COURSE UNIT (MODULE) DESCRIPTION

Course unit (module) title	Code
EN: Introduction to Formal Semantics and Pragmatics **LT: Formaliosios semantikos ir pragmatikos įvadas**	

Academic staff	Core academic unit(s)
Coordinating: Dr. Alexandre Cremers **Other**: N/A	Faculty of Philology Institute for the Languages and Cultures of the Baltic, Centre for Scandinavian Studies

Study cycle	Type of the course unit
BA	Elective

Mode of delivery	Semester or period when it is delivered	Language of instruction
Face-to-face	Spring semester	English

Requisites	
Prerequisites: English (B2)	**Co-requisites (if relevant):** None

Number of ECTS credits allocated	Student's workload (total)	Contact hours	Individual work
5	128	48	80

Purpose of the course unit

This course introduces the formal study of meaning in natural language. We start with the basics of logic as a toolkit for representing what sentences say. We then use these tools to build a semantics for a fragment of English: how the words combine into meaningful sentences, how quantifiers like 'every' and 'some' work, and what truth-conditions tell us about meaning (and what they leave out).
In the second half, we go beyond literal meaning to discuss speaker intentions and how a pragmatic listener can recover them: we explore Gricean theories of pragmatics and how we can enrich literal meaning by considering not just what was said, but also what was **not** said (*implicatures*).
The course assumes no prior background in logic or mathematics. The course will focus on in-class collaborative exercises to make sure everyone gets comfortable with the formalism. By the end of the course, you will be able to translate simple English sentences into logical notation, evaluate arguments for validity, and explain pragmatic phenomena such as implicatures with precise, testable tools. A useful foundation for anyone interested in syntax, philosophy of language, computational linguistics, or simply in thinking clearly about what words do.

Learning outcomes of the course unit	Teaching and learning methods	Assessment methods
Logic fundamentals: Be familiar with propositional and first-order logics. Be able to understand logic formulas and assess their well-formedness. Be able to calculate truth-	• Lectures • In class exercises	Homework Mid-term exam Final exam

tables and to manipulate logical formulas. Be able to provide a counter-example (model) to falsify a first-order logic formula.		
Compositional semantics: Explain the principle of compositionality, be able to translate simple English sentences into first-order logic and detemine their truth-conditions.	• Lectures • In class exercises	Homework Mid-term exam Final exam
Pragmatics: Understand the difference between a sentence and an utterance, between literal meaning and pragmatic enrichments. Be able to derive implicatures by applying the Gricean Maxims.	• Lectures • In class discussions and exercises	Homework Final exam
Critical thinking and argumentation: Evaluate everyday arguments for validity, identify why some inferences are legitimate and others are not, and recognize the logical mechanisms behind common rhetorical tricks.	• In class discussion of chosen examples	Assessed mostly indirectly through problem sets and exam questions requiring students to identify logical form, diagnose fallacies, and justify their verdicts.

Content	**Contact hours**			**Individual work: time and assignments**	
	Lectures	Seminars	**Contact hours total**	**Individual work**	**Tasks for individual work**
Introduction: Language, Meaning, and Logic	2		**2**	**2**	Reading
Propositional logic I: connectives, truth tables, translation from English	2	2	**4**	**4**	Reading, problem set
Propositional logic II: validity, entailment	2		**2**	5	Reading, problem set
First-order logic I: predicates, constants, variables	2	2	**4**	5	Reading, problem set
First-order logic II: models and satisfaction	2		**2**	5	Reading, problem set
Semantics I: Quantification in natural language, scope ambiguity	2	2	**4**	5	Reading, problem set
Semantics II: Presuppositions	2		2	5	Reading, problem set
Logic and Semantics recap week		4	**4**	5	Reading, revision
Mid-term test		2	**2**	6	Revision
Pragmatics I: Semantics vs Pragmatics, Speech-acts	2	2	**4**	5	Reading, problem set
Pragmatics II: Grice, Cooperative Principle and Maxims, Implicatures	2		**2**	5	Reading, problem set
Pragmatics III: Horn scales, Scalar implicatures	2	2	**4**	5	Reading, problem set
Pragmatics IV: Disjunction and alternatives	2		**2**	5	Reading, problem set
Pragmatics V: Implicatures of quantified sentences	2	2	4	5	Reading, problem set
Pragmatics VI: Lying with implicatures, Cornering with presuppositions	2		**2**	5	Reading
Review, Exam preparation, Exam	2	2	4	8	Reading, revision
Total	**28**	**20**	**48**	**80**	

Assessment strategy	Weight %	Deadline	Assessment criteria
Mid-term test	40	Mid-Semester	Assessment Criteria (10 points total): • Accuracy of translation and formalization (3 points): Correctly translate English sentences into propositional/first-order formulae, choosing appropriate predicates, connectives, and quantifier structure. • Command of semantic evaluation (3 points): Correctly evaluate truth values in a model (truth tables, satisfaction, quantifier scope), and determine entailment/validity with correct justification. • Understanding of key concepts (2 points): Accurately explain notions such as compositionality, truth conditions, scope ambiguity, and presupposition (including triggers and projection) in own words. • Clarity and justification (2 points): Answers are properly justified, reasoning is valid, formal work is legible.
Final exam	60	Semester	Assessment Criteria (10 points total): • Application of semantic and pragmatic theory (5 points): Correctly identify and analyze implicatures of sentences similar to those studied in class, deriving them by offering a logical translation then applying the maxims and Horn scales. • Analysis of linguistic data (3 points): Interprets novel English examples accurately, distinguish what is said from what is implicated or presupposed. Informally explain their rhetorical effects. • Generalization (2 points): Apply the theory to new cases which only share part if their structure with examples studied during the semester.

Author (-s)	Publishing year	Title	Issue of a periodical or volume of a publication	Publishing house or web link
Required reading				
Coppock, E., & Champollion, L.	2019	*Invitation to formal semantics.*	Manuscript, Boston University and New York University	https://eecoppock.info/bootcamp/semantics-boot-camp.pdf
Recommended reading				
Heim, I., & Kratzer, A.	1998	*Semantics in generative grammar.*	Wiley-Blackwell	https://www.academia.edu/81121459/Semantics_in_Generative_Grammar
Sauerland, U.	2004	*Scalar implicatures in complex sentences.*	Linguistics and Philosophy, 27(3), 367-391	https://link.springer.com/article/10.1023/B:LING.0000023378.

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