Program Change Request

APPROVED BY SENATE
04/06/2026

EP.26.141_FINAL
Approved by EP 03/23/2026

New Proposal

Date Submitted: 08/25/25 6:51 pm

Viewing: : Linguistics + Data Science, BSLAS

Last edit: 03/27/26 9:56 am

Changes proposed by: Jonathan Dunn

In Workflow

1. U Program Review
2. Gen Ed Review
3. 1864-LING Head
4. 1583-STAT Head
5. 1434-SSCDS Head
6. 1992-IS Head
7. 1257-MATH Head
8. KP Committee Chair
9. LP Committee Chair
10. KP Dean
11. LP Dean
12. SLCL Head
13. KV Dean
14. University Librarian
15. COTE Programs
16. Provost
17. Senate EPC
18. Senate
19. U Senate Conf
20. Board of Trustees
21. IBHE
22. HLC
23. Catalog Editor
24. DMI

Approval Path

1. 08/28/25 11:18 am Brianna Vargas-Gonzalez (bv4): Approved for U Program Review
2. 09/19/25 5:03 pm Melissa Steinkoenig (menewell):

Approved for Gen Ed Review

3. 09/22/25 1:52 pm Tania Ionin (tionin): Approved for 1864-LING Head
4. 09/22/25 2:21 pm Feng Liang (liangf): Approved for 1583-STAT Head
5. 01/16/26 11:30 am Mahesh Viswanathan (vmahesh): Approved for 1434-SSCDS Head
6. 01/23/26 9:51 am Brandon Batzloff (batzloff): Approved for 1992-IS Head
7. 01/25/26 4:22 pm Lee DeVille (rdeville): Approved for 1257-MATH Head
8. 01/26/26 2:26 pm Katherine Freeman (katefree): Approved for KP Committee Chair
9. 01/28/26 10:02 am Amber Holmes (aflowers): Approved for LP Committee Chair
10. 01/28/26 2:50 pm Rashid Bashir (rbashir): Approved for KP Dean
11. 01/28/26 2:58 pm

Emily Knox (knox): Approved for LP Dean
12. 01/29/26 9:29 am Mariselle Melendez (melendez): Approved for SLCL Head
13. 02/25/26 4:39 pm Stephen Downie (sdownie): Approved for KV Dean
14. 02/26/26 11:16 am Tom Teper (tteper): Approved for University Librarian
15. 02/26/26 12:55 pm Suzanne Lee (suzannel): Approved for COTE Programs
16. 03/04/26 2:57 pm Brooke Newell (bsnewell): Approved for Provost

Proposal Type

Proposal Type:	Major (ex. Special Education)

Administration Details

Official Program Name	Linguistics + Data Science, BSLAS
Diploma Title	Bachelor of Science in Liberal Arts and Sciences
Sponsor College	Liberal Arts & Sciences

Sponsor Department	Linguistics	
Sponsor Name	Jonathan Dunn, Director of Undergraduate Studies	
Sponsor Email	jedunn@illinois.edu	
College Contact	Stephen R. Downie, Associate Dean for Curricula and Academic Policy	College Contact Email
sdownie@illinois.edu		
College Budget Officer	Michael Wellens	
College Budget Officer Email	wellens@illinois.edu	

If additional stakeholders other than the Sponsor and College Contacts listed above should be contacted if questions during the review process arise, please list them here.

Tania Ionin, Department Head, tionin@illinois.edu
Melissa Reedy, murray@illinois.edu (LAS Assistant Director Course & Cir Dvt)

Does this program have inter-departmental administration?

Yes

Interdisciplinary Colleges and Departments (list other colleges/departments which are involved other than the sponsor chosen above)

Please describe the oversight/governance for this program, e.g., traditional departmental/college governance, roles of elected faculty committees and of any advisory committees.

In Spring 2017, the College of Liberal Arts & Sciences submitted an Investment for Growth Proposal to “Jump Start Data Science”, focusing on undergraduate data science education. Interim Provost John Wilkin supported the proposal but called on LAS to work with three colleges (Engineering, the iSchool, and the Gies College of Business) to develop a collaborative approach to undergraduate data science at Illinois.

Those deans formed a task force (herein the “Data Science Education Task Force” or DSETF) to explore opportunities and make proposals for undergraduate data science education at Illinois. The DSETF conducted its work during academic years 2017—2018 and 2018—2019. At the core of their work was the vision that every Illinois undergraduate should have the opportunity to have a meaningful exposure to data science.

In February 2019, the four deans agreed to support a shared framework for X+Data Science majors, based on suggestions from the DSETF. The framework consisted of the following pieces.

1) A set of core competencies and common features which will be expected of X+Data science majors, together with a reference standard set of courses and activities that fulfills the data science portion of those expectations.

2) Each college can propose its own X+Data Science majors, which will be majors of that college. They may differ from the reference standard approach. When they do so, they should explain how the proposed major provides the expected competencies and features of an X+Data Science major in a manner that is appropriate for their students.

Currently, this program will be subject to the oversight of the campus Data Science Educational Council (DSEC), which oversees all academic programs in data science that span across academic units at the University of Illinois. The DSEC will:

- Keep track of offerings related to data science to facilitate collaboration and reduce redundancy;
- Facilitate the development of data science programs by connecting undergraduate data science education resources across the university;
- Advise colleges on matters related to undergraduate data science education; and
- Review X+Data Science major proposals, commenting on how they meet the expectations for X+Data Science majors and engage collaboratively and strategically with the university’s resources in data science education.

College	Liberal Arts & Sciences
Department	Statistics

Is there an additional department involved in governance?

Yes

College Grainger College of Engineering

Department Siebel School Comp & Data Sci

Is there an additional department involved in governance?

Yes

College Information Science, School of

Department Information Sciences

Is there an additional department involved in governance?

Yes

College Liberal Arts & Sciences

Department Mathematics

Are there additional department(s) involved in governance?

No

Effective Catalog Term

Effective Catalog Term	Fall 2026
Effective Catalog	2026-2027

Proposal Title

Proposal Title (either Establish/Revise/Eliminate the Degree Name in Program Name in the College of XXXX, i.e., Establish the Bachelor of Science in Entomology in the College of Liberal Arts and Sciences, include the Graduate College for Grad Programs)

Establish the Bachelor of Science in Liberal Arts and Sciences in Linguistics plus Data Science in the College of Liberal Arts and Sciences

Does this proposal have any related proposals that will also be revised at this time and the programs depend on each other? Consider Majors, Minors, Concentrations & Joint Programs in your department. Please know that this information is used administratively to move related proposals through workflow efficiently and together as needed. Format your response like the following "This BS proposal (key 567) is related to the Concentration A proposal (key 145)"

Program Justification

Provide a brief justification of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates, when appropriate.

Ubiquitous digital technology and the generation of massive amounts of data are rapidly transforming society and multiple fields of inquiry. This transformation has created exciting opportunities and worrisome scenarios across multiple domains of human endeavor. Like the industrial technologies of the early-20th century, the new digital technologies of the early-21st century have great potential to transform society, for good or ill. The University of Illinois Urbana-Champaign has a high calling to prepare students to lead society's digital transformation.

Substantial demand exists, both from students and from employers, for educational programs in data science. The U.S. Bureau of Labor Statistics, in their "Job Outlook, 2021-31" says that the average growth rate for all occupations is 5%. They currently project that the employment of data scientists will grow 36% from 2021 to 2031 (https://www.bls.gov/ooh/math/data-scientists.htm). The Enrollment in the undergraduate majors of "Statistics" and "Statistics and Computer Science," which provide students access to some of the competencies of data science, have grown by a factor of six in the last ten years.

Data science is emerging as a subject of great importance in many domains of human and scholastic endeavor. National policy documents for data science majors emphasize that engagement with an application domain is an important part of data science education. The University of Illinois' white paper on data science education (https://blogs.illinois.edu/files/7831/599574/133040.pdf) recommended the development of "X + Data Science Majors" as an approach to offering broad collaborative opportunities for Illinois students to engage with data science.

There is a close relationship between Linguistics and Data Science. From the perspective of linguistics, digital communication now means that language use can be stored and used to study the nature of language. We have no evidence about language at all until the invention of writing systems and little evidence until the invention of the printing press. With digital sources of data, linguists can now observe actual language use at a broad scale: there is more evidence about spoken language in a day's worth of YouTube and TikTok videos than from the entirety of human history up to the year 2000. In short, this means that linguistics now has a tremendous amount of data available to help understand the nature of human communication. This data requires a different set of skills than have traditionally been taught in linguistics programs. This program will provide those skills to students.

From the perspective of Data Science, the single biggest source of data that is analyzed is from human communication. Because humans use language to encode information, AI models like

Large Language Models are trained almost exclusively on language data. The study of linguistics is in many ways about the difference between the external world and what humans encode in language data, understanding the cognitive and social and historical factors that skew and influence how humans encode information in language. As a result, an understanding of these factors is essential before using analyses of language data to aid decision making. This program will also provide skills in linguistics for students doing work in data science more broadly.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a resul of this new program/proposed change?

No

Does this new program/proposed change result in the replacement of another program?

No

Does the program include other courses/subjects outside of the sponsoring department impacted by the creation/revision of this program? If Yes is selected, indicate the appropriate courses and attach the letter of support/acknowledgement.

Yes

Courses outside of the sponsoring department/interdisciplinary departments:

MATH 220 - Calculus
MATH 221 - Calculus I
MATH 234 - Calculus for Business I
MATH 227 - Linear Algebra for Data Sci
MATH 257 - Linear Algebra w Computat Appl
STAT 107 - Data Science Discovery
STAT 207 - Data Science Exploration
CS 307 - Model & Learning in Data Sci
CS 277 - Algo & Data Stru for Data Sci
IS 467 - Ethics & Policy for Data Scien
IS 477 - Data Mgmt, Curation, & Reprodu

Please attach any letters of support/ acknowledgement

LING+DS_Letter_DSC.pdf
LING+DS_Letter_Statistics.pdf
LING+DS_Letter_Math.pdf

for any Instructional Resources. Consider faculty, students, and/or other impacted units as appropriate.	LING+DS_Letter_iSchool.pdf LING+DS_Letter_CS.pdf

Program Features

Academic Level	Undergraduate
Does this major have transcripted concentrations?	No

What is the longest/maximum time to completion of this program?

4 Years

What are the minimum Total Credit Hours required for this program?

120

CIP Code	307001 - Data Science, General.

Is this program part of an ISBE approved licensure program?

No

Will specialized accreditation be sought for this program?

No

Describe the institution's plan for seeking specialized accreditation for this program. Indicate if there is no specialized accreditation for this program or if it is not applicable.

Not applicable.

If this program prepares graduates for entry into a career or profession that is regulated by the State of Illinois, describe how it is aligned with or meets licensure, certification, and/or entitlement requirements.

Not applicable.

Does this program prepare graduates for entry into a career or profession that is regulated by the State of Illinois?

No

Program of Study

Provide detailed information (course rubrics, numbers, and credit hours) of how a student could obtain 40 credit hours of upper-division coursework.

To earn 40 credit hours of upper-division coursework, students will:

- 14 credit hours from required data science core courses (CS 277 (Prerequisite: STAT 207; one of MATH 220, MATH 221, MATH 234.), CS 307, IS 467, IS 477).
- 6 credit hours from required linguistics core courses (LING 406 and LING 413).
- 6 credit hours from required linguistics core courses (choose two: LING 301, LING 302, LING 304, LING 307, LING 401)
- 12 credit hours in electives in computational linguistics courses (such as LING 414, LING 425, LING 442, LING 444, LING 446. LING 448, LING 490).
- A minimum of 3 credit hours in a required research or discovery experience (LING 453).
- Level 3 and 4 LOTE (8-10 hours)

Forty-one (41) upper-division hours are achieved in the program requirements without the use of the Level 3 and Level 4 LOTE.

Attach Program of Study related information here.

LING 442_ Computational Sociolinguistics.pdf
LING_DS_SampleSequence_Feb27.docx

Catalog Page Text - Overview Tab

Catalog Page Overview Text

This innovative major gives you the skills you need to work with language as data while respecting the social and cognitive factors that make language data different. Digital communication means that we have more samples of people using language in the last day than we had for all of human history before this century. Language is how humans encode their thoughts, and thus this data can tell us about what humans think and care about. But language is also a social and cognitive system, which means that this data can also tell us about human society and human cognition. This major offers a unique interdisciplinary journey that combines the analytical power of data science with a nuanced understanding of how human language intertwines with society and cognition.

Graduates of the Linguistics + Data Science program emerge as versatile professionals equipped to contribute meaningfully to artificial intelligence and the tech industry, data analysis, academia, research, and beyond. This program empowers you to work with language data and language models while respecting their social and cognitive foundations.

Email: linguistics@illinois.edu

Statement for
Programs of Study
Catalog

Graduation Requirements

Minimum hours required for graduation: 120 hours.

University Requirements

Minimum of 40 hours of upper-division coursework, generally at the 300- or 400-level. These hours can be drawn from all elements of the degree. Students should consult their academic advisor for additional guidance in fulfilling this requirement.

The university and residency requirements can be found in the Student Code (§ 3-801) and in the Academic Catalog.

General Education Requirements

Follows the campus General Education (Gen Ed) requirements. Some Gen Ed requirements may be met by courses required and/or electives in the program.

Composition I	4-6
Advanced Composition	3
fulfilled by LING 413	
Humanities & the Arts (6 hours)	6
Natural Sciences & Technology (6 hours)	6

Social & Behavioral Sciences (6 hours)		6
fulfilled by LING 100 and any other course approved as Social & Behavioral Sciences		
Cultural Studies: Non-Western Cultures (1 course)		3
Cultural Studies: US Minority Cultures (1 course)		3
Cultural Studies: Western/Comparative Cultures (1 course)		3
Quantitative Reasoning (2 courses, at least one course must be Quantitative Reasoning I)		6-10
fulfilled by MATH 220 or MATH 221 or MATH 234, STAT 107, STAT 207		
Language Requirement (Completion of the fourth semester or equivalent of a language other than English is required)		0-20
Orientation and Professional Development		
LAS 101	Design Your First Year Experience	1
OR		
LAS 100 & LAS 101	Success in LAS for International Students and Design Your First Year Experience	3
OR		
LAS 102	Transfer Advantage	1
Total Hours		**1 or 3**
Major Core Requirements and Electives		
Data Science Core		**29-30**
Mathematical Foundations		
MATH 220	Calculus	
or MATH 221	Calculus I	
or MATH 234	Calculus for Business I	
MATH 227	Linear Algebra for Data Science	
or MATH 257	Linear Algebra with Computational Applications	
Data Science Fundamentals		
STAT/CS/IS 107	Data Science Discovery	
STAT 207	Data Science Exploration	
CS 307	Modeling and Learning in Data Science	

Computational Fundamentals		
CS 277	Algorithms and Data Structures for Data Science	
Social Impact in Data Science		
IS 467	Ethics and Policy for Data Science	
IS 477	Data Management, Curation & Reproducibility	
Linguistics Core		**18**
LING 100	Intro to Language Science	3
LING 406	Introduction to Computational Linguistics	3
LING 413	Computational Corpus Linguistics	3
Choose one of the following courses:		
LING 210	Language History	3
LING 225	Language, Mind, and Brain	3
LING 250	American Voices: Linguistic Diversity in the US	3
Choose two of the following courses:		
LING 301	Elements of Syntax	3
LING 302	Elements of Phonology	3
LING 304	Elements of Morphology	3
LING 307	Elmnts Semantics & Pragmatics	3
LING 401	Intro to General Phonetics	3
Research or Discovery Experience		**3**
LING 453	Capstone in Computational Linguistics	3
Advanced Computational Linguistics Electives		**12**
Choose four of the following courses:		
LING 414	Advanced Computational Linguistics	3
LING 425	Intro to Psycholinguistics	3
LING 442	Computational Sociolinguistics	3
LING 444	Computational Syntax	3
LING 446	Fundamentals for Speech Signal Processing and Analysis	3

LING 448	Introductory Machine Learning	3
LING 490	Special Topics in Linguistics	3

Corresponding Degree	BSLAS Bachelor of Science in Liberal Arts and Sciences

Program Regulation and Assessment

Plan to Assess and Improve Student Learning

Illinois Administrative Code: 1050.30(b)(1)(D) Provision is made for guidance and counseling of students, evaluations of student performance, continuous monitoring of progress of students toward their degree objectives and appropriate academic record keeping.

Student Learning Outcomes

After completing this program, students will be able to:

(1) Analyze linguistic problems and identify relevant data-driven solutions.

(2) Implement efficient computational models and demonstrate their adequacy.

(3) Compare and assess the predictions of linguistic theories using empirical methods.

(4) Synthesize results obtained from language data with non-linguistic data sources.

(5) Examine the linguistic, social, and cognitive contexts of both data and models.

Describe how, when, and where these learning outcomes will be assessed.

Describe here:

The Department of Linguistics will ensure that students are meeting learning outcomes through the following assessment activities:

1. We have produced a learning objectives map to identify how each course connects to the learning outcomes. Completing those courses which map to a learning outcome are one measure that students have obtained the relevant ability.

LO 1 maps to LING 100, LING 210/225/250, LING 301/302/304/307/401, LING 406, LING 413, LING 425, LING 453

LO 2 maps to LING 406, LING 414, LING 442, LING 444, LING 446, LING 448, LING 453

LO 3 maps to LING 301/302/304/307/401, LING 406, LING 413, LING 425, LING 453

LO 4 maps to LING 413, LING 442, LING 444, LING 446, LING 453

LO 5 maps to IS 467, LING 413, LING 442, LING 444, LING 446, LING 448, LING 490, LING 453

2. All students will complete a capstone course, LING 453, which includes all of the program learning outcomes. This provides a final in-depth assessment to evaluate student achievement.

3. The department will audit student progress and overall grades each semester and take proactive intervention where necessary. In addition, the advisor will meet with students each semester, a meeting which will include informal discussions and observations about the curriculum and specific courses.

4. The department will occasionally undertake student surveys to understand the student experience within the major.

5. The department will carry out discussions with alumni, recruiters/professionals, and graduate programs about our students' level of preparation and need.

Identify faculty expectations for students' achievement of each of the stated student learning outcomes. What score, rating, or level of expertise will signify that students have met each outcome? Provide rating rubrics as necessary.

Linguistics faculty expect a 70% success rate in direct measures of student success as outlined above. Satisfactory performance is expected when a percentage-based outcome is not available.

Explain the process that will be implemented to ensure that assessment results are used to improve student learning.

Data gathered through assessment activities will be used to support student success in the following ways:

Performance feedback assessed through coursework and course completion rates will be utilized to adjust course content and academic support if learning outcomes are not being met at the expected 70% success rate.

Feedback from students through advising meetings and student surveys will be utilized to provide appropriate academic support and intervention where necessary.

Assessment of student research or discovery experience artifacts will be shared with department committees and utilized to expand additional research opportunities and revisit learning outcomes for future cohorts.

Program Description and Requirements
Attach Documents

Delivery Method

This program is available:

On Campus - Students are required to be on campus, they may take some online courses.

Admission Requirements

Desired Effective Admissions Term	Fall 2026

Provide a brief narrative description of the admission requirements for this program. Where relevant, include information about licensure requirements, student background checks, GRE and TOEFL scores, and admission requirements for transfer students.

The proposed BSLAS in Linguistics + Data Science will be a rigorous degree program, but we want to remove as many barriers to matriculation as possible.

Specifically, the requirements will be those for all incoming first-year applicants to Illinois. This means requirements for admission are handled at the campus level. The admissions requirements can be found at this URL: https:// admissions.illinois.edu/Apply/Freshman/ requirements, but can also be summarized as follows:

English: 4 years required
Math: 3 or 3.5 years required, 4 years recommended. Calculus is recommended for students applying to Linguistics + Data Science, but is not required.
Social Sciences: 2 years required, 4 years recommended
Lab Sciences: 2 years required, 4 years recommended
Language other than English: 2 years required, 4 years recommended
Flexible academic units: 2 years required, 4+ years recommended

For Transfer students/Intercollegiate Transfer (ICT) students
Transfer students/ICT students will be evaluated according to the following criteria:
• For ICT students: At least 1 Linguistics course completed at Illinois

Recommended courses for transfer students are:
• Language Other Than English
• 3 hours of 100-level Linguistics coursework
• Math 220 Calculus I (or equivalent: MATH 221 or 234)
• Rhet 105 Writing and Research (or equivalent, since this is a 2-semester sequence at many institutions)

Enrollment

Number of Students in Program (estimate)

Year One Estimate	10	5th Year Estimate (or when fully implemented)
		100

Estimated Annual Number of Degrees Awarded

Year One Estimate	0	5th Year Estimate (or when fully

implemented) 20

What is the matriculation term for this program?

Fall

Budget

Will the program or revision require staffing (faculty, advisors, etc.) beyond what is currently available?

No

Additional Budget Information

The Linguistics + Data Science degree program will be supported by the Linguistics department without the need for additional funding. Course capacity exists to accommodate the increased demand, and no additional faculty will be required. It is expected that some students declaring this major would have otherwise declared a Linguistics major, and therefore overall growth of the department is expected to be modest to intermediate based on this degree option. Infrastructure also already exists via existing +DS degrees to support students in this major.

Attach File(s)

Financial Resources

How does the unit intend to financially support this proposal?

This degree program will not impact departmental resources. The program will be supported by existing resources as well as through tuition. No additional financial resources will be required for this program.

Will the unit need to seek campus or other external resources?

No

Attach letters of support

What tuition rate do you expect to charge for this program? e.g, Undergraduate Base Tuition, or Engineering Differential, or Social Work Online (no dollar amounts necessary)

Undergraduate Base Tuition; differential tuition for all LAS X + DS

majors, which is being requested by LAS

IBHE

Institutional Context

University of Illinois at Urbana-Champaign

Describe the historical and university context of the program's development. Include a short summary of any existing program(s) upon which this program will be built.

Explain the nature and degree of overlap with existing programs and, if such overlap exists, document consultation with the impacted program's home department(s).

Data science is an area of scholarship involving principles for data collection, storage, integration, analysis, inference, communication, and ethics as they relate to the ubiquitous collection of massive data sets that have emerged in recent years. The field draws from several existing fields, including information technology, computer science, statistics, mathematics, and business analytics. However, core data science concepts are not being conveyed by mainstream training in any single other field because data science is not reducible to any of the preexisting fields (https:// doi.org/10.17226/25104).

The university's 2018 Strategic Plan "The Next 150" (https://archive.strategicplan.web.illinois.edu) called for "[p]rovid[ing] all Illinois students the opportunity to have a meaningful exposure to data science." One of the hallmarks of data science is that it is outward-looking, engaging richly with multiple domains of application. In response to the university's strategic plan and in recognition of the interdisciplinary and outward-looking nature of data science, the Departments of Mathematics and Statistics, the Siebel School of Computing and Data Science, the Gies College of Business, and the iSchool collaborated to develop a framework for X + Data Science majors, enabling students to learn the principles of data science while engaging deeply with a variety of subject matters (X). In this program, the Department of Linguistics offers coursework and advising in linguistics, while the Departments of Mathematics and Statistics, the Siebel School of Computing and Data Science, and the iSchool offer a core framework of courses and advising in data science. In addition, the overall program provides coursework and independent work/research experiences that integrate linguistics and data science and enhance the students' experience.

The proposed Linguistics + Data Science major offers a distinctive blend of linguistic inquiry and data-driven analysis, enhancing the interdisciplinary landscape of our institution. Established in 1965, the university's Linguistics department is one of the oldest in the country and also one of the largest. The department has been at the forefront of integrating new methodologies, like psychological experiments, into the study of language and how diverse populations learn and use language. The department has also taken a long-standing interest in computational and quantitative methods in linguistics, with the department's profile mirroring the university's own strengths in that regard. For example, the Computer Science + Linguistics program was one of the first undergraduate programs to specialize in computational linguistics (also called natural language processing) and currently accounts for somewhat more than half of our undergraduate students.

This program in Linguistics + Data Science will complement the history and profile of the department and augment our ability to offer a strong mix of courses. For example, most Linguistic departments in the country offer only one or two courses in computational linguistics that are available for an undergraduate audience. We offer nine, mostly at an advanced level

(LING 217, LING 406, LING 413, LING 414, LING 442, LING 444, LING 446, LING 448, LING 453). This new program will allow us to develop further strength in this area of the curriculum. Most departments have a single computational linguist while at Illinois we have three tenure-track faculty in this area.

At the same time, the proposed Linguistics + Data Science program will not be redundant with the existing Computer Science + Linguistics program. The latter program has entry requirements which expect a high degree of familiarity with computational thinking in high school. Because many high school students do not have access to high-quality education in this area, this excludes many students from studying computational linguistics who would otherwise be capable. This new program builds on the resources available from the +DS initiative to serve a different audience of students. But the difference goes beyond this: the CS+Linguistics degree has an underlying focus on using machine learning to build systems that process and make predictions about language data. The Linguistics + Data Science program will instead have a primary focus on language data and how to work with it, with a secondary focus on machine learning and the design of systems for processing language. While this distinction is perhaps subtle, it remains meaningful. In short, these two programs will draw distinct audiences of students.

University of Illinois

Briefly describe how this program will support the University's mission, focus and/or current priorities. Demonstrate the program's consistency with and centrality to that mission.

The University of Illinois Urbana-Champaign is resolute in its dedication to respond to student demand, societal need, and economic opportunity. Data Science has rapidly emerged as a field with broad-based demand across many areas of economic activity and across many fields of scholarship. The university recognized this in its 2018 Strategic Plan "The Next 150", which called on the institution to “provide all Illinois students the opportunity to have a meaningful exposure to data science.” The Linguistics + Data Science program proposal has been developed in response of that directive. An understanding of the social and cognitive sources of language data empowers students with a well-rounded skill set that aligns with the multifaceted mission of the university, fostering critical thinking, interdisciplinary collaboration, and informed decision-making in an increasingly complex and interconnected world.

Discuss projected future employment and/or additional educational opportunities for graduates of this program. Compare estimated demand with the estimated supply of graduates from this program and existing similar programs in the state. Where appropriate, provide documentation by citing data from such sources as employer surveys, current labor market analyses, and future workforce projections. (Whenever possible, use state and national labor data, such as that from the Illinois Department of Employment Security at http://lmi.ides.state.il.us/ and/or the U.S. Bureau for Labor Statistics at http://www.bls.gov/).

Graduates of the Linguistics + Data Science program are prepared for a diverse array of career paths and further educational pursuits. With a deep understanding of language and its social and cognitive contexts , well-honed writing and oral presentation skills, and the technical expertise to analyze data, graduates are well-equipped for roles in research, analysis, and interpretation. They can excel in professions that require adeptness in synthesizing complex information. Graduates may pursue careers in data analysis, natural language processing and AI, or even data-driven journalism, where their interdisciplinary training sets them apart and makes them more competitive applicants in the job market. Furthermore, the program lays a strong foundation for further educational opportunities, including advanced studies in linguistics, data science, or related fields, transitioning into graduate programs even in fields such as digital humanities, leveraging their multidimensional expertise to make meaningful contributions to academia and a wide spectrum of professional domains. Given the explosive growth in data science jobs predicted by the Bureau of Labor Statistics, combining the strong job market opportunities of the linguistics degree with data science skills will produce graduates to fill a variety of positions across the state and the nation. In 2021 Illinois had the fifth-highest employment of data scientists of any state, and projected employment of data scientists in the state of Illinois is expected to grow by 29% by 2030 according to the US Department of Labor. This program will prepare future graduates to serve the employment needs of our state.

What resources will be provided to assist students with job placement?

Students will have access to the Linguistic Department’s advising services, which provide specialized resources to assist students with internships and job placement, as the department has established relationships with several organizations in the region. In addition to these resources students will have access to LAS Career Services, which is available to all students in the College of LAS, and the campus-wide Career Center, which is available to all U of I students.

If letters of support
are available attach
them here:

Comparable Programs in Illinois

Identify similar programs and sponsoring institutions in the state, at both public and private colleges and universities. Compare the proposed program with these programs, and discuss its potential impact upon them. Provide complete responses, do not reference website links.

The proposed Linguistics + Data Science degree program CIP classification is 30.7001 - Data Science, General.

The University of Illinois Chicago has a BS in Computer Science and Linguistics. Similar to the existing CS + Linguistics degree at the Urbana-Champaign campus, this program is focused on machine learning and computational models of language rather than data science as related to language and language data. These are related fields of study but remain distinct.

Dominican University offers a B.S. in Data Science. This program is a joint effort of their Math and Computer Science departments, without a linguistics component. This is a private university with an enrollment of under 4,000 students that is located in a different region than U of I. Impact on this institution is very unlikely.

Knox College offers a B.A. in Data Science. This program combines math, statistics, and computer science courses but does not include any focus on linguistics. This is a small, private institution with enrollment of 1,200 students located in another region of the state than U of I. Impact from this proposed major on them is very unlikely.

Northwestern University offers a B.S. in Data Science. This program is a combination of math and computer science courses without a linguistics component. It does offer an Ethics elective within the major that includes courses in Comparative Literary Studies, Ethnic Studies, Humanities, Philosophy, etc. Northwestern is a medium, private institution with an enrollment of 8,500 students that is located in a different region of the state than U of I. Impact on this institution is unlikely.

Olivet Nazarene University offers a B.S. in Data Science. This program is a combination of math and computer science courses without a linguistics component. Olivet is a small, private institution with an enrollment of 3,500 students that is located in a different region of the state than U of I. Impact on this institution is unlikely.

The University of Chicago offers a B.A. and B.S. in Data Science. This program is a combination of math and computer science courses without a linguistics component. It also offers a Digital Studies of Language, Culture, and History major that combines courses from computer science, data science, and language. The University of Chicago is a medium, private institution with an enrollment of 7,500 students that is located in a different region of the state than U of I. Impact on this institution is unlikely.

The University of Illinois-Chicago offers a B.S. in Data Science with concentrations in Computer Science, Data Processing, Science and Engineering, Health Data Science, Industrial Engineering, Social Technology Studies, Statistics, and Urban Planning and Public Affairs. None of these concentrations focus on linguistics. UIC is a part of the University of Illinois System with enrollment of 22,000 undergraduate students located in another region of the state. Impact from this proposed major on them is very unlikely.

The University of Illinois Urbana-Champaign has nine X + DS programs, those programs are:

Accountancy + Data Science, BS
Astronomy + Data Science, BSLAS
Business + Data Science, BS
Chemical Engineering + Data Science, BS
Finance + Data Science, BS
Information Sciences + Data Science, BS
Material Science & Engineering + Data Science, BS
Molecular & Cellular Biology + Data Science, BSLAS
Nuclear, Plasma, and Radiological Engineering + Data Science, BS

It is to these Illinois X + DS programs that the proposed program (Linguistics + Data Science) is most closely related. These degree programs were created by the X + Data Science Initiative on the University of Illinois Urbana-Champaign campus. The strategy was to bring a significant component of Data Science to existing degree programs/disciplinary areas across a very broad set of disciplines so as to prepare students for the future employment in which data science will surely have a role.

Based on the information available, it appears that the proposed combination of Linguistics +Data Science degree program will be the first of its kind in Illinois to pair linguistics as a discipline with data science at the Bachelor level. It will complement preexisting programs offered by the University of Illinois by building upon extant interdisciplinary scholarship and build upon current infrastructure, further positioning U of I as a leader in the field. There will be no impact on existing programs given that they do not currently exist in the state of Illinois. There is every reason to believe that this degree program will provide a unique and highly impactful experience for students and leave them with many career opportunities from which to choose.

Comparable
Programs in Illinois
Attach Documents

A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth

IBHE is charged to develop a strategic plan to address the present and future aims and needs and requirements of higher education in Illinois (110 ILCS 205/6) (from Ch. 144, par. 186) Sec. 6). Illinois Administrative Code:

1050.30(a)(6): A) The unit of instruction, research or public service is educationally and economically justified based on the educational priorities and needs of the citizens of Illinois Respond to the following questions about how the proposed program will support the three goals of A Thriving Illinois: Higher Education Paths to Equity, Sustainability, and Growth Strategic Plan.

Equity

Describe institutional-level plans to close equity gaps in access, progression, completion, and attainment and the implications for the proposed program. More specifically, provide institutional-level plans for attracting, recruiting, retaining, and completing a diverse group of students including working adults, students of color, transfer and low-income students and implications for the proposed program. Explain how progress will be monitored.

At the System level, the University of Illinois prioritizes closing equity gaps among the citizens across Illinois, within our urban and rural communities, and beyond. While the fundamental needs that will drive greater economic vitality vary greatly across zip codes in the state, it is clear that closing equity gaps among our citizens remains crucial to achieving the mission of the University of Illinois System.

Supportive of IBHE's A Thriving Illinois plan and aligning its Equity Strategy #2, the UI System's Access 2030 Strategic Plan is a comprehensive initiative designed to increase the number of graduates from underrepresented groups by 50 percent by the end of the decade. This will include students from disadvantaged backgrounds – ethnic and racial, rural, and urban. This initiative will strengthen the University of Illinois' bedrock commitment to the public good, ensuring that as we work to improve life in our state, we are not leaving communities behind. It will build on ongoing efforts to create more opportunities for Illinoisans of all backgrounds. The initiative is being tooled to close equity gaps throughout the pipeline, working from K-12 through college, including our community colleges. Access 2030 embodies Equity Goal 2 of A Thriving Illinois, providing a framework for and supporting the three institutions' equity plans.

In addition to Access 2030, the University of Illinois System is engaged in various programs and supports aimed at student recruitment and retention. One such program is Salute to Academic Achievement (SAA). SAA has run for 40 years, and targets underrepresented minority groups and students from low-sending counties. The students are invited either for their academic performance (identified by GPA and standardized test score) or by nomination by a high school counselor (must meet minimum GAP requirement and belong to target population) to attend a college-fair type event. Participants are recognized for academic achievements, and have the opportunity to meet with college, admissions, financial aid, and housing representatives from all three UI System universities. Participants also receive fee waivers for future admissions applications for each university along with an individualized Certificate of Academic Achievement. We are currently expanding the number of students who receive invitations.

The President's Award Program (PAP) and PAP Honors provide financial support for students admitted to one of the UI Systems three institutions from historically underrepresented groups. The PAP award is $5,000 per year available for a maximum of four years while the PAP Honors Program awards $10,000 per year for four years. Over $359.1 million has been distributed between 2006 and 2024.

A third example of System level support is the UI System Transfer Guarantee Program, which aligns with Growth Strategy #8. Cognizant that many underrepresented minority students begin their higher education journeys at community colleges, this program guarantees admission to students who apply to any of the three campuses if they graduated from an Illinois high school, attended an Illinois community college, and attained 36 graded credit hours and a minimum 3.0 GPA. We are currently developing program enhancements to expand the guarantee to all students who graduated from Illinois high schools and who have maintained the academic criteria noted above for Fall 2025.

Finally, to curb out-of-state migration, all of the four-year publics unite for a college fair once per year. This event will be slightly enhanced to now attract high school students earlier in their academic journey in an effort to reach them sooner in the college decision-making process.

In alignment with the UI System's Access 2030 Strategic Plan.at the institution level is the University of Illinois Urbana-Champaign's 2024-2025 Equity Plan. Submitted to IBHE in May, 2024 outlines pursuit of two aspirational goals:

1) Close the graduation rate gap between Underrepresented Minorities (URM) and Non-URM students by 2030.
2) Increase by 50% the number of undergraduate degrees earned by URM students over the next 12 years.

These goals reflect the university's commitment to close equity gaps by investing in expanding current and new initiatives and deliberately understanding the campus climate. To address the equity gaps between URM and Non-URM undergraduate students, the campus will work on four focus areas:
1) PreK-12 Engagement
2) Undergraduate Recruitment and Enrollment
3) Undergraduate Retention and Completion
4) Campus Climate and Culture.

The PreK-12 engagement is the newest area of work at the institution level and represents an intentional framing that includes the centralization of programs, the development of partnerships, and the enhancement of opportunities across the state to increase college awareness and readiness. In addition to continued investment in current financial aid programs such as Illinois Promise and Illinois Commitment, as part of the Equity Plan, the university will also be investing in new initiatives such as the Digital Innovation for Equity and Excellence in College Admissions (DIEECA) work.

As retention and completion requires intentional, coordinated work, Student Success @ Illinois has become a permanent, funded area to lead in the review and interrogation of policies and

has become a permanent, funded area to lead in the review and interrogation of policies and practices that are often considered barriers for success for specific groups of students. Additionally, the university is investing in expanded support for first generation students such as the NASPA First Scholars Network and growth of bridge/early move-in programs.

Diversity, equity, and inclusion work is led by the Office of the Vice Chancellor for Diversity, Equity, and Inclusion (OVCDEI). The OVCDEI's goals, ongoing assessments, and initiatives impact students as well as faculty and staff, and student-focused programming sets the tone for the institution's efforts as they relate to all of A Thriving Illinois' equity strategies. In fall 2023, the institution administered a campus-wide climate assessment instrument to understand the degree to which students feel safe, accepted, and valued. The goal is to provide a quantitative sense of how individuals feel about their campus experiences. This assessment will include students' perceptions of the quality of their interactions with peers, faculty members, and administrators, including their sense of the campus as a place where they belong and are treated with respect. The university is partnering with the Association of American Universities (AAU), external organizations, and peer institutions to ensure the survey instrument is state of the art, has questions that shed light on multiple axes of diversity, and generates data that can be shared and benchmarked against peer institutions to tease out challenges that are unique to the University of Illinois Urbana-Champaign campus as well as those that are common to peer universities. As of May 2024, the campus received preliminary reports from the survey. These reports and data are under review in the summer of 2024 with the expectation to deliver and socialize the data to campus stakeholders in fall, 2024. The campus has charged four working groups: assessment, faculty & staff, students, and communication to guide university administration with this initiative. The working groups are tasked with developing frameworks for effectively socializing the climate survey, results, and implementation plans to the campus; disseminating reports to the university community and academic and administrative units; and assessing opportunities for campus- and unit-level responses to the reports.

In keeping with the institutional framework led by the OVCDEI, the University of Illinois Urbana-Champaign is engaged with a number of efforts to strategically support and bolster equity on campus. For example, in July, 2020, the university pledged $2 million annually for the Chancellor's Call to Action to Address Racism and Social Injustice to focus the intellectual and scholarly talent of the university to examine two of the greatest challenges facing society and seek new solutions.

Over the first four years of the program:

- the Office of the Vice Chancellor for Diversity, Equity & Inclusion has received and reviewed 171 proposals and funded 59 projects.
- more than $4.3 million in research funding has been awarded.
- approximately 433 individuals have worked on funded research projects.

• as of April 2024, 30% of the PIs have used their Call to Action project to seek external funding, applying for more than $18 million to support further research.

The 59 projects were awarded to principal investigators from 14 campus units, 10 of which were academic. To date, the program has provided research experience for approximately 48 undergraduate and graduate students and engaged in the local community as co-project leaders or team members for their expertise.

In October 2022, OVCDEI hosted the inaugural Research Symposium, which included a keynote conversation with Dr. Ibram X. Kendi, Director of the Center for Antiracist Research at Boston University. The second Research Symposium featuring projects funded during 2023-24 was held on April 5, 2024.
Critical efforts on the campus surround activities related to closing the graduation gap and increasing student success. The university is an active participant in the American Talent Initiative, with Chancellor Robert Jones serving on ATI's steering committee. ATI is focused on expanding student access to high graduation-rate institutions, with the goal of enrolling and graduating 50,000 additional high-achieving, low-and moderate-income students from these institutions by the year 2025. The University of Illinois Urbana-Champaign has targeted the following goals: 1. increase the six-year graduation rate for Pell students to 81% for the 2017 entering cohort; 2. increase targeted opportunities for incoming students to participate in summer scholar/bridge programming in an attempt to increase the number of Pell students enrolling, improve retention rates, and reduce graduate rate gaps for this population.

Additionally, the university is a leader in the Association of Public and Land Grant Universities Powered by Publics (APLU PxP) initiative. The goals of APLU PxP are to produce several hundred thousand more degrees by 2025; to eliminate the achievement gap for low-income, minority, and first-generation students; and to expand access to higher education for students from all backgrounds. Since 2018, one hundred thirty (130) universities and state systems participate in 16 transformation "clusters." The university served as lead in the Big Ten Academic Alliance (BTAA) Cluster, which is studying retention and persistence starting with a focus on foundational course "DFW" rates to determine barriers faced by students pursuing degree advancement and align best practices to address those challenges.

The university has begun to use these data to examine foundational course curriculum and determine additional supports needed for students in these courses. This has culminated in a project called the Inclusive Course Redesign Initiative (ICRI). ICRI began in Spring, 2023 focused on inviting faculty to consider course redesign with equity and inclusion at the core. Inclusive course redesign is a process of intentionally designing course materials and activities to be more welcoming and accessible to all students, regardless of their backgrounds or abilities. By working in partnership with the Center for Innovation in Teaching and Learning (CITL), instructors can create more equitable learning environments that support the success of all

learners. Inclusive course redesign can involve changes to course syllabi, assessments, classroom policies, and more. Each semester depending on availability of CITL partners, faculty are invited to participate by the Vice Provost for Undergraduate Education in consultation with the faculty member's home academic unit. In the Spring, 2023, Fall, 2023, and Spring, 2024 semesters, faculty who teach in larger, foundational courses which were identified as having gaps in final grade performance were prioritized for participation. Gaps refer to significantly higher percentages of students receiving a final grade of D or F or who withdrew from the course comparing URM students to White students and first-generation students to non-first-generation students. Additional courses will be selected for the 2025-26 academic year.

Aligned with the goals of the ATI and APLU work is the campus' Student Success @ Illinois (SS@I) work. Known as the Student Success Initiative when it kicked off in 2019, goals are: 1. increase access (reduce cost of attendance, increase aid, consider time to degree); 2. eliminate equity gaps (increase retention and graduation rates for underrepresented and minoritized students); 3. improve the Illinois experience (abandon "sink or swim" mentality, identify and broaden campus programs, support services, and opportunities for engagement). Recognizing that Student Success is ongoing work, what was known as the "Student Success Initiative" became SS@I in 2023. A variety projects emerged from SS@I that have enabled the university to provide greater focus on recruitment and retention efforts. Some examples of key current efforts include:

• Student Success Symposia: The 4th Annual Student Success Symposium in February 2025 drew more than 250 participants. As part of the Symposia, campus recognizes individuals and teams based on their contributions to Student Success @ Illinois with Student Success Champion Awards.
• Early Alert and Outreach: An advisory group has been meeting since 2022 to research and recommend appropriate early alert markers to connect students with relevant resources early in the semester. Starting with the Spring, 2023 semester, a select group of instructors engaged in a pilot effort to utilize Canvas Learning Management System data to detect early warning signs of academic issues. Information from the pilot paired with interviews with campus academic advisors will be used to help build an equitable, sustainable early alert system and to inform a communication campaign around the importance of class attendance and engagement.

• Policies:
o Grounded in research showing institutional labeling of students in racially and culturally charged ways leads to disproportionality negative experiences for historically underrepresented minority students, a SS@I Policy and Issues Group worked toward changing "probation language." In 2024, the university approved revisions to this language. Effective starting in the Fall, 2024 semester, all academic standing codes at the university that used the word "probation" will be replaced with either "low GPA warning" or "college academic warning"

depending on the code. Throughout 2024, this Policy and Issues Group has been examining college, departmental, and program websites to ensure consistency with the university's revised language. Academic unit representatives are also tasked with evaluating practices in determining students' academic status, messaging to these students, and programs available to support them.
o Led by the Director for General Education, a SSS@I Policy and Issues Group is currently studying access and outcomes for historically marginalized students in general education courses and requirement categories. Using student outcomes data to look at grade disparities by group and impact on time-to-degree, the Director and the Policy and Issues Group will make recommendations to the campus General Education Board and, where appropriate, to the Academic Senate, on appropriate revisions with the goal of more equitable outcomes.
o The Transfer Student Experience Task Force met throughout the 2022-2023 and 2023-2024 academic years, investigating the impact of certain university policies such as the residency requirement on transfer students. The Task Force authored a proposal to reduce this requirement from 60 to 45 credit hours with the intention of reducing time to degree completion for transfer students and better alignment with peer institutions. The proposal was approved by the Academic Senate in December, 2023 and will go into effect starting with the Fall, 2024 semester.

• Academic Advising: Cognizant that academic advisors are key to students' retention and experience, SS@I is focusing on supporting the university's advising community to advance efforts to create a sustainable and equitable advising experience for students and a professional advising community for academic advisors and those in advising adjacent roles. SS@I hosts the Advisor Series, a monthly professional development opportunity for advisors. In addition, a group with representation from academic advising and student support units across campus came together regularly to develop a landscape analysis survey followed by focus groups to collect feedback from the advising community. Among other findings, advisors indicated a need for coordinated resources. As a first step in this direction, the SS@I website is being redesigned to include a central location for many student, advising, and staff resources.

Finally, the university's recruitment plan and programming aligns with A Thriving Illinois and with the Office of Undergraduate Admissions' (OUA) statement on their Diversity Site. The university offers a number of outreach and recruitment programs geared toward historically underrepresented minority students geared toward underrepresented populations. The University of Illinois Urbana-Champaign moved to test-optional, with ACT/SAT scores optional for all first-year applicants. Test scores are not required to be considered for merit-based or honors programs. OUA has dedicated teams to enhance the recruitment and enrollment of underrepresented groups; in 2024, these teams included a group on African American Recruitment and Yield, one on Native American Recruitment and Yield, and a third focused on Latinx Recruitment and Yield. The objective is to assemble stakeholders from campus sectors already engaged in impactful work with underrepresented populations, fostering ongoing

already engaged in impactful work with underrepresented populations, fostering ongoing dialogues and collaborations to devise innovative recruitment and enrollment strategies. In alignment with A Thriving Illinois Growth Strategy 8 to strengthen the statewide, coordinated transfer system to ensure students have seamless paths to build on previous academic learning and earn postsecondary credentials, the University of Illinois Urbana-Champaign has multiple transfer pathway programs. The Parkland Pathway program allows students to dual enroll at Parkland College and the University of Illinois Urbana-Champaign while living in university residence halls. There are also intensive advising partnerships with City Colleges of Chicago, Danville Area Community College, Illinois Central College, and Rock Valley College. In 2022, the campus implemented Public Act 102-0187, the Public University Uniform Admission Pilot, which guarantees transfer students admission to the university if they meet minimum requirements.

Describe program and institution-based high-impact practices and wrap-around student support services ensuring equitable access and success for students enrolled in the proposed program.

Access 2030 demonstrates the University of Illinois' commitment to supporting "the ongoing learning renewal of students and systemic implementation of evidence-informed student support practices." This equity-focused plan includes emphasis on the three universities' summer bridge programs, proactive advising, and high-impact practices to support retention and to ensure equitable access and success.

In addition to Access 2030, the System supports students through the President's Research in Diversity Travel Assistance award. This competitive program, primarily for graduate students, has been established for the purpose of promoting diversity and the understanding of diversity within the University. Recipients are provided a certificate and funding up to $600 to travel to a professional conference related to diversity or identity (such as those conferences involving race, gender, ethnicity, sexual orientation, disability, and national origin) to present papers, posters, or creative work at conferences related to diversity or identity.

At the institution level, the University of Illinois Urbana-Champaign prides itself on the array of high-impact practices and services offered to students. These student support practices support the ongoing learning renewal of students and systemic implementation of evidence-informed student practices, which align with Equity Strategy 1 of A Thriving Illinois. The Counseling Center, Office of the Dean of Students, McKinley Health Center, and the Connie Frank CARE Center are accessible to all students via in-person or remote options to facilitate student wellness and retention. All students are encouraged to participate in workshops hosted by the university's Writer's Workshop and are eligible to receive assistance on writing projects through their writing assistants. For students with disabilities, Disability Resources & Educational Services (DRES) has helped thousands of students earn college degrees and Urbana-Champaign has been recognized as a national leader in the area of post-secondary education for persons with disabilities. Indeed, as the oldest post-secondary disability support

program in the world, DRES has been associated with many programmatic innovations including:

• The seminal research which led to the development of the first architectural accessibility standards that would become the American National Standards Institute Standards;
• The first wheelchair-accessible fixed route bus system;
• The first accessible university residence halls;
• The first university service fraternity and advocacy group comprised of students with disabilities, Delta Sigma Omicron; and
The first university to receive the Barrier-Free America Award from the Paralyzed Veterans of America (2012).

Additionally, poised at the crossroads of academic and student affairs, the Michael L. Jeffries, Sr. Center for Access and Academic Support (formerly known as the Office of Minority Student Affairs) is one of the oldest and most comprehensive student support programs in the nation. The Jeffries Center has embodied the University of Illinois Urbana-Champaign's land-grant mission by championing access for all students and providing a comprehensive array of college preparatory and support services to bolster students' success since its inception. Programs such as A&M (Advising and Mentoring), First Generation Student Initiatives and Tutoring and Academic Services the Center also align with A Thriving Illinois Equity Strategy 8 with the use of staff as advisors/coaches as well as peer and near-peer tutoring. The Jeffries Center currently houses nine departments. In 2022, the University of Illinois Urbana-Champaign was recognized as one of 53 institutions in the National Association of Student Affairs Professionals' (NASPA) First-Gen Forward 2022-2023 cohort. First-Gen Forward was the first program to acknowledge higher education institutions for their commitment to the success of first-generation students. As a NASPA First-Gen Forward institution, the university applied and was accepted into NASPA's First Scholars Network. This membership signifies the university's competency and commitment to the success of first-generation students. Through the network, the university receives tools, resources, and expert guidance, including data, peer networks, evidence-based approaches, and data-driven continuous improvement. The university established a First-Generation Steering Committee in January, 2023 to work with the Center for First-Generation Student Success to establish goals, identify barriers, and create improvement projects to enhance the experience of first-generation students on campus. In the 2023-2024 academic year, this Steering Committee launched their Insights Tool, which is a comprehensive diagnostic self-assessment in which members of the community share information about institutional efforts to support first-generation students. They also joined the Postsecondary Data Partnership, which provides insights into students' academic progress and outcomes across participating institutions. In the fall of 2023, the Jeffries Center hired the inaugural Director of First-Generation Student Initiatives to lead programming and service delivery to the undergraduate first-generation student community.

The Office of Student Affairs, particularly Student Success, Inclusion and Belonging (SSIB),

The Office of Student Affairs, particularly Student Success, Inclusion and Belonging (SSIB), supports numerous programs aimed at supporting diverse groups of students including working adults, students of color, and transfer and low-income students (just a sampling of which are provided in this document. SSIB houses the university's cultural and resource centers and a variety of high-impact programs; to name just three examples: 100 STRONG Program, I-Connect Diversity & Inclusion Workshops, and Housing Division Social Justice and Leadership Education. Veteran support is provided through the Chez Veterans Center out of our College of Applied Health Sciences, which includes individualized academic and career coaching to support progress and address barriers, peer and professional mentoring to foster community and networking, and health and wellness services to promote psychosocial adjustments and well-being.

The Career Center offers coaching and support students and connects them to opportunities, as they make career decisions and learns lifelong career management skills. They serve as leaders of the university's career services community. The Career Center in partnership with the Jeffries Center sponsors the FOCUS program, an intensive year-long program created to eliminate the gap in post-graduation outcomes and starting salaries between underrepresented, first-generation students and their peers. Its aim is to positively impact their career trajectory, earnings potential, and economic security for years to come. Through a series of workshops, this program provides transformative learning experiences for students in and out of the classroom. Those selected to participate receive a $1,000 scholarship over two semesters.

Finally, the university continues to develop and grow the Illinois Scholars Program (ISP). Designed to serve residents of the state of Illinois from historically underserved populations and low-sending counties, ISP guides undergraduate students' transition to the University of Illinois Urbana-Champaign by providing a wide range of educational, personal, social, and cultural opportunities. ISP aims to combine opportunity and access, experiential learning, and support to position students for academic success and personal growth throughout their time at Illinois. ISP begins with a four-week intensive summer bridge experience for incoming first-year students, and ISP continues to provide support and community for Illinois Scholars during their undergraduate years. Since the program's inception in 2018, 266 students have completed their summer bridge experience, with a 97.1% retention rate from their first to second term, compared to a 89% campus retention rate for underrepresented minority students during the same period. As of August 2024, 46 ISP students have graduated with their bachelor's degrees. During 2023, ISP hired a full-time Illinois Scholars Program Coordinator position and expanded the summer bridge participants from 25 students from two colleges to 69 students from nine colleges, with that number expected to grow to 150 students by 2026. Curricular modifications are underway to provide stronger academic support. Current academic support includes math, writing, and undergraduate research.

The Data Science core of the X+ Data Science programs is designed from the ground up to be

The Data Science core of the X+ Data Science programs is designed from the ground up to be inclusive and equitable. They have many fewer technical prerequisites and requirements than most programs in computer science, mathematics, or statistics. The first course in the data science core introduces students to data science and the computer language Python and has no prerequisites. The sequence has no external prerequisites beyond first-semester calculus.

The Linguistics + Data Science degree will provide marketable skills for a wider variety of students than we currently serve. This program will expand the number of graduates who will have access to these in-demand jobs, the median income of which was over $100,000 in 2021.

The Linguistics department is committed to ensuring equitable access for all students in the program. As our initiatives and strategies prioritize diversity and inclusion, with individualized support while we build community and belonging.

Explain institutional strategies being implemented to increase and retain faculty, staff, and administrators of color and the implications for the proposed program. Explain how progress will be monitored.

Aligned with Equity Strategy 3 (Implement equitable talent management to increase and retain faculty, staff, administrators, and trustees of color), the UI System and the Urbana Campus support efforts in these areas, particularly in supporting underrepresented minority faculty. The Distinguished Faculty Recruitment Program has a stated goal of increasing underrepresented minority faculty. Since 2017, the System has committed $31.4 million to this program, the recruitment of underrepresented minority faculty from a range of disciplines who can transform our universities by their exceptional scholarship and teaching. One criterion is that the faculty member "will enhance diversity in the unit and in the college." The Public Voices Fellowship is a year-long program open to tenured faculty to join a cohort of leaders, the majority of whom will be underrepresented (including women) and provide them with extraordinary support, leadership skills, and knowledge to ensure their ideas shape not only their fields, but also the greater public conversations of our age. The Leadership Initiative for Women Faculty brings together women faculty from across the UI System who are leaders and/or potential leaders to identify barriers to and facilitators for advancement of women. Finally, the System will also be providing funding in support of each university's faculty recruitment plans which will also emphasize the recruitment of underrepresented minority faculty.

As a campus, the University of Illinois Urbana-Champaign is committed to investing in strategic hiring of faculty to maintain our academic strengths, respond to student demand, and capture opportunities. Investments from the Office of the Provost in faculty hiring, retention, and development are critical to maintaining and enhancing the academic excellence of our campus, especially at a time when the competition for top talent is intense. The Next 150 strategic plan identified a major hiring initiative to expand faculty hiring in key areas over the next five years, with the goal of expanding the overall size of the faculty. While the COVID-19 pandemic slowed that initiative, the University remains committed to hiring with the goals of enhancing faculty diversity and meeting student demand.

Though all faculty hiring is a department and college-level decision, the campus has devoted significant resources to incentivize hiring activities that support diversity, recruitment, and retention goals. Prominent among those programs are the Targets of Opportunity Program (TOP) and the Dual Career Academic Couples (DCAC) program. The TOP program provides recurring funds for salary support for hires that enhance campus diversity, including faculty from underrepresented groups and women in STEM fields. Nearly all of these hires are identified through a traditional search process. The Provost invests ~$1 million per year in this recurring salary support for TOP. The Office of the Provost, in conjunction with the Office of the Vice Chancellor for Diversity, Equity, and Inclusion also announced a temporary modification to

the TOP program to recruit more faculty of color. This initiative made an additional ~$1 million available to units to support hiring in this area. For the DCAC program, the Provost provides recurring matching funds (i.e., 1/3 of the initial salary) if the partner is hired into a tenure track position through the DCAC program. Several years ago, the Provost modified the DCAC program to provide only non-recurring funding (1-3 years) for non-tenure track partner hires which has helped to reduce the overall cost of the program.

The campus also continues to fund postdoctoral fellowships targeted to underrepresented scholars in ethnic studies programs (e.g., Latina/Latino Studies, American Indian Studies, etc.) and through the DRIVE program. These programs are intended to help provide postdocs with an opportunity to build a foundation of scholarship that will prepare them for tenure track positions. While the ethnic studies postdocs are selected through a specific advertisement, the DRIVE program identifies candidates through a search process for open faculty positions.

Finally, through a partnership with the University System Office and departments, the Provost's Office also supports the Underrepresented Faculty Recruitment Program in making available non-recurring funds for research to enhance offers of employment. Awards up to $20,000 per year for each of the first three years of employment are available for those hired in the 2022-2023 academic year. The Provost's Office funds the additional search expenses incurred by bringing an additional candidate to campus if that person is from an underrepresented group.

Additional retention efforts include programming and development activities for executive officers and faculty members across ranks. Programming and resources for unit executive officers (EOs) equip them with the knowledge and skills necessary for leadership including ways to enhance their ability to support and mentor faculty within their units, particularly faculty members of color. The Office of the Provost also coordinates several leadership development programs to increase the pool of potential academic leaders on campus with intentional focus on supporting faculty members from marginalized and underrepresented groups to explore campus leadership and administrative roles. The Office of the Provost also invests in faculty development. From recruitment to onboarding, through promotion, and retirement, faculty members have access to programming and resources designed to meet them and address their careers needs. The office also supports several institutional memberships that provide external resources to our faculty, such as the National Center for Faculty Development and Diversity to ensure faculty members' continued access to NCFDD's resources.

To monitor progress of our efforts to recruit and retain faculty members of color on our campus, we collect, manage, and report annual data through the Division of Management Information and Office for Access and Equity. Additionally, we release a yearly report on hiring and retention of women faculty of color through the Women at Illinois report (e.g., 2020-2021 report and 2021-2022 report).

Sustainability

Describe strategies and initiatives the institution plans to implement that makes the proposed program and college more generally affordable for students and their families, including those who have been historically underserved.

The University of Illinois and the University of Illinois System have been committed to implementing strategies to make college “more affordable, particularly those who have been historically underserved.” The following initiatives have been implemented and promising outcomes have already been realized. The President’s Award Program (PAP) and PAP Honors provide financial support for students admitted to one of the UI Systems three institutions from historically underrepresented groups. The PAP award is $5,000 per year available for a maximum of four years while PAP Honors awards $10,000 per year for four years. Over $244 million has been distributed between 2006 and 2020.

The University participates in the State of Illinois AIM HIGH Grant program, which provides $5,000 per year ($20,000 over four years) in merit-based awards to the top academically admitted new freshmen who meet eligibility requirements.

Aligned with A Thriving Illinois’ Equity Strategy 5 and Growth Strategy 4 to encourage high school graduates to enroll in our higher education system and keep talent in Illinois, Illinois recently adopted the Common App.

Recognizing the barrier that affordability creates to higher education, the University of Illinois Urbana-Champaign has taken action to increase the portfolio of financial support for students. The university annually provides over $465 million in financial aid funding to undergraduate students, with 72% of students receiving some type of aid. Over $145 million of that funding comes from institutional sources, with the vast majority provided to Illinois residents as need-based grants and scholarships. The university has two signature financial aid programs. Began in 2005, the Illinois Promise program covers tuition, campus fees, room/board, and books/ supplies through a combination of federal, state, and institutional grants and a $2,500 Federal Work-Study award to Illinois residents whose family income is at or below the federal poverty level. In 2019, the Illinois Commitment program began and provides a combination of federal, state, and institutional grants to cover tuition and campus fees for Illinois residents whose family income is $67,100 or less. Approximately 30% of Illinois residents attending the University of Illinois receive funding through either the Illinois Promise or Illinois Commitment programs. Of the 2020-2021 cohort of Illinois Commitment recipients, 36% identify as Hispanic, 28% as White, 19% as Black/African American, 14% as Asian, and 3% identify as two or more races.

In an effort to acknowledge financial constraints that may impact retention, in March 2020, the University of Illinois Urbana-Champaign raised the threshold that previously prevented course

registration due to holds placed on student accounts resulting past-due balances of over $200. The change now only impacts students whose past-due balance is over $1,500. This proactive institutional response is an example of alignment with the Sustainability Goal, Strategy 3 of A Thriving Illinois.

Provide tuition cost analysis for comparable programs and institutions in Illinois.

The Department of Linguistics seeks to retain Undergraduate Base Tuition for the Linguistics + Data Science Program. For students entering in Fall 2025 the Base Tuition Resident Rate for the academic year was $12,992, for Nonresidents the rate was $33,344, and the International Rate was $35,872. We could find no other program in Illinois combining data science with the study of language, making tuition analyses not directly comparable. The most similar program is Computer Science + Linguistics at the University of Illinois Chicago. This program costs $14,348 for residents, $31,048 for non-residents, and $33,148 for international students.

LAS plans to seek a new differential tuition for all LAS X+DS majors; if this differential tuition is proposed and approved, the Department of Linguistics will seek this differential tuition for the Linguistics + Data Science Program.

Growth

Provide a supply and demand analysis for the proposed program that, at minimum, does the following: a) Provides evidence of student interest in the proposed program including any strategies to incentivize students to stay in Illinois. b) Identifies and provides evidence of a high-quality credential with viability for future careers.

The X+Data Science degree programs are an innovative approach to providing additional support for the tremendous and rapidly growing demand for employees with capabilities in data and computation. The Bureau of Labor Statistics projects that employment for data scientists will grow by 36% from 2021-2031, compared to an average growth rate of 5% for all jobs. (https://www.bls.gov/ooh/math/data-scientists.htm). Enrollment in the undergraduate majors of “Statistics” and “Statistics and Computer Science,” which provide students access to some of the competencies of data science, have grown by a factor of six in the last ten years. The median annual wage for data scientists was $100,910 in May 2021. We expect graduates from this proposed degree program to enter a strong job market with a very highly sought-after skillset.

In addition, graduates of the Linguistics + Data Science program will be well prepared for other in-demand jobs across a variety of sectors including natural language processing and AI. Current job descriptions for positions relevant to this degree demonstrate the demand for the skill set for which this degree is designed. Examples include preferences for "capacity to manipulate, organize, and analyze large amounts of data," "demonstrated skills with analytical thinking and quantitative methods," "statistical coding experience in R," "experience with data mining tools". All of these skills would be demonstrated by graduates of the Linguistics + Data Science program, making them strong candidates for a wide variety of job opportunities.

Explain how the program engaged with business and industry in its development and how it will spur the state's economy by leveraging partnerships with local, regional, and state industry, business leaders and employers.

The University of Illinois Urbana-Champaign has strong partnerships with business and industry through the statewide initiatives like the Discovery Partners Institute (DPI) and the Illinois Innovation Network (IIN),which closely align with A Thriving Illinois' Growth Strategies. As a key gubernatorial initiative, DPI's Tech Talent Lab and immersion programs engage with Chicago's technology workforce, allowing students to interact with Chicagoland technology and innovation culture. Students make meaningful connections to regional employers and industries, university research teams, civic and nonprofit organizations, and startups that will lead to employment and talent retention in the region. IIN works to enrich the student experience through short-term boot camps around topics such as artificial intelligence, data science, entrepreneurship, and more. These intensive programs will encourage students' interest in topics that are key to the 21st century economy and give them a foundation for continued study.

Partnerships with the Research Park, the work of the Campus Community Compact, and the I-Engage program align with A Thriving Illinois' Growth Strategies.

As a dynamic tech hub that provides meaningful and industry-focused research and internship opportunities, the Research Park employs 800 interns year-round in part-time employment, allowing University of Illinois Urbana-Champaign undergraduate and graduate students to work on campus and be enrolled as full-time students. There are more students working at the Research Park than at any other peer American university research/tech park. Students are paid highly competitive wages for their specialized skillsets in areas like computer science, data analytics, UX/UI design, engineering, business development, and market research. Research Park internships increase students' employment prospects by expanding their professional networks, building their professional portfolios, and developing their leadership skills. The top students working in the Research Park are typically hired into full-time roles within the companies that employ them, many of whom then remain in tech roles in Illinois (i.e. John Deere, State Farm, Caterpillar, ADM, Motorola Solutions, Brunswick, Abbott, etc.). Many of the corporate sites focus on DEI outreach and participate as sponsors to various student groups and campus units. Examples include Synchrony supporting a class of 125 Chicago students who are gaining technology skills as they attend the Pritzker Tech Talent Labs' Digital Scholars program with the Discovery Partners Institute, part of the University of Illinois System. The Digital Scholars program is a free summer program for underrepresented high school students to build computing skills, increase college and career readiness, and make connections to Champaign and Chicago's dynamic tech communities. This program helps link Chicago high school students to the University of Illinois and, through Synchrony, the Research Park, further developing a strong talent pipeline. Motorola Solutions' partnership with the Society of Hispanic Professional Engineers, and Brunswick's volunteer work with Booker T. Washington

STEM Academy. Building on the well-established relationships of the affinity and community groups both on campus, the Research Park campus office has ongoing partnerships with units such as Cultural Centers, The Career Center, and Registered Student Organizations (RSOs) to educate Illinois' diverse population of students on the opportunities available within the Park. Research Park has been integrally involved in building the region's capacity and expertise in precision fermentation and bioprocessing, which resulted in the $51 million grant to iFAB from the U.S. Economic Development Administration announced in July. Research Park encompasses multiple facets of that ecosystem – it is home to one of the region's fastest growing contract development manufacturing organizations, as well as one of the major industry partners (ADM).

Another local program, We CU, supports long-term partnerships between local organizations, instructors, and students at the University of Illinois Urbana-Champaign. These mutually beneficial partnerships create impactful learning experiences for students and promote positive change in the Champaign-Urbana community. In the first four years of the program (2020-2024), 3,152 students from 12 colleges dedicated 56,115 hours to 798 service projects. In 2024, We CU recognized 84 students as We CU Community Engaged Scholars. We CU Scholars completed an additional 8,615 service hours.

The Campus-Community Compact (Compact) is one of the major initiatives of the Community Action and Public Engagement (CAPE) Committee of Illinois' Chancellor's Call to Action to Address Racism and Social Injustice. Comprised of a co-equal partnership between Illinois and the broader Champaign County community, the Compact is an ambitious and visionary initiative to accelerate social justice by addressing structural racism, bias, and social injustice over the next five to ten years in six interrelated grand challenge areas: inclusive education; accessible technology; economic development; health, wellness, and resilience; workforce development; and community relations. The Compact also includes several crosscut areas; namely, accessible campus/transportation, accessible information, community safety, and language (e.g., multilingualism, communications, and messaging).

Three priorities have been identified for the Inclusive Education focus area: restoring opportunity; providing a community-based information delivery service; and professional development. Restoring Opportunity addresses the need for greatly improved access to quality health care, access to a rich array of courses taught by culturally responsive and affirming educators, and access to well designed and well-resourced schools. The development, implementation, and sustainability of a community-based information delivery service requires a community that partners with the university to invest in professional development strategies and training opportunities to continuously strengthen the capabilities of the teacher workforce to address the needs of an increasingly diverse student population. Illinois, through its College of Education, will work with the local schools' districts to create targeted initiatives to recruit and hire teachers of color at a level proportionate to the population of students of color taught

and hire teachers of color at a level proportionate to the population of students of color taught or that increase the total population of teachers of color by 100% of their current numbers. Professional development involves continuous professional development for teachers and administrators.

An example of a professional development activity is the TEACH Academy, a three-day interactive experience designed to strengthen instructional practices using a lens that focuses on educational justice, equity, and inclusion. Now in its second year, the TEACH Academy has already cultivated a community of over 200 TEACH Scholars who are transforming education across Champaign County. The 2023 TEACH Academy introduced groundbreaking new math teaching methods that were subsequently implemented in local schools during the 2023-2024 academic year. These innovative approaches have already yielded impressive results, with an increase in math scores among some high school students. The 2024 TEACH Academy again featured three keynote presentations open to all Champaign County educators and TEACH Scholars. With 180 TEACH Scholars, the 2024 cohort doubled the size of the inaugural class, represents four area school districts, and spans 34 campuses across the county. Forty-nine returning TEACH Scholars who continue to deepen their impact were also welcomed back in 2024.

Finally, the Office of the Provost's I-Engage promotes new faculty engagement with the community. Deans nominate new faculty members to be part of the cohort of approximately 35 from different academic units. The cohort spends a day traveling around Champaign-Urbana to different local business and industry sites, meeting with leaders from these areas and debriefing with campus leaders between sites. The program's goal is to facilitate opportunities for new faculty to develop a deeper understanding of the infrastructures and drivers of the local economy, including agriculture, government, healthcare, and social services. I-Engage furthers understanding of the critical synergy between the campus and local community.

This next section discusses how the program itself engages with business and industry, and works to spur the state's economy:

Curriculum Alignment with Business Needs: The Linguistics + Data Science program will collaborate with businesses and industries to ensure that its curriculum is aligned with the practical skills and knowledge demanded by the job market. This alignment will not only prepare students for relevant career opportunities but also addresses specific challenges faced by industries in the state.

Internship and Job Placement Opportunities: The program will work with local businesses and organizations to create internship and job placement opportunities for its students. By connecting students with real-world work experiences, these partnerships will enhance students' employability and provide industries with a pool of skilled and well-prepared

candidates.

Economic Growth: The development of a skilled workforce in the intersection of language and data science has the potential to attract new businesses to the state or region. Businesses seeking individuals with expertise in data analysis and socially and cognitively informed contexts will find value in locating or expanding their operations in areas with strong interdisciplinary programs. Linguistics + Data Science graduates will be equipped with a unique skill set that combines quantitative problem solving with the humanistic skills of writing and critical analysis. This can lead to innovative problem-solving approaches in various industries, driving efficiency and growth.

By collaborating with local, regional, and state industry leaders and employers, the Linguistics + Data Science program will not only prepare students for successful careers but will also contribute to the state's economic development. The program's curriculum, internship opportunities, research collaborations, and networking initiatives collectively create a pathway for students to enter the workforce with relevant skills and contribute to the growth and innovation of industries within the state.

Describe how the proposed program will expand access and opportunities for students through high-impact practices including research opportunities, internships, apprenticeships, career pathways, and other field experiences.

The proposed Linguistics + Data Science program is designed to expand access and opportunities for students through a variety of high-impact practices that combine academic learning with real-world experiences. These practices enhance students' education, skill development, and career readiness:

Research opportunities: The program will offer students the chance to engage in research projects that integrate linguistic analysis with data science methodologies. Through individual research, and with the support of their instructors, students will gain valuable insights into trends revealed through language use, social dynamics, and cultural phenomena while honing their data analysis skills.

Internships: Collaborations with local businesses and other institutions will provide students with internships that will grant them invaluable “real-life” problem solving and pre-professional/professional experiences. These experiences expose students to practical applications of linguistics and data science in real-world settings, enhancing their understanding of how these disciplines intersect and their potential impact on various industries.

Career Pathways: The program will work to establish clear career pathways for graduates. By aligning curriculum with industry demands, students will be equipped with the skills and

aligning curriculum with industry demands, students will be equipped with the skills and knowledge needed for careers in fields such as data analysis, natural language processing and AI, and more.

Collaboration with Industry Experts: Through partnerships with industry leaders and professionals, students will benefit from guest lectures, workshops, and mentorship opportunities. These interactions expose students to current industry practices, broaden their perspectives, and establish connections for future career opportunities.

Capstone Projects: The program can culminate in capstone projects that require students to apply their historical and data science skills to real-world problems. These projects allow students to showcase their abilities, build a portfolio, and demonstrate their readiness for the workforce.

Explain how the proposed program will expand its models of teaching and learning, research, and/or public service and outreach that provide opportunity for students to succeed in the work of the future.

Interdisciplinary Collaborations: The program will encourage interdisciplinary collaborations, enabling students to work with peers from different disciplines. This exposure fosters a holistic understanding of complex issues and prepares students for collaborative work environments.
The Linguistics + Data Science program will continue the department's commitment to skill-driven course offerings to best support student success as they progress through the program.
Community Engagement: Students may engage with local communities through projects that address language-related and data-driven challenges faced by the community. This engagement fosters a sense of civic responsibility and highlights the relevance of linguistics and data science in everyday life.
Additionally, dynamic classroom experiences, including collaborative group assignments and independent research opportunities will prepare student for the future workplace. Internship opportunities will be explored. As we continue to build out the program we will continue to embed data driven practices in our curriculum, including workshops for undergraduate and graduate students. This program will both benefit from and contribute to the wide range of data-focused courses offered by the department.
By integrating research opportunities, internships, career pathways, field experiences, collaboration with industry experts, capstone projects, interdisciplinary collaborations, and community engagement, the proposed Linguistics + Data Science program ensures that students receive a well-rounded education that equips them with practical skills, critical thinking abilities, and a deep understanding of the intersection between language and data science. These high-impact practices expand students' access to opportunities and enhance their preparation for successful careers in a rapidly evolving world.

Beyond workforce need, describe how the program broadly addresses societal needs (e.g., cultural or liberal arts contribution, lifelong learning of Illinois residents, or civic participation).

Beyond fulfilling workforce demands, the Linguistics + Data Science program serves as a dynamic bridge between cultural enrichment and lifelong learning for Illinois residents, overcoming the disciplinary boundaries that have kept them apart until now. By merging the analytical power of data science with the nuanced insights of linguistic inquiry, the program enables individuals to uncover untold stories, gain a deeper appreciation for diverse cultures, and engage critically with complex narratives. This blend of disciplines encourages civic participation through informed decision-making, fostering a sense of social responsibility and active engagement with contemporary issues. In doing so, the program not only contributes to a more culturally enriched society but also empowers residents to navigate the complexities of the modern world with linguistic context and analytical acumen.

The Linguistics + Data Science program will greatly expand career opportunities for graduates, who with their strong background in the humanities, will widen the perspectives of their employers and colleagues. This will allow them to tackle complex social problems form both a humanistic and quantitative perspective.

A Thriving Illinois:
Higher Education
Paths to Equity,
Sustainability, and
Growth - Attach
Documents

Program Description and Requirements

Illinois Administrative Code:

1050.30(b)(1) A) The caliber and content to the curriculum assure that the objectives of the unit of instruction will be achieved; B) The breadth and depth of the curriculum are consistent with what the title of the unit of instruction implies; C) The admission and graduation requirements for the unit of instruction are consistent with the stated objectives of the unit of instruction.

1050.30(b)(3): Appropriate steps shall be taken to assure that professional accreditation needed for licensure or entry into a profession as specified in the objectives of the unit of instruction is maintained or will be granted in a reasonable period of time.

1050.50 (a)(2)(C) Requirement for Programs in which State Licensure is Required for Employment in the Field: In the case of a program in which State licensure is required for employment in the field, a program can be found to be in good standing if the institution is able to provide evidence that program graduates are eligible to take the appropriate licensure examination and pass rates are maintained as specified in the objectives of the unit of instruction. If there is no such evidence, the institution shall report the program as flagged for review.

Program Description

Provide a description of the proposed program and its curriculum, including a list of the required core courses and short ("catalog") descriptions of each one. (This list should identify all courses newly developed for the program).

Provide Program Description here:

The Linguistics + Data Science degree plan incorporates simultaneously a strong foundation in data science and linguistics, including a capstone research experience as part of the degree.

1. The data science core coursework (29-30 hours) comprised of:
a. Two (2) courses from Statistics (STAT 107, STAT 207)
b. Two (2) courses from Computer Science (CS 277, CS 307)
c. Two (2) courses from Information Sciences (IS 467, 477)
d. Two (2) courses from Mathematics (MATH 220 or 221 or 234 and MATH 227 or 257)
2. Core linguistic coursework, which requires students to demonstrate a breadth of linguistic and computational knowledge (30 hours)
3. A research, internship, or capstone experience wherein the student integrates data science and history into a long-form project or presentation (3 hours) (LING 453)

This is a face-to-face, residential program.

Note: LING 442 has been approved, effective FA26 and will show as course not found until the Academic Catalog rolls to the next academic year in early 2026. See CIM Course approval documents in the Program of Study section.

Attach Program Description Files if needed

Graduation Requirements

Provide a brief narrative description of all graduation requirements, including, but not limited to, credit hour requirements, and, where relevant, requirements for internship, practicum, or clinical. For a graduate program, summarize information about the requirements for completion of the thesis or dissertation, including the thesis committees, and the final defense of the thesis or dissertation. If a thesis or dissertation is not required in a graduate program, explain how the functional equivalent is achieved.

A total of 120 credit hours, including general education requirements, the university residency requirements of 45 hours of U of I coursework with a minimum of 40 hours of upper division coursework is required for graduation.

General education: Students must complete the Campus General Education requirements including the campus general education language requirement.

Minimum required major and supporting course work normally equates to 63-66 hours.

Departmental distinction: to graduate with distinction requires an Illinois Linguistics GPA 3.4 or higher. In addition, students must complete a research project under the supervision of a Department of Linguistics faculty member and distinction must be recommended by a Linguistics faculty member.

ORIENTATION AND PROFESSIONAL DEVELOPMENT: 1-3 hours
LAS 101 or LAS 100 & LAS 101 or LAS 102

DATA SCIENCE CORE: 29 – 30 hours
MATHEMATICAL FOUNDATIONS: 7 – 8 hours
Calculus: One of MATH 220 or MATH 221 or MATH 234 (4-5 hours)
Linear Algebra: One of MATH 227 or MATH 257 (3 hours)
DATA SCIENCE FUNDAMENTALS: 12 hours
Data Science Discovery: STAT/CS/IS 107 (4 hours)
Data Science Exploration: STAT 207 (4 hours)
Modeling and Learning in Data Science: CS 307 (4 hours)
COMPUTATIONAL FUNDAMENTALS: 4 hours
Algorithms and Data Structures for Data Science: CS 277 (4 hours)
SOCIAL IMPACT IN DATA SCIENCE: 6 hours
Ethics and Policy for Data Science: IS 467 (3 hours)
Data Management, Curation, and Reproducibility: IS 477 (3 hours)

LINGUISTICS CORE (18 hrs)
LING 100
LING 406

LING 413
Choose one of the following courses: LING 210, LING 225, LING 250
Choose two of the following courses: LING 301, LING 302, LING 304, LING 307, LING 401

RESEARCH OR DISCOVERY EXPERIENCE: 3 HOURS
LING 453 (3 hours)

ADVANCED COMPUTATIONAL LINGUISTICS Electives (12 hrs)
Choose four of the following courses: LING 414, LING 425, LING 442, LING 444, LING 446, LING 448, LING 490

TOTAL HOURS: 63-66

Plan to Evaluate and Improve the Program

Describe the program's evaluation plan.

The Linguistic + Data Science program's evaluation plan is designed to comprehensively assess various aspects of student success and program effectiveness. Student progress will be monitored through regular academic advising and the tracking of milestones, ensuring timely completion of degree requirements. Departmental support will be evaluated through feedback mechanisms that gauge the quality of advising and assistance provided to students. Student engagement will be measured by assessing participation in activities that include, but are not limited to, the Undergraduate Research Symposium and external undergraduate research conferences. The success of the program will also be reflected in the quality of work in the capstone course, which will assess all of the program learning outcomes.

Additionally, the program's impact on career outcomes will be assessed by tracking graduates' placements in advanced studies, data-driven positions, and related fields. The Linguistics Department will administer "exit" surveys to graduating seniors about their satisfaction with the program. The Director of Undergraduate Studies will host roundtable conversations with Linguistics faculty and undergraduates to hear from their experiences teaching and learning in the program and will seek their feedback in developing strategies to enhance student outcomes and quality of experience for student and instructor alike. This multi-faceted evaluation approach will ensure continuous improvement and alignment with the program's goals, promoting an enriched educational experience for students and positive contributions to their academic and professional trajectories.

Plan to Evaluate

and Improve the
Program
Attachments

Budget Narrative

Fiscal and Personnel Resources

Illinois Administrative Code: 1050.30(a)(5): A) The financial commitments to support the unit of instruction, research or public service are sufficient to ensure that the faculty and staff and support services necessary to offer the unit of instruction, research or public service can be acquired and maintained; B) Projections of revenues necessary to support the unit of instruction, research or public service are based on supportable estimates of state appropriations, local tax support, student tuition and fees, private gifts, and/or governmental grants and contracts.

Budget Rationale

Provide financial data that document the university's capacity to implement and sustain the proposed program and describe the program's sources of funding.

Is the unit's (Department, College, School) current budget adequate to support the program when fully implemented? If new resources are to be provided to the unit to support the program, what will be the source(s) of these funds? Is the program requesting new state funds? (During recent years, no new funds have been available from the state (IBHE) to support new degree programs).

The Department of Linguistics' current budget is adequate to support the program when fully implemented. No new funding will be requested to support this program.

Faculty Resources

Will current faculty be adequate to provide instruction for the new program or will additional faculty need to be hired? If additional hires will be made, please elaborate.

Current faculty resources will be sufficient to support this program. Course capacity exists to accommodate the increased demand, and no additional faculty hires will be requested to support the program. Infrastructure already exists via existing campus X + DS programs to support students in this major.

Please address the impact on faculty resources including any changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

It is expected that some students declaring this major would have otherwise declared a Linguistics major, and therefore overall growth of the department is expected to be modest to intermediate based on this degree option. Given current faculty and course capacities, the modest increase in class size is not expected to significantly change student-faculty ratios in the department.

Describe how the unit will support student advising, including job placement and/or admission to advanced studies. Will current staff be adequate to implement and maintain the new program or will additional staff be hired? Will current advising staff be adequate to provide student support and advisement, including job placement and or admission to advanced studies? If additional hires will be made, please elaborate.

The Linguistics Department is well-prepared to provide comprehensive student advising and support for the new Linguistics + Data Science major, ensuring students' successful job placement and admission to advanced studies. The department's current advising staff is equipped to handle the anticipated increase in student numbers, given the effective support infrastructure already in place. This infrastructure includes faculty advisors for research projects as well as academic advisors who will guide students through the program's requirements and opportunities.

Moreover, the department will collaborate with the broader university resources, such as LAS Career Services and the Career Center, to enhance job placement support. While the current advising staff is expected to be sufficient, the department remains open to assessing needs and making adjustments if additional hires are deemed necessary to ensure students receive the best possible support and guidance as they pursue their studies at Illinois and work toward creating the best possible foundation for advanced study or their early careers.

Are the unit’s current facilities adequate to support the program when fully implemented? Will there need to be facility renovation or new construction to house the program?

Current facilities are adequate to support the program when fully implemented.

Library Resources

Describe your proposal's impact on the University Library's resources, collections, and services. If necessary please consult with the appropriate disciplinary specialist within the University Library.

This proposal will represent little to no new impact on the University Library's resources because every course in the degree program is currently active on this campus. This degree program will involve bringing some new students to campus, but also will attract students already on campus in other degree programs. Current library collections, resources and services are sufficient to support the students in the proposed degree program. The U of I Library houses an extensive collection encompassing a wide array of subjects, making it a valuable repository for both general knowledge and specialized research materials. Linguistics faculty and students already make extensive use of library resources. Linguistics + Data Science students will leverage this comprehensive collection to access both primary sources and scholarly works. Areas where the Library might see some additional expenses include: acquiring new text and data mining collections (financial and licensing restrictions), code-intensive instructional sessions (beyond those included in the core DS+ curriculum), an increase in one-on-one consultations connected to humanities-centered DS topics, computer labs capable of supporting instructional sessions with heavy computational demand, and availability of loanable technology. This statement was prepared with the assistance of Paula Mae Carns.

Summarize information about library resources for the program, including a list of key textbooks, a list of key text and electronic journals that will support this program, and a short summary of general library resources of the University that will be used by the program’s faculty, students, and staff.

Most periodicals in the field of computational linguistics are open access, organized through the Association for Computational Linguistics which hosts all papers in this field going back to 1965.

Other key resources include access to the Cambridge Core collection.

Are any sources of funding temporary (e.g., grant funding)? If so, how will the program be sustained once these funds are exhausted?

No, all sources of funding for the program are secured for the long term, ensuring sustainable support without reliance on temporary or grant funding.

Budget Narrative
Fiscal and
Personnel
Resources
Attachments

Personnel Budget

Category	Year One	Year Five	Notes

Faculty (FTE)

Faculty FTE Year1	Faculty FTE Year 5	Faculty FTE Notes
0	0	Not required

Faculty ($)

Faculty Year 1	Faculty Year 5	Faculty Notes
0	0	Not required

Advising Staff ($)

Advising Staff Year 1	Advising Staff Year 5	Advising Staff Notes
0	0	Not required

Graduate Students ($)

Graduate Students Year 1	Graduate Students Year 5	Graduate Students Notes
0	0	Not required

Other Personnel Costs

Other Personnel Costs Year 1	Other Personnel Costs Year 5	Other Personnel Costs Notes
0	0	Not required

Budget Narrative Attachments

Facilities and Equipment

Illinois Administrative Code: 1050.30(a)(4): A) Facilities, equipment and instructional resources (e.g., laboratory supplies and equipment, instructional materials, computational equipment) necessary to support high quality academic work in the unit of instruction, research or public service are available and maintained;

B) Clinical sites necessary to meet the objectives of the unit of instruction, research or public service;

C) Library holdings and acquisitions, owned or contracted for by the institution, that are necessary to support high quality instruction and scholarship in the unit of instruction, research and public service, are conveniently available and accessible, and can be maintained.

Describe the facilities and equipment that are available, or that will be available, to develop and maintain high quality in this program. Summarize information about buildings, classrooms, office space, laboratories and equipment, and other instructional technologies for the program.

The Literatures, Cultures, and Linguistics Building (located at 707 S. Mathews Ave, Urbana IL 61801) is home to the Department of Linguistics. This building contains approximately 35 classrooms on Levels 0 and 1. However, the Linguistics Department classes are scheduled through central time-tabling and are located in whatever locations are necessary. All of the courses required by this program are already time-tabled, so that the Linguistics + Data Science program will not overwhelm existing capacity.

Will the program require new or additional facilities or significant improvements to already existing facilities?

No

Will the program need additional technology beyond what is currently available for the unit?

No

Are there other costs associated with implementing the program?

No

Facilities and Equipment Attachments

Faculty and Staff

Illinois Administrative Code: 1050.30(a)(3): A) The academic preparation and experience of faculty and staff ensure that the objectives of the unit of instruction, research or public service are met; B) The academic preparation and experience of faculty and staff, as evidenced by level of degrees held, professional experience in the field of study and demonstrated knowledge of the field, ensure that they are able to fulfill their academic responsibilities; C) The involvement of faculty in the unit of instruction, research or public service is sufficient to cover the various fields of knowledge encompassed by the unit, to sustain scholarship appropriate to the unit, and to assure curricular continuity and consistency in student evaluation; D) Support personnel, including but not limited to counselors, administrators, clinical supervisors, and technical staff, which are directly assigned to the unit of instruction, research or public service, have the educational background and experience necessary to carry out their assigned responsibilities.

Describe the personnel resources available to develop and maintain a high quality program, including faculty (full- and part-time, current and new), staff (full- and part-time, current and new), and the administrative structure that will be in place to oversee the program. Also include a description of faculty qualifications, the faculty evaluation and reward structure, and student support services that will be provided by faculty and staff.

Current staffing in the Department of Linguistics is sufficient to support existing high-quality programs as well as meet the needs of the proposed Linguistics + Data Science major.

Administrative Staff: The Department of Linguistics employs two civil service staff members and one academic professional.

The Undergraduate Team is comprised of a faculty Director of Undergraduate Studies and a Senior Academic Advisor.

The Graduate Studies Team is comprised of one faculty Director of Undergraduate Studies.

Faculty: The Department of Linguistics currently employs 13.50 FTE tenure-track faculty and 29.75 FTE specialized faculty. In addition, the Department hosts fifteen affiliated faculty with joint appointments.

Summarize the major accomplishments of each key faculty member, including research/scholarship, publications, grant awards, honors and awards, etc. Include an abbreviated curriculum vitae or a short description.

Faculty in the Department of Linguistics are actively engaged in research, publishing in a variety of media and serving as experts on wide-ranging topics. Please see the attached list of key stakeholder faculty in the Linguistics + Data Science curriculum, along with their profiles and CVs for additional information on their scholarships, grants, and accomplishments.

Faculty and Staff
Attachments
LING+DS_Faculty.pdf

HLC Section

Credit Hours

Existing or repackaged curricula (Courses from existing inventory of courses): 100	Number of Credit Hours:	120 Percent of Total:
Revised or redesigned curricula (Courses for	Number of Credit	0

which content has been revised for the new program):	Hours: 0	Percent of Total:
New curricula (Courses developed for the new program that have never been offered): 0	Number of Credit Hours:	0 Percent of Total:
Total Credit Hours of the Program: 100	Number of Credit Hours:	120 Percent of Total:

New Faculty Required

Will new faculty expertise or new faculty members be needed to launch this program?

No

Please explain existing coverage:

The existing faculty coverage for the new Linguistics + Data Science major is robust and comprehensive, drawing upon a diverse range of expertise to provide a well-rounded educational experience. Because of our department's traditional strength in computational and quantitative methods, we have three tenure-track faculty who specialize in either computational linguistics and signal processing.

Additional Funds

Will the proposed program require a large outlay of additional funds by the institution?

No

Institutional Funding

Please explain institutional funding for proposed program:

The Linguistics Department will not ask the College of Liberal Arts and Sciences for additional funding due to the deployment of this degree program. We will use existing revenue streams, such as differential tuition in existing degree programs, to support this proposal until it is generating revenue on its own.

EP Documentation

EP Control Number EP.26.141

Attach Rollback/ Approval Notices: ep26141_attachment_approval letter template for X+DS proposals_20260322.pdf

Non-EP Documentation

U Program Review Comments

Rollback Documentation and Attachment

DMI Documentation

Attach Final Approval Notices

Banner/Codebook Name

Program Code:

Minor Code	Conc Code	Degree Code	Major Code

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

HLC Approval Date

DOE Approval Date

Effective Date:

Program Reviewer Comments

Brianna Vargas-Gonzalez (bv4) (08/28/25 11:14 am): LING 442 is an approved course effective Fall 2026. Red Box will disappear once we roll to the 2026-2027 Academic Catalog.

Melissa Steinkoenig (menewell) (09/19/25 5:03 pm): Gen Ed Table: Good (added LING 100 to

Gen Ed Table under Social & Behavioral Sciences)

Key: 1314