In 2014, East Carolina University retained Sparlin Law Office, PLLC to conduct a faculty salary equity study. The purpose of the study was to search, on a comprehensive, institution-wide basis, for any evidence of systematic gender or race/ethnicity disparities in the compensation paid to university faculty. Direction regarding the study has been provided by the Faculty Salary Equity Task Force, which represents faculty and staff from various departments and organizations across campus. The University supplied the database for analysis, which included pertinent information for all full-time instructional faculty members employed for nine or more months during the 2014-2015 academic year. The final database encompassed 1,033 Academic Affairs faculty members.

The statistical methodology used in the study is multiple regression. A multiple regression analysis examines the extent to which a dependent variable, in this instance faculty compensation, is related to a series of independent variables. The specific compensation measure chosen as the dependent variable is the nine-month equivalent base salary of each faculty member in the database. The dependent variable was analyzed through a series of regression models designed to test for evidence of bias affecting female faculty, minority faculty in general, or faculty members of specific race/ethnicities. The starting point for each series was a model that accounted for only the gender or race/ethnicity of each faculty member, as applicable, without inclusion of any other variables that might appropriately affect individual salaries. Other independent variables were introduced to the analysis in a succession of models to determine the extent to which those additional factors influence compensation. These additional independent variables included rank, tenure, discipline, experience, and other appropriate pay factors.

Once these factors were taken into account, the resulting regression models did not reveal any systematic differences between the pay of males and females, or between minority and non-minority, of faculty members in the Division of Academic Affairs. Additional regression models were prepared for Asian, Black/African American, and Hispanic faculty. These analyses did not raise significant pay equity concerns unique to Asian or Hispanic faculty members. Pay levels of Black/African American faculty members in Academic Affairs were, on average, higher than pay levels for faculty members of other race/ethnicities after controlling for only the factors included in the model.

Although faculty productivity (e.g., publications, research, and other academic activities) has clear applicability to faculty salary determinations, this factor was not included in the multiple regression models described above. The Task Force concluded that the development of
numerical productivity indices that could provide meaningful input at the individual level for a multiple regression analysis was not feasible. However, the assumption that there is no systematic difference between the average productivity of male and female faculty (as well as between minority and non-minority faculty) sufficient to alter the overall outcome of the multiple regression models was tested. The results indicated that there may be some gender differences in the mix of productivity categories, with women tending to be more active than men in some areas and less active in others. In the aggregate, however, the outcomes were generally consistent with the assumption that average total productivity does not vary substantially by gender or by race/ethnicity.

After reviewing initial results from the analyses of all full-time Academic Affairs faculty, members of the Task Force observed that pay practices for tenure-eligible and fixed-term faculty differ in significant ways, which merited separate modeling. In general, the results from an analyses of tenured/tenure-track faculty were consistent with those generated in the analysis for all faculty members in Academic Affairs. The only statistically significant result arose in the comparison of tenured/tenure-track Black/African American faculty to their peers of other race/ethnicities, with the disparity favoring Black/African American faculty members.

Despite generally favorable outcomes, this study should not be taken as evidence that further attention to the subject of faculty compensation is unnecessary. Regression analyses for the current study did not account for any equity issues associated with the underlying processes by which qualifications such as tenure or higher academic rank are obtained. Although such issues were outside the scope of this study, they have obvious implications for each faculty member’s opportunities to earn a higher income. Additionally, overall patterns do not always replicate themselves in individual cases. As a follow-up to the regression analyses, an outlier analysis was conducted at the individual level to provide a basis for closer examination of specific cases. In an outlier analysis, a residual (the difference between an individual’s actual salary and his/her salary as predicted by the regression model) is calculated for each faculty member. A positive residual indicates that the faculty member is paid more than expected given the factors considered in the model, while a negative value denotes a salary that was less than predicted.

Members of the Faculty Salary Equity Task Force recommended further review of all cases in which nine-month base salary levels were at least one standard deviation below predicted salary. However, the fact that an individual is included in this review does not necessarily mean that this faculty member is underpaid. Other considerations not accounted for in the analysis, such as workload or individual performance, may justify the base pay level that has been established. By applying further scrutiny to each of these cases, the University will be taking important steps toward satisfaction of its overall objectives of fairness and equity.