September 18, 2025

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Dear Colleagues,

The University of Nebraska-Lincoln's proposal to abolish its Department of Statistics and terminate all tenured and tenure-track faculty is a deeply alarming decision that threatens the integrity of a core STEM discipline. This move undermines the university's mission as a comprehensive, research-intensive, land-grant institution and contradicts the principles of academic excellence and innovation.

Statistics is not merely a support service. It is a foundational discipline that underpins evidence-based decision making, a critical competency in post-secondary education and modern society. In an age of data-driven challenges and misinformation, it equips students and researchers with the tools to think critically, evaluate evidence, and make informed decisions across all sectors.

The Department of Statistics at UNL plays a vital role in this mission. It serves both co-disciplinary and interdisciplinary functions that are integral to the university's research and teaching mission. As a co-disciplinary field, statistics operates in close partnership with disciplines such as agriculture, medicine, engineering, and the social sciences, providing the mathematical backbone for experimental design, predictive modeling, uncertainty quantification, and the interpretation of complex data. These collaborations are not peripheral; they are central to advancing knowledge and solving real-world problems, from improving crop yields under extreme conditions to developing life-saving medical treatments. As an interdisciplinary field, statistics partners deeply with domains like biology, economics, and computer science to form collaborations that are at the forefront of innovation: driving discoveries in genomics, financial modeling, artificial intelligence, and beyond. This dual role makes statistics not only indispensable but irreplaceable in a modern research university.

As a tenured Professor and Associate Chair of the Statistics Department at Cornell University, I've seen firsthand that the belief that data science programs can replace the foundational role of statistics

departments is not just misguided, it's fundamentally flawed. While data science is a valuable and growing field, it is built upon the theoretical and methodological foundations developed within statistics. Data science programs rely on statistics departments for core instruction in probability, inference, modeling, and experimental design. Without a dedicated statistics faculty, data science curricula risk becoming superficial, lacking the depth and rigor necessary for high-quality research and decision-making. Moreover, statistics departments are essential for advancing the theoretical underpinnings of data science itself, ensuring that innovation in machine learning, causal inference, risk assessment, and uncertainty quantification is grounded in sound methodology.

Eliminating the department would not only discredit UNL's national reputation but also dismantle a critical hub for collaboration, teaching, and discovery. Thirteen out of fourteen Big Ten universities maintain stand-alone statistics departments because they recognize the strategic importance of the discipline. As a proud statistics major from one of those institutions, I can personally attest to the transformative value of a dedicated statistics department in shaping my own education and career, and in fostering a culture of analytical rigor, interdisciplinary collaboration, and continuous innovation. UNL's decision would set a dangerous precedent in which foundational academic units can be dismantled despite their centrality to institutional success and societal progress.

The economic consequences of this decision would also be significant. Statistics departments are often key contributors to securing federal and industry research grants, especially in agriculture, health, and engineering, which are vital to Nebraska's economy. Without in-house statistical expertise, UNL researchers may lose competitiveness for major funding opportunities, reducing the university's research output and innovation capacity.

Furthermore, the absence of a statistics department would disrupt the talent pipeline for Nebraska's data-driven industries, including agriculture, insurance, logistics, and public health. Students seeking training in statistics and data science may leave the state, and local employers may struggle to find qualified graduates, increasing recruitment costs and weakening the state's workforce development. Eliminating statistics also sends a troubling signal to prospective students, industry partners, and donors about UNL's commitment to STEM excellence and economic leadership.

Case studies from peer institutions further underscore the economic and academic value of statistics departments:

At Ohio State University, the Department of Statistics contributes to the university's \$1.2 billion in annual research and development expenditures by supporting federally funded projects in agriculture, health, and engineering. Its faculty are principal investigators or collaborators on grants from the NSF, NIH, and USDA, and its graduates fill high-demand roles in Ohio's insurance, logistics,

and healthcare sectors.¹ At the University of Michigan, the Department of Statistics plays a key role in the university's \$2.04 billion research enterprise. In 2024, federally funded research supported over 16,000 individuals, and Michigan-based vendors received \$97.7 million in research-related spending. The department's faculty lead data-intensive projects in genomics, climate modeling, and public health, directly contributing to the state's research economy.² At the University of Wisconsin-Madison, the Department of Statistics is embedded in a university ecosystem that contributes \$30.8 billion annually to the state economy and supports over 232,000 jobs. The department provides statistical consulting and research design for projects across engineering, agriculture, and medicine, and its alumni have founded or staffed startups that emerged from UW's research pipeline.³ At the University of Minnesota, the School of Statistics contributes to a research enterprise that generated \$3.9 billion in economic impact in 2024, supporting over 25,000 jobs. The department supports federally funded research in health, agriculture, and engineering, and trains statistical scientists who power Minnesota's insurance, healthcare, and tech sectors.⁴

Eliminating a statistics department is not a cost-saving measure, it is a forfeiture of long-term economic and intellectual capital.

I urge the UNL administration and Academic Planning Committee to reconsider this decision. Preserving the Department of Statistics is not just a matter of institutional continuity. It is a clear commitment to academic rigor, scientific progress, and the public good. And it is essential for safeguarding the future of research, education, and evidence-based leadership in Nebraska and beyond.

Sincerely yours,

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¹ The Ohio State University. (2022). The Economic Impact of The Ohio State University. https://erik.osu.edu/sites/default/files/documents/2022/09/Economic%20Impact%20Study%20FINAL.pdf

² University of Michigan News. (2025). U-M federal research funding fuels innovation, economic growth. https://news.umich.edu/u-m-federal-research-funding-fuels-innovation-economic-growth/

³ University of Wisconsin-Madison. (2021). UW-Madison's Economic Impact. https://universityrelations.wisc.edu/economic-impact-2021/

⁴ University of Minnesota. (2025). Statewide economic impact of the University of Minnesota grows to \$11.5 billion annually. https://twin-cities.umn.edu/news-events/statewide-economic-impact-university-minnesota-grows-115-billion-annually.