

Belief Change and Information Exchange: Current Trends in Epistemic Logic

May 18-22, 2026

Venice International University Isola di San Servolo, Venice

VIU Graduate Seminar

Belief Change and
Information Exchange:
Current Trends in
Epistemic Logic

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VIU Global Challenges
Initiatives

An increasing amount of information, including misinformation, disinformation, and (deep)fake news, is increasingly disseminated through both traditional and new media. Our societies need to address and prevent such problems, which affect our belief systems, decision-making process, and public discourse, by developing information strategies and policies. And this largely relies on grasping logical models of belief, which reveals how belief systems and related concepts (such as preferences, desires, questions, and doubts) form and change, as well as how information exchange between individuals influences one's belief inferences. Epistemic logic offers a thorough analysis of the underlying assumptions, definitions, inference rules, and semantic characterizations of knowledge and belief by examining statements like "Agent A knows X" or "Agent A believes Y." Recent development in epistemic logic is particularly useful for modelling belief changes in both single-agent and multiagent systems, as well as in philosophical discussions. The Graduate Seminar "Belief Change and Information Exchange: Current Trends in Epistemic Logic" will delve into these models.

The primary focus of the Graduate Seminar will be introduced through both classical and contemporary, as well as syntactic and semantic, methodological approaches in epistemic logic, including propositional logic, modal logic, dynamic systems, inquisitive logic, theories of belief revision, possible world semantics, inquisitive semantics, and game-theoretical semantics. Additionally, we will help students understand: (i) how these approaches relate to topics in scientific disciplines, such as multi-agent systems in artificial intelligence (AI) and robotics, distributed systems in computer science, and models of belief revision in cognitive psychology; and (ii) how they can address contemporary social issues mentioned at the beginning, such as the spread of false information on social media and its influence on public belief systems, as well as how individuals or groups form and revise beliefs in political or social contexts.

This Graduate Seminar will be led by

- Tsinghua University
- University of Padua
- Ludwig-Maximilians-Universität München

Faculty

Fenrong Liu, Tsinghua University Chenwei Shi, Tsinghua University Norbert Gratzl, Ludwig-Maximilians-Universität München

Massimiliano Carrara, University of Padua Ivano Ciardelli, University of Padua Wei Zhu, University of Padua Hans Rott, University of Regensburg

Methodology

The Graduate Seminar will involve a combination of lectures, workshops, group discussions, and case studies.

Topics

- Epistemic logic
- Dynamic epistemic logic
- Inquisitive dynamic epistemic logic
- Possible world semantics
- Game-theoretical semantics
- Inquisitive semantics
- Non-monotonic reasoning
- Belief revision and iterated belief revision
- Betterness relation and preference logic
- Logics for social networks and multi-agent systems
- Proof-theory of predicate logic and related systems

Learning outcomes for participants

Students will gain broad experience working in an international context, across disciplines, languages, and cultures. Through lectures, workshops, group discussions, and case studies, they will enhance their logical reasoning skills in exploring specific philosophical-logical questions, while also improving their communication abilities to share and exchange ideas on a global platform. The faculty will help students understand the formation and evolution of various theoretical considerations and

methodological approaches, encouraging them to develop their own theoretical strategies on belief-related topics, grounded in a deep understanding of the complexities of epistemic logic. Furthermore, students will recognize the extensive application of logical models in both theoretical and applied fields. This will enable them to critically assess the rationality of belief change and information flow in society, with practical relevance to pressing global issues.

Who can apply?

This Graduate Seminar is offered to Master students, PhD students, and young researchers in Logic, Epistemology, Social Sciences, Cognitive Sciences, Psychological Sciences. Open to candidates from all the VIU Member Institutions; applications from excellent candidates from nonmember institutions will be also considered and evaluated.

Fees & Grant Support

Full fee waiver scholarships are available for students from VIU member institutions. In addition, grant support is available to support partially or fully the costs of international travel. Accommodation is provided free of charge. The participation fee for students of non-member institutions is Euro 1.150 VAT included. The fee is inclusive of tuition, course materials, accommodation, lunches, social events and taxes. Students from non-member institutions are not eligible for VIU grant support. VIU Alumni are eligible for a reduced fee.

Credits

Participation in the Graduate Seminar is considered equivalent to **2 ECTS**.

The program is available on the VIU website.

Applications

November 1, 2025 – January 20, 2026 via the VIU website

Applicants must submit the application form, a letter of motivation – which should include a brief description of the candidate's research interests, a curriculum vitae, and a photo.

VIU Graduate Seminars

These are thematic intensive seminars given in a concentrated period on subjects of universal interest, open to a broad spectrum of disciplines. They are suited to both Master's and PhD students as well as junior researchers and are open to candidates from all the VIU member institutions. The young researchers will receive support in defining their research proposal. Significant cooperation among departments in the member institutions is expected.

Venice International University is a consortium of 23 institutions, representing 14 countries throughout the world. The mission of VIU is to foster cooperation among VIU member institutions while facilitating the exchange of

knowledge and ideas, by developing, promoting and organizing joint academic, research, and training/capacity-building programs. Students from non-member institutions may participate in selected academic programs. The academic programs at VIU are distinguished by a markedly interdisciplinary approach to the topics, and by the international perspectives that the participants contribute to the discussions. The VIU campus is on the island of San Servolo in Venice, Italy.

Location





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