EP.27.063_FINAL
Approved by EP 11/02/2026

: STATISTICS + DATA SCIENCE, BSLAS

In Workflow

1. U Program Review (eastuby@illinois.edu; mhazen@illinois.edu; bv4@illinois.edu; jswen@illinois.edu)
2. Gen Ed Review (menewell@illinois.edu)
3. 1583-STAT Head (fellouri@illinois.edu; yuguo@illinois.edu; liangf@illinois.edu)
4. 1434-SSCDS Committee Chair (shaffer1@illinois.edu; dhoiem@illinois.edu; smherzog@illinois.edu; kudaliga@illinois.edu; agk@illinois.edu)
5. 1434-SSCDS Head (dhoiem@illinois.edu; shaffer1@illinois.edu; namato@illinois.edu)
6. 1257-MATH Head (rdeville@illinois.edu)
7. 1992-IS Head (aflowers@illinois.edu; batzloff@illinois.edu)
8. KP Committee Chair (amccul2@illinois.edu; bodony@illinois.edu; emj4@illinois.edu; jmakela@illinois.edu; katefree@illinois.edu; kcp@illinois.edu; kjgir@illinois.edu; ksgarb17@illinois.edu)
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10. LP Committee Chair (aflowers@illinois.edu; rmmagee@illinois.edu; bievenue@illinois.edu; mbonn@illinois.edu; vtorvik@illinois.edu; yvw@illinois.edu)
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Approval Path

1. Wed, 18 Dec 2024 17:36:19 GMT
   Donna Butler (dbutler): Approved for U Program Review
2. Thu, 19 Dec 2024 16:21:22 GMT
   Melissa Steinkoenig (menewell): Approved for Gen Ed Review
3. Fri, 20 Dec 2024 19:21:41 GMT
   Feng Liang (liangf): Approved for 1583 Head
4. Fri, 20 Dec 2024 19:40:56 GMT
   Lee DeVille (rdeville): Approved for 1257 Head
5. Thu, 27 Mar 2025 16:31:57 GMT
   Elsa Gunter (egunter): Approved for 1434-SSCDS Head
6. Wed, 23 Apr 2025 14:07:40 GMT
   Amber Holmes (aflowers): Approved for 1992-IS Head
7. Wed, 23 Apr 2025 16:15:45 GMT
   Katherine Freeman (katefree): Approved for KP Committee Chair
8. Thu, 24 Apr 2025 13:57:26 GMT
   Amber Holmes (aflowers): Approved for LP Committee Chair

9. Thu, 24 Apr 2025 13:58:04 GMT
   Cindy Pruitt (cpruitt): Approved for KP Dean
10. Thu, 24 Apr 2025 14:07:41 GMT
    Catherine Blake (clblake): Approved for LP Dean
11. Fri, 23 May 2025 13:47:13 GMT
    Stephen Downie (sdownie): Rollback to Initiator
12. Tue, 10 Mar 2026 16:31:35 GMT
    Brianna Vargas-Gonzalez (bv4): Approved for U Program Review
13. Tue, 10 Mar 2026 21:13:39 GMT
    Melissa Steinkoenig (menewell): Approved for Gen Ed Review
14. Tue, 10 Mar 2026 23:55:23 GMT
    Feng Liang (liangf): Approved for 1583-STAT Head
15. Tue, 07 Apr 2026 20:20:35 GMT
    Steve Herzog (smherzog): Approved for 1434-SSCDS Committee Chair
16. Mon, 04 May 2026 18:32:15 GMT
    Mahesh Viswanathan (vmahesh): Approved for 1434-SSCDS Head
17. Wed, 06 May 2026 14:19:03 GMT
    Lee DeVille (rdeville): Approved for 1257-MATH Head
18. Mon, 15 Jun 2026 13:28:27 GMT
    Brandon Batzloff (batzloff): Approved for 1992-IS Head
19. Mon, 27 Jul 2026 13:32:49 GMT
    Katherine Freeman (katefree): Approved for KP Committee Chair
20. Mon, 27 Jul 2026 13:35:03 GMT
    Melissa Engel (engelm): Approved for KP Dean
21. Mon, 27 Jul 2026 18:46:56 GMT
    Amber Holmes (aflowers): Approved for LP Committee Chair
22. Mon, 27 Jul 2026 18:53:42 GMT
    Emily Knox (knox): Approved for LP Dean
23. Thu, 01 Oct 2026 17:35:46 GMT
    Stephen Downie (sdownie): Approved for KV Dean
24. Thu, 01 Oct 2026 18:19:04 GMT
    Tom Teper (tteper): Approved for University Librarian
25. Thu, 01 Oct 2026 18:22:58 GMT
    Suzanne Lee (suzannel): Approved for COTE Programs
26. Wed, 07 Oct 2026 17:51:59 GMT
    Brooke Newell (bsnewell): Approved for Provost

New Proposal

Date Submitted: Mon, 09 Mar 2026 15:03:15 GMT

Viewing: : Statistics + Data Science, BSLAS
Last edit: Tue, 03 Nov 2026 13:18:20 GMT

Changes proposed by: Douglas G. Simpson

Proposal Type

Proposal Type:

Major (ex. Special Education)

Administration Details

Official Program Name

Statistics + Data Science, BSLAS

Sponsor College

Liberal Arts & Sciences

Sponsor Department

Statistics

Sponsor Name

Douglas Simpson

Sponsor Email

dgs@illinois.edu

College Contact

Stephen R. Downie

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.

Melissa Reedy, murray@illinois.edu (LAS Assistant Director Course & Cir Dvt)
Director of Undergraduate Programs: David Unger, dunger@illinois.edu
Departmental Curriculum Chair: Feng Liang, liangf@illinois.edu

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, Jump Start Data Science, focused on expanding undergraduate data science education. Interim Provost John Wilkin supported the proposal and called on LAS to collaborate with the Grainger College of Engineering, the School of Information Sciences (iSchool), and the Gies College of Business to develop a coordinated, campus-wide approach to undergraduate data science education.

In response, the four deans formed the Data Science Education Task Force (DSETF) to explore opportunities and develop recommendations for undergraduate data science education. The DSETF conducted its work during the 2017–2018 and 2018–2019 academic years. Central to its efforts was the vision that every Illinois undergraduate should have the opportunity for meaningful exposure to data science.

In February 2019, the four deans adopted a shared framework for X+Data Science majors based on the DSETF's recommendations. The framework established:

1. A common set of core competencies and shared features expected of all X+Data Science majors, along with a reference curriculum that fulfills the data science component of those expectations.

2. The ability for each participating college to propose its own X+Data Science majors. While these programs may differ from the reference curriculum, each proposal must demonstrate how it provides the expected competencies and features of an X+Data Science major in a manner appropriate for its students.

Consistent with this collaborative framework, the program is subject to oversight by the Data Science Education Council (DSEC), which oversees academic data science programs that span multiple academic units across the university. The DSEC:

a. Monitors data science course and program offerings to facilitate collaboration and reduce unnecessary duplication;
b. Facilitates the development of undergraduate data science programs by connecting data science education resources across the university;
c. Advises colleges on matters related to undergraduate data science education; and
d. Reviews proposals for X+Data Science majors, evaluating how they meet the established expectations for X+Data Science programs and how they strategically engage with the university's shared data science education resources.

College

Liberal Arts & Sciences

Department

Mathematics

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?

No

Catalog Term

Desired Effective Catalog Term

Fall 2027

Effective Catalog

2027-2028

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 Statistics plus Data Science in the College of Liberal Arts and Sciences

Are there other related proposals that should be considered simultaneously with this one? If yes, please list the program keys and/or titles. 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.

The rapid growth of digital technologies and the unprecedented volume of data they generate have fundamentally reshaped research, industry, and society. Across disciplines, organizations increasingly rely on data to inform decisions, drive innovation, and address complex challenges. As these technologies continue to evolve, so too does the need for professionals who can responsibly analyze, interpret, and communicate data-driven insights.

The University of Illinois is well positioned to prepare students to meet these demands by providing advanced training in statistical and data science methods. Beyond technical expertise, graduates must be equipped to develop models that are transparent, reproducible, and well justified, while understanding the assumptions and limitations underlying data-driven conclusions. Preparing students with these competencies enables them to contribute thoughtfully and ethically to the continued advancement of data-intensive fields and to the broader digital transformation of society.

Substantial demand exists, both from students and from employers, for educational programs in data science. 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.

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 recommended the development of "X+Data Science Majors" as an approach to offering broad collaborative opportunities for Illinois students to engage with data science.

The field of statistics is central to the broader field of data science. 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. The new Statistics + Data Science major will provide enhanced training in critical areas of data science beyond the fundamental statistical methods of the Statistics major. There is substantial demand, both from students and from employers, for educational programs in data science. Combining a core in data science with advanced training in statistics will provide a unique and powerful new pathway into data intensive careers for a wider range of undergraduate students who might not be served by existing majors.

We propose a degree plan that combines a strong foundation in statistics and uncertainty quantification with training in data science principles, techniques, and practices. The program includes core statistical classes with additional data science coursework requirements and a data science practicum.

Students who graduate from this curriculum will enter the workforce with the technical skills to construct models, to analyze and visualize data, to process large scale data, and to make data-informed decisions in light of technology, economic, and safety and ethical considerations. Furthermore, with their advanced training in statistical foundations, they will be advantageously positioned to respond to the demands of new technology developments throughout their careers.

Instructional Resources

Will there be any reduction in other course offerings, programs or concentrations by your department as a result 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?

Yes

Please email the Department Head or a CIM User in the Department Head role of the units that own the courses that are impacted by the creation/revision/phase down or elimination of this program. For example, if you are adding a course, you will need support from the course owning unit to do so. Likewise, if you are removing a course or adding additional courses where enrollment in existing courses in the program of study could be impacted, you will need acknowledgement from the course owning unit. If the program has potential for perceived overlap with another unit on campus, you should have consultation with the other unit/stakeholders. Once this is complete, acknowledge that you have done so below.

Acknowledged

Indicate which departments/units/stakeholders were notified/consulted by listing the name of the department(s). For example, if you are adding a course owned by the Department of Philosophy and a course owned by the Department of Theatre and notified the units accordingly, you would include in the box below: 1. Department of Philosophy; 2. Department of Theatre.

1. Department of Mathematics
2. Department of Computer Science
3. School of Information Sciences

Please attach any letters of support/acknowledgement for any Instructional Resources. Consider faculty, students, and/or other impacted units as appropriate.

MATHSuppport_Approval_STAT_DS.pdf
X+DS-SupportLetter-DSEC-Statistics-signed.pdf
Letter of Support_SSCDS_STATS_DS.pdf
Statistics-DS LOS iSchool.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.

SOC Code(s) (Should be completed only for Certificates:)

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 earn:

10 credit hours of 300/400 level coursework in the data science core:
CS 307: Modeling and Learning in Data Science (4 cr. hrs.)
IS 467: Ethics and Policy for Data Science (3 cr. hrs.)
IS 477: Data Management, Curation & Reproducibility (3 cr. hrs.)

7 credit hours of 400-level coursework in probability and statistics:
STAT 400: Statistics and Probability I (4 cr. hrs.)
STAT 410: Statistics and probability II (3 cr. hrs.)

6 credit hours of 300/400 level computational statistics:
Choose two of:
STAT 385: Statistics Programming Methods (3 cr. hrs.)
STAT 428: Statistical Computing (3 cr. hrs.)
STAT 440: Statistical Data Management (3 cr. hrs.)
STAT 447: Data Science Programming Methods (3 cr. hrs.)
STAT 480: Big Data Analytics (3 cr. hrs.)

6 credit hours of 400-level coursework in statistical modeling:
STAT 425: Statistical Modeling I (3 cr. hrs.)
STAT 426: Statistical Modeling II (3 cr. hrs.)

3-4 credit hours in 400-level statistical methods:
Choose one of:
STAT 424: Design of Experiments (3 cr. hrs.)
STAT 429: Time Series Analysis (3 cr. hrs.)
STAT 430: Topics in Applied Statistics (3 cr. hrs.)
STAT 431: Applied Bayesian Analysis (3 cr. hrs.)
STAT 432: Basic of Statistical Learning (3 cr. hrs.)
STAT 433: Stochastic Processes (3 cr. hrs.)
STAT 434: Survival Analysis (3 cr. hrs.)
STAT 448: Advanced Data Analysis (4 cr. hrs.)

3 credit hours of 300/400 level Research or Discovery Experience:
Choose one of:
STAT 390: Individual Study (3 cr. hrs.)
STAT 391: Honors Individual Study (3 cr. hrs.)
STAT 427: Statistical Consulting (3 cr. hrs.)
STAT 443: Professional Statistics (3 cr. hrs.)

The remaining 4-5 upper-division credit hours can be completed through upper-division free electives or 8-10 hours can completed by those that need to complete level 3 and 4 LOTE.

Attach Program of Study related information here.

STAT_plusDS_SampleSequence.docx

Catalog Page Text - Overview Tab

Catalog Page Overview Text

The Statistics + Data Science degree combines a strong foundation in data science with advanced study in statistics, one of the core disciplines of data science. Research or discovery experiences are part of the degree. The major prepares students for professional

or graduate work in statistics and data science, and for applications of data science in which knowledge of statistics is particularly important, such as data mining, machine learning, and the design and analysis of experimental and observational studies.

Departmental distinction: To graduate with distinction requires a specified minimum grade point average in all Computer Science, Statistics, Information Science, and Mathematics courses listed below. A GPA of 3.25 is required for Distinction, 3.5 for High Distinction, and 3.75 for Highest Distinction.

Undergraduate degree programs in Statistics
Statistics, BSLAS
Statistics and Computer Science, BSLAS
Statistics + Data Science, BSLAS

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 (https://studentcode.illinois.edu/article3/part8/3-801/) (§ 3-801) and in the Academic Catalog (http://catalog.illinois.edu/general-information/degree-general-education-requirements/).

General Education Requirements

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

Code	Title	Hours
Composition I		4-6
Advanced Composition		3
Humanities & the Arts (6 hours)		6
Natural Sciences & Technology (6 hours)		6
Social & Behavioral Sciences (6 hours)		6
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, STAT 107, STAT 207, MATH 231, MATH 241		
Language Requirement (Completion of the fourth semester or equivalent of a language other than English, or completion of the third semester in two different languages other than English is required)		0-20

Orientation and Professional Development

Code	Title	Hours
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**

Code	Title	Hours
Data Science Core		**29-30**
Mathematical Foundations		
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 257	Linear Algebra with Computational Applications	
or MATH 415	Applied Linear Algebra	
Data Science Fundamentals		
CS 307	Modeling and Learning in Data Science	
STAT 107	Data Science Discovery	
STAT 207	Data Science Exploration	
Computational Fundamentals		
CS 277	Algorithms and Data Structures for Data Science	
Ethics and Responsibility in Data Science		
IS 467	Ethics and Policy for Data Science	
IS 477	Data Management, Curation & Reproducibility	
Statistics Specialization Coursework		**29-30**
Mathematics		
MATH 231	Calculus II	
MATH 241	Calculus III	
Computational Statistics (choose two):		
STAT 385	Statistics Programming Methods	
STAT 428	Statistical Computing	
STAT 440	Statistical Data Management	
STAT 447	Data Science Programming Methods	
STAT 480	Big Data Analytics	
Probability and Statistical Inference		
STAT 400	Statistics and Probability I	
STAT 410	Statistics and Probability II	
Statistical Modeling		
STAT 425	Statistical Modeling I	
STAT 426	Statistical Modeling II	
Advanced Statistical Methods (choose one):		
STAT 424	Design of Experiments	
STAT 429	Time Series Analysis	
STAT 430	Topics in Applied Statistics	
STAT 431	Applied Bayesian Analysis	
STAT 432	Basics of Statistical Learning	
STAT 433	Stochastic Processes	
STAT 434	Survival Analysis	
STAT 448	Advanced Data Analysis	
Any of the Computational Statistics courses listed above that were not used to satisfy that requirement.		
Research or Discovery Experience (choose one)		**3**
STAT 390	Individual Study	
or STAT 391	Honors Individual Study	

STAT 427	Statistical Consulting
STAT 443	Professional Statistics
Total Hours	**61-63**

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

Statistics + Data Science graduates will be able to:

1. Evaluate and apply mathematical, probabilistic, and statistical reasoning to analyze and solve complex, real-world problems.
2. Design, implement, and justify data-driven studies by selecting appropriate modeling assumptions and drawing rigorous statistical inferences.
3. Evaluate the suitability of advanced statistical methodologies for complex datasets and justify the selection of methods based on the characteristics of the data and the research question.
4. Apply ethical and professional principles to evaluate data collection, management, and curation practices.
5. Design and conduct comprehensive analyses across the data life cycle, interpreting and communicating insights from large-scale datasets within relevant domain contexts.

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

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.

Applicants are admitted in the fall semester.

The admission requirements are the same as for the existing Statistics degree, which means the requirements are handled at the campus level.

Enrollment

Number of Students in Program (estimate)

Year One Estimate

50

5th Year Estimate (or when fully implemented)

200

Estimated Annual Number of Degrees Awarded

Year One Estimate

0

5th Year Estimate (or when fully implemented)

50

What is the matriculation term for this program?

Fall ONLY

Budget

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

No

Additional Budget Information

The Department of Statistics does not expect to alter the number of faculty in Statistics due to the creation of this degree program. The department recently hired several new faculty and is already searching for two new faculty in statistics and data science. The statistics courses required for this degree program are currently operational and have capacity to accommodate Statistics + Data Science students. Faculty teaching load will not change because of this proposed degree program because the Statistics required courses for this degree program currently have capacity to seat additional students or are delivered in sections and can scale. Moreover, initially it is expected that most of the new students in Statistics + Data Science will be transfers from the Statistics major, or students who would have otherwise enrolled in the Statistics major, so the net gains will be modest and manageable. If any individual course sees increased enrollment pressure, the Department of Statistics will work with our faculty to find solutions so that the course can move forward with undiminished quality. These solutions may include the service of a course coordinator or additional graduate teaching assistants being assigned. Statistics will use existing revenue streams to meet these needs, and will not ask the College of Liberal Arts and Sciences for additional funding.

The Departments of Mathematics, Statistics, the Siebel School of Computing and Data Science, and the i-School are coordinating to provide support for advising in data science. To this end the Department of Statistics recently hired an additional undergraduate advisor.

Attach File(s)

Financial Resources

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

Attach letters and self-supporting documents as applicable

What is the specific title of the proposed degree program as it would be listed in the IBHE Program Inventory? The name should be what typically is used for similar programs nationally. Provide a short description of the program, including highlights of the program objectives, and the careers, occupations, or further educational opportunities for which the program will prepare graduates.

Statistics + Data Science (STAT + DS), Bachelor of Science in Liberal Arts and Sciences (BSLAS)

Combining a core in data science with advanced training in statistics, this program will provide a unique and powerful new pathway into data intensive careers for a wide range of undergraduate students who might not be served by existing majors. Furthermore, students graduating from this program will be well-prepared for careers and citizenship in the rapidly evolving information age. Large scale data are changing paradigms for research, government, and commerce in virtually every area of endeavor. Data Science professionals with deep knowledge of data science practice, statistical principles and advanced statistical modeling will be crucial members of society. The Department of Statistics, as a core member of the data science community at the University of Illinois at Urbana Champaign, is ready to embrace the challenges posed by the ever changing technology and social constructs, by training

students in both foundational principles and methodological approaches that will position graduates to contribute core expertise to data intensive activities, and to keep abreast of new developments building on the foundation of their education at the University of Illinois Urbana-Champaign.

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).

The university's 2018 Strategic Plan, The Next 150, calls for "[p]rovid[ing] all Illinois students the opportunity to have a meaningful exposure to data science."

Data science is an area of scholarship involving principles for data collection, storage, integration, analysis, inference, communication, and ethics in the context of 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.

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, Statistics, the Gies College of Business, the Siebel School of Computing and Data Science, 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 Statistics offers coursework and advising in statistics; Siebel School of Computing and Data Science, Mathematics, Statistics, and the i-School offer a core framework of courses and advising in data science; and the program provides coursework and independent work/research experiences that bring statistics and data science together.

The degree program differs from other undergraduate degree programs in data science because it provides the student with substantial exposure to data science and advanced statistics. It differs from the CS+ degrees because the focus beyond X is in data science, which overlaps with but is distinct from computer science.

If letters of support are available attach them here:

Program Support

Provide a brief description of the support for this program, including the financial, faculty, space, advisors/staff. Discuss plans to acquire any additional support that will be needed. If new or additional facilities or significant improvements to already existing facilities is needed, describe the Facility Need, Year 1 and 5 cost, and any other applicable notes.

The proposed BSLAS degree in Statistics + Data Science will be supported by (1) the data science core, which is a collaboration among the Department of Statistics, the Department of Mathematics, the Siebel School of Computing and Data Science, and the School of Information Sciences to provide the data science core, which is common to all bachelor's degree programs in X + Data Science, and (2) specialized coursework in statistics provided by the Department of Statistics. The Department of Statistics will serve as the administrative home of the program. Governance and curriculum oversight will be provided by the Department of Statistics with additional oversight by the Data Science Education Council (DSEC), which oversees all X + Data Science degree programs. The program is built on existing courses provided in the data science core and by the Department of Statistics, leveraging the university's established strengths in statistics, mathematics, computer science, information science, and data science education.

Financial Support. The Department of Statistics will use existing revenue streams to support this program until it is generating revenue on its own. Differential tuition will be sought for this program consistent with other X + Data Science programs. Tuition

revenues are expected to support instructional costs, advising, program administration, computing infrastructure, and other operational needs as enrollment grows.

Faculty Support. The curriculum is composed entirely of existing courses offered by Statistics, Mathematics, Computer Science, and Information Sciences, allowing the program to launch without requiring the development of new coursework to do so. Faculty from the data science core units and the Department of Statistics will contribute to instruction, curriculum oversight, student mentoring, and assessment. This is a revision of the traditional BSLAS in Statistics to include a new Data Science component and primarily involves a shift in enrollments of courses taken within the unit already. Data science core courses largely shift enrollments away from the existing courses (e.g. STAT 100 and CS 105 to STAT/CS/IS 107; STAT 200 to STAT 207; MATH 225 to MATH 257; etc.).

Advising and Staff Support. The Departments of Mathematics, Statistics, the Siebel School of Computing and Data Science, and the i-School are coordinating to provide support for advising in data science. In addition, administrative support for the program will be provided by the academic advising team and registration staff in the Department of Statistics. The academic advising team will monitor student progress and support student success throughout the program. Students will also benefit from existing advising, career development, internship, and professional development resources available through the participating colleges and departments.

Space and Facilities. No new instructional buildings, classrooms, or advising facilities are required for the program. The Statistics + Data Science, BSLAS program will use existing classrooms, laboratories, instructional computing resources, and office space maintained by the participating units. Students will also have access to existing campus research, innovation, and professional development resources, including opportunities associated with Research Park and related data science initiatives. The University Library has confirmed that existing collections, services, and resources are sufficient to support the program.

Future Support Needs. Enrollment is projected to grow from approximately 50 students in the first year to approximately 200 students at five years. The Department of Statistics does not expect to alter the number of faculty in Statistics due to the creation of this degree program. The statistics courses required for this degree program are currently operational and have capacity to accommodate Statistics + Data Science students. Faculty teaching load will not change because of this proposed degree program because the Statistics required courses for this program currently have capacity to seat additional students or are delivered in sections that can scale. Moreover, initially it is expected that most of the new students in Statistics + Data Science will be transfers from the Statistics major, or students who would have otherwise enrolled in the Statistics major, so the net gains will be modest and manageable. If any individual course sees increased enrollment pressure, the Department of Statistics will work with our faculty to find solutions so that the course can move forward with undiminished quality. These solutions might include the service of a course coordinator or additional graduate teaching assistants being assigned.

No new buildings, major renovations, or significant modifications to existing facilities are anticipated. Existing instructional, research, advising, and administrative facilities are expected to be sufficient to support projected enrollment growth.

Attach any supporting documents as applicable.

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.

The University of Illinois Library System is among the best library systems in the nation. Included in the system are the Mathematics Library and the Grainger Engineering Library Information Center (GELIC), recognized as one of the top libraries in the nation. Current collections and services already support the proposed program's coursework as existing courses from Statistics, Computer Science, Mathematics, and the Information Sciences are being used for the curricula. Thus, library collections, resources and services are sufficient to support this BSLAS degree program in Statistics + Data Science.

The proposal team consulted with Sarah Park and, based upon their input, determined that the Library’s resources, collections, and services are sufficient to meet the needs of the program outlined in this proposal.

HLC Section

Credit Hours

Existing or repackaged curricula (Courses from existing inventory of courses):

Number of Credit Hours:

120

Percent of Total:

100

Revised or redesigned curricula (Courses for which content has been revised for the new program):

Number of Credit Hours:

0

Percent of Total:

0

New curricula (Courses developed for the new program that have never been offered):

Number of Credit Hours:

0

Percent of Total:

0

Total Credit Hours of the Program:

Number of Credit Hours:

120

Percent of Total:

100

EP Documentation

EP Control Number

EP.27.063

Attach Rollback/Approval Notices

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) (Wed, 25 Oct 2023 13:37:22 GMT): Rollback: Rollback to sponsor as requested.-BV
Brooke Newell (bsnewell) (Wed, 25 Oct 2023 20:10:19 GMT): Rollback: Per discussion with Douglas.
Donna Butler (dbutler) (Mon, 16 Dec 2024 16:02:11 GMT): Rollback: Connect with Melissa Steinkoenig (menewell@illinois.edu) about General Education requirements. Connect with AJ Schmidt about X+DS requirements (letter of support).
Melissa Steinkoenig (menewell) (Thu, 19 Dec 2024 16:21:19 GMT): Gen Ed Table Check: Good. I made one adjustment to indent the Quant Reasoning "fulfilled by"
Katherine Freeman (katefree) (Wed, 23 Apr 2025 16:15:37 GMT): Instructional capacity is okay for GCOE and DS portion of proposed program meets the DS framework.
Stephen Downie (sdownie) (Fri, 23 May 2025 13:47:13 GMT): Rollback: Revisions requested by LAS. Explanatory email sent to D. Simpson (cc. A.J. Schmidt, S. Wang, Y. Chen, D. Unger, and L. Feng) on 05/22/25. Once revised, please let LAS review the proposal prior to resubmission.
Melissa Steinkoenig (menewell) (Tue, 10 Mar 2026 21:13:36 GMT): Gen Ed Table: Good

Key: 1171