductory decision theory and the mathematical preliminaries required to read and comprehend mathematical proofs related to decision theory. Therefore, it is highly recommended that students take "Decision Theory: A Philosophical Introduction" before enrolling in this course.

Literature:

Peterson, M. (2009). An Introduction to Decision Theory, Cambridge: Cambridge University Press.
Kreps, D. M. (1988). Notes On The Theory Of Choice, Boulder: Westview Press.
Savage, L. J. (1954). The Foundations of Statistics, New York: John Wiley and Sons.
Jeffrey, R. C. (1965). The Logic of Decision, New York: McGraw-Hill.

030115	Arguments in Action: Debating			
	Seminar	09.05. 16.05. 30.05. 06.06. 20.06. 11.07. 14:30-17:30	Wasserstraße 221/4	Seselja

Debating is practiced across the world as one of the most efficient methods of learning the skills of critical thinking and public speaking. In this course students will learn to debate according to some of the standard for-

mats of structured debating, to compose a case for and against a given motion, to pose critical and clarificatory questions to an opponent, and to protocol and evaluate debates. Throughout the course, we will cover the basics of argumentation theory, applied to concrete examples and analyze arguments exchanges throughout the debate. To gain credit points, you are expected to be present at each class. To get a grade, you also have to submit an essay developing a case for and a case against a specific motion, which will be given at the end of the course.
The seminar will take place on 6 Fridays, each time from 14:30-17:30 in Wasserstr. 221: May 9, May 16, May 30, June 6, June 20, July 11.

Literature:
The reading list will be provided at the start of the course.

030109	Philosophy and Argumentation			
	Seminar	Thu 14-16	GABF 05/703	Horvath

It is almost a commonplace that rational argumentation – that is, the giving and demanding of reasons – is the central method of philosophy par excellence, and that most philosophers like nothing better than to argue endlessly and tirelessly with one another. All the more surprising, then, is the fact that in contemporary metaphilosophy many methods have received significantly more attention, even though they are far less central. Examples include the role of intuitions in philosophy, thought experiments or – more recently – the use of experimental methods in philosophy. It therefore seems timely to refocus on the role of argumentation as the central philosophical method. In this seminar, we will discuss metaphilosophical questions about the role of argumentation and disagreement in philosophy, as well as examine foundational approaches to argumentation theory and their relevance for philosophy. Basic knowledge of elementary logic and argumentation theory is helpful for the seminar but not required. Reading and discussing English texts, on the other hand, should not be a problem.

030125	Technikphilosophisches Forschungskolloquium			
	Colloquium	Tue 16-18	GA 3/143	Weydner-Volkmann

Forschungskolloquium zu Themen der Technikphilosophie und Technikethik. Es werden Konzepte für BA- und MA-Abschlussarbeiten vorgestellt und diskutiert. Zudem werden aktuelle Forschungstexte und Entwürfe ge-

lesen und diskutiert. Im Rahmen des Colloquium Digitale wird das Forschungskolloquium durch Gastvorträge zu Themen der Ethik und Philosophie der Digitalisierung ergänzt.

Organisatorischer Hinweis:
Bedingung für die Teilnahme ist die Anmeldung (bzw. Planung) einer Abschlussarbeit im Arbeitsbereich „Ethik der digitalen Methoden und Techniken“. Bei regelmäßiger Teilnahme und dem Vorstellen eines eigenen Konzeptes kann eine kleine Studienleistung erworben werden.

030117	Introduction to Pragmatics in Philosophy and Linguistics			
	Lecture	Wed 10-14 bi-weekly Prospective dates: 09.+30.04, 14.+28.05, 04.+25.06 (02.07 or 18.06. to be confirmed)	GABF 04/354	Spychalska

This course introduces basic notions and concepts in pragmatics such as implicatures, presuppositions, speech acts, deixis. We will read chapters from Levison “Pragmatics” and Huang “Pragmatics” as well as selected articles. Students will be expected to give a presentation in English and work on a pragmatics-related experimental project in a team. Part of the meetings will involve instructor-team consultations on the project (also via zoom).
Requirements: Active participation and a presentation in class

Literature:
Levinson, S. C. (1983). Pragmatics. Cambridge: Cambridge University Press. Huang, Yan (2007). Pragmatics. Oxford University Press
Selected articles (to be provided)

030091	Natural Language Ontology			
	Seminar	Mo 14-16	GA 04/187	Liefke

Natural languages (like English and German) assume many different kinds of objects. For example, to interpret the sentence *Every boy admires Mary*, we need to assume individuals (i.e. boys, Mary), properties (being a boy), relations (admire), etc.. This course investigates the ontological systems

that arise from such assumptions. The study of such systems has recently gained momentum in the discipline of 'natural language ontology', which lies at the interface of metaphysics, philosophy of language, and philosophy of science.
The first half of the course will survey different strategies for identifying a language's ontological commitments. These strategies reveal a plethora (or 'zoo') of ontological categories that includes -- next to individuals, properties, and relations -- e.g. events, degrees, and kinds. The second half of the course will investigate how this 'zoo' can be reduced to a smaller set of categories, and will explain why such reduction is desirable. It will compare the ontological commitments of different reductions and will identify relations between different reduced ontologies. In this way, students will gain insight into the requirements on minimal ontologies and the challenges for ontology engineering.

Prerequisites:
Basic familiarity with logic and the philosophy of language.

Literature:
Selected readings: All readings will be made available on Moodle.
Bach, E. (1986). Natural language metaphysics. In R.B. Marcus, G.J.W. Dorn, & P. Weingartner (eds.), *Logic, Methodology and Philosophy of Science VII* (pp. 573–593). Elsevier.
Liefke, K. (2024). *Natural Language Ontology and Semantic Theory*. Cambridge University Press. https://doi.org/10.1017/9781009307789
Liefke, K. (2025). *Reduction and Unification in Natural Language Ontology*. Cambridge University Press. https://doi.org/10.1017/9781009559683
Moltmann, F. (2022b). Natural language ontology. In E.N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy*: Winter 2022 edition. Metaphysics Research Lab, Stanford University.

030116	The experimental investigation of language-related phenomena in philosophy, linguistics, and cognitive science: EEG			
	Seminar	Wed 14-18 bi-weekly Prospective dates: 09.+30.04, 14.+28.05, 04.+25.06 (18.06. or 02.07. to be confirmed)	GABF 04/352	Spychalska

This course introduces EEG research in the area of philosophy of language, linguistics and cognitive science, especially focusing on semantics and pragmatics. It will include overview lectures of the method, in particular aspects such as experimental design, measurement, ERP components, basis principles of analysis and interpretation the results. The course will involve team project, where students will conceptualize their own study based on provided literature. Part of the course will involve consultation team-instructor meetings (also via zoom) aimed at discussing and improving the team projects. Final projects will be presented and discussed in class.
Requirements: Presentation and a team project

Literature:
Selected articles (to be provided).

030102	Philosophy of Psychiatry			
	Seminar	Mo 12-14	Wasserstraße 221/4	Seselja, Straßer

The field of philosophy of psychiatry examines the conceptual, methodological, and ethical foundations of psychiatric theory and practice. This course introduces core themes and debates in this research area. Central questions we will discuss include: What is a mental disorder? Are mental disorders biological or social? Do mental disorders even exist?

Literature:
The course literature will be provided on moodle. The language of the seminar and of all texts we will discuss is English.

030073	Feministische Philosophie und Kritik des philosophischen Kanons			
	Seminar	Mo 16-18	GABF 04/71	Breil

Das Seminar richtet sich an MEd- sowie MA-Studierende. All genders welcome.
„Gleiches Recht für alle!“, ist eine der zentralen Forderungen der feministischen Theoriebildung. Die kritische Auseinandersetzung mit und Dekonstruktion von androzentrischen Strukturen des institutionellen Philosophierens und des lebensweltlichen Miteinanders sowie eine gender-, class- und race-sensible Theoriebildung sind die zentralen Anliegen der feministischen Philosophie, deren Wurzeln bis in die Antike zurückverfolgt werden können.

Gegenstand des Seminars ist ein ausgewählter und textbasierter Einblick in historische sowie aktuelle feministische Strömungen (von Differenz-, über Öko- bis zum Technofeminismus), anhand derer zentrale Konzepte (z.B. Intersektionalität) und Zusammenhänge (z.B. mit tierethischen, postkolonialen und kapitalismuskritischen Ansätzen) diskutiert werden sollen.
Aufbauend auf der inhaltlichen Auseinandersetzung mit den Texten stellen wir uns im Seminar immer wieder die Frage nach der Möglichkeit und Notwendigkeit gendersensiblen Lehrens. Welchen Ansprüchen muss ein feministischer Kanon in Schule und Hochschule genügen? Wie sind historische Quellen in aktuelle feministische Diskurse einzuordnen? Muss der feministischen Theoriebildung ein besonderer Stellenwert in der Philosophiedidaktik zukommen?

Ablauf:
Wöchentliche Teilnahme und Textlektüre. Zur wöchentlichen, vorbereitenden Textlektüre gibt es schriftliche Aufgaben, die über Moodle einzureichen sind. Nach Absolvieren der schriftlichen Aufgaben kann im Seminar ein Essay (Studienleistung) geschrieben werden.
Wenn das Seminar im Modul WM IIIc belegt wird, dann ist nach dem erfolgreichen Abschluss der Aufgaben und des Essays zusätzlich als Prüfungsleistung eine schriftliche Hausarbeit (Umfang 15-20 Seiten) möglich.

Literatur:
Literatur zur Vorbereitung:
Hagengruber, Ruth (2014): Ethik und Geschlecht. In: ZDPE 3, S. 78.
Küppers, Carolin (2012): Soziologische Dimensionen von Geschlecht. In. APuZ 62 (20–21), S. 3–8.
Adichie, Chimamanda Ngozi (2014): We should all be feminists. New York: Vintage.
Grundlagenliteratur für Philosophiedidaktik:
Pfister, Jonas (2014): Fachdidaktik Philosophie, 2. Aufl., Bern: Haupt/UTB.
Richter, Philipp (Hg.) (2016): Professionell Ethik und Philosophie unterrichten. Ein Arbeitsbuch, Stuttgart: Kohlhammer.
Thein, Christian (2020): Verstehen und Urteilen im Philosophieunterricht, 2. Auflage, Opladen u.a.: Budrich.

030107	Writing a Bachelor or Master Thesis in English			
	Seminar	Fri 14:30-17.45	Wasserstraße 221	Seselja, Straßer

25.04.,
02.+23.05.,
13.06., 04.07.

In this course we will cover the basics of academic writing of philosophy theses and essays (including seminar papers, BA and MA theses), focusing on the following issues: How to structure and organize an academic article? How to concisely express the main thesis and aims of the paper? How to develop strong arguments? How to find the relevant sources? And so forth.
The seminar is targeted at students who are in the process of writing a Bachelor or Master thesis, or who will do so soon.
Students have opportunities to present ideas and drafts of chapters. In the seminar these contributions will be examined in terms of academic language, argumentative structure, style, etc. Students will give (guided) peer review of the contributions.
The seminar will take place in five blocks (April 25, May 2, May 23, June 13, July 4), each time at 14:30-17:45. In addition, students will have individual (online) coaching sessions in between the blocks.

030129	Colloquium Philosophy of Information and Communication			
	Colloquium	Tue 12-14	GA 04/187	Liefke

This colloquium (co-organized with Prof. Daniel Gutzmann, Germanistik) serves the discussion of current topics in semantics, pragmatics, and the philosophy of language. The colloquium combines talks by international experts with presentations of local researchers and (PhD/MA) students. Students will be given the opportunity to present their (ongoing) work in English. A detailed schedule will be available by mid-March at https://www.ruhr-uni-bochum.de/phil-inf/colloquium/index.html.en.

030130	Philosophy Meets Cognitive Science: Memory and Language			
	Colloquium	Tue 12-14	GA 04/187	Werning

In the research colloquium current topics at the interface between Philosophy and Cognitive Science will be discussed. The colloquium hosts talks by leading international experts and local researchers as well as presentations by doctoral and master students. Students will be given the (assisted) opportunity to present their projects in English.
This semester the sessions of the research colloquium will alternate in a

bi-weekly rhythm between the topics “Memory” and “Language”. A detailed schedule will be published in due course at https://www.ruhr-uni-bochum.de/phil-lang/colloquium.html. Talks will be held either online via Zoom or in person.