

STCC Partner Appreciation Luncheon

Welcome
Thank You!
Accomplishments
The Future

Three Year Collaborative Accomplishments



STEM
COLLABORATIVE
CENTER

The UNM STEM Collaborative Center is grant-funded initiative designed to improve STEM retention and graduation rates, especially for Hispanic and low-income students. Funding provided by the US Department of Education, Hispanic Serving Institutions Program (Title V).

The STCC is in the fourth year of five-year funding.

The missions of the STCC are to:

- Engage and Connect
- Collaborate and Strengthen

What We Do Together



STEM
COLLABORATIVE
CENTER

**STEM
UNIVERSITY**

**Discover
STEM**

**High-Engagement
Co-Curricular
STEM Events**

**STEM
Leadership**



Resources

**STEM
Collaborations**

**Event
Online
Infrastructure**



**STEM
COLLABORATIVE
CENTER**

Discover STEM

stemuniversity.unm.edu

- **Sessions at Shared Knowledge Conference**
[Partner: Graduate Resource Center]
- **Discover Your Science Days** [Partners: UNM Faculty, Staff and Students]
- **New Student Orientation Opt-In**
(undergraduate research focus) [Partners: College Enrichment Programs and New Student Orientation, Honors College, Pre-Health Professions Student Development]
- **Upcoming STEM Future Educators Conference**



DISCOVER STEM

High-Engagement Co-Curricular STEM Events

stemuniversity.unm.edu

- Events are free to UNM undergraduate students
- Events introduce students to STEM faculty members, researchers, technology and peers
- Events are held during the fall, spring and summer terms

**Partners: UNM Faculty, Staff
and Students; Regional
Scientists and Engineers;
Andrea Polli**



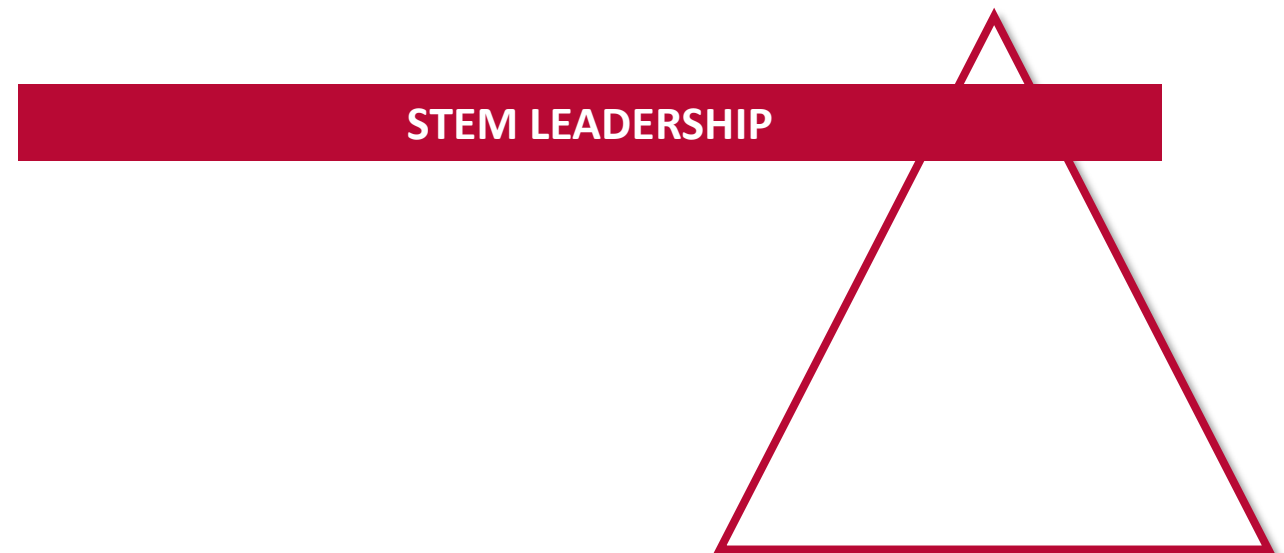
STEM EVENTS

STEM Leadership

stemuniversity.unm.edu

STCC Professional Mentoring STEM Student Outreach to K-12

**Partners: Scientists & Engineers
from the Air Force Research
Laboratory and Sandia National
Laboratories**



STEM Leadership

stemuniversity.unm.edu

8

Fall 2015

MATCHES

40+

Spring 2018

STCC Professional Mentoring

- ***One-on-one relationship*** between undergraduate and local STEM professional
- ***Students receive training*** from program on developing a professional relationship, time management, goal setting, and campus resources
- ***Students work with mentor on long-term goals***, such as exploring career options, obtaining an internship, and applying to graduate school
- ***Mentors offer exposure to research laboratories***, professional meetings, networking, and STEM outreach events with K-12 students
- ***Many students stay in program for multiple semesters*** to build sustained relationships with mentor, other students, and program staff
- ***10 students took on leadership positions by mentoring freshmen*** under guidance of professional mentor, and 3 of these students progressed to mentoring earlier students on their own [10 “I AM STEM” Award Winners]
- **More than 30% of students obtain internships or research positions**

Resources

stem.unm.edu

- Directory of STEM Student Organizations
- Directory of STEM Student Support Programs
- Directory of STEM Majors

- **Weekly STEM Bulletin**

- **STEM Longitudinal Benchmarking Data**
[Partner: UNM Office of Institutional Research]

STEM Collaborations

- **First-Year Student High Impact Practice** Data Collection and Preliminary Analysis [Partner: First Year Steering Committee]
- **The UNM5 Essential Skills** (unm5.unm.edu) [Partners: Career Services, Dean of Students Office]
- **UNM Math Preparation Roadshow**, pilot and precursor to UNM NSO Opt-In [Partners: College Enrichment Programs]
- **STEM NM**, regional STEM network [Partners: UNM STEM-H Center, Mission Graduate, Explora!]

STEM Collaborations

- **Engineering & Math Learning Community Course** [Partners: College of Engineering, Department of Mathematics and Statistics, Center for Teaching and Learning]
- **Chemistry & Math Freshman Learning Community Course** [Partners: University College, College of Arts & Sciences, Department of Chemistry & Chemical Biology, Department of Mathematics and Statistics, Center for Teaching and Learning]
- **Undergraduate Research Initiatives** [Partners: UNM Office of Research, Honors College, McNair/ROP, El Centro de la Raza, Provost Office, College of Arts and Sciences, School of Engineering, Center for Teaching and Learning, among many others]

**Event
Online
Infrastructure**

stem.unm.edu

- **STEM University Sign-up App**
 - Authenticated
 - Individual student accounts
 - Sign-up, Waitlist, Drop functions
 - Automated Student Communication
- **Event Scheduling Heat Map**

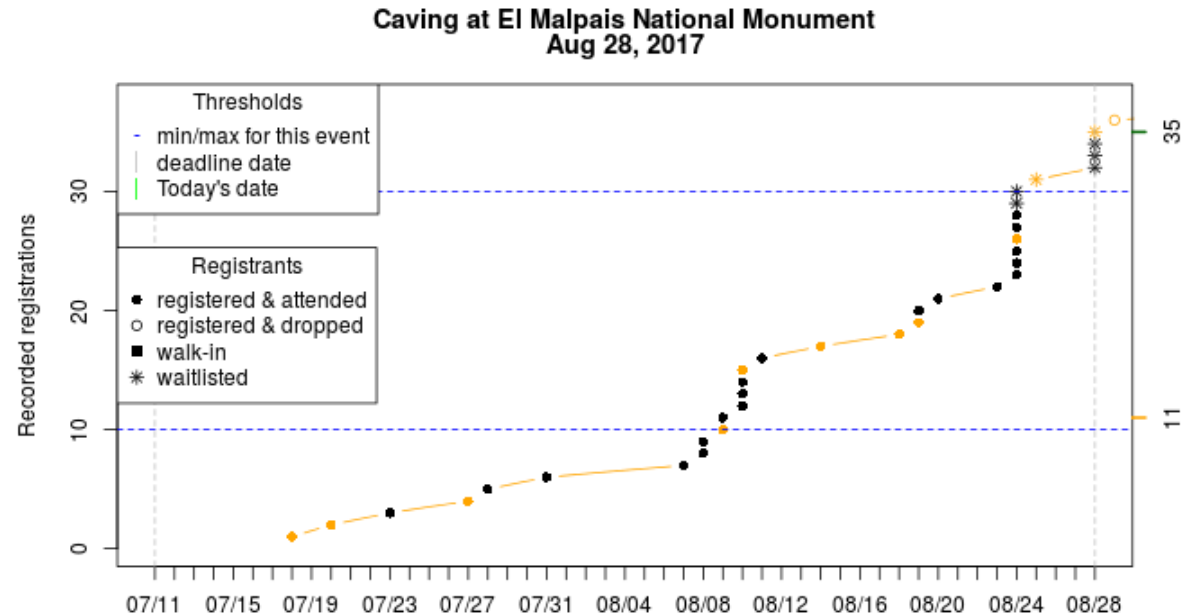
**Partners: UNM Information
Technologies**

Event Online Infrastructure

stem.unm.edu

■ Event Attendance Tracker

- custom web application that allows us to see registrations for our events. Those who best fit our grant goals are highlighted in yellow. We can tell how effective we were at bringing students in day by day in real time. Then we adjust our operations accordingly.



How We're Doing

THE NUMBERS

Together, we have served more than 1600 UNM undergraduate students

- ***74 students participated in STEM Professional Mentorships***
- ***114 participated in Discover Your Science Days***
- ***665 participated in High Engagement Co-Curricular STEM Events***
- ***482 participated in NSO Opt-In Sessions, with CEP***

THE NUMBERS

Discover Your Science

<i>One Year Snapshot</i>	DYS Participants	Not Participants, UNM STEM Freshmen	DYS
COHORT ONE, Fall 2016			
Percent Hispanic	48%	58%	
Percent Low-Income	36%	49%	
Average ACT Comp Score	25	21	
Average UNM GPA, FA17	3.4	3.2	
Pct Returned Fall 2017	88%	71%	
Pct Hispanic Returned Fall 2017	94%	87%	

THE NUMBERS

Discover Your Science

<i>One Year Snapshot</i>	DYS Participants	Not Participants, UNM STEM Freshmen	DYS
COHORT TWO, Fall 2017			
Percent Hispanic	28%	60%	
Percent Low-Income	28%	40%	
Average ACT Comp Score	26	21	
Average UNM GPA, FA17	3.3	3.2	
Pct Returned Spring 2018	94%	85%	
Pct Hispanic Returned Spring 2018	100%	85%	

THE NUMBERS

Opt-In

<i>One Year Snapshot</i>	Opt-In Participants	Freshmen, Not Opt-In Participants	Opt-In
Percent Hispanic	60%	53%	
Percent Low-Income	37%	30%	
Average UNM GPA	3.2	3.1	
Pct Returned Spring 2018	89%	72%	
Pct Hispanic Returned Spring 2018	90%	84%	

THE NUMBERS

High-Engagement Events

	Event Participants, All Years	Averages for UNM STEM Undergraduates, 2016-17	STEM Events
Percent Hispanic	38%	47%	
Percent Low-Income	51%	36%	
Cumulative UNM GPA	3.3	3.2	



THE NUMBERS

High-Engagement Events

<i>One Year Snapshot</i>	Event Participants, 2016-17	Averages for UNM STEM Undergraduates, 2016-17	STEM Events
Percent Hispanic	46%	47%	
Percent Low-Income	36%	36%	
Cumulative UNM GPA, SP17	3.3	3.2	
Average ACT Comp Score	23.7	22.6	
Return or Graduate Rate, SP17	96%	90%	
Pct Freshmen/Sophomores	46%	41%	
Largest School/College Pct	A&S, 33%	A&S, 34%	

THE NUMBERS

Professional STEM Mentoring

	Mentoring Participants, All Years	Averages for UNM STEM Undergraduates, 2016-17	Mentor
Percent Hispanic	50%	47%	
Percent Low-Income	53%	36%	
Cumulative UNM GPA	3.3	3.2	



THE NUMBERS

Professional STEM Mentoring

<i>One Year Snapshot</i>	Mentoring Participants, 2016-17	Averages for UNM STEM Undergraduates, 2016-17	Mentor
Percent Hispanic	55%	47%	
Percent Low-Income	46%	36%	
Cumulative UNM GPA, SP17	3.2	3.2	
Average ACT Comp Score	23.3	22.6	
Return or Graduate Rate, SP17	100%	90%	
Pct Freshmen/Sophomores	45%	41%	
Largest School/College Pct	Engineering, 63%	A&S, 34%	

THE NUMBERS

Student Evaluations

- 97% of participants grade events at an A or B on **quality of interactions with instructor**
- *93% grade events at an A or B on **quality of interactions with peers***
- 99% grade events at an A or B on the overall **quality of the learning experience**



THE NUMBERS

In Summary

- **We are attracting Freshmen, Sophomores and students from low-income families**
- *We need to attract more Hispanic students*
- **Our activities appear to have a positive impact on retention**
- *Our activities do not appear to impact GPA*
- **Our events are received well by students**
- *We may need to promote more peer interaction*



BEYOND THE NUMBERS

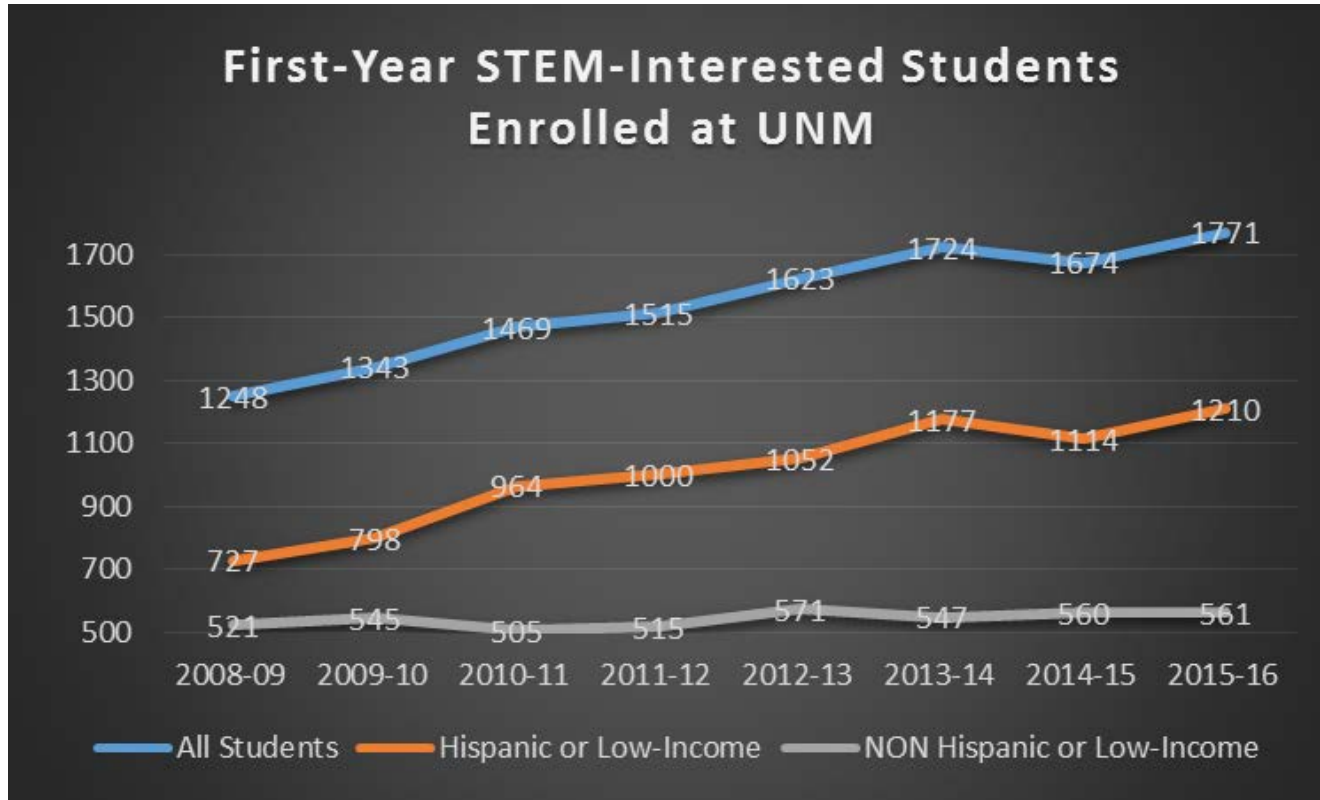
- DYS Students reported gains relative to their comfort level seeking out academic support, academic advising and career exploration opportunities
- I AM STEM Awards demonstrate how collaborative events impact individual students
- We are preparing to conduct a deep qualitative study of impact with CEPR

OTHER MEASURES?



- Are there any other measures we should consider, or other questions we should answer, when evaluating impact?
- *If so, please write them down on your notepad, and leave that sheet on the table. We will collect them at the end of today.*

HOW WELL IS UNM IMPROVING STEM ED?

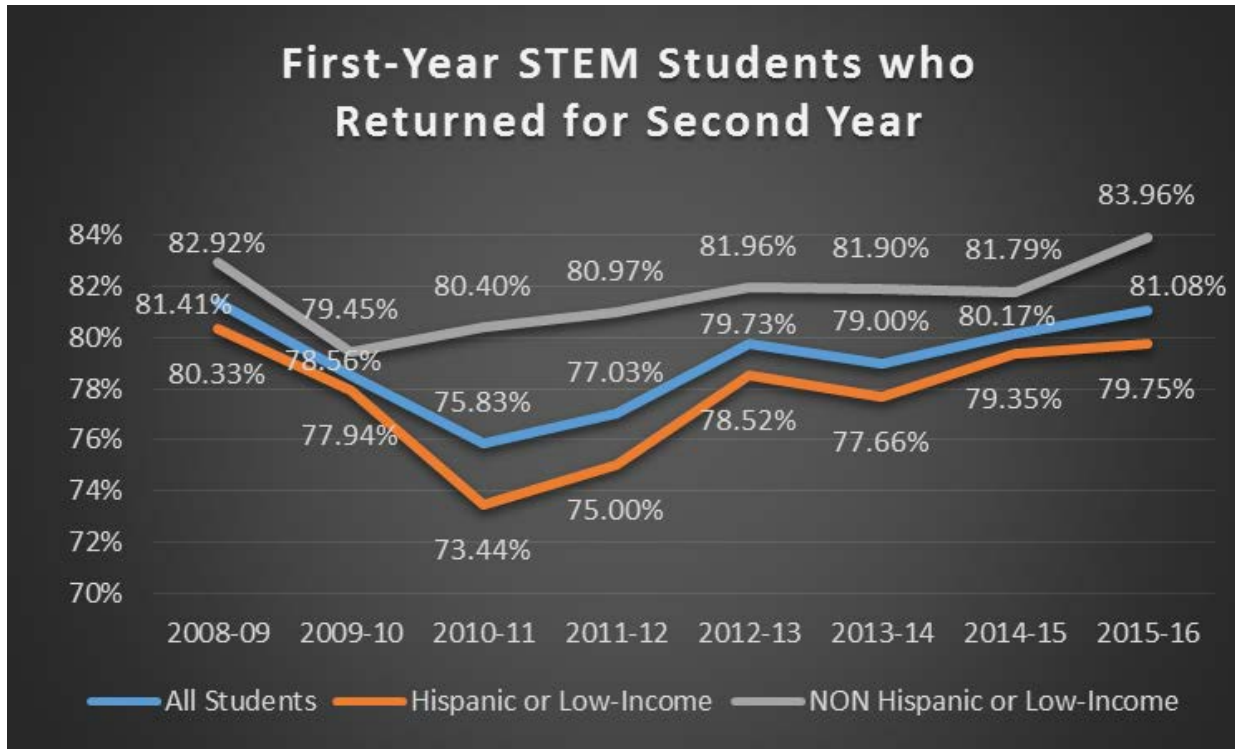


ALL STEM STUDENTS

***HISPANIC AND/OR
LOW-INCOME STEM
STUDENTS***

***STEM STUDENTS
WHO ARE NOT
HISPANIC AND/OR
LOW-INCOME***

HOW WELL IS UNM IMPROVING STEM ED?



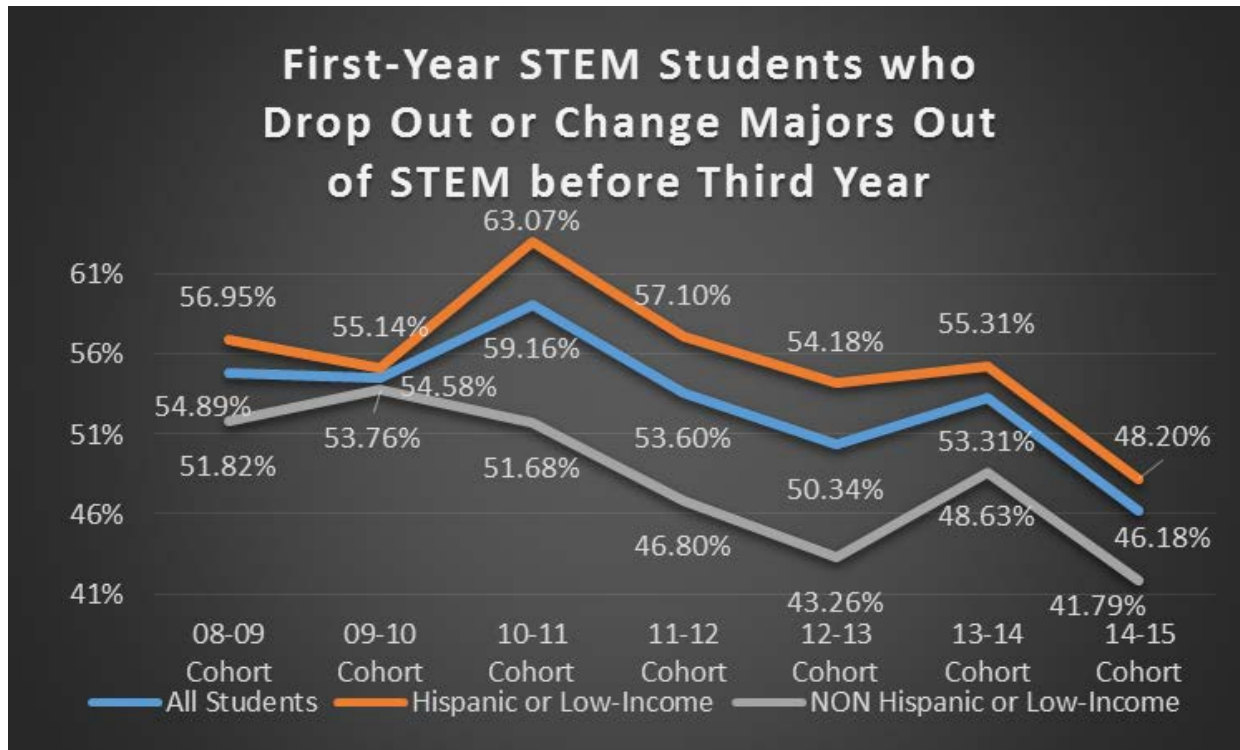
**STEM STUDENTS
WHO ARE NOT
HISPANIC AND/OR
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ALL STEM STUDENTS

**HISPANIC AND/OR
LOW-INCOME STEM
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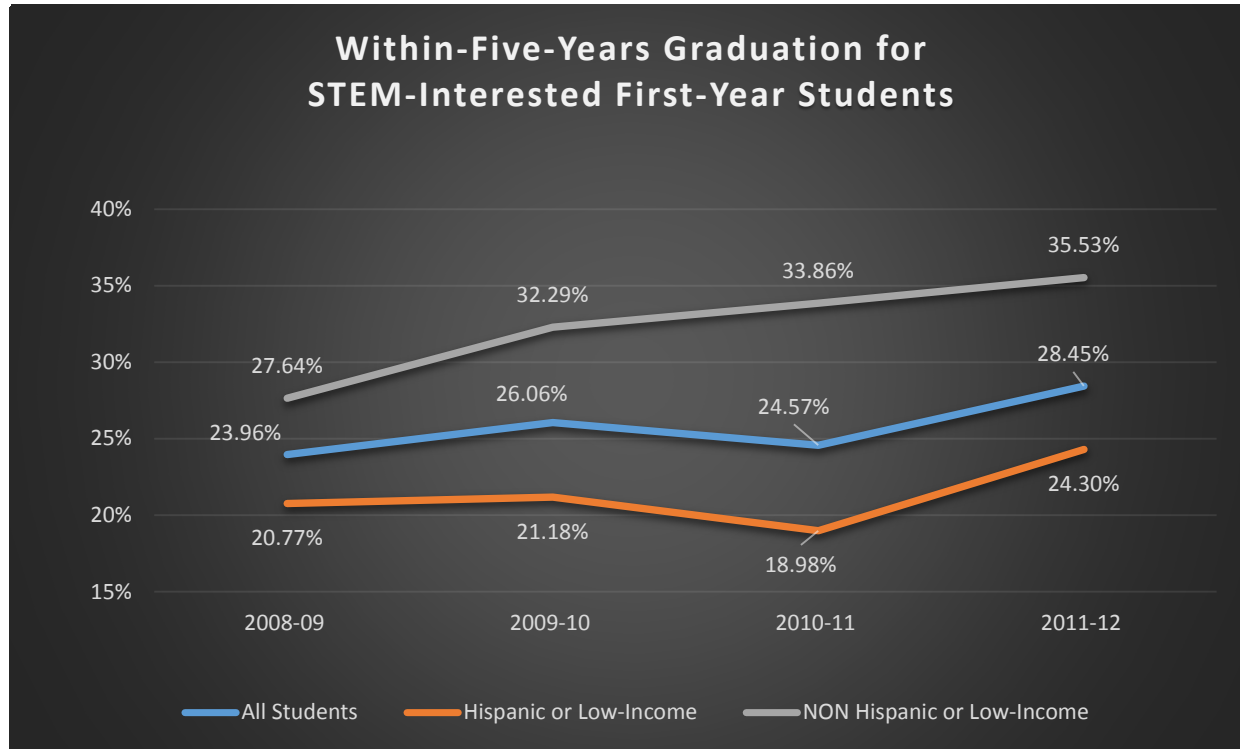


HISPANIC AND/OR LOW-INCOME STEM STUDENTS

ALL STEM STUDENTS

STEM STUDENTS WHO ARE NOT HISPANIC AND/OR LOW-INCOME

HOW WELL IS UNM IMPROVING STEM ED?



**STEM STUDENTS
WHO ARE NOT
HISPANIC AND/OR
LOW-INCOME**

ALL STEM STUDENTS

**HISPANIC AND/OR
LOW-INCOME STEM
STUDENTS**



STEM
COLLABORATIVE
CENTER

HOW WELL IS UNM IMPROVING STEM ED?

- We are seeing gains across the board in STEM interest, STEM student retention, STEM degree persistence and STEM graduation rates
- *However, there remains a large gap between Hispanic and/or low-income student interest in STEM and accompanying retention, degree persistence and graduation rates*
- Together, UNM is making great progress, but more work remains in transforming the institution to better serve Hispanic and low-income students



Questions



Summer Planning is in FULL SWING

- *Let us know if you would like to partner on a summer event*
- *Please encourage students to check us out in early April on stemuniversity.unm.edu*

*Thank
You*

- To our UNM Faculty and Staff Partners
 - To our Community Partners
 - To our Student Partners
 - To the STCC Staff
 - To Tim Gutierrez
-
- Thank you for your support on this and so many other Student Affairs projects, with many more to come!

Program Improve & Sustainability Discussion Groups

High-Engagement
Co-Curricular
STEM Events

STEM
Leadership

Event
Online
Infrastructure



**Have a Wonderful
Weekend!**



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