



# Hartnell College Office of Advancement and Development Grant Pre and Post Award Form

October 2013

<b>1. Funding Agency/Organization and Title of Grant Project</b>			
NASA MUREP Community College curriculum Improvement (MC3I)			
<b>2. Applicant</b>		<b>Fiscal Agent</b>	
<input checked="" type="checkbox"/> Hartnell College <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Hartnell College <input type="checkbox"/> Other	
<b>3. Submitted</b>		<b>Submission Date</b>	<b>4. Awarded</b>
<input type="checkbox"/> No <input checked="" type="checkbox"/> Yes		6-11-2015	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes
<b>If not submitted, why?</b>		<b>Reviewer Notes Attached</b>	
<b>Hartnell College Board of Trustees report date:</b>		6-2-2015	
<b>Abstract:</b>			
See attached.			

## HARTNELL COLLEGE NASA MC<sup>3</sup>I PROPOSAL

### Proposal Summary/Abstract (4,000 characters limit)

Hartnell College's NASA Minority University Research and Education Project (MUREP) Community College Curriculum Improvement (MC<sup>3</sup>I) program will expand, strengthen, and diversify the STEM pipeline for underrepresented and disadvantaged youth at five high need high schools. Hartnell's MC<sup>3</sup>I NASA partner is the **NASA Ames Research Center** in the nearby Silicon Valley. The project will support NASA Science and Space Technology Mission Directorates. The project is based on a solid foundation, including: Hartnell's ability to attract and support underrepresented students; the College's STEM pathways, including an innovative, award-winning, three-year computer science degree; and long-established K-12 and university partnerships.

Hartnell College, an accredited California Community College, Hispanic Serving Institution, is the only public institution of higher education exclusively serving Salinas and the 1,000 square mile Salinas Valley. It serves a population that is mostly Latino, low income, with limited educational attainment. Between 50-95 percent of regional underrepresented students are not college-ready in science; and between 80-90 percent are not college-ready in math. This means that when they arrive at Hartnell, students require remedial coursework before beginning their STEM major. This results in a serious delay in time-to-degree and poses a major obstacle to transfer or graduation. Despite the influx of underprepared students, Hartnell has had significant success increasing the number of STEM majors, particularly underrepresented STEM majors, by 31 percent since 2010-11. And, Hartnell is the number one community college in California for transferring underrepresented minority students to the University of California.

Hartnell's MC<sup>3</sup>I activities were designed with research-based evidence demonstrating their effectiveness in improving STEM achievement; preventing dropouts; increasing postsecondary STEM diversity; and improving underrepresented student academic success. Activities, strategies, and methods to improve, expand and strengthen the STEM pipeline include: High School STEM Teacher Training; Summer STEM Academies; Early College; STEM Ambassadors; Curriculum Alignment and Articulation; Links with; MESA Schools Program; Multi-Level Mentoring; and other Student Engagement Activities such as project-based learning, STEM field trips, and internships at NASA Ames. NASA content will be integrated into the Summer Academies as well as into the content of regular STEM academic courses at each partner high school.

The project will recruit students from Hartnell's successful NASA SEMAA program (founded in 2010) and from the MESA Schools Program, a co-curricular program that assists students in middle and high schools to excel in math and science. In total, the project will engage 1,000 high school students (grades 9-12) per year and will support long term improvement in the STEM pipeline.

As detailed in the research-based strategies to be used, this MC<sup>3</sup>I project will increase the *breadth* and *depth* of student access to NASA curriculum and experiences. The project will increase number of teachers and students with access to the curriculum (breadth); training 20 teachers and engaging 1,000 students per year. The length of the experience (9<sup>th</sup>-12<sup>th</sup> grades) and

the continuum of related experiences culminating in early college and/or internships will create a more profound experience for the participants (depth). This will lead to increased college-readiness and postsecondary enrollments in STEM majors at Hartnell and elsewhere.

Hartnell's MC<sup>3</sup>I project will meet specific NASA MC<sup>3</sup>I goals and objectives; NASA's Strategic Plan Goals, including Annual Performance Goals and Indicators; and the objectives contained in the Co-STEM Strategic Plan. Overall, the Hartnell MC<sup>3</sup>I will be integrated with other STEM programs and initiatives at Hartnell, strengthening the STEM pipeline for Latino and female youth throughout the community.