PROJECT SUMMARY

Overview:

The University of Florida Institute of Higher Education (UF-IHE) and Indian River State College (IRSC) are requesting funding for the iConnect project to improve access, equity, and success of women and underrepresented racial and ethnic minority students in community college Information Technology (IT) programs of study. iConnect includes three reconceptualized and redesigned "gateway" IT courses, a summer bridge program to increase student interest in and awareness of IT careers, embedded internships, industry mentoring programs, and a rigorous mixed-methods research protocol to investigate perceived obstacles, self-limiting behaviors, and the effectiveness of project interventions.

iConnect has the potential to profoundly change how we approach community college IT technician education and training programs. Through a three-pronged focus on access, success, and post-graduation matriculation, iConnect is designed to truly impact diversity throughout the IT industry pipeline. At conclusion of the project, iConnect will have resulted in increased enrollment of underrepresented students in IT programs of study, an increase in the percentage of underrepresented students achieving success in key "gateway" courses, an increase in the percentage of underrepresented students persisting from one year to the next, and an increase in the number of underrepresented students matriculating into an IT baccalaureate degree.

iConnect is a faculty-driven, theory-to-practice research partnership between UF-IHE and IRSC. The entire project will be under the leadership of Dr. Justin Ortagus who is the Director of the University of Florida Institute of Higher Education. Dr. Ortagus will be joined by Dr. St. Hilaire and IT faculty member Mr. Cliff Kemp at IRSC, as well as UF faculty members Dr. Lindsay Lynch and Dr. Pavlo "Pasha" Antonenko. This research team represents a robust mix of faculty with specializations in STEM education, IT curricula, community college programming, and minority student access and success. Through iConnect, they will engage in a collaborative effort to reimagine our current approach to IT technician education.

Intellectual Merit:

The intellectual merit of iConnect lies in the research outcomes it will generate over the course of its three-year project period. Women and racial and ethnic minorities remain significantly underrepresented in STEM programs of study at all levels (NAS, 2011). Despite serving more than half of the Black and Latinx students enrolled in higher education, the achievement gap for these students in STEM and IT programs of study is even worse at the community college level (NAS, 2011). Effective models have been developed to close the gender and racial minority STEM achievement gap through highly-engaging content and expanded research experiences; however, these models have primarily focused on equity in baccalaureate completion in the university setting. iConnect will adapt these baccalaureate pipeline models to a two-year technician education IT program. Through a combination of reconceptualized gateway courses designed to break-down culturally-grounded barriers and self-limiting behaviors in tandem with strong industry connections and experiential learning, iConnect will generate an effective model for improving success of women and underrepresented racial and ethnic minority students that is positioned for replication at peer community colleges nationwide.

Broader Impacts:

The broader impact of iConnect is supporting a more diverse STEM workforce. According to the U.S. Equal Employment Opportunity Commission, women, Latinx, and Black individuals remain significantly underrepresented in our national IT workforce (2014). Women account for 36% of employees in the high-tech workforce, while Black individuals represent 7.4% and Latinx represent 8%. Diversity in IT leadership and executive positions is even worse, with women at 20%, Black individuals at 2%, and Latinx at 3.1% (US EEOC, 2014). Addressing the IT workforce equity gap begins with educational programs designed to fill the IT pipeline with a diverse pool of students. iConnect will directly address the social and cultural capital disparity that has been found to contribute to self-limiting behaviors that negatively impact the IT career aspirations of women and underrepresented minorities. At the conclusion of this three-year project, UF-IHE and IRSC will have developed a replicable model for community colleges and their industry partners to significantly improve diversity for our nation's IT workforce.