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Re: Proposed elimination of the Department of Statistics

Dear President Gold, Chancellor Bennett, Vice-Chancellor Tiffany Heng-Mos, Prof. Griffin and other members of the Academic Planning Committee,

I write in my personal capacity. However, for context, I am the current President of the *International Society of Bayesian Analysis*, Membership Engagement Chair of Section U (Statistics) of the *American Association for the Advancement of Science*, and a permanent member of the *ASPA Study Section at the National Institutes of Health*. I also serve as a Chief Statistical Advisor for the journal *Nature Medicine*.

I want to register my strong concern about the proposal to eliminate the Department of Statistics at UNL. For a Tier-1 research university, this would be a serious strategic mistake, especially now, when statistical thinking underpins responsible AI and evidence-based research across the sciences and social sciences.

If the rationale is budget reduction, the move is especially shortsighted. Statistics departments are comparatively lean, teach high-enrollment service courses that subsidize the curriculum, and generate substantial indirect (F&A) cost recovery through collaborative grants.

Disbanding the department incurs immediate costs such as teach-outs, redistribution of general education and graduate methods courses, and the loss of central consulting capacity. It also leads to longer-term reductions in tuition revenue and partnerships. Equally important, grant competitiveness impressively declines: NIH, NSF, and other agencies increasingly require statisticians as co-investigators and insist on prespecified analyses, rigorous design, and reproducible workflows. *Proposals lacking these elements tend to perform worse, resulting in fewer awards and a smaller overhead base for the university in the future*. In my experience, the lack of a statistician among the core investigators on a research grant has almost always been a notable weakness in every panel I have been involved with, even with the new grant format.

The plan to “strategically deploy a portion of the state-appropriated funds to continue to offer selected undergraduate and graduate courses and provide coordinated statistical consulting” only underscores the problem.

A handful of scattered courses cannot substitute for a coherent curriculum governed by a department. Faculty without the protections and career paths of a department are nearly impossible to recruit and retain in today’s very competitive market. And consulting without a strong base of research-active statisticians risks becoming merely transactional (help with a regression here or a sample-size calculation there), rather than the sustained collaboration that drives successful grants and high-impact publications. *This approach will weaken the university’s research portfolio and external funding.*

Eliminating a statistics department also removes the intellectual infrastructure that the campus depends on. AI may get the headlines, but statistics supplies the grammar: probability, experimental design, inference, calibration, and the quantification of uncertainty. Without that foundation, you do not simply lose a major; you weaken every unit that relies on credible data-based evidence: medicine, public health, economics, psychology, ecology, policy, and computer science.

The first issue is the depth and durability of training. Many celebrated AI advances are refinements of statistical ideas, including regularization, empirical risk minimization, Bayesian updating, causal inference, cross-validation, and hierarchical modeling. Dissolving the department signals a comfort with teaching tools without a theoretical foundation, hardly the sign of a Tier-1 Research University. *Such a blind trust in algorithmic tools may work until one needs to know whether a model will generalize beyond yesterday’s data, or worse, when failures lead to immediate financial and ethical liabilities for the university.* A cautionary example came in 2018, when IBM Watson for Oncology, an AI-driven clinical decision-support tool, was reported to have provided unsafe and incorrect treatment recommendations. The failures stemmed from inadequate training on real-world patient data and the absence of rigorous statistical oversight.

Statistics also the primary example of a department that can help build the campus’s connective tissue. A Statistics department does more than graduate majors: it provides service courses, staffs consulting clinics and methods cores, rescues grant proposals, and prevents labs from spending months on flawed designs. Remove the hub and the work fragments. Courses scatter across units with competing priorities, consultation becomes ad hoc, and students receive a disjointed set of methods that don’t form a solid foundation of knowledge. *Your students will find it harder to be competitive in the job market.*

Indeed, workforce realities cut the same way. Student demand for statistics and data science is sustained and high, and employers across tech, biotech, finance, climate, and government hire at every degree level. *Closing a department in the face of that demand misaligns the university with student interest and employers’ need,* ceding enrollments, tuition, and partnerships to peer institutions that are expanding, often by re-forming as “Statistics & Data Science” and integrating computation with inference.

Ethics and governance reinforce the point. Headlines about biased models, uncalibrated predictions, and irreproducible findings are often failures of measurement, sampling, and inference. Auditing models, quantifying fairness trade-offs, and designing studies that identify causal effects rather than correlations are core statistical competencies. As AI enters medicine, education, hiring, credit, and the justice system, universities need people who can explain not only how a model works, but when and why to trust it.

Given these stakes, I urge you to pause this decision. If modernization and budget reduction are the goals, the right move is the opposite of closure: align titles and curricula with “Statistics & Data Science,” invest in computing and reproducible workflows, and hire widely at key interfaces: causal ML, robust model evaluation, experimental design for digital platforms, and responsible AI. *This is exactly the strategy being pursued at UCLA and at other first-tier research universities, which are expanding rather than dismantling their statistics programs.*

The stated goal is a budget reduction of \$1.75 million. *In reality, the university will lose far more in weakened grant competitiveness, diminished tuition revenue, lost partnerships, and reputational harm.* This decision risks sacrificing long-term strength for a short-term appearance of savings.

AI has not made statistics obsolete; it has made statistical thinking non-negotiable.

Universities that recognize this will graduate students who can build models, stress-test them, and explain their limits to scientists, regulators, and the public. Universities that do not will graduate students who can run code but lack the necessary critical thinking and cannot tell you whether to believe the output. That is not a competitive position, for the students, the institution, or the society.

Respectfully,



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Professor

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I am cognizant that this letter will be read by colleagues from various disciplines. Hence, I would like to provide more context to my letter. I am a tenured Full Professor of Biostatistics at the *University of California, Los Angeles*. I am honored to be a Fellow of the American Statistical Association (ASA), an elected member of the International Statistical Institute (ISI), and a Fellow of the International Society for Bayesian Analysis (ISBA). I have had the privilege of serving as Editor-in-Chief of *Bayesian Analysis*, the official journal of the ISBA (2018-2021). The journal was ranked among the top 10 most impactful journals in the fields of Statistics & Probability in 2023. I am also one of the Chief Statistical Advisors for the journal *Nature Medicine*, an Associate Editor for the *Journal of the American Statistical Association* (2023-), *Biometrics*, a journal of the International Biometric Society (IBS, 2016-), and for *Econometrics and Statistics* (2019-). I am a founding co-editor of a new journal of the

ASA, *Statistics and Data Science in Imaging*, which aims to publish papers that address methodological challenges in imaging data analysis, offering statistically robust solutions. I am honored to have recently been elected chair of the *Section on Bayesian Statistical Sciences* of the ASA for the 2023-2025 term, chair of the *Section on Statistical Imaging* of the ASA for the 2024-2026 term, and I am also serving as the Membership Engagement Chair of the Section U (Statistics) of the *American Association for the Advancement of Science* (AAAS). I have also recently been selected to serve as a permanent member of the *Analytics and Statistics for Population Research Panel A Study Section* (ASPA) of the US National Institutes of Health (2024-2028). I am also a member of the Executive Council and President of the ISBA (2024-2026).