HUMAN LANGUAGE TECHNOLOGY - GRADUATE CERTIFICATE

The explosive growth of the web and the vast improvements in computing power in the last decade have led to a strong need for education and research in human language technology. Human language technology is an interdisciplinary field that includes the following key technological and scientific areas:

- Computer speech recognition and understanding
- Natural language understanding and generation
- Text-based information retrieval
- Web-based dialog agents

CU Boulder's interdisciplinary certificate in human language technology, offered jointly by the Institute of Cognitive Science; the Department of Computer Science; the Department of Linguistics; and the Department of Speech, Language and Hearing Sciences, provides a rich and broad background for students interested in computational tools for human language processing.

To learn more about the certificate, visit the Institute of Cognitive Science (https://www.colorado.edu/ics/graduate-programs/human-language-technology-certificate/) website.

Required Courses and Credits

The curriculum for the certificate consists of *five* different courses, as shown in the course table below. Three of these five required courses must be taken at the graduate level.

Code	Title	Credit Hours
Programming		
One semester of programming required (waived for those with programming background).		
CSCI 1300	Computer Science 1: Starting Computing	4
Core Courses		
Choose three core courses from the list below; at least two must be outside the student's home department and college.		9
Speech and Language Technologies		
CSCI 5832	Natural Language Processing	
CSCI 6302	Speech Recognition and Synthesis	
Human Communication		
SLHS 2010	Science of Human Communication	
LING 5030	Linguistic Phonetics	
LING 5420	Morphology and Syntax	
LING 7800	Open Topics in Linguistics	
Optional Course		
Choose one from the optional course list (or two if programming was waived). Extra courses from the core list (beyond the required three) can also be counted as optional courses. [1]		3
Total Credit Hours		**16**

[1] For a full list of core and optional courses, visit the ICS website (https://www.colorado.edu/ics/graduate-programs/human-language-technology-certificate/).