

## HUMAN LANGUAGE TECHNOLOGY A RESEARCH FIELD AT THE INTERSECTION OF LINGUISTICS & COMPUTER SCIENCE

Human Language Technology is a rapidly developing research field. In current Humanities research, a firm background in language technology is extremely valuable for manipulating large datasets. The Computational Lexicology and Terminology Lab (CLTL) offers a specialization in the research master Humanities in which students are trained in human language technology. A human language technology expert has knowledge of technology as used in computer applications (e.g. search engines) and of relevant linguistic theories.

### WHY STUDY AT VU AMSTERDAM?

The Computational Lexicology and Terminology Lab (CLTL) is one of the world's leading research institutes in human language technology. Prof. Dr. Piek Vossen, recipient of the NWO Spinoza Prize, heads



**"IN THIS DEGREE I DISCOVERED HOW LANGUAGE REALLY WORKS; FIGURE IT OUT ONCE AND THEN TEACH THE COMPUTER!"**

Chantal van Son, PhD student at the Computational Lexicology and Terminology Lab (CLTL) [WWW.CLTL.NL/HLT](http://WWW.CLTL.NL/HLT)

the group of international researchers that are working on interdisciplinary projects, including the Spinoza project 'Understanding Language by Machines'.

Become part of an international group of researchers at VU Amsterdam!

### CAREER PROSPECTS

You can set up your own research direction as a PhD student or you can embark on a career in a research institute or at the language industry. We offer the possibility of combining your thesis with an internship in research or at the language industry.

### ADMISSION REQUIREMENTS

- Applicants must have a Bachelor's degree in Linguistics, Artificial Intelligence or a comparable Bachelor programme, with an average grade of minimally 7.5.
- Applicants who do not meet the requirement(s) are also encouraged to apply, provided that they have a sound academic background and a demonstrated interest in and knowledge of engineering and/or linguistics.

**HUMAN LANGUAGE TECHNOLOGY  
HUMANITIES RESEARCH MASTER  
DURATION: 2 YEARS FULLTIME  
DEADLINE: APRIL 1 (NON-EU STUDENTS)  
1 JUNE FOR DUTCH AND EU STUDENTS**

### SCHOLARSHIPS

We are proud to offer support for highly motivated and excellent students:  
\* The VU Fellowship Programme (VUFP) for EU and non-EU students

### MORE INFORMATION

[WWW.VU.NL/HUMANITIES](http://WWW.VU.NL/HUMANITIES)

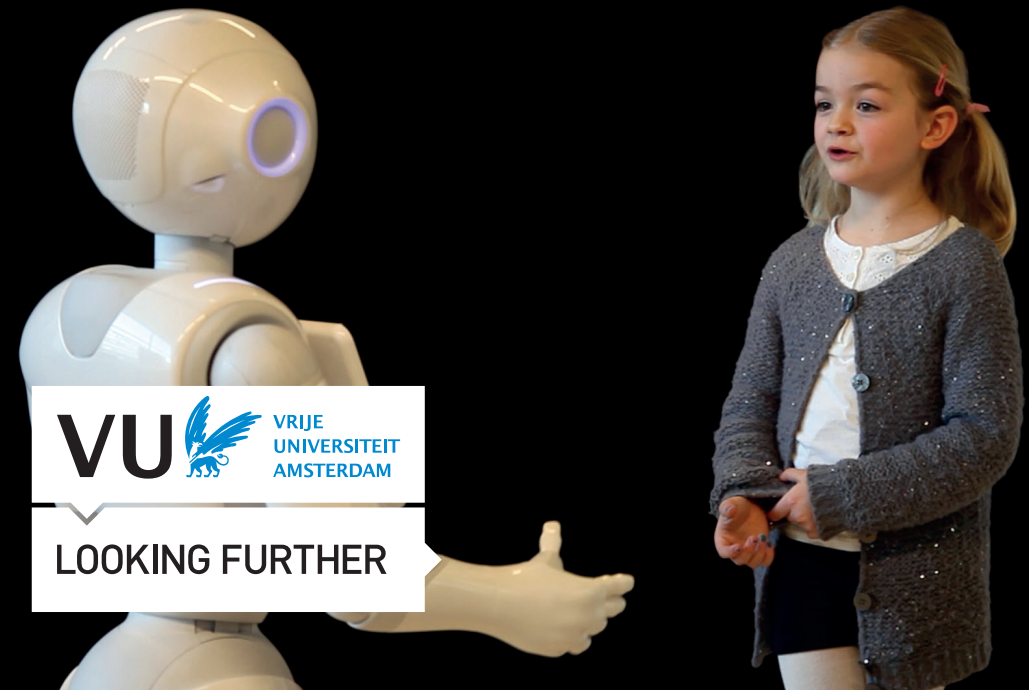
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## HUMANITIES RESEARCH MASTER

## HUMAN LANGUAGE TECHNOLOGY

[WWW.VU.NL/HUMANITIES](http://WWW.VU.NL/HUMANITIES)



**VU**  **VRIJE  
UNIVERSITEIT  
AMSTERDAM**

**LOOKING FURTHER**

YEAR 1	PERIOD 1	PERIOD 2 & 3	PERIOD 4	PERIOD 5 & 6
<b>CORE COURSE GENERAL LINGUISTICS [9 EC]</b>	<b>INTERDISCIPLINARY RESEARCH IN THE HUMANITIES (6 EC)</b>	<b>ESSENTIALS OF HUMANITIES RESEARCH (6 EC)</b>	<b>TERM PAPER [9 EC]</b>	
This is an advanced introduction to grammatical notions and theories that are used as analytical tools in applied linguistics. You will deepen knowledge of grammatical theory & of current approaches to phonology, morphology and syntax.	You will be introduced to the history and philosophy of the Humanities, the VU research environment and cross-cutting themes such as Digital Humanities and Environmental Humanities. How can we connect Humanities research with societal challenges?	This is the first Humanities research design course: you will train to position yourself in an international research field and learn to design and present innovative Humanities research. You will also take active part in the lectures of the Graduate School of Humanities.	Writing a research paper forces you to define the boundaries of your research. Secondly, it helps organize your ideas and present them in a cohesive and logical form. You will be guided through this process and receive detailed feedback on your paper.	
<b>LINGUISTIC RESEARCH PROJECT [6 EC]</b>	<b>PYTHON PROGRAMMING FOR TEXT ANALYSIS [9 EC]</b>	<b>NATURAL LANGUAGE PROCESSING TECHNOLOGY [9 EC]</b>	<b>NETHERLANDS RESEARCH SCHOOL OF LINGUISTICS [12 EC]</b>	
You explore NLP research by collaborating with different researchers from our group, interview them, read background literature and write a report. You will learn about exciting international projects at the frontier of science.	You learn the basic skills for developing your own computer programs and run these from a command line. We gently submerge you into the world of Python with a strong focus on text processing.	NLP is a highly dynamic research field that requires knowledge of both linguistics and technology. You will acquire the tools needed to carry out research in NLP covering both theory and practical skills involved in state-of-the-art approaches.	All students enrol in a Humanities National Research School at the start of their study. You may choose a selection of courses, master classes, summer or winter schools for 10 EC - over 2 years in periods 3 & 6.	

YEAR 2	PERIOD 1	PERIOD 2 & 3	PERIOD 4	PERIOD 5 & 6
<b>COMPUTATIONAL LEXICON [6 EC]</b>	<b>HUMANITIES RESEARCH CAREER PREPARATION [6 EC]</b>	<b>RESEARCH THESIS or THESIS BASED ON AN INTERNSHIP [30 EC]</b>		
In this course, you will learn about the most influential lexicons in the world. WordNet and FrameNet not only capture major properties of languages, but are also widely used in Natural Language Processing and language technology.	Through intensive training and supervision, you will learn to write a research proposal for (inter)national science foundations, and learn to design and position an innovative Humanities research project.			
<b>SUBJECTIVITY MINING [6 EC]</b>	<b>MACHINE LEARNING [9 EC]</b>			
Subjectivity is part of reality and this is especially apparent in language. You will learn how to model subjectivity relations in text and how to automatically detect and analyze subjectivity in large text collections such as tweets, news, and product reviews.	NLP algorithms based on machine learning are widely used for the understanding of language by machines and in analyzing big data. You will become familiar with the principles behind supervised and unsupervised techniques and learn to apply the tools and algorithms in research projects.			

### MORE INFORMATION

Human Language Technology is a track of the Humanities Research Master, specialization Linguistics  
 For more details on the programme, admission and application:  
[WWW.VU.NL/HUMANITIES](http://WWW.VU.NL/HUMANITIES)  
[WWW.CLTL.NL/HLT](http://WWW.CLTL.NL/HLT)  
 Dr. H. D. van der Vliet  
 Email: [h.d.vander.vliet@vu.nl](mailto:h.d.vander.vliet@vu.nl)

### LEGEND:

- Obligatory for all students of the VU Humanities Research Master
- Obligatory for all students of the Linguistics Research Master specialization
- Courses in the track Human Language Technology
- Optional courses: summer/winter school at a National Research School