A Research Partnership that Enhances Student Transfer and Success in STEM: The Bridges to the Baccalaureate Program at San Diego Mesa College

> Academic Academy 2013 Academic Senate for California Community Colleges San Diego, California, February 23, 2013

Bridges to the Baccalaureate Program at San Diego Mesa College



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Edward Alexander, Ph.D. Professor of Chemistry Program Director and Principal Investigator



Elaine Erickson Education Technician

Presentation Plan for Today

- 1. San Diego Mesa College: Background, Demographics, and Student Transfer Record
- 2. The National Institutes of Health (NIH) Bridges to the Baccalaureate Grant
- 3. San Diego Mesa College: Bridges' Student Success and Achievements
- 4. San Diego Mesa College: Presentations by Bridges students: Alberto Palacios, Lidia Monjaras, and Tais Castellano

Opened in 1964

One of three colleges within the San Diego Community College District

241 full-time faculty

Current Enrollment: 24,000 students

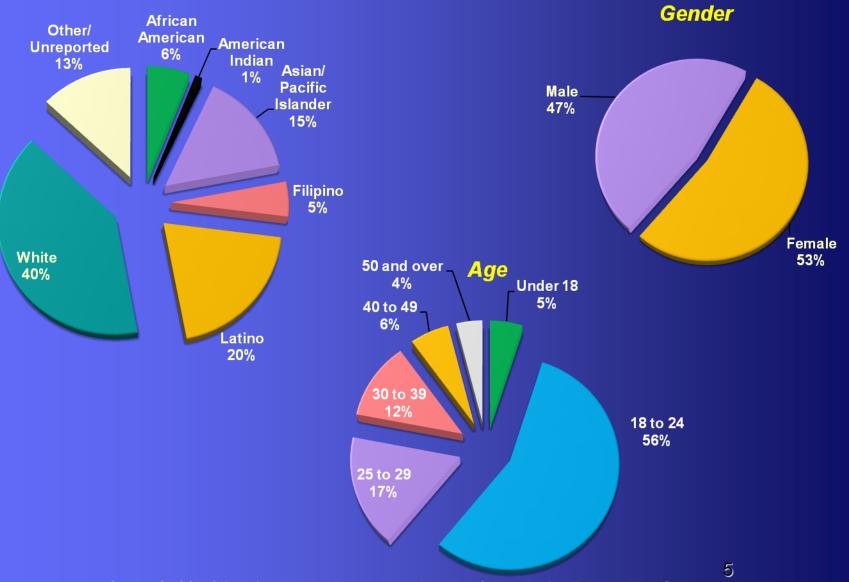


Mission: * offer programs that lead to the AA or AS degree

- * offer low-division courses that lead to transfer to four-year colleges and universities
- ^{*} offer programs in career/technical education
- * high-school outreach
- * promote regional economic development

DEMOGRAPHICS OF STUDENT POPULATION – Fall 2008

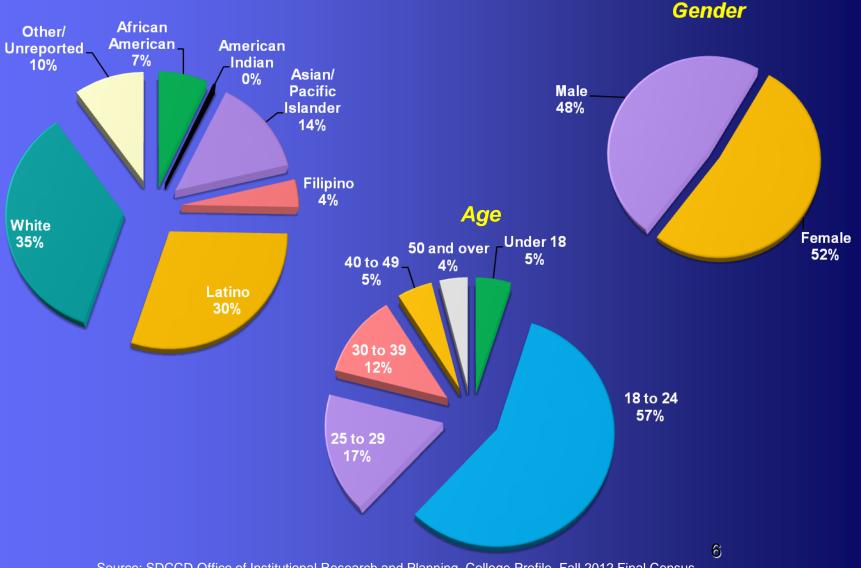




Source: SDCCD Office of Institutional Research and Planning, College Profile, Fall 2008 Final Census

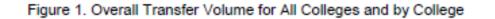
DEMOGRAPHICS OF STUDENT POPULATION – Fall 2012

Ethnicity



Source: SDCCD Office of Institutional Research and Planning, College Profile, Fall 2012 Final Census

Successes of San Diego Mesa College in Transfer



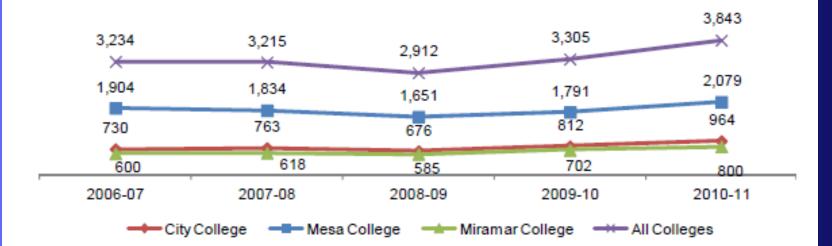


Table 1. Overall Transfer Volume for All Colleges and by College

	2006-07	2007-08	2008-09	2009-10	2010-11	% Change 06/07-10/11
City College	730	763	676	812	964	32%
Mesa College	1,904	1,834	1,651	1,791	2,079	9%
Miramar College	600	618	585	702	800	33%
All Colleges	3,234	3,215	2,912	3,305	3,843	19%

Source: SDCCD Information System

SDCCD Office of Institutional Research and Planning May 2012

Successes of San Diego Mesa College in Transfer

Figure 4. Mesa College - Top Five 4-Year Transfer Institutions 2006-07 to 2010-11

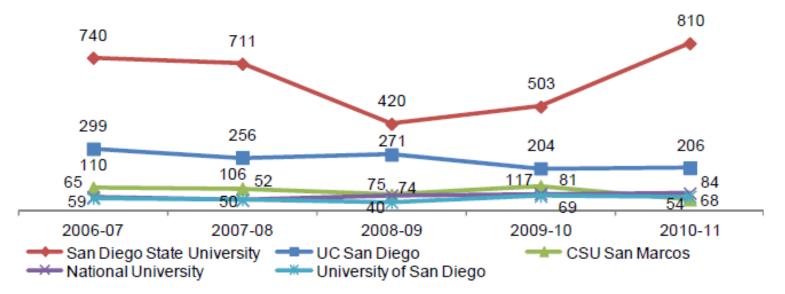


Table 6. Mesa College - Top Five 4-Year Transfer Institutions 2006-07 to 2010-11

	2006-07		200	2007-08		2008-09		2009-10		0-11	% Change 06/07-10/11
San Diego State University	740	58%	711	61%	420	48%	503	52%	810	66%	9%
UC San Diego	299	23%	256	22%	271	31%	204	21%	206	17%	-31%
CSU San Marcos	110	9%	106	9%	75	9%	117	12%	54	4%	-51%
National University	65	5%	50	4%	74	8%	81	8%	84	7%	29%
University of San Diego	59	5%	52	4%	40	5%	69	7%	68	6%	15%
Total	1,273	100%	1,175	100%	880	100%	974	100%	1,222	100%	-4%

Source: SDCCD Information System

Successes of San Diego Mesa College in Transfer

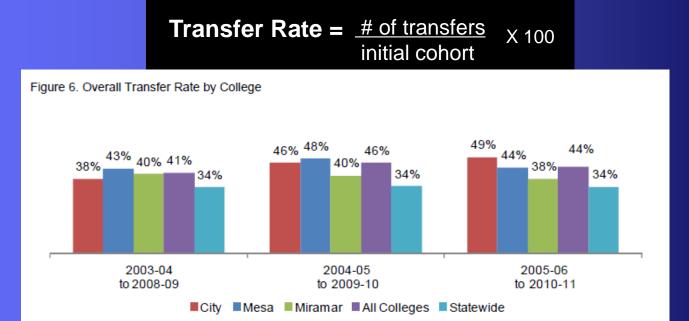


Table 14. Overall Transfer Rate by College

		Cohort								College
		2003-04 to 2008-09		2004-05 to 2009-10			2005-06 to 2010-11			Average 03/04 - 05/06
	Cohort	N	Percent	Cohort	N	Percent	Cohort	N	Percent	
City	1,356	513	38%	1,504	690	46%	1,500	730	49%	44%
Mesa	2,233	965	43%	2,484	1,189	48%	2,164	941	44%	45%
Miramar	938	377	40%	910	359	40%	937	355	38%	39%
All Colleges	4,275	1,743	41%	4,645	2,132	46%	4,402	1,934	44%	44%
Statewide			34%			34%			34%	34%
Source: Chancellor Office MIS								••		

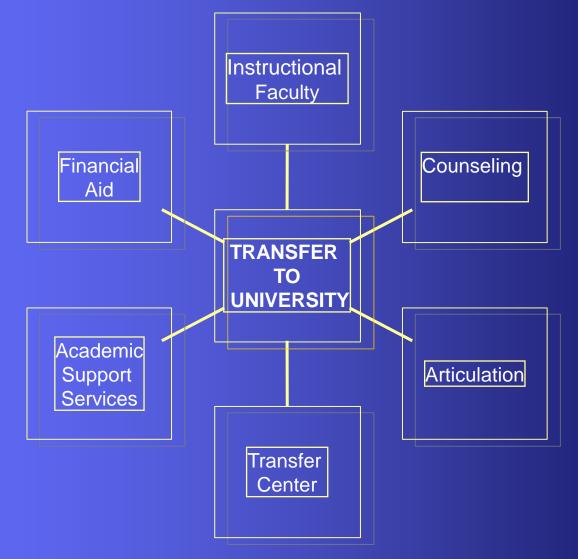
SDCCD Office of Institutional Research and Planning May 2012

Successes of San Diego Mesa College in Transfer Transfer Ranking in STEM Disciplines*: Relative to all 112 CCC's



Source: California Post Secondary Education Commission (CPEC), February , 2013

Mechanisms for Successful Transfer



Transfer Programs



San Diego Mesa College Transfer Center

HONORS ADMISSIONS PROGRAMS

In addition to the Transfer programs, the following Honors Transfer Agreements are also available. Please see the Honors Program, Room G-301, for more details.

UCLA - TAP

Transfer Allance Program -The TAP guarantees priority consideration for admission to the College of Letters and Science in addition to other benefits.

UC Irvine

Community College Honors Transfer Program -This program provides priority consideration for admission in addition to other benefits.

Pomona College – PATH

Pomona Agreement for Transfer Honors -PATH provides priority consideration for admission to the college in addition to other benefits.

Occidental College

Preferred Admission Agreement -Preferred consideration for admission in addition to other benefits.

UC Santa Cruz

Guaranteed Priority Admission -Guaranteed priority admission consideration in addition to other benefits.

UC Riverside – HART

Honors Allance for Riverside Transfers -Guaranteed admission to the university in addition to other benefits.

Chapman University – PACT

Priority Access for Chapman Transfer -Guaranteed admission to the university in addition to other benefits.



GUARANTEE ADMISSIONS PROGRAMS

Transfer programs are designed to make transitioning from a community college to a 4-year university easier. There may be additional requirements for each of these programs/agreements. Please be sure to visit the Counseling Office in I-430 or Transfer Center in I3-202 for additional details. For major preparation coursework, visit <u>assist.org.</u>

UC Davis - TAG

What is it? Transfer Admission Guarantee. Guaranteed admission to UCD and the major for the College of Agriculture and the College of Letters and Sciences.

What to do? Students should focus on completing major preparation courses before completing IGETC.

Who to see? The Transfer Center coordinator to sign contract.

When to do It? For Fall transfer: September 1st---30th

UC Irvine - TAG

What is it? Transfer Admission Guarantee. On-the-spot provisional admission to well-qualified students to UCI for all majors except Arts and Humanities, Dance and Music. Some majors are more selective.

What to do? Students should focus on completing major preparation courses before completing IGETC.

Who to see? Meet with a UCI representative.

When to do It? For Fall transfer: Oct. 15th-Nov. 30th

UC Riverside - TAG

What is it? Transfer Admission Guarantee. Guaranteed admission to UCR for the College of Natural and Agricultural Sciences, College of Humanities, Arts, and Social Sciences except Business Administration and Art (Studio). Some majors are more selective.

What to do? Students should focus on completing major preparation courses before completing IGETC.

Who to see? UC Riverside's Transfer and Re-entry Services.

When to do It?

For Fall, Winter, or Spring transfer: by November 30th

UC Santa Barbara – TAG

What is it? Transfer Admission Guarantee. The TAG assures general admissions to UCSB for the College of Engineering, College of Letters and Science except BA in Computer Science, Dance, BGA, Music.

What to do? Go to <u>www.assist.org</u>, for institution choose UCSB, for agreements choose on San Diego Mesa College, and for majors choose TAG for the agreement.

Who to see? There is no contract to sign. Indicate UCSB TAG on UC application.

When to do it? During UC filing period indicate UCSB TAG on application.

UC Santa Cruz - TAG

What is it? Transfer Admission Guarantee. The TAG program offers guaranteed admission to UCSC but no guarantee to a major.

What to do? Students should focus on completing major preparation courses before completing IGETC.

Who to see? The Transfer Center coordinator to sign contract.

When to do it? For Fall transfer: August 1st—October 15th

UC San Diego – TAG

What is it? Transfer Admission Guarantee. Guarantees admission to UCSD and the college of your choice upon completion of all program requirements. It does not guarantee admission to a particular major.

What to do? Attend a UCSD TAG informational workshop. It is required for students interested in this program. Contact the Transfer Center to sign up for a workshop.

Who to see? Transfer Center for Information and your counselor to sign the UCSD TAG contract.

When to do It? For Fall transfer: by September 23rd For Winter transfer: by May 23rd For Spring transfer: by August 23rd

Humboldt State University - TAG

What is it? Transfer Admission Guarantee. Guaranteed admission to Humboldt State University. Students who sign the TAG will have priority registration.

What to do? Students should follow the CSUGE Breadth or IGETC pattern and follow the major preparation coursework.

Who to see? The Transfer Center coordinator to sign contract.

When to do It? For Fall transfer: by December 1st. For Spring transfer: by August 1st

CSU Northridge - TAG

What is it? Transfer Admission Guarantee. Guarantees admission to CSU Northridge for all majors except Computer Science, Cinema and Television Arts, Accounting, Finance, and Financial Services.

What to do? Students should focus on completing CSUGE Breadth or IGETC pattern and major preparation coursework.

Who to see? The Transfer Center coordinator to sign contract.

When to do It? For Fall transfer: by November 30th For Spring transfer: by August 30th

San Diego State University – TAG

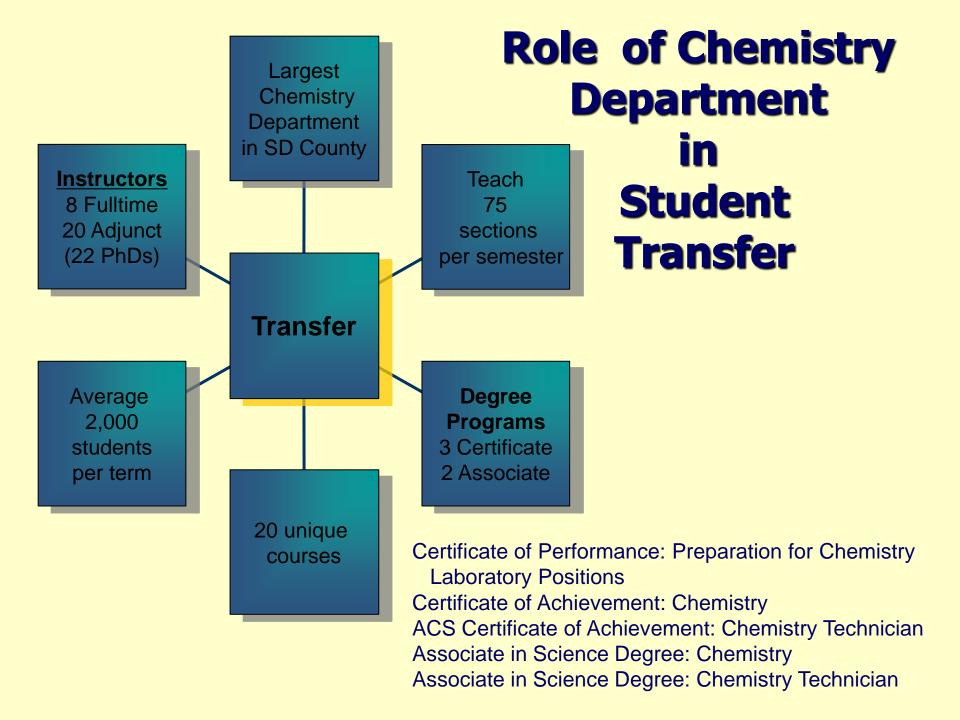
What is it? Transfer Admission Guarantee. Guarantees admission to SDSU. This is not a guarantee into the major.

What to do? Students should focus on completing CSUGE Breadth or IGETC, major preparation coursework and meet GPA requirements. Attendance in the Transfer to SDSU Workshop is required for students who want to sign the agreement. Contact the Transfer Center to sign up for a workshop.

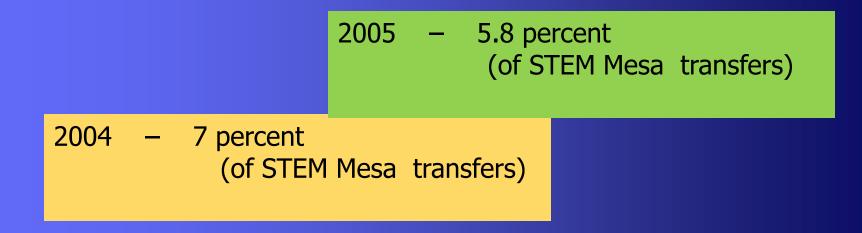
Who to see? Transfer Center for information and your counselor to sign the SDSU TAG.

When to do It? As soon as you decide SDSU is an option for you.

SAN DIEGO MESA COLLEGE TRANSFER CENTER LONG-RANGE PLANNING WORKSHEET Name Ima "A." Student (SAMPLE) BRIDGES STUDENT CSID THO > UCSD Date 12/1/2008 Counselor J.C. * Need 3.0GPA, min. MAJOR = BIOLOGY (GENERAL) YEAR 1 YEAR 2 YEAR YEAR 4 09 10 Units Units Units Units Fall Fall Fall BIDL 210A ENG101 3 4 0 Math 151 Phys195C 4(1) Hemzodi 40 4 Math 141 (5)4 PSLC 255 з 4(1) (Hem 291 5 (8)7 954, (precalc) Phys 195A 44) HIST 110 3 OCTOBER: 2011 APPLY HOUCSD United 14 Units 16 Units Cumulative Units27 Cumulative Unit **Cumulative Units** Cumulative Units Spring 2009 Spring /2 Spring 10 Spring // Units Units Units Units ENG 205 BIOL 210B ENG 51 (3) З 4 MATH 104 137 MATH 252 4 CHEM 201/2 4(1) **CHEM 152** Math 150 CILEM 233 5 4(1) Phys 1958 SPAN 101 5 4(1) ART100 3 * PG-140 3 Units (18)17 Units (16)10 Unite 8) 16 Units Cumulative Units 10 Cumulative Units 44 Cumulative Units 80 **Cumulative Units** Summer /D Summer // Summer 09 Units Units Units Summer Units **CHEM 251** JAN 102 5 HIST 109 (5)4 3 6)4 Units Units Units Units Cumulative Units Cumulative Units/3 Cumulative Units **Cumulative Units** AUGUST 2011 MATH Level: (50) TAKE Math 104 (trig) ONLY ENDUSH SAPPERTAKE ENG 51-3 101 -7 205 SIGN Page 3 TAIS AGREEN



Pre-Bridges URM Transfer to the University of California



Source: California Post Secondary Education Commission (CPEC), Feb 2013

http://www.census.gov/compendia/statab/cats/population /estimates_and_projections_by_age_sex_raceethnicity.html

2012 U.S. Census Data*Projects Increased Diversity in Ethnicity/Race



Lack of URMs in STEM disciplines is Pervasive in U.S.

Increasing Diversity in STEM is vital for successful Science and Technology Development in the U.S.



"LACK OF MINORITIES SEEN IN STEM CLASSES"

http://multibriefs.com/briefs/ACS2/ACS2021413.php



Doctorate Recipients from U.S. Universities: Summarv Report 2007-08 Data Tables: 2008 TABLE 9: by field of study and race/ethnicity: 2008

http://multibriefs.com/briefs/ACS2/index.php



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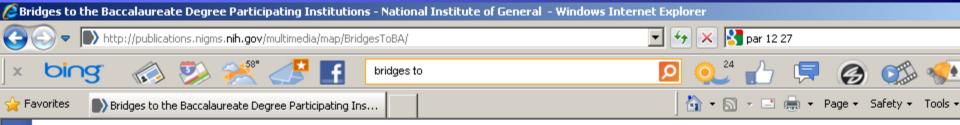
Department of Health and Human Services

Part 1. Overview Information

Participating Organization(s)	National Institutes of Health (NIH)					
Components of Participating Organizations	National Institute of General Medical Sciences (<u>NIGMS</u>)					
Funding Opportunity Title	Bridges to the Baccalaureate Program (R25)					
Activity Code	R25 Education Projects					
Announcement Type	Reissue of PAR-11-285					
Related Notices	None					
Funding Opportunity Announcement (FOA) Number	PAR-12-277					
Companion Funding Opportunity	None					
Number of Applications	Only one application per institution is allowed, as defined in <u>Section III. 3. Additional Information on Eligibility</u> .					
Catalog of Federal Domestic Assistance (CFDA) Number(s)	93.859					
Funding Opportunity Purpose	This Funding Opportunity Announcement (FOA) issued by the National Institute of General Medical Sciences (NIGMS), National Institutes of Health (NIH), encourages Research Education Grant (R25) applications from institutions that propose research education programs to increase the pool of community college students from underrepresented backgrounds who go on to research careers in the biomedical and behavioral sciences and will be available to participate in NIH-funded research. This initiative promotes partnerships/consortia between community colleges or other two-year post-secondary educational institutions granting the associate degree with colleges or universities that offer the baccalaureate degree. The program expects that the joint efforts of baccalaureate degree-granting and associate degree-granting institutions will foster the development of a well-integrated institutional program that will provide students with the necessary academic preparation and skills to enable their transition and successful completion of the baccalaureate and subsequently more advanced degrees in biomedical and behavioral sciences.					

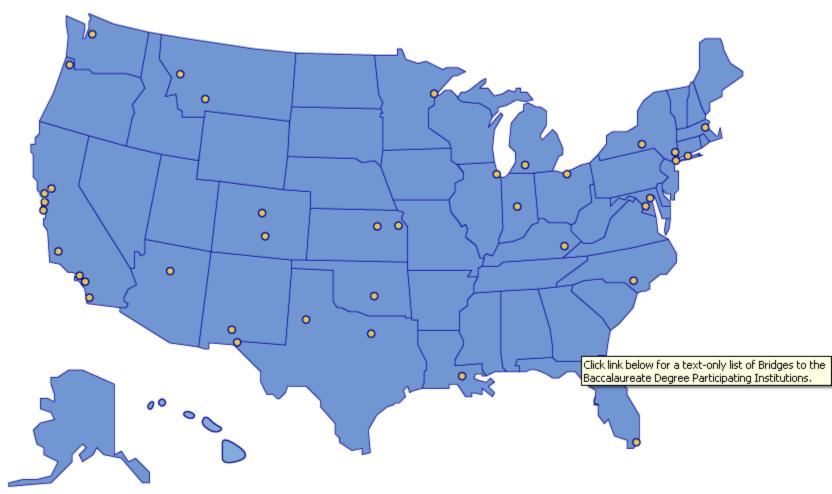






Bridges to the Baccalaureate Degree Participating Institutions

For Bridges to the Baccalaureate Degree program contact information, click the dots on the map below.



Bridges' Program Goals

increase the overall transfer admission rate of underrepresented minorities majoring in the biomedical or behavioral sciences by ten percent per year, and

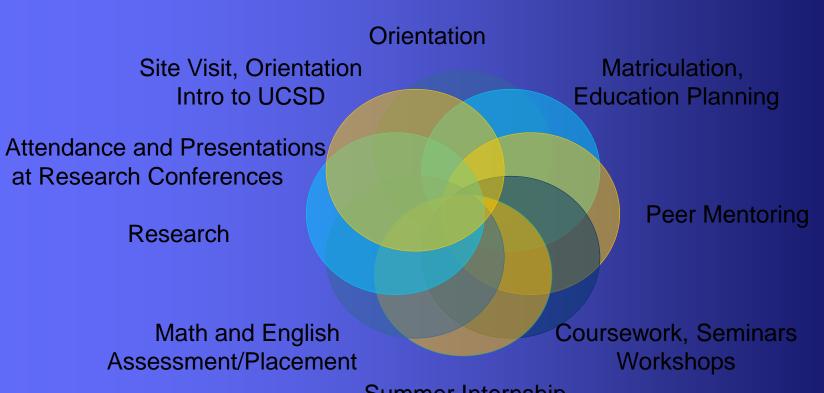


or benavioral sciences by ten percent per year, and

transfer at least seventy percent of the Bridges students to a four-year university, and

ensure that seventy-five percent of Bridges students will earn a bachelor's degree in the biomedical or behavioral sciences.

Developmental Activities



Summer Internship



2013 SACNAS National Conference



Spring Deadline Travel Scholarship & Abstract: March 4 - April 3, 2013

Summer Program Deadline Travel Scholarship: May 20 - June 14, 2013

Abstract:

May 20 - July 3, 2013

(deadline for pre-registered undergraduate suramer programs ONLY)

Submit your Abstract! Apply for a Travel Scholarship!

Student Research Presentations

Present your Work at a National Scientific Conference!

Our SACNAS mentors, which are made up of university professors and professional scientists, provide feedback and guidance to students at every level of research experience and presentation skill.

For more information: Contact Asis Lopez, SACNAS Programs Manager at asis@sacnas.org

Travel Scholarship Awards

SACNAS is pleased to offer travel scholarship awards to selected applicants. Awards include round-trip airfare to/ from San Antonio, Texas and lodging through the conference dates.

For more information: Contact Brianda Alvarez, SACNAS Programs Manager at brianda@sacnas.org

Important Note: Travel scholarship applications and abstract submissions are independent of each other. Acceptance of an abstract does not mean acceptance of a travel scholarship, or vice versa.

For more information visit sacnas.org or call I-877-SACNAS-1

Strengthening the Nation through Diversity, Innovation & Leadership in STEM

> October 3-6, 2013 San Antonio, Texas Henry B. Gonzalez Convention Center



Bridges Student Achievements and Accomplishments

Summer Internships	Transfers			
2012-2013				
UCSD 7, SDSU 2, SD Mesa 6, U. Of MN: 1	UCSD 4, UCLA 1, UC Davis 2, SDSU 3, U. of Utah School of Pharmacy 1			
2011-201	L2			
UCSD 11, SDSU 2, U. of Glasgow Scotland 1, Sea World, San Diego 1	UCSD 5, UCLA 1, UC Santa Barbara 1, SDSU 3			
2010-2011				
UCSD 13, SDSU 3, Woods Hole Oceanographic Institution, MA 1	UCSD 5, SDSU 4			
2009-2010				
UCSD 4, SDSU 1, Scripps Oceanographic Inst. 1	UCSD 2, SDSU 4, U. of Guam 1			

RECENT SCHOLARSHIPS AND AWARDS

MARY GRAVES: San Diego Mesa College Chemistry Department Scholarship Award, 2012. SACNAS Travel Award 2012.

JASMINE GREEN: UC Davis entering UG Scholarship, and UC Davis fee Grant.

ABDIRISAK HUSSEIN: Jack Kent Cooke Transfer Undergraduate Scholarship, Jack Kent Cooke Foundation, 2012; American Chemical Society Scholars Program Award 2012, San Diego Mesa College Chemistry Department Scholarship Award, 2012; San Diego Mesa College Dr. Granville N. Moore Memorial Scholarship Award, 2012; San Diego Mesa College Beta Beta Upsilon Chapter of Phi Theta Kappa Scholarship Award, 2012; San Diego Mesa College 2011-2012 Osher Scholarship Award; 2012 Certificate of Recognition, California legislature Assembly, 2012 Undergraduate Summer Research Internship, University of Minnesota, SACNAS Travel Award 2012.

ALBERTO PALACIOS: 2012 Mesa College Foundation Scholarship, SACNAS Travel Award 2012.

MOHAMMAD MUSSE: UCSD Chancellor's Transfer Student Scholarship, 2011-2013.

Bridges Student Achievements and Accomplishments

RECIPIENTS OF PRESTIGIOUS RESEARCH CONFERENCE AWARDS

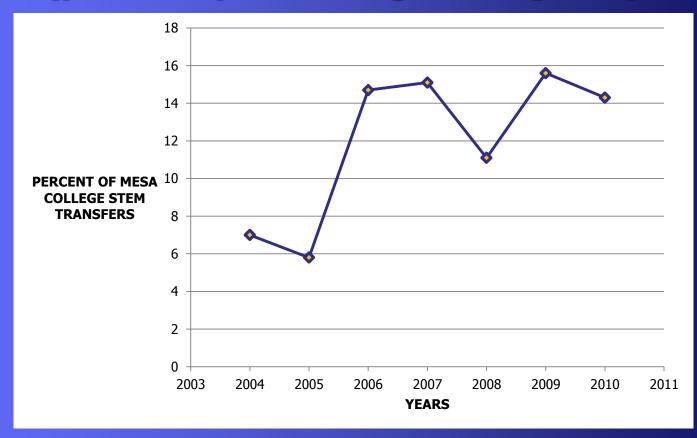
LIDIA MONJARAS: Poster Presentation in Social/Behavioral Sciences and Public Health, Psychology Division, entitled, "Shame in Dating: Violence Victimization in Teen Girls", 2012 ABRCMS Conference. Presently attending San Diego Mesa College.

WENDY PLANTE: Oral Presentation in Neurosciences, entitled, "Mirror Neuron System Activation as a Function of Autism Symptom Severity: A Replication and Extension of Previous Findings". 2012 ABRCMS Conference. Presently attending UCLA.

CECILIA BESS: Poster Presentation in Social/Behavioral Sciences and Public Health, Psychology Division, entitled, "Demographic Predictors of Initial Interest in Contra lateral Prophylactic Mastectomy among Women with Sporadic Breast Cancer: Preliminary Results". 2012 ABRCMS Conference. Presently attending SDSU.

DEAN ELHAG: Poster Presentation in Bioengineering entitled, "Determining Oxygen Hemoglobin Dissociation Curve and Ligand Kinetics of Lumbricus Erythocruoin Using A Hernox Analyzer Machinge", 2 011 SACNAS Conference. Presently attending UCSD.

MOHAMED MUSSE: Poster Presentation in Biochemistry entitled, "Micro-Purification of Phosphofructokinase-1", 2010 Conference. Presently attending Transfer of San Diego Mesa College URMs in STEM Disciplines to University of California (pre and post-Bridges Program)



Source: California Post Secondary Education Commission (CPEC), Feb 2013















Acknowledgements

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