Another facet of the project involves data mining and predictive analytics techniques to explore student
demographic and academic history data to identify any correlative factors related to student success in STEM fields. Once correlative factors are identified, it should be possible to develop proactive advising strategies that facilitate retention of at-risk STEM students. Advising could begin as soon as students have completed all of their admissions paperwork. It may be possible to extend data mining and analytic modeling techniques to identify high schools from which successful and less successful STEM students graduate. This information could then be used to focus recruitment efforts and to identify schools which may benefit from partnership opportunities. Ultimately, this should lead to a stronger regional STEM pipeline and future P-16-directed grant submissions.

The final grant activities involve the development of student surveys. Currently the College has very few venues through which we gather student feedback and none of them specifically seek feedback on STEM-related concerns. Student attrition from STEM majors (change of major) is high. A survey will be developed by faculty committee members in consultation with Program Managers to address student satisfaction with the programs and potential reasons for students to change majors. This survey will be administered to students who change from a STEM to a non-STEM major. A second survey will be developed similarly to the survey above and administered to existing STEM majors. This survey will address many aspects of the program and college procedures that may impact student satisfaction with the program. A STEM attitude survey will be developed and administered to entering freshman. The surveys will identify those students with positive attitudes toward STEM. These students could potentially be recruited to STEM majors.

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