

Educational Statistics and Research Methods Graduate Certificate (EDST)

The Graduate Certificate in Educational Statistics and Research Methods (EDST) at the University of Arkansas is designed to prepare students with essential skills for conducting applied research within social science, behavioral science, and education-related disciplines. Since the implementation of significant revisions in 2021, this 15-credit-hour certificate program has offered students enhanced flexibility by enabling selection among diverse methodological concentrations.

Typically, certificate candidates complete three core courses in Educational Statistics and Research Methods (ESRM) before choosing two additional electives. These electives are drawn from specialized methodological domains, including psychometric methods (e.g., measurement theory and item response theory), quantitative methods (e.g., hierarchical linear modeling, structural equation modeling, Bayesian statistics), and qualitative methods (e.g., foundational and advanced qualitative research approaches). The primary aim of the EDST certificate is to ensure students acquire foundational methodological proficiency, complemented by advanced coursework tailored to equip them for rigorous research practices in their respective fields. As such, the core learning outcomes of the certificate include the capacity to identify appropriate quantitative and qualitative procedures, conduct rigorous data analyses, critically evaluate research studies, and collaborate effectively with professional peers.

Assessment Criteria:

The program evaluates students' achievement of core competencies through the following criteria:

1. Identification of appropriate research designs relative to specific research questions.
2. Execution of statistical analyses aligned with research hypotheses.
3. Demonstration of comprehensive understanding regarding the strengths, limitations, and suitable applications of diverse statistical techniques.
4. Effective critique of statistical methodologies utilized in existing research.
5. Successful submission of research proposals or manuscripts to recognized professional conferences and academic journals.
6. Effective delivery of oral presentations at professional and academic forums.

Effectiveness Evaluation:

To comprehensively assess program efficacy and student proficiency development, data were systematically gathered and analyzed during the 2024-2025 academic year. Sources of these data include student-led research projects, submissions and presentations at professional conferences, publications in peer-reviewed journals, grant proposal submissions, and recognitions received through academic or professional awards.

Assessment Information

Course-Based Data:

Assessment of the program's learning outcomes—specifically, students' ability to identify appropriate research designs, perform statistical analyses, and discern the strengths, limitations, and applicability of statistical procedures—was derived from course-based research projects and take-home examinations. Student performance was evaluated by calculating average scores from their final grades. Scores were categorized according to mastery levels: 4 (mastery, 90% or higher), 3 (proficient, 80-89%), 2 (adequate, 70-79%), 1 (minimal, 60-69%), and 0 (below minimal, less than 60%).

Based on official university records, 13 students were enrolled in the EDST certificate program during the 2024-2025 academic year. Of these, six students are currently active participants in the program, three have successfully completed the program, and four students were newly admitted:

Status	<i>n</i>
Admitted	4
Active	6
Complete	3