

## HCC INSPIRE: Innovative Science Program Initiatives to Reform Education

### Executive Summary

In recognition of its essential role in providing relevant learning opportunities to the students of a large and diverse community for academic and career advancement, Houston Community College (HCC) has developed a comprehensive Quality Enhancement Plan (QEP) with a **clear focus on improving student learning, engagement, and success in the sciences.**

While the US is currently the world's leader in science and technology, numerous factors indicate a "gathering storm" by which US leadership is presently challenged. There are few fields of study more important than science for our social and economic security. As the current "energy capital" of the world and home to the famed Texas Medical Center, Houston must provide thousands of workers annually dedicated to scientific research, training, and work.

HCC's QEP, **HCC INSPIRE** (INnovative Science-Program Initiatives to Reform Education) will transform the HCC science student experience by providing real-world, active and collaborative learning opportunities. Such learning has been shown to improve student engagement, knowledge and persistence, as well as encourage critical thinking and higher-level reasoning. Further, such learning will contribute to 21<sup>st</sup> century learning skills for students as adaptability, teamwork, effective use of technology, and social and personal responsibility.

**HCC INSPIRE** will bring together science faculty to create and assess a series of course-specific active learning modules/activities with student-engaging, real-world themes. Faculty development teams in biology, chemistry, and physics will work with instructional designers to create the modules and college teams will pilot, assess, and scale-up implementation. The modules will be delivered in Eagle Online, the HCC learning management system, and supplemented by an Online Toolbox of learning materials in the HCC Library for faculty and student support. The HCC Center for Teaching and Learning Excellence will coordinate appropriate faculty development experiences with college Curriculum Innovation Centers. Faculty will also sponsor student science clubs, create learning communities, and implement a science-based student success course at all HCC colleges to promote science student engagement and success. The HCC Office of Institutional Research will assess student learning outcomes (SLOs) as well as program goals and objectives.

**HCC INSPIRE** will be led by Dr. A. Tineke Berends, HCC Northwest Biology Professor, who may be contacted at [tineke.berends@hccs.edu](mailto:tineke.berends@hccs.edu). She will be supported by the Accreditation Compliance Director Judy Cantwell ([judy.cantwell@hccs.edu](mailto:judy.cantwell@hccs.edu)).