CSin3: A three-year bachelor’s degree program in Computer Science

October 10, 2016
Outline

1. Introductions
2. Video of student in the program
3. Hartnell College demographics
4. Cal State Monterey Bay demographics
5. Discussion of challenges the CSin3 program addresses
6. Overview of CSin3 program
7. Results after one cohort
8. Challenges to the CSin3 program
16,000 students annually (unduplicated headcount)

In 2015-16, over 700 “Dreamer” students enrolled (291 enrolled in 2010-11)

56% first generation students (5th highest of 113 California community colleges)

85% receive financial aid

68% of students are Latino/Hispanic

About 90% of all students take at least one remedial course in English or math

About 12% of adults in District have a bachelor’s degree or higher

39% of adults over 25 years old do not have a high school diploma

Only 6% of adults in the District have a bachelor’s degree or higher
Part of the CSU system that serves 400,000 students

Undergraduate enrollment: 7,000

Computer science approximately 3% of total

37% Hispanic, 35% white, 7% African American, 7% multiracial

55% first generation

35% low income

62% women

33% of students from three-county service area
What challenges does CSin3 address?

Higher Education Challenges
- In past six years, CSUs turned away ~140K students
- CC->CSU 6-year graduation rate is <20%
- Average student loan debt for 2014 CSU graduate: $18K

Tech Workforce Diversity Challenge
- ~60% White Americans
- ~15% Women
- ~4% Hispanic Americans (greater than 35% of CA population)
- ~2% African Americans

Computer Science Demand Challenge
- Not enough qualified CS graduates
- U.S. colleges and universities are expected to produce less than 50% of the needed graduates in CS
All students are pursuing a Bachelor’s Degree in Computer Science

Partnership between community college (Hartnell) and state university (CSUMB)

Cohort-based

Accelerated - completion in 33 months

Significant support and engagement beyond coursework

Students supported by scholarships from Matsui Foundation
Mission

A CSin3 student who embraces high expectations, cultivates curiosity, maintains a positive attitude, has a tenacious work ethic, and commits to the cohort learning community, upon graduation, will be well-prepared to compete with graduates from any top 10 computer science program for opportunities in the industry or academia.
Maria Rivera
2016 Graduate

Born in Mexico; parents moved to USA to work in fields in Salinas; 6 siblings

First generation to go to college

Never heard of CS prior to info session in January of her high school senior year

CSin3 from 2013-2016

Interned at Salesforce summer 2015; now full-time employee
CSin3 Demographics

in categories traditionally underrepresented in CS

Of the 123 students served/being served in 4 cohorts...

URM Total - 86%

Hispanic - 81%

First Generation College - 71%

Female - 43%
What does a CSin3 student encounter upon being accepted into the program in February?

1. A small team of faculty and staff becomes her primary point of contact for all things college.

2. A cohort of ~30 additional students become her supportive learning community for the next 36 months.

3. Growth mindset, grit, general college readiness, Math and CS are emphasized/practiced during math intensive and summer bridge.
Nuts & Bolts View of 3-year Pathway

Fall 1
4 courses at Hartnell
1 course at CSUMB

Winter 1
1 course at Hartnell

Spring 1
4 courses at Hartnell
1 course at CSUMB

Summer 1

Fall 2
2 courses at Hartnell

Spring 2
5 courses at CSUMB

Winter 2
1 course at Hartnell

Summer 2
Internship

Fall 3
5 courses at CSUMB

Winter 3
1 course at Hartnell

Spring 3
4 courses at CSUMB

Pathway meets all bachelor's degree requirements (120 units)

Students don’t see institutional boundaries. Panther and Otter from day one.
## Support Team Structure

Small faculty/staff support team consists of…

| Faculty leadership (one faculty lead from each institution) | • Interface/interact with cohorts on a daily basis  
| • Lead career and educational support services:  
| • Plan and implement pathway |
| --- | --- |
| **Program coordinator** | Supports and interfaces across institutional processes so students do not worry about registration, transfer, and cross enrollment |
| **Education coordinator** | Coordinates and implements outside of classroom educational support and enrichment activities |
Student focus remains squarely on academics and professional development.
Pre-college Prep
February - May all students participate in *Math Intensive* using Khan Academy and Saturday workshops

Summer Bridge
A weeklong “bootcamp” to officially launch the cohort

Friday Enrichment Workshops
Cohorts meet 2-3 hours every Friday for grade-level appropriate enrichment (Begins with getting acclimated to college and study skills, moves to internship prep, finishes with job searching)

Organized Study Time
1-2 hours per day of designated, required study time and space, which includes Peer Led Team Learning program

Industry Involvement
Industry organizations and professionals engage with students from year one
Results after 3.5 years

Graduation
22 out of 32 (68%) cohort 1 students in May 2016
(2 more from cohort 1 are expected to graduate in Dec 2016)

Jobs
18 out of 22 (82%) graduates had job offers at graduation or shortly after

Transfer
28 out of 32 (87.5%) students in each of the first two cohorts transferred from Hartnell to CSUMB
Biggest Challenges

**Institutionalization** of program procedures across institutions

Consistently cultivating a strong **cohort culture**

Expanding to **serve more students** (classroom capacities and assignments, faculty)
Lessons Learned (so far)

1. Still learning…
   (Change is an iterative process)

2. Impact of program is orders of magnitude greater with each new cohort

3. Importance of transitioning to a support team structure that does not depend on individuals
The 2014-2015 California budget included $50 million to recognize campuses that change existing policies, practices or systems to achieve the following state priorities:

- Significantly increase the number of bachelor's degrees awarded
- Allow students to complete bachelor's degrees within four years after beginning higher education
- Ease transfer through the state's education system by better recognizing learning that occurs across the state's education segments and elsewhere.
Questions

FOR MORE INFORMATION

Visit Program Website:

http://csin3.hartnell.edu

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