EP.26.029_FINAL
Approved by EP 10/06/2025

Program Change Request

Date Submitted: 07/24/25 12:45 pm

Viewing: 10KS0329MS : Statistics, MS

Last approved: 11/17/21 10:51 am

Last edit: 10/07/25 10:54 am

Changes proposed by: Darren Glosemeyer

Catalog Pages Using this Program	Statistics, MS

Proposal Type:
Major (ex. Special Education)

This proposal is for a:
Revision

In Workflow

1. U Program Review
2. 1583-STAT Head
3. KV Dean
4. University Librarian
5. Grad_College
6. COTE Programs
7. Provost
8. Senate EPC
9. Senate
10. U Senate Conf
11. Board of Trustees
12. IBHE
13. HLC
14. DOE
15. Catalog Editor
16. DMI

Approval Path

1. 04/18/25 9:25 am Donna Butler (dbutler): Approved for U Program Review
2. 04/18/25 11:16 am Feng Liang (liangf): Approved for 1583-STAT Head
3. 04/23/25 10:12 am Melissa Reedy (murray): Rollback to Initiator
4. 07/30/25 3:45 pm Brianna Vargas-Gonzalez (bv4): Approved for U Program Review

5. 07/31/25 1:16 am Feng Liang (liangf): Approved for 1583-STAT Head
6. 08/20/25 2:29 pm Stephen Downie (sdownie): Approved for KV Dean
7. 08/21/25 1:57 pm Tom Teper (tteper): Approved for University Librarian
8. 09/02/25 3:52 pm Allison McKinney (agrindly): Approved for Grad_College
9. 09/02/25 4:19 pm Suzanne Lee (suzannel): Approved for COTE Programs
10. 09/04/25 10:47 am Brooke Newell (bsnewell): Rollback to KV Dean for Provost
11. 09/12/25 9:07 am Stephen Downie (sdownie): Approved for KV Dean
12. 09/15/25 2:02 pm Tom Teper (tteper): Approved for University Librarian
13. 09/15/25 4:38 pm Allison McKinney (agrindly): Approved for Grad_College
14. 09/15/25 4:41 pm Suzanne Lee

(suzannel): Approved for COTE Programs

15. 09/17/25 12:35 pm Brooke Newell (bsnewell): Approved for Provost

History

1. Oct 11, 2019 by Mary Lowry (lowry)
2. Oct 7, 2020 by Amy Elli (amyelli)
3. Feb 9, 2021 by Beth McKown (bmckown1)
4. Nov 17, 2021 by Andrea Ray (aray)

Administration Details

Official Program Name	Statistics, MS
Diploma Title	Master of Science in Statistics
Sponsor College	Liberal Arts & Sciences
Sponsor Department	Statistics
Sponsor Name	~~Jeff Douglas, Associate Chair and~~ Darren Glosemeyer, Senior Instructor and Director MS Program
Sponsor Email	~~jeffdoug@illinois.edu and~~ glosemey@illinois.edu
College Contact	Stephen R. Downie
College Contact Email	sdownie@illinois.edu
College Budget Officer	Michael Wellens
College Budget	wellens@illinois.edu

Officer Email

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) ~~Darren Glosemeyer, Senior Instructor and Director MS Program, glosemey@illinois.edu~~

Does this program have inter-departmental administration?

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)

Revise the Master of Science in Statistics in the College of Liberal Arts and Sciences and the Graduate College

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)"

This MS proposal (Key 58) is related to concentration Analytics (Key 781), concentration Applied (Key 782), Statistics course list (Key 910).

Program Justification

Provide a brief description, using a numbered item list, of the proposed changes to the program.

1) Change STAT 510 requirement to select one of STAT 510 or STAT 511

2) Adjust listing of STAT 410 or waiver requirement

3) Moved STAT 410 to the top of the POS

4) Adjust listing of "one of STAT 427, STAT 593, or STAT 443"

5) Add newly approved STAT 441 Practice of Applied Statistics as an option for the list mentioned in item 4

6) Add "Other Requirements" items:
A maximum of 4 hours of STAT 590 may be applied toward degree requirements.
A maximum of 4 hours of STAT 593 may be applied toward degree requirements.

7) Move courses in elective list into the POS

8) Remove STAT 458, STAT 534, and STAT 538 from electives

9) Add STAT 437, STAT 441, STAT 527, and STAT 558 to electives

10) Remove MATH 464 crosslist listing

11) Add headers "Mathematical Statistics", "Foundational Applied Statistics", "Electives", "Experiential Learning"

12) Change Total Hours from "32 - 36" to "32 or 36" in POS

13) Moved Experiential Learning course requirement and list of courses above Electives and changed the wording regarding requirements.

14) Changed Elective wording to be "Choose five (4 credit hour) courses from the following" and added the max of four hour limits to STAT 590 and STAT 593.

The support letter for ASRM 563 has been issued by the interim head of ASRM, Feng Liang, which is in the process of becoming its own independent unit.

Did the program content change 25% or more in relation to the total credit hours, since the most recent university accreditation visit? See the italicized text below for more details.

No

Provide the reasoning for why each change was necessary, using a corresponding numbered item list as it relates to the brief description numbered list above.

1) STAT 510 and STAT 511 are both graduate level mathematical statistics courses. 510 is the MS level course. 511 is the PhD level course. Allowing 511 provides a more advanced alternative and is especially beneficial for students considering continuing on to a PhD.

2) There is no change to the degree requirements. This is just to address red boxes in the system. The requirement for STAT 410 is that students either take the course for 4 graduate hours, or are allowed to waive the course based on prior completion or proven proficiency. Those required to take the course need 36 hours to complete the degree. Those not required to take the course need 32 hours.

3) STAT 410 is the first course needed if not waived. Placement at the top aligns with this fact and also removes any potential confusion that 410 might be a part of the "Select one of" for STAT 427, STAT 593, or STAT 443.

4) This is just to address red boxes in the system. The requirement is completion of one of STAT 427, STAT 593 or STAT 443. Taking STAT 593 for 0 hours is allowed.

5) STAT 441 is a recently approved course that is a good option for this degree requirement.

6) STAT 590 (independent study) and STAT 593 (internship) are allowed to be taken multiple times, and STAT 593 would need to be taken multiple times by some students. The program, however, limits the usage toward degree requirements.

7) Elective courses in GR-STATISTICS : STATS DEPT COURSE LIST are moved to the POS for transparency based on College guidance.

8) STAT 458, STAT 534, and STAT 538 were deactivated and have not been offered for some time.

9) STAT 437, STAT 441, STAT 527 and STAT 558 are recently approved courses and desired as elective options.

10) The crosslist is not needed or used by Statistics students.

11) The headers clarify the intent of course groups within the program requirements. The section headers mirror those used on the department website for the Analytics concentration and terminology used within department materials, but were not currently included in the academic catalog.

12) This is a change to match current catalog guidance. The actual hours for the degree have not changed. A difference of 4 hours is determined by whether a student is required to take STAT 410. It is now preferred to use "or" rather than a range in such cases.

13) Moved Experiential Learning course requirement and list above Electives and changed wording about requirements to clarify student must take at least one experiential course, but no hours are required. Hours apply to the elective requirement of 20.

14) Wording changed to clarify that Elective courses must be 4 hours each. Max of 4 hours was added to courses with variable credit to clarify that additional hours won't count or reduce the need to take five courses.

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? If Yes is selected, indicate the appropriate courses and attach the letter of support/ acknowledgement.

Yes

Courses outside of the sponsoring department/interdisciplinary departments:

ASRM 563 - Risk Modeling and Analysis

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

SupportLetter_ASRM563_StatMS.pdf

Program Features

Academic Level	Graduate
Does this major have transcripted concentrations?	Yes ~~No~~

Concentrations

Concentrations(s)
Statistics: Analytics, MS
Statistics: Applied, MS

Will you admit to the concentration directly?	Yes
Is a concentration required for graduation?	No

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

2 years

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

32

What is the required GPA?	2.75
CIP Code	270501 - Statistics, General.

Is this program part of an ISBE approved licensure program?

No

Will specialized accreditation be sought for this program?

No

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

No

Program of Study

Revised programs

Catalog Page Text - Overview Tab

Catalog Page Overview Text

The Master of Science (MS) degree in Statistics provides advanced training in mathematical and applied statistics, exposure to statistics in a consulting or collaborative research environment and specialized coursework in a number of areas of emphasis. The program is intended to prepare students for careers as practicing statisticians, to provide enhanced research expertise for students pursuing advanced degrees in other fields, and to strengthen the mathematical and statistical training of students preparing for PhD studies in statistics or a related field. The MS degree requires 32 or 36 hours (8 or 9 courses) beyond the prerequisites. There is no thesis requirement for this degree. The entire program must be approved by the Graduate Advisor before a degree can be awarded. ~~See Word document attached for update to Overview tab~~

Is the overview text above correct?

Yes

Statement for Programs of Study Catalog

Mathematical Statistics		
STAT 410	Statistics and Probability II (or equivalent proficiency - may be waived with approval)	0 or 4
Select one of the following:		
STAT 510	Mathematical Statistics	4
or STAT 511	Advanced Mathematical Statistics	
Foundational Applied Statistics		
Select one of the following:		
STAT 425	Statistical Modeling I	4
or STAT 527	Advanced Regression Analysis	
Select one of the following:		4
STAT 424	Design of Experiments	
STAT 426	Statistical Modeling II	
STAT 429	Time Series Analysis	
STAT 431	Applied Bayesian Analysis	
STAT 433	Stochastic Processes	
STAT 528	Advanced Regression Analysis II	
STAT 533	Advanced Stochastic Processes	

STAT 556	Advanced Time Series Analysis	
Experiential Learning		
Take one course from the following list:		
STAT 427	Statistical Consulting (or experience in applied statistics)	
STAT 441	Practice of Applied Statistics	
STAT 443	Professional Statistics	
STAT 593	STAT Internship	
Electives		
Choose five (4 credit hour) courses from the following list:		20
STAT 424	Design of Experiments	
STAT 426	Statistical Modeling II	
STAT 427	Statistical Consulting	
STAT 428	Statistical Computing	
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 437	Unsupervised Learning	
STAT 440	Statistical Data Management	
STAT 441	Practice of Applied Statistics	
STAT 443	Professional Statistics	
STAT 447	Data Science Programming Methods	
STAT 448	Advanced Data Analysis	
STAT 480	Big Data Analytics	
STAT 511	Advanced Mathematical Statistics	
STAT 525	Topics in Computational Statistics	
STAT 527	Advanced Regression Analysis	

STAT 528	Advanced Regression Analysis II	
STAT 530	Bioinformatics	
STAT 533	Advanced Stochastic Processes	
STAT 542	Statistical Learning	
STAT 545	Spatial Statistics	
STAT 546	Machine Learning in Data Science	
STAT 551	Theory of Probability I	
STAT 552	Theory of Probability II	
STAT 553	Probability and Measure I	
STAT 554	Probability and Measure II	
STAT 555	Applied Stochastic Processes	
STAT 556	Advanced Time Series Analysis	
STAT 558	Risk Modeling and Analysis	
STAT 571	Multivariate Analysis	
STAT 575	Large Sample Theory	
STAT 576	Empirical Process Theory and Weak Convergence	
STAT 578	Topics in Statistics	
STAT 587	Hierarchical Linear Models	
STAT 588	Covar Struct and Factor Models	
STAT 590	Individual Study and Research (max 4 hours)	
STAT 593	STAT Internship (max 4 hours)	
Total hours		**32 or 36**

Other Requirements

Other Requirements may overlap

A concentration is not required.

A maximum of 4 hours of STAT 593 may be applied toward degree requirements.

A maximum of 4 hours of STAT 590 may be applied toward degree requirements.

Minimum 500-level Hours Required Overall:	12
Minimum GPA:	2.75

Corresponding Degree	MS Master of Science

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.

Are the learning outcomes for the program listed in the Academic Catalog?

Yes

Student Learning Outcomes

Statistics students in the MS program will:

1. Acquire a solid foundation in mathematical statistics and learn how it applies to data analysis;
2. Develop strong communication abilities in writing and orally that will allow them to work effectively in diverse teams;
3. Become skillful in statistical computing, data management, and statistical software;
4. Be knowledgeable of the most modern techniques in statistical methodology and data science, especially data analysis techniques associated with statistical learning and machine learning;
5. Develop an understanding and gain experience in applying methodology learned in the classroom to real problems in science and industry. ~~No changes to the current assessment process are proposed.~~

Did you make any revisions to the learning outcomes you copied and pasted from the current academic catalog?

No

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

Describe here:

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.

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

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

Is this revision a change to the admission status of the program?

No

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.

Enrollment

Describe how this revision or phase down/elimination will impact enrollment and degrees awarded. If this is an elimination/phase down proposal include the plans for the students left in the program.

No change in enrollment

Estimated Annual Number of Degrees Awarded

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

What is the matriculation term for this program?

Fall

Budget

Are there budgetary	No

implications for this revision?

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

No

Additional Budget Information

Attach File(s)

Financial Resources

How does the unit intend to financially support this proposal?

There are no financial implications as the courses are already being taught.

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)

Graduate Base tuition

Are you seeking a change in the tuition rate or differential for this program?

No

Is this program requesting self-supporting status?

No

Faculty Resources

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

No impact. Courses are already being taught.

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.

No impact. Courses are already being taught.

EP Documentation

EP Control Number EP.26.029

Attach Rollback/ Approval Notices

Non-EP Documentation

U Program Review Comments

Rollback Documentation and Attachment

DMI Documentation

Attach Final Approval Notices

Banner/Codebook Name

MS:Statistics -UIUC

Program Code: 10KS0329MS

Minor Code	Conc Code	Degree Code	MS Major Code
0329			

Senate Approval Date

Senate Conference Approval Date

BOT Approval Date

IBHE Approval Date

HLC Approval Date

DOE Approval Date

Effective Date:

Program Reviewer Comments	**Emily Stuby (eastuby) (04/17/25 3:45 pm):** Added diploma title and changed concentration question to Yes and listed the concentrations that are associated with the major. **Donna Butler (dbutler) (04/18/25 9:25 am):** Current tuition rate information added for CIM documentation purposes. **Melissa Reedy (murray) (04/23/25 10:12 am):** Rollback: Email sent to Darren, Feng, Yuguo, Georgios, and Stephen. **Allison McKinney (agrindly) (09/02/25 3:52 pm):** Administratively approved. **Brooke Newell (bsnewell) (09/04/25 10:47 am):** Rollback: Per email discussion and request from Melissa R.

Key: 58