BS Stat
Bachelor of Science in Statistics

Under Review | Fall 2025

Proposal Information

Status

Active

Refresh ⟳ **Form Submission, Proposer**   collapse ▾

Submitted for Approval | Proposer

    ✔ Ana Lombard | 3/25/2024 1:51 PM

Department Chair Approval, Mathematics & Statistics

Approved | Department Chair

    ✔ Monika Nitsche | 3/25/2024 2:15 PM

Registrar Technical Check Approval, Registrar Technical Check

Approved | Registrar Technical Check

    ✔ Michael Raine | 3/26/2024 8:31 AM

Notification, Arts & Sciences College Committee

Notification Sent | College-level Curriculum Committee Member

    ✉ Marcy Litvak
    ✉ Anita Obermeier
    ✉ Derek Hamilton
    ✉ Jeremy Edwards
    ✉ Eva Rodriguez Gonzalez
    ✉ Brisha Cruz-Garcia
    ✉ Stephanie Hands
    ✉ Marlene Sanchez

College/School Approval

Skipped

    ➜ Maggie Sumruld

    Approver changes. Peter Fawcett gave approval in comments

                10/18/2024 3:07 PM

Library Approval, Main Campus Library

Approved | Library Approval

    ✔ Sever Bordeianu | 10/18/2024 3:09 PM

FSCC Member notification, Faculty Senate Curriculum Committee

Notification Sent | Faculty Senate Curriculum Committee Member

    ✉ John Russell
    ✉ Gabriel Pacyniak
    ✉ Jonathan Wheeler
    ✉ Min Ro
    ✉ Randi Archuleta
    ✉ Stephanie Hands
    ✉ Laura Soito

- ✉ Robben Brown
- ✉ Megan Jacobs
- ✉ Justine Ponce
- ✉ Joe Anderson
- ✉ Jennifer Schneider
- ✉ Yiliang Zhu
- ✉ Nicole Capehart
- ✉ Kate Cartwright
- ✉ Julia So
- ✉ Antoinette Abeyta
- ✉ Joseph Poole Jr MSN, RN, CNE
- ✉ SueNoell Stone

Faculty Senate Curriculum Committee Approval, Faculty Senate Curriculum Committee

Approved | Faculty Senate Curriculum Committee Chair

- ✔ Janet Vassilev

FSCC voted to approve this form 11/15/2024.

11/15/2024 12:57 PM

Provost Approval, Main Campus Provost

Approved | Provost

- ✔ Pamela Cheek | 12/13/2024 3:41 PM

Faculty Senate Approval, Faculty Senate

Waiting for Approval | Faculty Senate Approval

Nancy Middlebrook

Theresa Sherman

External Review - HED CIP code approval, External Review

Approval | HED CIP code approval

Michael Raine

Anna Gay

Reg. Final Approval/Processing, Registrar

Approval | Registrar final approval

Michael Raine

Maggie Sumruld

Notification, Proposer

Notification | Proposer

Ana Lombard

IDI Notification

Notification

IDI

EMRT notification, EMRT users

Notification | EMRT user

Enrollment Mgt Reporting Team

Notification, LoboTrax Team

Notification | LoboTrax Staff

Sherri DeLeve

Paula Freitag

Hannah Epstein
Allie Martinez
Glenda Johnson

Changes
- College
- Requirements
- participants
- Proposed Effective Term and Year
- Sponsoring faculty/staff member

Show All ⌄

Proposal Information

Proposed
Sponsoring faculty/staff member
Ana Lombard

Proposed
Sponsoring faculty/staff email
alombard@unm.edu

Existing
Sponsoring faculty/staff member
Dimiter Vassilev

Existing
Sponsoring faculty/staff email
vassilev@unm.edu

Proposed
College
College of Arts & Sciences:
Natural Sciences &
Mathematics

Department
Mathematics & Statistics

Campus
Main Campus

Existing
College
College of Arts & Sciences

Effective Term and Year

Proposed
Proposed Effective Term and Year
Fall 2025

Existing
Proposed Effective Term and Year
Fall 2023

Justification

Proposed
Program Justification

The Math/Stat faculty have reviewed and approved MATH 1300 a requirement for the BS Statistics degree IN ADDITION TO the MATH 1350 requirement which is currently the only lower division course on Statistics that we require. The courses cover very different material with
MATH 1300 covering more philosophical ideas and general applications and 1350 covering more the nuts and bolts, introducing the basic mechanics of statistical procedures.
To keep the number of required courses the same, we propose lowering by three credits the requirement for upper division Enrichment Courses that complement the Statistics offerings with course work in possible areas of application. MATH 1300 already contains a wide sampling of areas of
application.

Existing
Program Justification
same program. new Kuali system

Program Category and Level

Program Category
Program

Program Level
Undergraduate

Degree, Minor, or Certificate Name
Bachelor of Science in Statistics

Degree Type
Bachelor of Science

Degree/Certificate Level
Undergraduate

Proposed
Is this program also offered online?
No

Existing
Is this program also offered online?
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Associated Forms

Select any associated course forms that exist

Select any associated program forms that exist

Shared Credit and Dual Degree information

Interdepartmental Program
No

Catalog Information

Program Description

Statistics is the science of collecting and analyzing data. Statisticians interact with researchers in all the various disciplines of science, engineering, medicine, social science and business to develop scientifically sound methods in those areas. Most course work in the department is devoted to understanding current methods and the reasoning behind them. A degree in statistics prepares students for careers in industry, government, academia, and research institutes, as well as being excellent preparation for professional programs in medicine, law, business administration and public policy and administration.

Admissions Requirements

College of Arts and Sciences and Department of Mathematics and Statistics Undergraduate Admission Requirements

A minimum of 26 credit hours; 23 credit hours must be in courses acceptable toward graduation.

A cumulative grade point average of at least 2.00 on all work.
- Transfer students must have a 2.00 transfer GPA.
- Continuing UNM students must have a 2.00 institutional GPA.

Demonstrated academic achievement by satisfying the following:
- Completion of General Education Curriculum: Communication.
- Completion of General Education Curriculum: Mathematics and Statistics.
- Completion of General Education Curriculum: Second Language.

Completion of Department of Mathematics and Statistics admission course work with a grade of "C" or better:
- MATH 1522.

Proposed
Graduation Requirements

Bachelor of Science in Statistics

Major Study Requirements

The following is required of all Statistics majors:

1) Assignment of a faculty advisor. Students must go to the Department of Mathematics and Statistics to be assigned an advisor from the Statistics Group as soon as they decide to major in statistics.

2) MATH 1350 and MATH 1300.

3) Knowledge of an intro computing language.

4) MATH 1512, 1522, 2530, (**314 or **321).

5) At least 21 credit hours of statistics courses numbered 300 or above with a grade of "C" (not "C-") or better. These must include STAT **345, 427, 428, 440 and 445.

6) Enrichment courses: At least 3 additional credit hours of courses numbered 300 or higher and approved by the student's undergraduate advisor. These can be taken in an appropriate discipline of the student's choice, for example: anthropology, biology, business, chemistry, computer science, economics, engineering, mathematics, psychology, and statistics. These courses may overlap with the student's minor.

7) The Credit/No Credit grade option may not be used in courses taken to satisfy requirements 2, 4 and 5. All grades in these courses must be "C" (not "C-") or better.

Departmental Honors

Requirements for departmental honors in Statistics are 1) a 3.5 GPA in Mathematics and Statistics courses and a 3.2 overall GPA; 2) notification to the department program specialist no later than two full semesters prior to graduation; 3) completion of a project based on 6 credit hours of STAT 495 (project outline to be presented to the Undergraduate Committee for approval); 4) final written report to be submitted to Undergraduate Committee for approval; and 5) seminar to be given at the end of the project. These requirements are in addition to the major requirements.
Existing
Graduation Requirements

Bachelor of Science in Statistics

Major Study Requirements

The following is required of all Statistics majors:
1) Assignment of a faculty advisor. Students must go to the Department of Mathematics and Statistics to be assigned an advisor from the Statistics Group as soon as they decide to major in statistics.
2) MATH 1350 or approved equivalent.
3) Knowledge of an intro computing language.
4) MATH 1512, 1522, 2530, (**314 or **321).
5) At least 21 credit hours of statistics courses numbered 250 or above with a grade of "C" (not "C-") or better. These must include STAT **345, 427, 428, 440 and 445.
6) Enrichment courses: At least 6 additional credit hours of courses numbered 300 or higher and approved by the student's undergraduate advisor. These can be taken in an appropriate discipline of the student's choice, for example: anthropology, biology, business, chemistry, computer science, economics, engineering, mathematics, psychology, and statistics. These courses may overlap with the student's minor.
7) The Credit/No Credit grade option may not be used in courses taken to satisfy requirements 2, 4 and 5. All grades in these courses must be "C" (not "C-") or better.

Departmental Honors

Requirements for departmental honors in Mathematics are 1) a 3.5 GPA in Mathematics and Statistics courses and a 3.2 overall GPA; 2) notification to the department program specialist no later than two full semesters prior to graduation; 3) completion of a project based on 6 credit hours of MATH 499 (project outline to be presented to the Undergraduate Honors Committee (UHC) for approval); 4) final written report to be submitted to UHC for approval; and 5) seminar to be given at the end of the project. These requirements are in addition to the major requirements.

Professional Credential/Licensure Program Information

Proposed
License/Certification associated with program

No

Existing

License/Certification associated with program

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Degree Information

Degree Hours

124

Minimum Major Hours

Professional Accrediting Bodies

Degree Requirements

Requirements

- Complete all of the following
    - Complete the following:
        - MATH1350 - Introduction to Statistics (3)
        - MATH1512 - Calculus I (4)
        - MATH1522 - Calculus II (4)
        - MATH2531 - Calculus III (4)
        - **MATH1300 - Statistical Literacy (3)**
    - Complete at least 1 of the following:
        - MATH314 - Linear Algebra with Applications (3)
        - MATH321 - Linear Algebra (3)
    - ~~Knowledge of an intro computing language.~~
    - **Complete the following:**
    - Complete the following:
        - STAT345 - Elements of Mathematical Statistics and Probability Theory (3)
        - STAT427 - Advanced Data Analysis I (3)
        - STAT428 - Advanced Data Analysis II (3)
        - STAT440 - Regression Analysis (3)
        - STAT445 - Analysis of Variance and Experimental Design (3)
    - Earned at least 6 credits from STAT 250 - 499
    - Earn at least ~~6~~ **3** credits from the following types of courses:
    Enrichment courses: At least ~~6~~3 additional credit hours of courses numbered 300 or higher and approved by the student's undergraduate advisor. These can be taken in an appropriate discipline of the student's choice, for example: anthropology, biology, business, chemistry, computer science, economics, engineering, mathematics, psychology, and statistics. These courses may overlap with the student's minor.
    - For students interested in a career in actuarial science, preparation for the first actuarial exam consists of the courses MATH 1512, 1522, 2531, (**314 or **321). Preparation for the second actuarial exam consists of STAT 453, 461.
    - Students planning on pursuing a graduate degree in Statistics are encouraged to take MATH **321 and 401.
    - Earn at least 79 credits from the following types of courses:
    Completed at least 79 credits. In addition to the program-specific requirements outlined here, all undergraduate students are required to fulfill UNM's General Education Program requirements. In some instances, courses included in an undergraduate degree program's requirement may also fulfill a General Education requirement. Please review the General Education Program in this Catalog for General Education information. Students within the College of Arts and Sciences must also complete 1) a major and a minor; or 2) two majors; or 3) one of the special curricula of the College that requires no minor.

Grand Total Credits: 124

Concentrations

Program Concentrations

Code	Title

Concentration Required
No

Emphases

Emphasis required
N/A

Emphasis Hours

Emphasis Rules

No Rules

Sample Degree Plan

Sample Degree Plan Upload

Program Learning Outcomes

Learning Outcomes
1. **Statistical knowledge.** Students should demonstrate proficiency in probability and statistical theory and methods.
2. **Presentation and interpretation of data.** Student should demonstrate the ability to manipulate and visualize data and to compute standard statistical summaries.
3. **Mathematical knowledge.** Students should demonstrate skill in applying fundamental mathematical techniques.