

December 13, 2018

Curriculum Committee
Office of Undergraduate Studies
Sterling Sill Center
CAMPUS

Dear Committee Member,

I am writing to offer my strong endorsement of the proposed certificate in Computational Linguistics. This collaboration between Linguistics and Computer Science will enable us to graduate students who are prepared to play significant roles in technology industries. As the Department of Linguistics letter indicates, tech companies have been hiring linguists in recent years and this program should give those students a head start by developing computing skills alongside their curriculum in linguistics.

I was pleased to note that this certificate has the strong support of the Department's faculty, recognizing that this program will also introduce students to much of their most significant research and direct them to innovative classes. I believe that the Department's current advisor will be able to provide students in the program with the support they need.

Sincerely,



Stuart Culver
Dean, College of Humanities

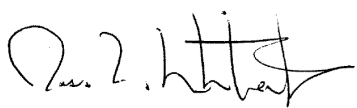
December 10, 2018

Dear Office of Curriculum Administration,

I am pleased to lend my support to the proposal for a new undergraduate certificate in Computational Linguistics, which is being submitted by the Department of Linguistics. Faculty members and undergraduate advisors from the School of Computing have worked collaboratively with the Department of Linguistics in developing the proposal, and we believe that students in both departments who earn the certificate will gain the specialized knowledge and skills they will need to compete for jobs involving language-related technologies. I hope you see fit to approve this exciting, new certificate program.

Sincerely,

Yours truly,

A handwritten signature in black ink, appearing to read "Ross Whitaker", written over a thin horizontal line.

Ross Whitaker
Professor, Director

December 10, 2018

Dear Curriculum Committee,

I am fully in favor of the proposed undergraduate certificate in Computational Linguistics. Several of our past BA and MA graduates have gotten jobs in industry with companies such as Amazon and Attensity that develop or use technologies that require sophisticated knowledge of language and linguistics. The market is becoming increasingly competitive, however, and it is clear that future graduates will need not only linguistic knowledge but also advanced computing skills and specific training in computational linguistics in order to get good jobs like this in the future...and also to make meaningful contributions to this sector of industry. The proposed certificate fills this need and seems especially relevant in the greater Salt Lake City area, where language and technology play such an important role in both society and the local economy.

The tenure-line faculty of the Department of Linguistics agree that the proposed Computational Linguistics certificate will serve our students well. Six voted in favor of the proposed certificate, no one opposed it, two faculty members abstained from voting, and three others did not vote.

Computational linguistics is a growing field, and the technologies that have come out of it (e.g., search engines, speech synthesis, speech recognition, language data mining, language-related machine learning, language encryption) represent some of the most important areas of current technological development. It is important for the University of Utah to be able to produce graduates who can participate meaningfully in these developments, and the proposed certificate is an important incremental step in the right direction.

Sincerely,



Scott Jarvis, Ph.D.
Professor and Chair
Department of Linguistics

September 5, 2019

Dear Office of Curriculum Administration,

The Department of English at Salt Lake Community College (SLCC) has learned about the Computational Linguistics Certificate proposed by the Linguistics Department at the University of Utah. This is of interest to us because the linguistics courses offered at SLCC are housed in our department, and several of our graduates continue their studies in the Department of Linguistics at the University of Utah. We have recently entered into an articulation agreement with the Linguistics Department, and we believe that the number of our students who go on to earn a BA in linguistics at the University of Utah will continue to increase. The proposed Computational Linguistics Certificate will probably be of interest and value to many of them.

On behalf of the Department of English at SLCC, I have agreed to make our students aware of this certificate and to help prepare interested students to be able to enter into the certificate's curriculum in their junior or senior year at the University of Utah.

Sincerely,

Stephen Ruffus

Stephen Ruffus
Associate Dean, School of Humanities and Social Sciences
Chair, Department of English

September 11, 2019

Dear Office of Curriculum Administration,

I have met and spoken with Scott Jarvis about the proposed Computational Linguistics Certificate. As I meet with our QAMO students and come across students who would benefit from such a certificate or curriculum, I am happy to share the information with them and connect them with Professor Jarvis.

Sincerely,

Ken Aoki

A handwritten signature in black ink, appearing to read 'Ken Aoki', with a stylized, cursive script.

Computational Linguistics Undergraduate Certificate

Learning Outcomes

1. Linguistic knowledge. Know the core areas of theoretical and empirical linguistics and how the discoveries of these fields are critical to the technology behind search engines, digital libraries, speech recognition, speech synthesis, part-of-speech taggers, syntactic parsers, machine translation, text classification, linguistic data mining, and other forms of Natural Language Processing (NLP).
2. Computational knowledge. Know the core data structures and computational algorithms used in NLP.
3. Application of knowledge. Apply existing NLP tools in order to perform phonological, morphological, lexical, syntactic, semantic, and/or pragmatic data mining of natural language (i.e., of any natural human language).
4. Analysis. Use NLP tools to analyze large corpora (or document collections) by classifying texts according to characteristics of the texts (e.g., topic, genre, readability, whether the text is original or translated text) or characteristics of the writers of the texts (e.g., gender, age, level of education, country of origin, native language, author's sentiment toward the topic).

Outcomes Assessment Evidence

OUTCOME	Evidence
1. Linguistic knowledge	A term paper or final exam from LING 3300 (alternatively from LING 4010, 4020, 5030, or 5190 for students who take CS 3505 instead of LING 3300)
2. Computational knowledge	A final project from CS 3500
3. Application of knowledge	A final project from CS 5340
4. Analysis	A final project from LING 5300

Outcomes Assessment Rubric

OUTCOME	Unacceptable	Satisfactory	Superior
1. Linguistic knowledge	Unable to explain satisfactorily how linguistic theory or empirical research contributes to NLP technologies	Able to explain in depth how at least two principles from linguistic theory and/or at least two findings from empirical linguistic research form the basis of current NLP technologies	Able to explain in detail how several principles from linguistic theory and/or several findings from empirical linguistic research form the basis of current NLP technologies
2. Computational knowledge	Unable to demonstrate a satisfactory knowledge of data structures or algorithms used in current NLP technologies	Able to identify and manipulate a variety of data structures and algorithms used in current NLP technologies	Able to create a variety of data structures and algorithms used in current NLP technologies
3. Application of knowledge	Unable to successfully use NLP tools to extract, assemble, organize, or quantify linguistic data from language sources (e.g., the Internet and/or language corpora)	Able to successfully use existing NLP tools to extract, assemble, organize, and quantify linguistic data from language sources (e.g., the Internet and/or language corpora)	Able to write algorithms that successfully extract, assemble, organize, and quantify linguistic data from language sources (e.g., the Internet and/or language corpora)
4. Analysis	Unable to make use of existing machine learning tools to successfully classify texts based on their linguistic content	Able to make use of existing machine learning tools to successfully classify texts based on their linguistic content	Able to create machine learning protocols that successfully classify texts based on their linguistic content