http://www.whitehouse.gov/blog/2014/12/03/white-house-college-opportunity-summit

STEM Commitments

Achieving the Dream

Goals
Achieving the Dream is committed to helping community colleges bridge the skills gap in the STEM labor market through projects to improve student advising and to identifying successful support systems in technician education pathways. Additionally, Achieving the Dream aims to work with more than 40 institutions offering technician education to identify best practices for academic and social structures to support community college STEM student success.

Actions
Achieving the Dream (ATD) is a national reform network dedicated to community college student success and completion with a particular focus on helping low-income students and students of color complete their education and obtain market-valued credentials. Due to scarce resources and infrastructure at many colleges, there often are not enough academic and social supports to meet the needs of all students and students who are in most need of coaching and guidance are frequently overlooked. ATD aims to combat this oversight by examining the combination of technology and advising interventions as a way of increasing persistence for students on STEM pathways at four community colleges. Colleges will be matched with technology providers that offer products and services for addressing common student hurdles; at the same time, the colleges will provide varying levels of advising for the students. This project is intended to increase efficiencies and allow colleges to work in a more coordinated fashion to provide adequate outreach to students on STEM pathways with the intention of increasing of student persistence and completion in STEM pathways in the participating community colleges. ATD will also explore the kinds of academic and social supports community colleges are implementing to enable students to complete middle-skill technician education pathways at more than 40 institutions offering technician education pathways. This project will highlight promising practices in effective academic and social supports for technician education pathways as well as examine how colleges are creating stackable certificates or credentials and micro-credentials to facilitate student progress. This work also will enable the colleges to spread the use of these interventions and supports across more of their pathways, create stronger connections between colleges' student success priorities and their technician education pathways efforts, and improve colleges' efforts to facilitate students' entry, persistence, and completion of middle-skill pathways.

Achieving the Dream and Jobs for the Future

Goals
Over the next three years, Achieving the Dream and Jobs for the Future will launch and strengthen approximately 75 pathways to STEM middle-skill careers by scaling up their STEM Regional Collaborative model in three new states and accelerating the implementation of structured middle-skill STEM pathways through In-State Learning.

Actions
There is a growing national recognition that community colleges can be a launching pad for individuals to highpaying, quality careers in STEM and an effective avenue for improving equity. Over the last year,

Achieving the Dream, Inc. (ATD) and Jobs for the Future (JFF) have launched STEM Regional Collaboratives within three community colleges -Norwalk Community College (Norwalk, Connecticut), Cuyahoga Community College (Cleveland, Ohio), and Miami Dade College (Miami, Florida) – to bring together college leadership, faculty and staff, local employers, P-12 school partners, community organizations, and state partners to create stronger, more efficient middle-skill STEM pathways to meet high demand in local labor markets. Over the next three years, through a reinvestment from The Leona M. and Harry B. Helmsley Charitable Trust, ATD and JFF will scale up the STEM Regional Collaborative model by adding another STEM Regional Collaborative in each of the three states. In addition, ATD and JFF will create In-State Learning Communities building on the successful models of the STEM Regional Collaboratives in order to accelerate the implementation of structured middleskill STEM pathways. Up to twelve colleges will be part of this learning community work and ATD and JFF have secured state leads in Connecticut, Ohio, and Virginia to partner in delivering annual In State Learning Community forums for multiple colleges in each state. Through scaling the STEM Regional Collaboratives and the Learning Communities, approximately 75 middle-skill STEM pathways will be launched or strengthened, thus increasing persistence in and completion of STEM pathways. In addition, the work on the STEM Regional Collaboratives and with the state partners informed the development of a Middle-Skill STEM State Policy Framework (released October 2014) that can be used to scale this work nationally and ATD and JFF will actively disseminate the learnings from this work throughout their respective college networks, which reach over half of the community college students in the nation.

ATD and JFF also continue to work with state policy partners in seven states on implementing Middle-Skill STEM policy agenda. In the next three years, this partnership will develop a Middle-Skill STEM State Policy Framework Self-Assessment Tool and encourage states to make explicit commitments to the Framework. The seven state partners will measure progress against the Framework using the Self-Assessment Tool annually.

Foothill College

Goal

STEM students comprise 35.3 percent of the Foothill College student population of 15,576, with STEM numbers increasing each year. Foothill College is committed to expanding its STEM student population by 5 percent per year and to increase its graduation rate by 95 percent above current rates within five years.

Action Plan

To meet this commitment, Foothill will continue to expand on its STEM programs, consistent with recent research on STEM student success and retention: academic support services that closely parallel STEM courses and pathways; analytical management to enable comprehensive support with limited resources; comprehensive mentoring services for progressive student success within an active learning community; stimulation of student learning via flipped classrooms, actively learning and growth mindset; and undergraduate research and internships. This will include:

- Recruiting more students into STEM majors by using faculty as STEM role models, especially for underrepresented students. These include Puente Program (helps Latino students transfer to four-year institutions), Pass the Torch (pairs high achieving students with minority students in study teams), and an active Student Outreach and Retention Office.
- Giving students academic support with a dedicated "STEM emporium" space: STEM programs will apply a scaffolding strategy that includes readiness testing for core STEM courses, along with booster modules to get students' skills up to course requisite skill level. A STEM emporium is in a centralized physical location and has a mechanism to coordinate student assessments, booster/scaffolding instruction, and mentoring. The STEM emporium works in close

collaboration with each student's instructor to ensure that remedial work has been completed and that the student has gained the skills to join and succeed with the other class participants.

- Expanding opportunities for STEM research and internships through partnerships: Foothill has developed partnerships with local four-year institutions and companies to provide collaborative studies, undergraduate research and internships, including Stanford University, California State University at San Jose, CalPoly San Luis Obispo, University of California Santa Cruz, University of California Irvine, NASA AMES, Cisco, Microsoft, Triple Ring, and Fogarty Institute for Innovation. Foothill stays on the forefront of STEM education with relationships with the Carnegie Foundation for the Advancement in Education, Gates Foundation, Monterey Institute for Technology and Education, League for Innovation and the National Science Foundation.
- Supporting the ability of STEM teachers to continue to improve their instructional practices: Foothill's Science Learning Institute (SLI) provides an innovative model based on educational research and best practices for the successful teaching and learning of science, technology, engineering and mathematics at all levels. This includes STEM summer camps, scholarships, summer Math Bridge, online course creation, using the campus as a living laboratory, and cutting edge curriculum in biomedical devices, 3D printing, green chemistry, Big Data, quantum computing, and energy.