





# The Board of Governors of the California Community Colleges

PRESENTED TO THE BOARD OF GOVERNORS

DATE: May 16, 2016

SUBJECT: Hartnell College and CSU Monterey Bay: CSin3 Presentation		Item Number: 4.3	
		Attachment: No	
CATEGORY:	Workforce & Economic Development	TYPE OF BOARD CONSIDERATION:	
Recommended By:	 Van Ton-Quinlivan, Vice Chancellor	Consent/Routine	
		First Reading	
Approved for Consideration:	 Erik Skinner, Acting Chancellor	Action	
		Information	X

**ISSUE:** It is estimated that through 2025, higher education institutions in the United States will produce less than one-third of the computer science graduates needed to fill available positions. As such, Information & Communications Technology/Digital Media (ICT/DM) is one of 10 priority industry sectors under the Doing What MATTERS for Jobs and the Economy framework, selected by 14 of the 15 regional economies of California.

For students just entering community college after high school, the most direct and reliable pathway to software development employment is completion of a computer science bachelor’s degree. The quality of projects and technical internship completed during the student’s undergraduate years will influence hiring prospects upon graduation.

Hartnell College and California State University–Monterey have engaged in a model collaboration, called CSin3, whereby students traditionally underrepresented in the field of computer science can attain the bachelor’s degree via a three-year pathway. Last year, this model was recognized by California Committee on Awards for Innovation in Higher Education, earning a \$5 million prize.

**RECOMMENDATION:** This item is presented for informational purposes.

**BACKGROUND:** The first cohort of CSin3 started in 2013, with one cohort starting each year since. The breakdown of participation, persistence, and completion rates per cohort are as follows:

	<b>Cohort 1</b>	<b>Cohort 2</b>	<b>Cohort 3</b>	<b>Cohort 4</b>
Starting Month/Year	Aug 2013	Aug 2014	Aug 2015	Aug 2016
Target Graduation Month/Year	May 2016	May 2017	May 2018	May 2019
Number of students starting	32	32	35	36 (recruited)
Number/percent graduating at target year	22/69%	N/A	N/A	N/A
Number/percent graduating at target + 1 year	26/81%	N/A	N/A	N/A
Number/percent transferring from Hartnell to CSUMB	28/88%	28/88%	N/A	N/A
Number of students with internships	25/78%	24/75% (as of 4/27/16)	N/A	N/A
Number of students with post-graduate job/academic placement (as of 4/27/16)	10 out of 22	N/A	N/A	N/A

Demographic breakdown: Of the students admitted into cohort 1, cohort 2, and cohort 3, the demographic breakdown is 42% female, 85% Hispanic, African-American, or other underrepresented minority in computer science, and 72% first-generation college.

Internship Host Organizations: All State, Amazon, Apple, Bank of America, Berkeley REU, BlackRock, Cisco, Code2040, Driscoll's, Dolby, Firetide, HeavyConnect, Language Line, Liberty Mutual, NASA Ames, Nationwide, Naval Postgraduate School, NBC Salesforce, SSCS, Uber, Verizon IT, and VmWare

Post-graduate Job Organizations: Apple, Driscoll's, JPMorgan Chase, Lyft, Panafold, Salesforce, SSCS, Uber

CSin3 is a three-year, cohort-based pathway to a bachelor's of science in computer science. In this program, students take courses primarily at Hartnell for the first 1.5 years, while taking one course at CSUMB. During the second 1.5 years, students primarily take classes at California State University-Monterey Bay. Key components of the model include:

- **Cohort learning:** Students take all classes and participate in enrichment activities together
- **Continuous engagement:** From math intensive (pre-college math prep) through graduation, students have no more than two weeks of consecutive break time
- **Prescribed course pathway:** All courses, through graduation, are predetermined and students receive priority registration
- **Minimizing impact of administrative processes:** Faculty/staff team interfaces between students and nearly all administrative processes to ensure student focus stays on academics
- **Integrated academic support:** Students receive tutoring support, their performance in courses is tracked and they receive timely interventions as necessary
- **Organized, required enrichment:** Students participate in ~10 hours per week of enrichment activities in the form of professional development workshops, study hours, additional coding practice, field trips, pre-college math preparation, and internships
- **Seamless transition from Hartnell to California State University-Monterey Bay:** From the students' perspective, they are considered students from day one of both institutions
- **Competitiveness for top jobs as primary success metrics:** Program success is measured by

graduates being competitive for top industry jobs

- **Scholarship:** Current CSin3 participants are receiving \$30,000 scholarships

The improved outcomes in this program are not due to any one of the specific components listed above, but rather are a result of it being a comprehensive program that addresses multiple dimensions required for student success. One small team of faculty and staff focus on all of the following dimensions:

- Administration
- College readiness
- College success
- Academic rigor/curriculum
- Professional development
- 'Above & Beyond' culture

In order to duplicate this program's success, CSin3 recommends that a small team of faculty and staff are enabled and incentivized to think about end-to-end success of cohorts of students. Keeping the team focused on a single subject addressing all of these dimensions to support a cohort of students will lead to better results. To do so requires a fundamental rethinking of how students are served is required to increase graduation rate and post-graduation success.