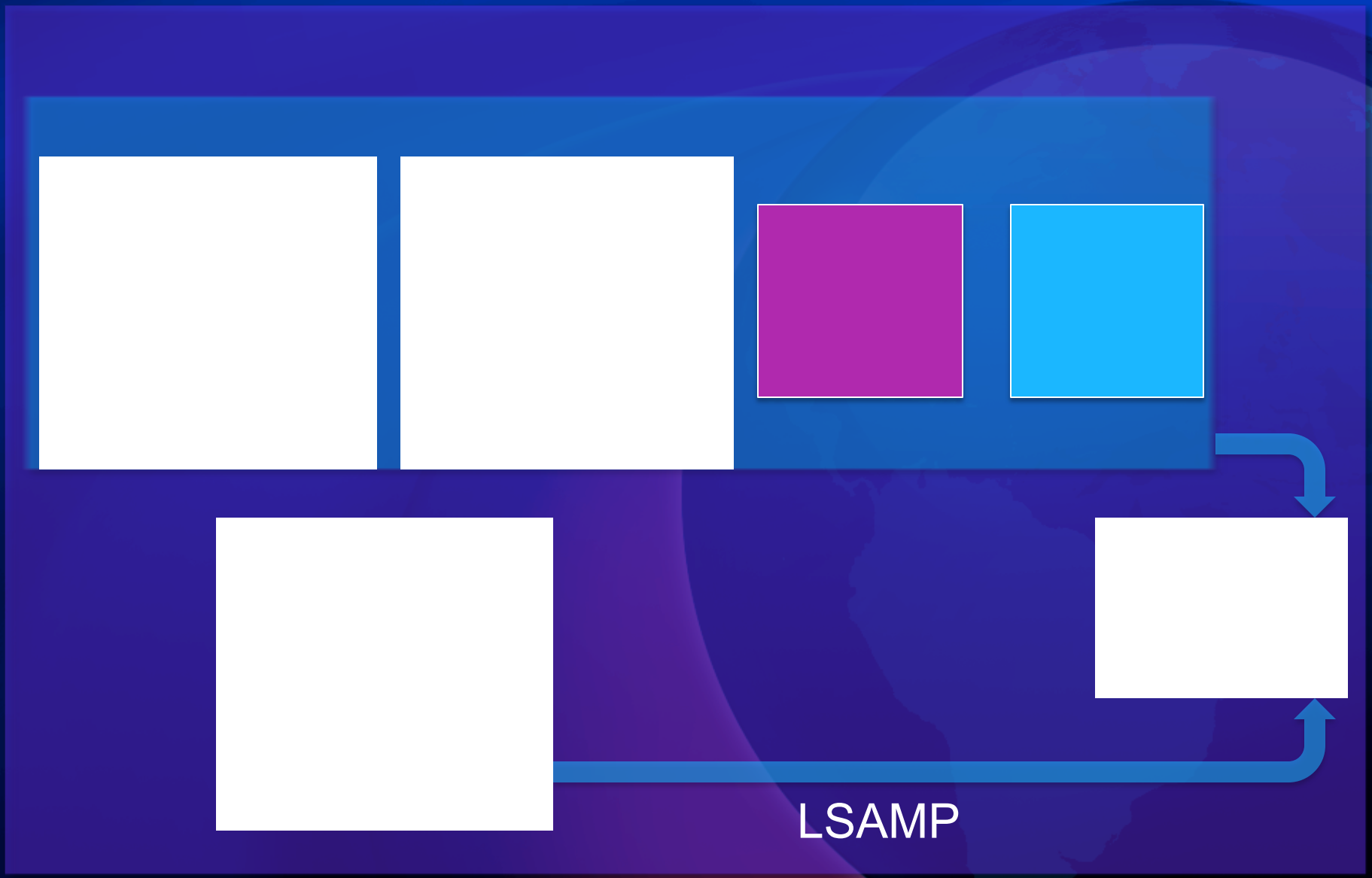

NSF

NSF HRD Division Programs targeted At Broadening Participation

- AGEP
- CREST
- HBCU-UP
- TCUP
- LSAMP

The LSAMP Model



ELEMENTS OF THE LSAMP MODEL

PRE-BACCALAUREATE

BACCALAUREATE*

UREATE

Middle & High School Activities

- Summer Bridge
- High School Outreach
- Career Awareness

Focus/Activity	Stem Academic Integration	STEM Social Integration	STEM Professionalization
Student			
Summer Bridge	√	√	
Scholarship/Stipend	√		
Peer Study Group	√	√	
Skills-Building Seminar	√	√	
Learning Centers	√	√	
Academic Advising	√		
Summer Academic Enrichment	√		
Tutoring	√		
Research Experience	√	√	√
Mentorships	√	√	√
Conferences	√		√
Internships	√	√	√
Career Awareness			√
GRE Test Preparation	√		√
Graduate School Admissions Support			√
Graduate Summer Bridge	√	√	√
Faculty			
Workshop on Teaching	√		
Diversity Sensitivity Training	√	√	
Faculty Research Program	√		
Institutional/Departmental			
New Course Development	√		
Curriculum Material Sharing	√		
Distance Learning Courses	√		
Changes in Institutional/Departmental	√	√	√
Policies and Practices			

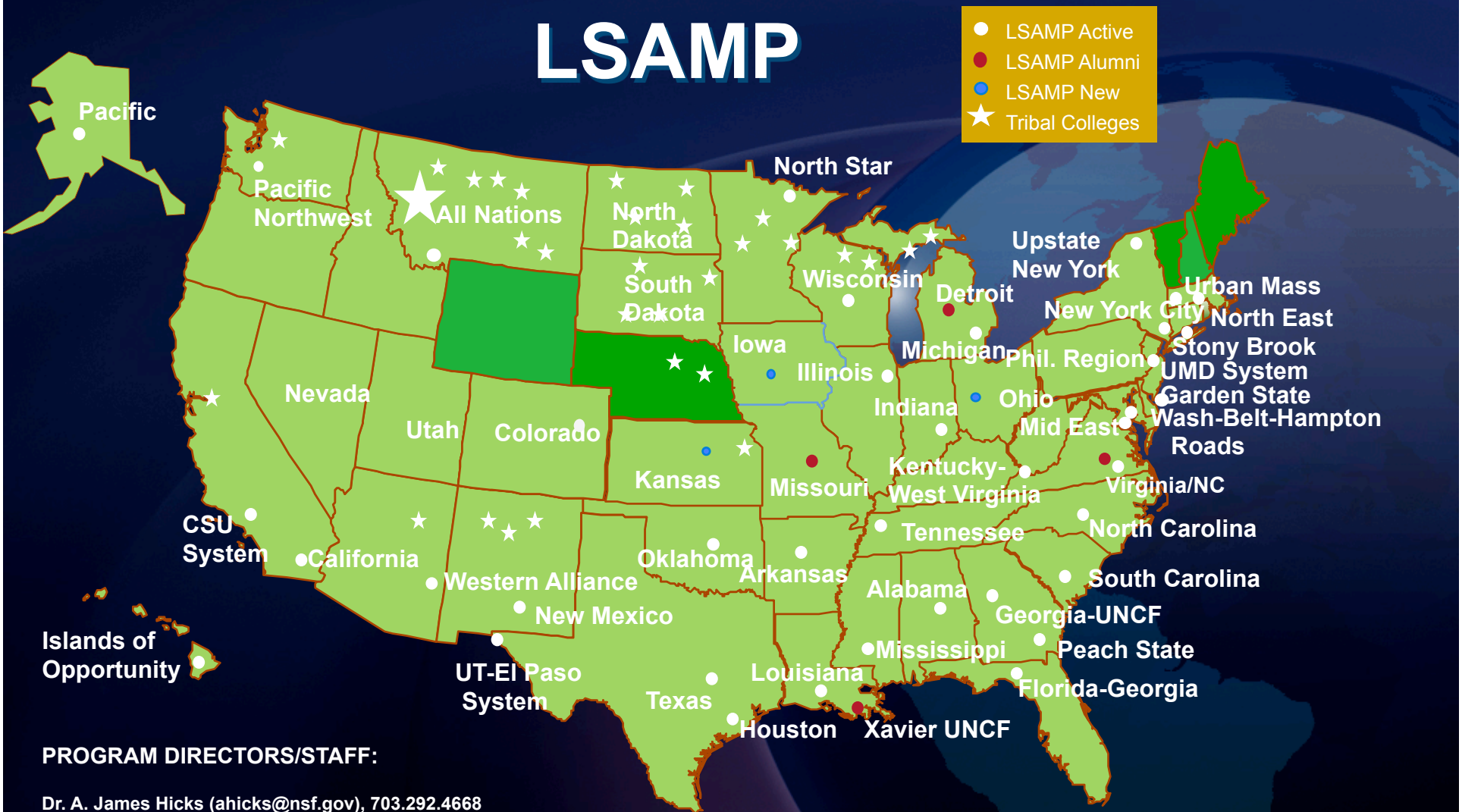
Bridge to the Doctorate

- Fellowship 24 Months Duration
- Graduate Coursework
- Skill Building
- Research Planning/Initiation
- Mentorship
- Teamsmanship
- Conferences: Scientific & Professional
- Career Awareness & Professional Development
- Ethics: Scientific and Professional
- Other:(International, etc.)

*Clewell, B.C., Clemencia Cosentino de Cohen, Lisa Tsui and Nicole Deterding. 2006. Revitalizing the Nation's Talent Pool in STEM. Urban Institute. Washington, DC. 25 pp. Dissemination Report. http://www.urban.org/url.cfm?ID=311299

Louis Stokes Alliances for Minority Participation

LSAMP



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Division of Human Resource Development
Louis Stokes Alliances for Minority Participation (LSAMP)
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Period: Academic year 2010-2011/ Reporting Year 2011

STEM Bachelor Degrees Report Disciplines by Race/Ethnicity

Discipline	Black or African American	Hispanic or Latino	Native American	Native Hawaiian or Pacific Islander	More then one Race Reported - Minority	Total
Agricultural Science	460	712	102	42	39	1355
Chemistry	718	847	76	19	59	1729
Computer Science	1894	1717	147	58	71	3587
Engineering	2980	5037	436	111	194	8758
Geosciences	117	177	31	10	20	355
Life/Biological Sciences	4859	6428	573	182	275	12317
Mathematics	573	816	86	19	53	1547
Physics/Astronomy	541	276	35	43	22	917
Environmental Science	75	271	53	14	25	438
Total	11917	16281	1539	498	768	31003

STEM Bachelor Degrees Report Gender by Race/Ethnicity

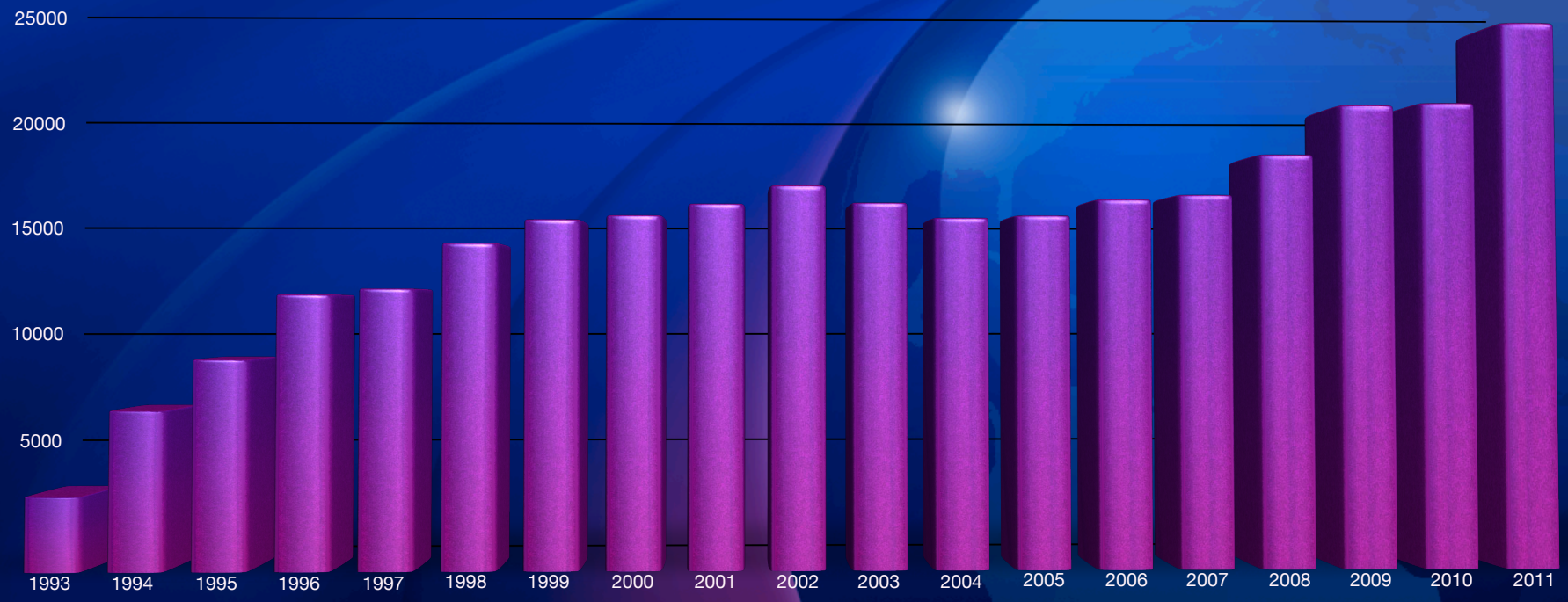
Gender	Black or African American	Hispanic or Latino	Native American *	Native Hawaiian or Pacific Islander	More then one Race Reported - Minority**	Total
Male	5765	9191	859	281	442	16538
Female	5895	672	76	208	324	13986
Not Reported or Unknown	257	203	8	9	2	479
Total	11917	16281	1539	498	768	31003

*The Native American Category includes American Indians and Alaska Natives

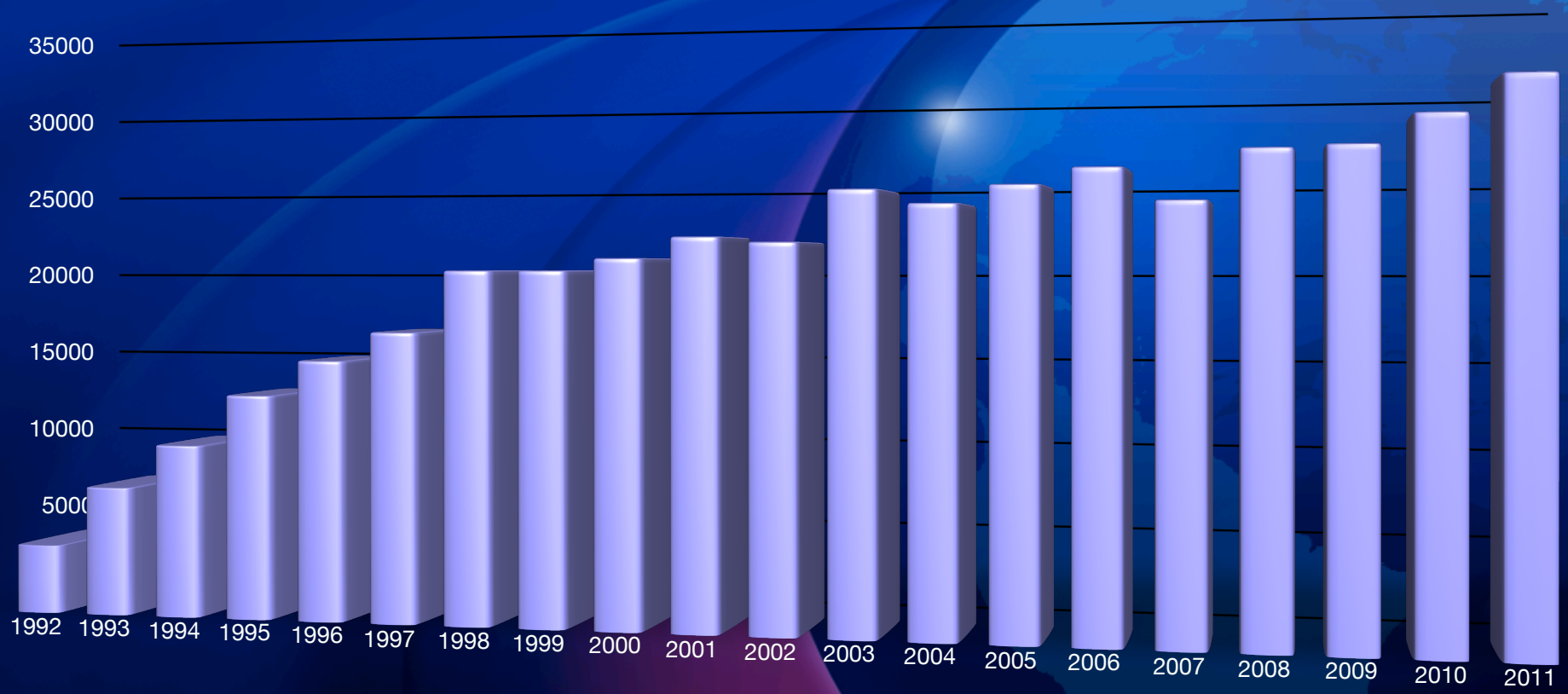
** The More Than One Race Reported – Minority category comprises non-Hispanic/Latino who reported

a) Two or more race categories and
b) one or more of the reported categories includes: America Indian, Alaskan Native, Black or Africa American, Native Hawaiian or Other Pacific Islander.

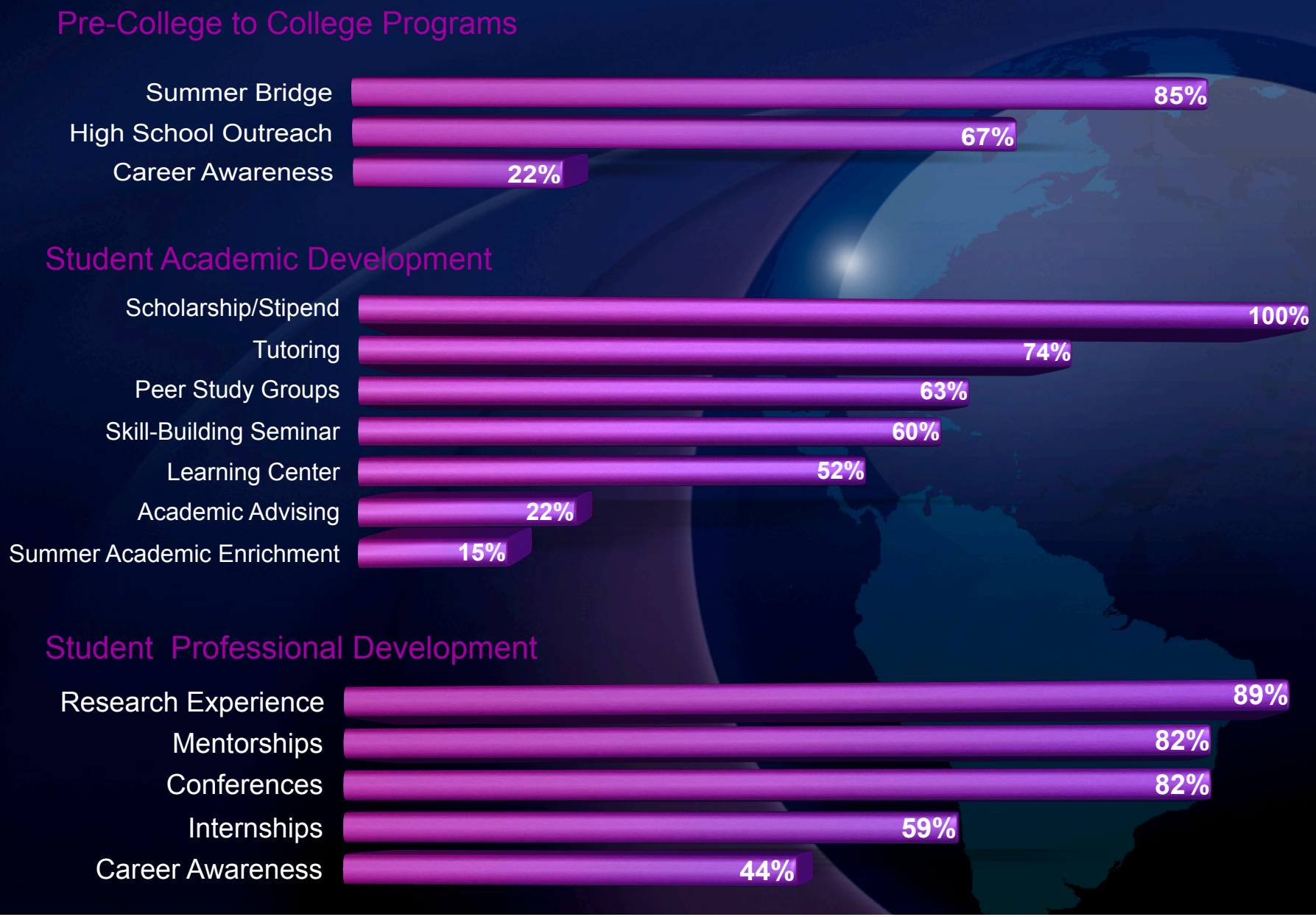
Underrepresented Minority STEM Enrollment 1993-2011



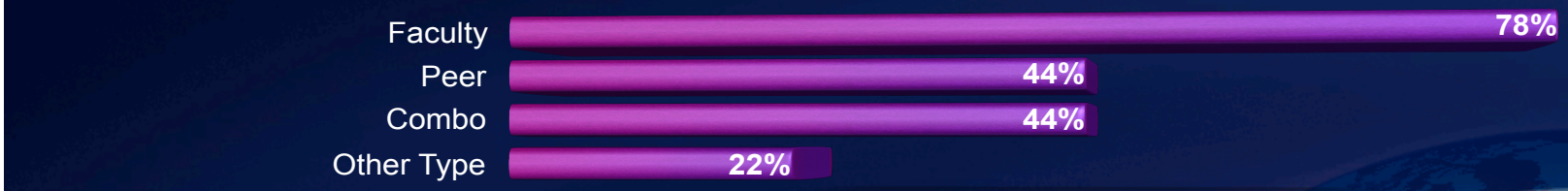
Underrepresented Minority STEM Bachelor's Degree 1992-2011



Percentage of LSAMP Projects Offering Various Components

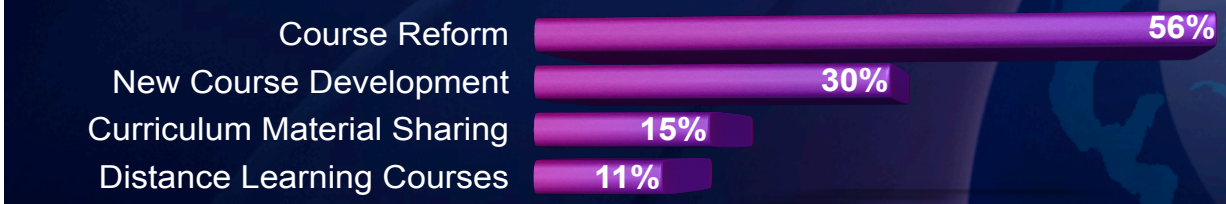


Types of Mentoring Programs

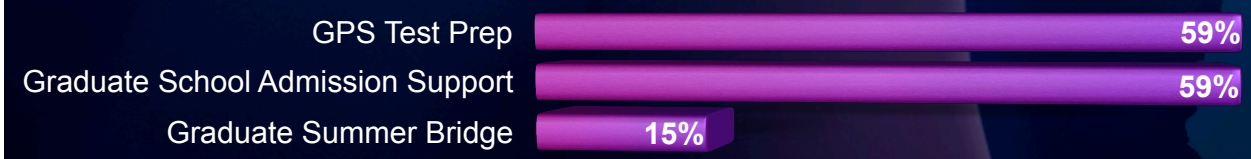


Faculty Development

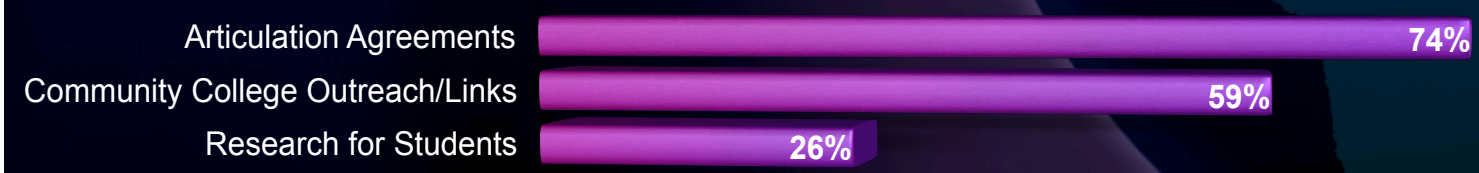
Curriculum Development Activities



Graduate Studies Development



Community College Components



Source: Urban Institute telephone interviews with project staff, 2002

Keys to Success

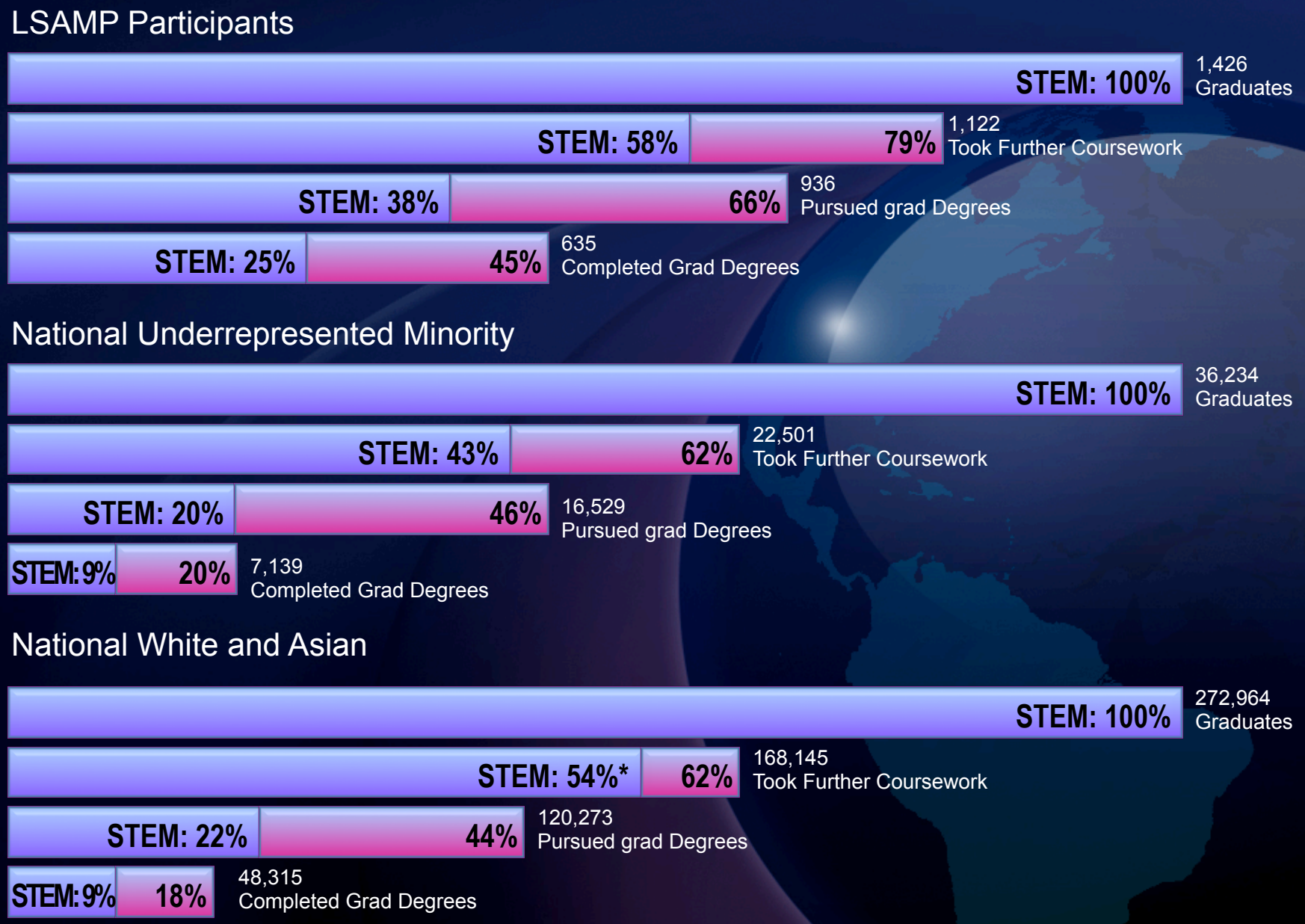
- Alliance Structure
- Summer Bridge (skills, gatekeeping)
- Mentoring (Faculty and Students)
- Research Experience (academic excellence)
- Drop in Center (community)
- Caring Staff

A Model of Excellence

An Evaluative Study of the LSAMP Program

By the Urban Institute

Figure 6. Graduate Coursework, Degrees Pursued and Degrees Complete



Source: UI LSAMP Graduate Survey and NSF NSRCG Longitudinal File.
*National comparison group statistic is not significantly different from LSAMP.

Education Pipeline: Post-BA Coursework, Graduate Degrees Pursued and Completed

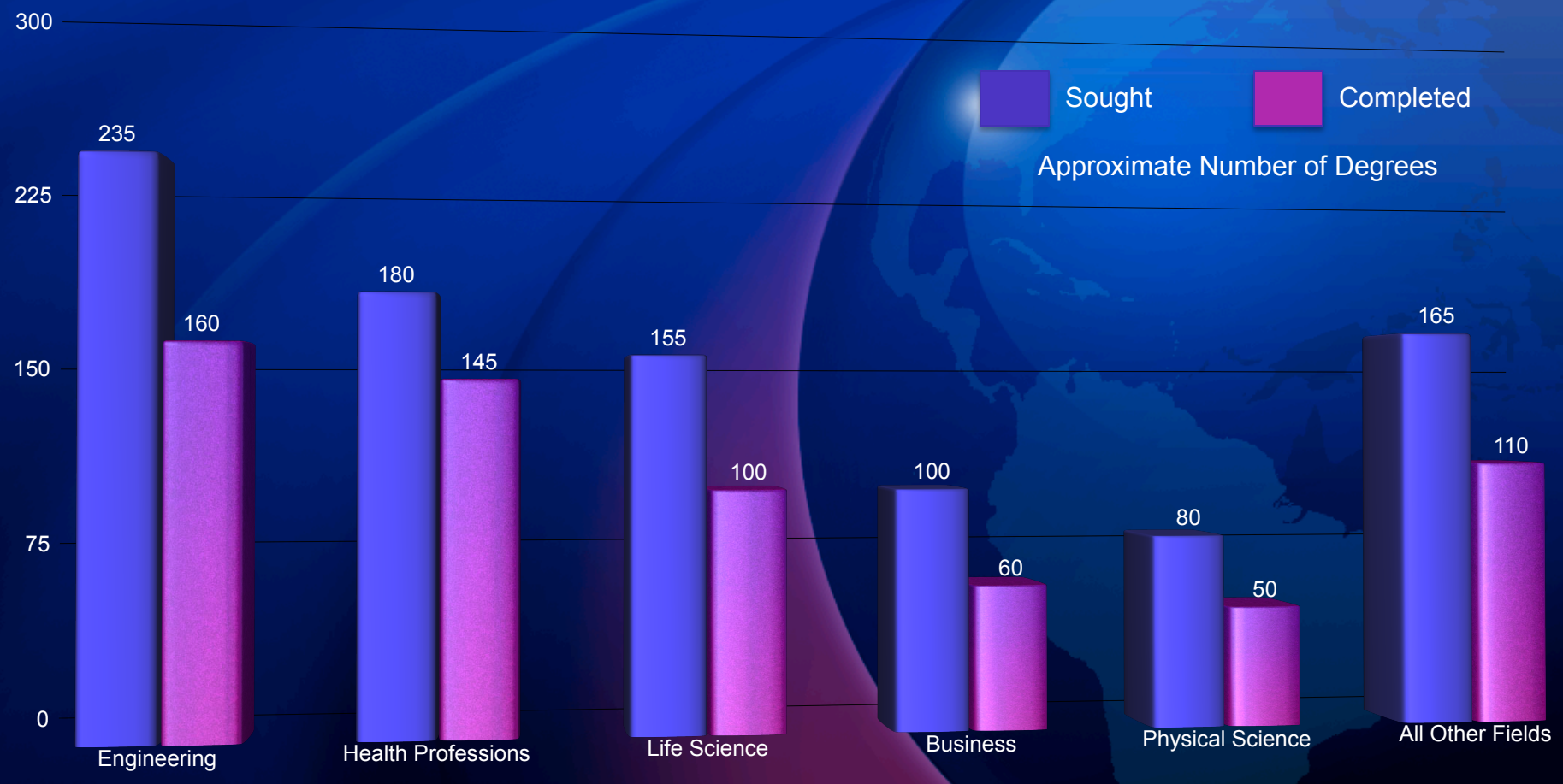
LSAMP Graduates

- 80% took further coursework after bachelor's degree
- 65% pursued graduate degrees
- 45% completed graduate degrees
- 38% enrolled in STEM
- 25% completed STEM graduate degrees

Non-LSAMP Graduates

- 60% took further coursework after bachelor's degree
- 45% pursued graduate degrees
- 20% completed graduate degrees
- 20% enrolled in STEM
- 9% completed STEM graduate degrees

Fields of Graduate Study: LSAMP Participants



*SOURCE: Urban Institute LSAMP Graduate Survey, 2002

The LSAMP Bridge to the Doctorate (BD) Program

New York Bridge to the Doctorate Students

Roxanne Rivera

B.A. in Anthropology
Lehman College '05

Graduate Major: Archaeology

Career Goal: I am interested in pursuing a Doctorate in Archaeology.

Silmilly Toribio

B.S. Biochemistry
City College '06

Graduate Major:Biochemistry

Career Goal: Continue my professional development as a scientist by obtaining a Doctoral degree in Biochemistry.

Inefta Reid

B.S. Biology
Medgar Evers College '06

Graduate Major: Environmental Science

Career Goal: Gain acceptance to a Doctoral program and obtain a degree in Environmental Science.

Diana Ramroop

B.S. Biology
Queens College '06

Graduate Major: Biology

Career Goal: Attend graduate school and further my studies in Biology. I am currently interested in the fields of Conservation Biology and Ecology.

Jonathan Blaize

B.S. Environmental Studies
College of Staten Island '05

Graduate Major: Biology

Career Goal: After obtaining a Doctoral degree, I hope to secure a position with a University/Hospital.

Yisa Rumala

B.S. Physics
York College '06

Graduate Major: Physics

Career Goal: My goal is to obtain a Doctoral degree in the field of Electrical Engineering or Applied Physics.

Clifford Bishop

B.S. Computer Science
City College '06

Graduate Major: Computer Science

Career Goal: A career in the IT industry working in Database Systems and Software Engineering.

Jose Perez

B.S. Computer Science
City College '06

Graduate Major: Computer Science

Career Goal: Obtain a Doctoral degree in Computer Science, with a specialization in Database Systems.

Katherine Shirley

B.S. Computer Science
Lehman College '06

Graduate Major: Computer Science

Career Goal: Obtain a Doctoral degree in Computer Science and teach at the college level.

Dorian Flores

B.S. Geology
York College '06

Graduate Major: Geology

Career Goal: Complete graduate school and pursue a position in an organization such as the USGS.

Thierry Desrosiers

B.S. Mathematics
NYC College of Technology '06

Graduate Major: Mathematics

Career Goal: Earn a Doctoral degree in Applied Mathematics, and work primarily in an Industrial setting.

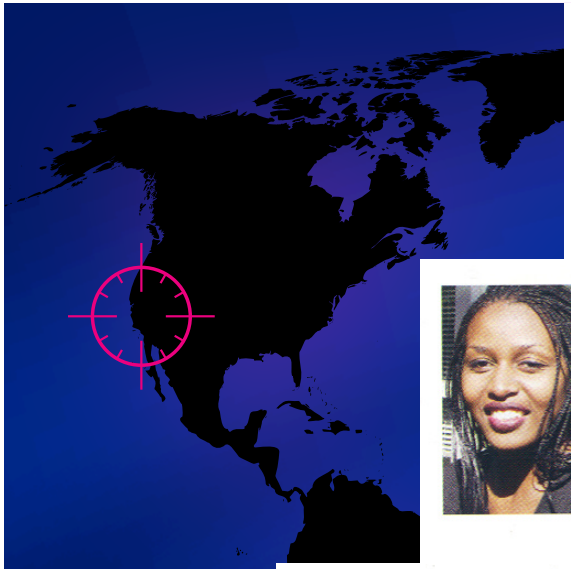
Carlos Silvera Batista

B.E. Chemical Engineering
City College '06

Graduate Major: Chemical Engineering

Career Goal: Contribute to the education of the next generation by becoming a Professor.

California Bridge to the Doctorate



Claudia Aguilar BS, physiology, 2002, San Francisco State University
Current program: MA, physiology
Career goal: Ph.D./MD—research

Christina Harris BA, biology, 2002, University of Missouri
Current program: MA, physiology
Career goal: Ph.D.—faculty/research

Danielle Augustin BS, microbiology, 2001, San Diego State University
Current program: MA, microbiology
Career goal: Ph.D.—faculty/research

John Paul Salazar BS, molecular biology, University of California-Santa Cruz
Current program: MS, chemistry
Career goal: Ph.D.—faculty/research

Noe Gomez BS, cell/molecular biology, 1996, University of California-Irvine
Current program: MA, microbiology
Career goal: Ph.D.—faculty/research

Cornell Wells BS, physiology, 2002, San Francisco State University
Current program: MA, physiology
Career goal: Ph.D./MD—research

Marilyn Asuncion BS, physiology, 2001, San Francisco State University
Current program: MA, physiology
Career goal: Ph.D.—research

Regina Lagman BS, physiology, 2000, San Francisco State University
Current program: MPH, public health
Career goal: Ph.D.—research

Nichole Coleman BS, chemistry, 1977, San Jose State University
Current program: MS, chemistry
Career goal: Ph.D.—faculty/research

Lisseth Villareal Electrical engineering, 2002, Cal Poly San Luis Obispo
Current program: MS, engineering
Career goal: Ph.D.—faculty/research

BD Student Race/Ethnicity by Gender

Generated: September 15th, 2014

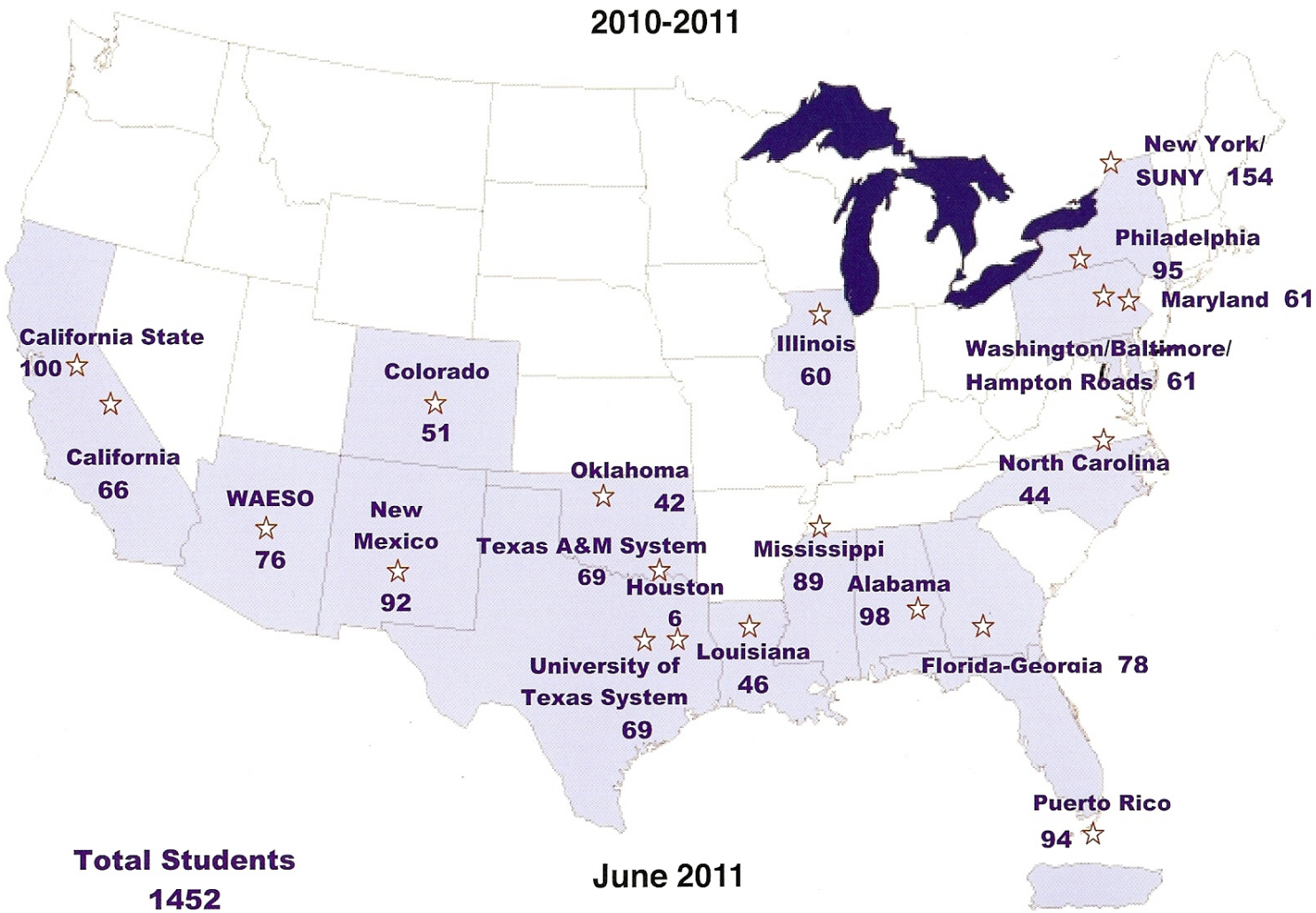
2013 Cohort									
Gender	Native American	Asian	Black or African American	Hispanic or Latino	More Than One Race Reported - Minority	Native Hawaiian or Pacific	Race not Reported	White	Total by Gender
Female	0	0	14	17	0	0	0	1	32
Male	1	0	12	22	0	0	0	2	37
Total	**1**	**0**	**26**	**39**	**0**	**0**	**0**	**3**	**69**

2012 Cohort									
Gender	Native American	Asian	Black or African American	Hispanic or Latino	More Than One Race Reported - Minority	Native Hawaiian or Pacific	Race not Reported	White	Total by Gender
Female	1	0	37	37	2	0	3	3	83
Male	5	3	37	45	0	1	0	5	96
Not Reported	0	0	0	0	0	0	2	0	2
Total	**6**	**3**	**74**	**82**	**2**	**1**	**5**	**8**	**181**

2011 Cohort									
Gender	Native American	Asian	Black or African American	Hispanic or Latino	More Than One Race Reported - Minority	Native Hawaiian or Pacific	Race not Reported	White	Total by Gender
Female	3	0	38	47	3	0	1	5	97
Male	4	1	32	71	3	1	0	2	114
Total	**7**	**1**	**70**	**118**	**6**	**1**	**1**	**7**	**211**

Bridge to the Doctorate Alliances

LSAMP alliances at the senior level are eligible for Bridge to the Doctorate (BD) support. BD funding provides financial support for eligible students for two years of graduate study. Proposals for BD support must describe effective strategies for recruiting, retaining, educating and graduating the participants. Proposers must provide documentation of past performance at the designated graduate institutional site of retaining, graduating and placing significant numbers of LSAMP graduates into doctoral-degree programs. A plan for formally connecting a significant number of matriculated LSAMP students, including master's degree graduates, to doctoral degree programs is expected. Beginning in FY 2008, requests for BD support must be submitted as a new proposal in FastLane.



Thank You