

WEST

Workshops for Engineering & Science Transfers

Integrating transfer students into the UCSC STEM community

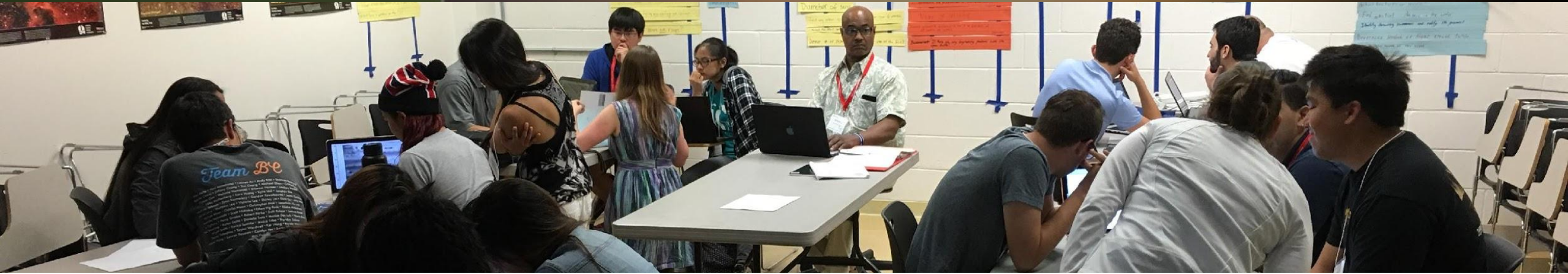
Outcomes from the WEST Program

Institute for Scientist & Engineer Educators (ISEE),
UC Santa Cruz

WEST

Workshops for Engineering & Science Transfers

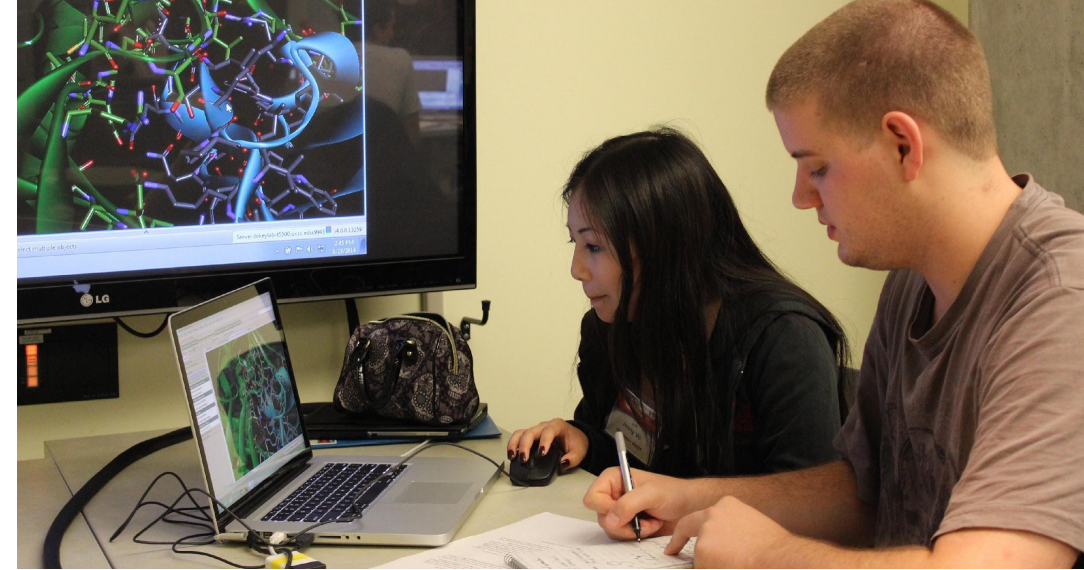
Integrating transfer students into the UCSC STEM community



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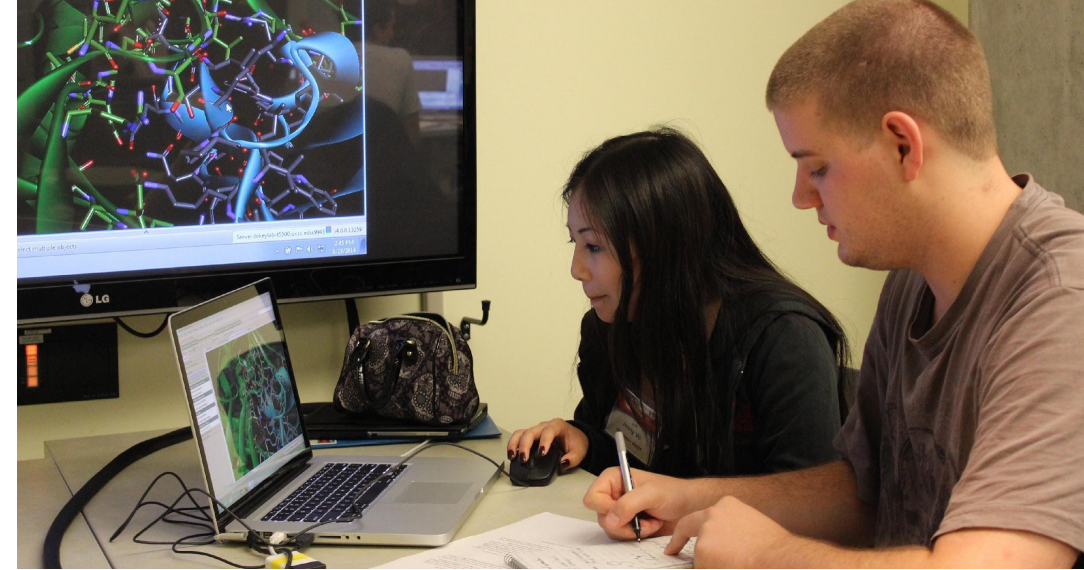
*Goal: Increase success of community college STEM
transfer students*

*Nearly **700** participants 2007-2019*



WEST: an authentic and inclusive STEM learning experience

2-day workshop for incoming STEM transfer students, offered just before academic year starts



Examples:

BioWEST -- Central dogma, genetics

EarthWEST – Climate change, ocean science

CompSciWEST – Machine learning, algorithms

BiochemWEST – Intermolecular Forces

EcoWEST – Food webs

WEST instructors are graduate students and postdocs in ISEE's Professional Development Program (PDP)

They design an authentic and inclusive STEM learning experience on a topic important to their field of study.



From 2007-2017:
588 WEST participants (CC transfers)

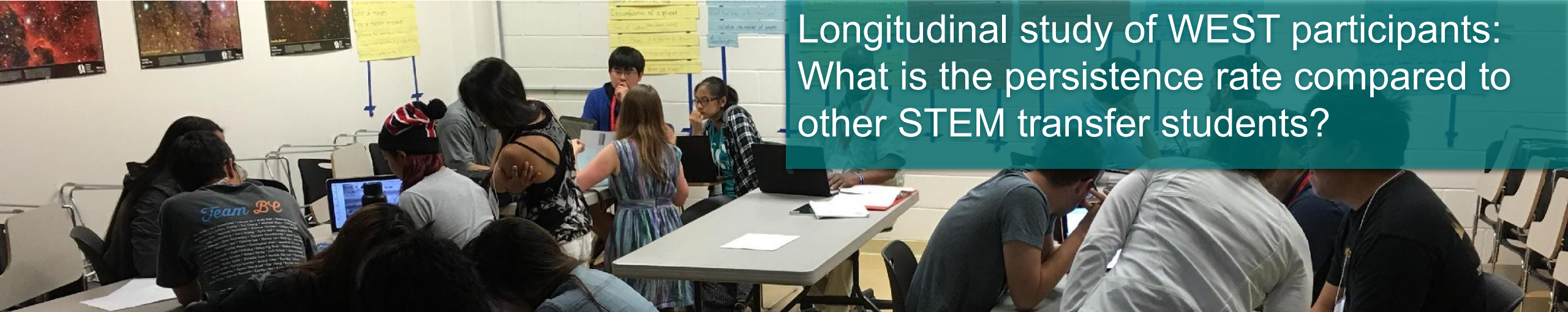
87 PDP participants (grad students and postdocs)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	/	/	/	/	/	/	/	/	/	/	/
	Bio	Bio Phys	Bio Phys	Bio Earth Eco	Earth Eng Eco	Earth Eco Ocean	Eng Phys Marine	Chem Earth Phys Eng	Ag Eco Astro Biochem	Chem CS	Chem CS Astro Eco
# UGs	18	32	42	46	44	41	52	65	89	48	92
# PDP (Grad/Post Doc Instructors)	3	6	6	8	11	10	8	13	14	7	14

WEST Participants Demographics Compared to other incoming STEM transfer students

Non-WEST STEM Transfer Cohort Demographics (2007-2016)	n	% of Total Cohort
Women	944	33
Hispanic/Latinx	551	21
URM	659	25
First Generation College	1154	44

WEST Cohort Demographics (2007-2016)	n	% of WEST
Women	198	42
Hispanic/Latinx	125	29
URM	144	33
First Generation College	222	51



Longitudinal study of WEST participants:
What is the persistence rate compared to
other STEM transfer students?

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
	/	/	/	/	/	/	/	/	/	/	/
	Bio	Bio Phys	Bio Phys	Bio Earth Eco	Earth Eng Eco	Earth Eco Ocean	Eng Phys Marine	Chem Earth Phys Eng	Ag Eco Astro Biochem	Chem CS	Chem CS Astro Eco
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Retention and Graduation Counts of Transfers by Entering STEM and WEST Status Collapsed Across Cohort Entry Years

		Year 1 After Transfer	Year 2 After Transfer	Year 3 After Transfer	Year 4 After Transfer
	Cohort Entry Years	2007-2014	2007-2013	2007-2012	2007-2011
WEST	Total	331	269	217	177
	Retained in STEM	296	139	12	3
	Graduated in STEM	0	71	147	131
Non-WEST STEM	Total	2065	1731	1469	1138
	Retained in STEM	1720	778	77	12
	Graduated in STEM	1	464	931	787

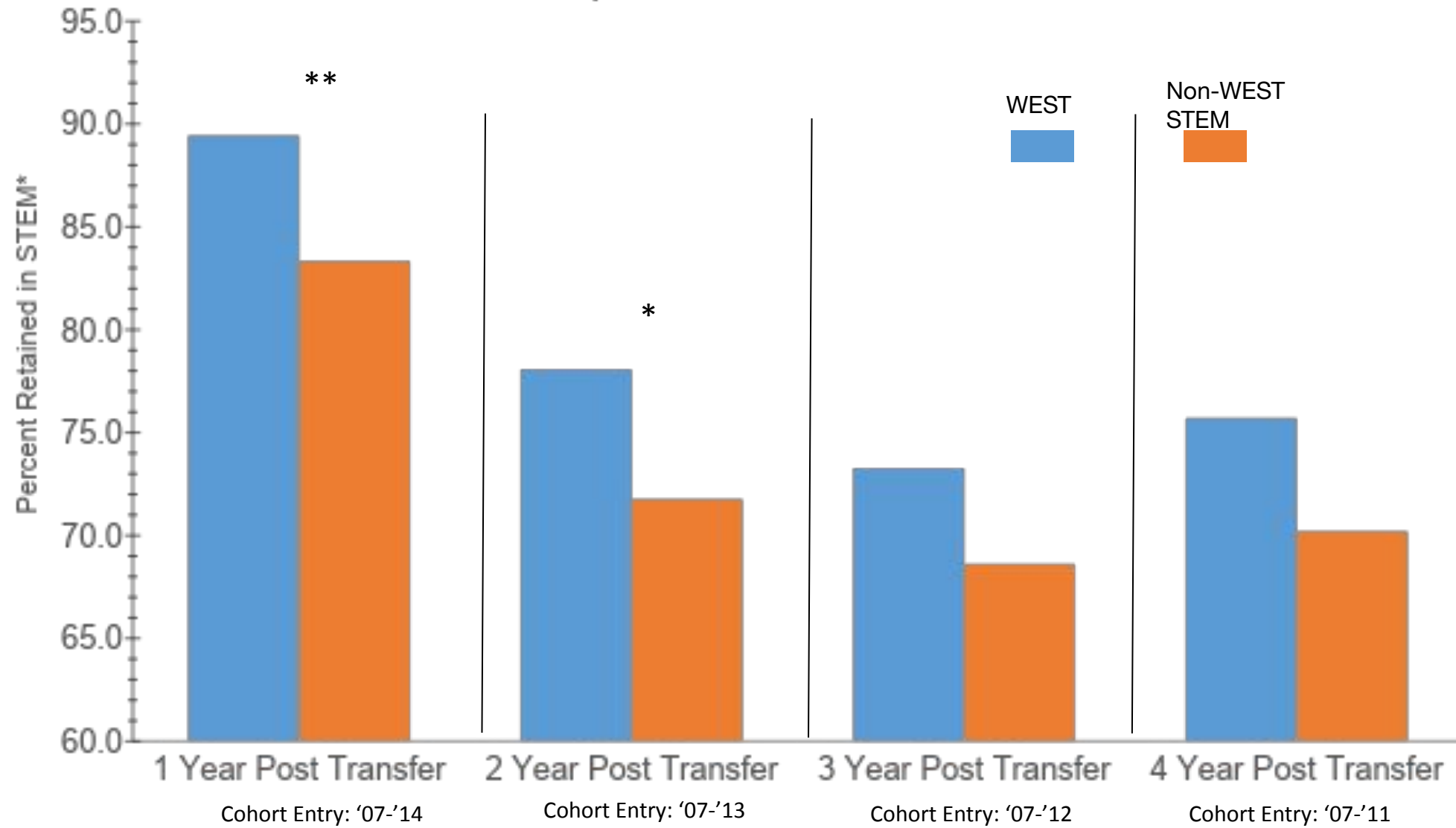
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WEST Participation and STEM Retention



‡ Graduated before or retained up to corresponding year

** $p < 0.01$

* $p < 0.05$