Project Summary

The University of Nevada, Las Vegas will develop an institutional data infrastructure called the Faculty Data Warehouse for Equity (FDW). Our primary goal is to conduct an innovative, data-driven study of the status of women in academic STEM positions at UNLV. To do this, we begin by developing an infrastructure for collecting, maintaining, and disseminating relevant institutional data to administrators and researchers. We propose a dual agenda approach, whereby the data needs of the ADVANCE mission are integrated into the university’s current data modernization efforts. The development of the FDW will be guided by our four interrelated research areas, each of which is critical to the development of measures that can detect key equity gaps predicted by social science theory. The resulting data will also be used to help administrators plan, implement, and assess the impact of various evidence-based interventions to improve the status of women in STEM.

Intellectual Merit. We have assembled a research team with a wide range of relevant research interests and expertise. We have divided our proposed work into four interrelated research areas, each of which provides key insights into the status of women STEM faculty at UNLV. This approach gives us a broad view of faculty equity issues. We incorporate this wide lens perspective into our development of the FDW. The four research areas include Faculty Achievement, Faculty Salary, Faculty Climate, and Faculty Experience. Each of these research areas contributes key information to the FDW, both in terms of raw data inputs and qualitative analyses to contextualize outputs. The primary innovation of the FDW proposed here is the uniquely rich raw data on UNLV faculty workload and productivity (Faculty Achievement). We will assemble these data and use them to develop measures of work responsibility and productivity that are multidimensional. These measures will be informed by rich qualitative work on gender, race, and intersectionality among UNLV’s STEM faculty (Faculty Experience), as well as the job satisfaction and gender equity knowledge data obtained through a rigorous climate survey (Faculty Climate). These data will also inform and improve upon existing models of STEM salary equity (Faculty Salary). Together, these projects work to establish a line of scholarly research that draws upon the social scientific literature, including theories about the lack of women in academic leadership, the differential effect of work and family demands, stereotype threat, implicit (and explicit) bias in evaluating performance and assigning work duties, microinequities, and more.

Broader Impacts. This project will yield a number of important benefits with broad impact. We will develop, refine, and distribute widely an activity-oriented process model inspired by a dual agenda approach to developing a Faculty Data Warehouse. This process model will provide actionable advice for other universities to develop robust institutional data infrastructures to capture information that is critical to pursuing the equity-related goals of the ADVANCE program. Our work will provide a baseline analysis of gender equity in STEM on UNLV’s campus. This baseline will be grounded in rigorous social scientific theories and methods, and will innovate these methods by providing more rigorous and racially sensitive measures of faculty workload, productivity, and knowledge of gender equity issues. We will produce comprehensive accounts of how we constructed these analyses, and we are committed to making those process models available widely. The baseline analyses that we create will serve to raise and measure awareness of gender equity issues on UNLV’s campus. The project will help to unite faculty and administrators behind the common goal of pursuing lasting institutional transformation. During the course of our project, we will be providing a graduate student with critical research experience and mentorship. Through a UNLV ADVANCE Symposium, communications via the UNLV Women’s Council, and regular electronic newsletters and updates, we will inform the campus community about the project and promote awareness of and participation in efforts to increase gender equity.