

San Jose State University  
San Jose, CA March 15, 2018

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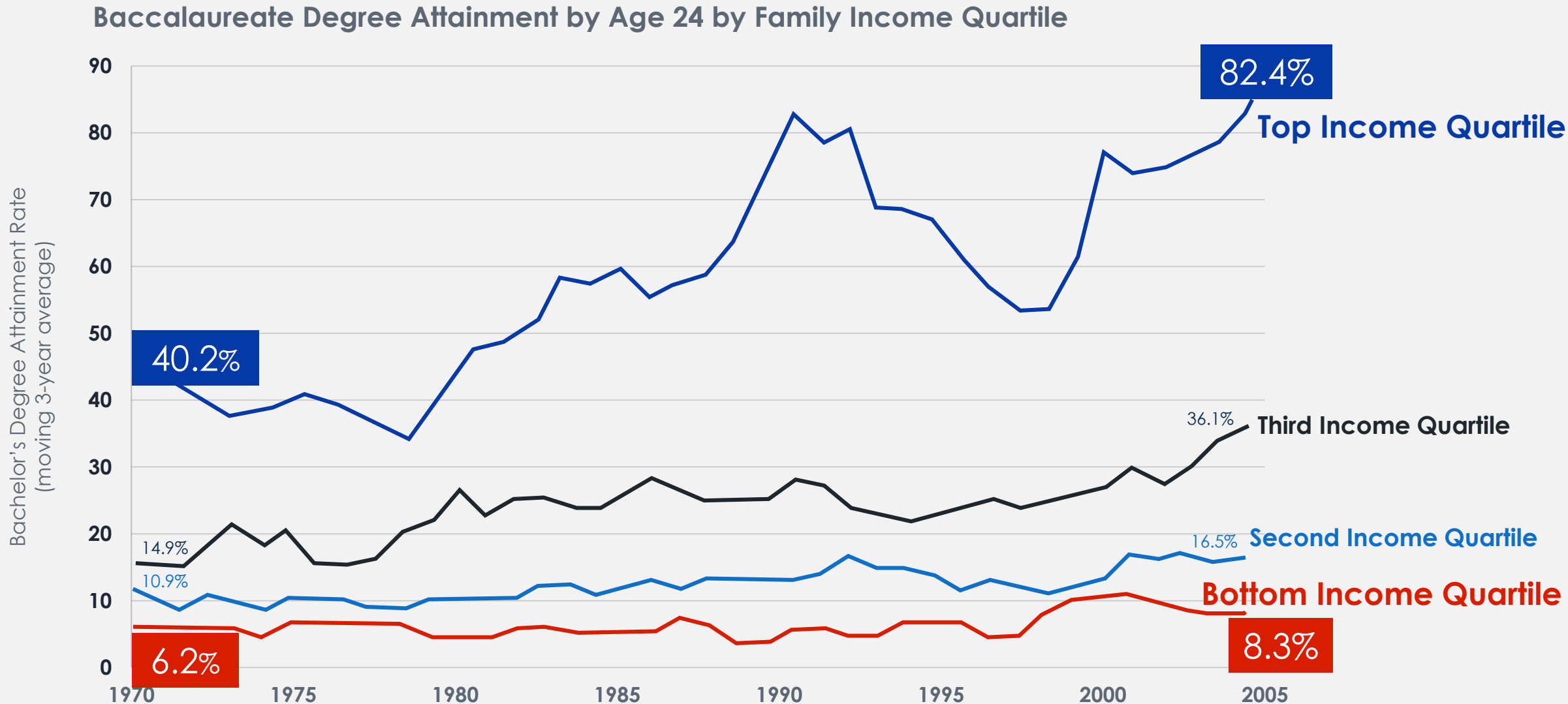
# Eliminating Achievement Gaps Through Data and Analytics

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GeorgiaState  
University®

# The Challenge in Front of Us



Source: New York Times, "The Reproduction of Privilege," March 12, 2012



- 32,500 Students on the Atlanta campus
  - Research University status achieved in 1995
  - 50,000+ Students as of 2016 with Perimeter College Consolidation
- 



GeorgiaState  
University®





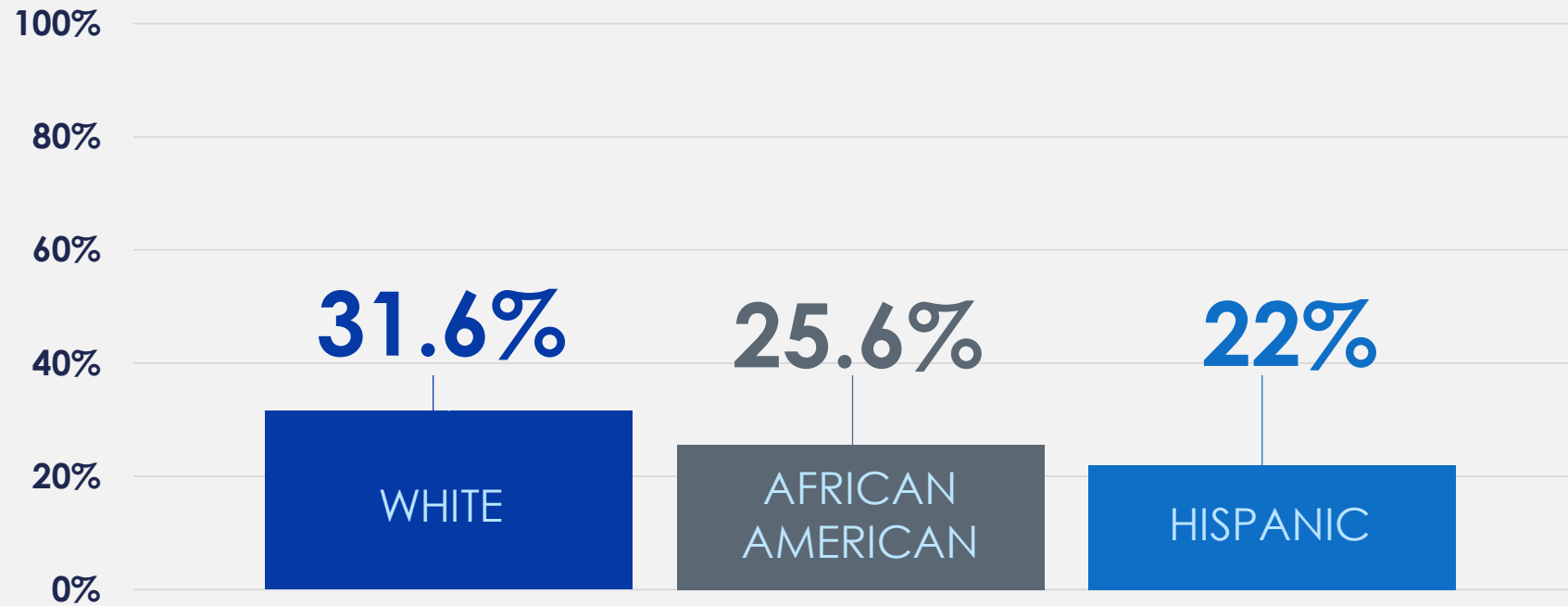
TRAVELER



# Graduation Rates by Race & Ethnicity



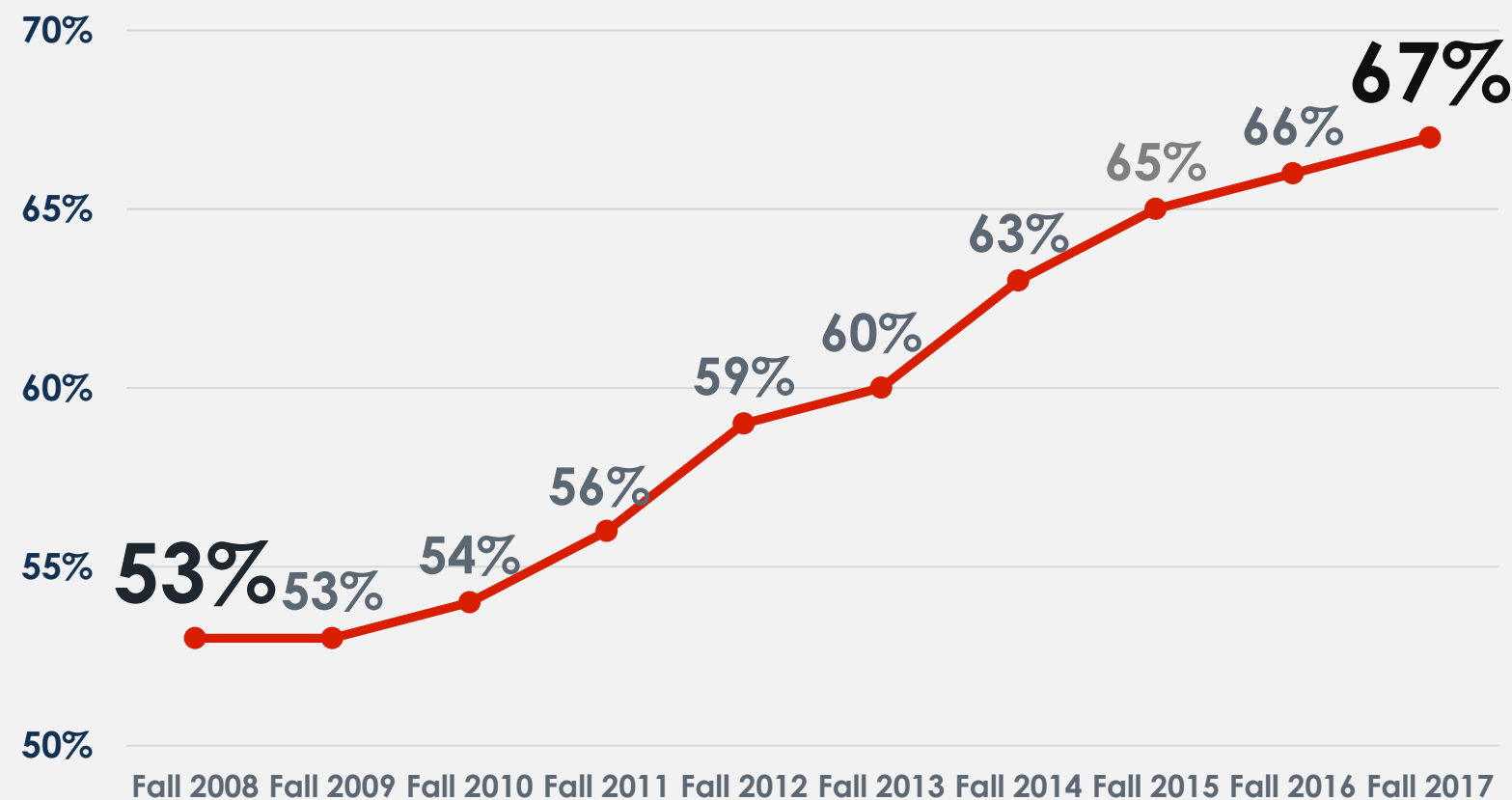
Where we were: 2003



# Changing Demographics: Race & Ethnicity



Underrepresented Minorities

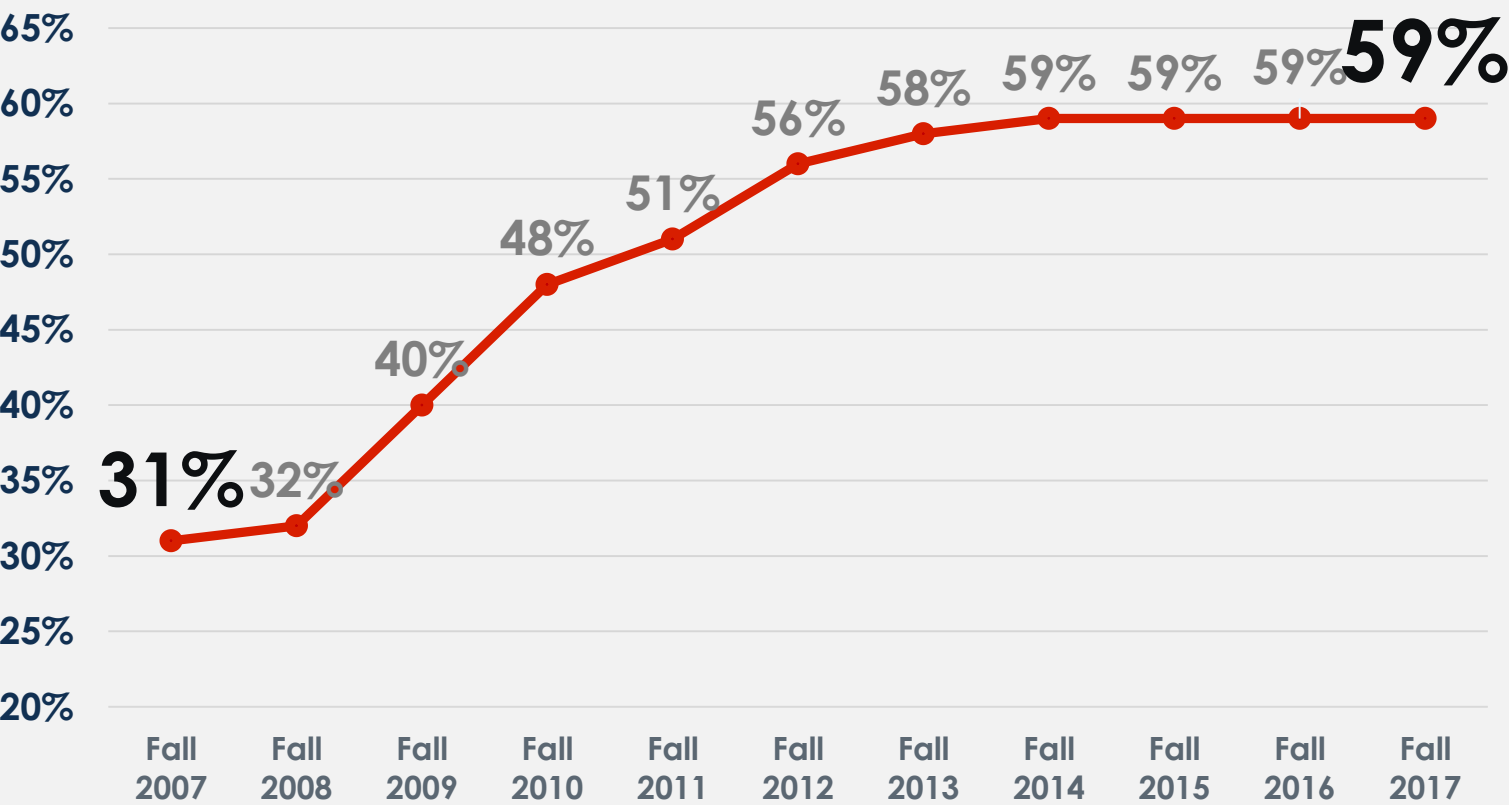




# Low-Income Students



Percent of Georgia State Undergraduates on PELL



A background image of a classroom with several students sitting at desks, focused on their work. The students are diverse in age and ethnicity. Large windows in the background let in natural light. A blue semi-transparent rectangle is overlaid in the center of the image, containing white text and a large blue arrow pointing downwards.

SAT SCORES  
**-33 points**





FORECLOSURE

Appropriations Cuts

**-\$40 million**







Are We the  
Problem?



Challenge:

# Summer Melt

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Fall 2015

Confirmed GSU Freshman Who  
Never Attended Any College: **278**

Non-white **76%**

First Generation **45%**

Low Income **71%**

Avg. High School GPA **3.34**



# The Hidden Obstacles to Enrollment



- Federal Financial Aid Application
- Verification Request
- State of Georgia Immunization Proof
- Taking Placement Exams
- Registering for Classes



# Personalized Interactions Before Enrollment

Source: EAB



3:32 PM

All About You

Help us get to know David...

**I work more than 20 hrs. per week**

**I'm first in my family to attend college**

English is my second language

I'm a parent

I'm a veteran

I have a disability

**next**

Navigation icons: back, forward, home, search

3:32 PM

Academic History

In high school, what was your...

favorite class?

hardest class?

art

math

english/writing

music

history

phys. ed

geography

science

Navigation icons: back, forward, home, search

3:32 PM

Interests

What are you interested in?

community service

finance & business

food & cooking

music & arts

professional development

**science & technology**

**sports**

Navigation icons: back, forward, home, search



# Portal to Guide Students Through Next Steps



My Path

My Plan

My Profile

All Items ▼

This... Week Month Term

## This Week

### Resource

Connect with campus resources that matter most to you.

### Resource

Explore services designed specifically for first-generation students.

### To Do

Meet with an academic advisor before your first term

### To Do

Take and review your Assessment Examination

### To Do

Pick your courses and schedule your first term

### Appointment

Open House: Campus Day Care

## Which resources matter most to you?

- Select any of our student services that interest you, and we'll add appropriate information to your path.

### A Few Recommendations:



#### Child Care

On campus and nearby child care options to help while you are in class.



#### First Generation to Attend College

Resources to help new students learn the ropes and lingo of college.



#### Commuting Services

Learn the different ways you can get to and from campus.



#### Student Technologies

Get help with all apps, gadgets, and sites that can enhance your campus experience.

### All Student Services:



#### Tutoring & Academic Support

A great resource for help outside the classroom for your work inside the classroom.



#### Housing Services

Resources to help you find a place to stay near campus.



#### Career Guidance

Helping you find the right career path and prepare you for the job market. It's never too early to start!



#### Clubs and Activities

Grow and have fun! Get involved in one of our many on-campus activities.



#### Mentorships

Helping you connect with experience students who can help guide your way.



#### Disability Services

Providing support and equipment to qualified students with physical, mental, or educational needs.

# 24/7 Responses Using Chat Bots on Smart Devices



Which parent do I use on the FAFSA?  
Jan 19 2017 6:38:13 PM

For info on which parent's information to use on the FAFSA, reply with the option that best describes your parents' marital status: Never Married Unmarried and both parents living together Married Remarried Divorced/Separated Widowed If none of these options are applicable, check out [1.usa.gov/1OgfTcg](https://1.usa.gov/1OgfTcg)

Undo ✓ Approved by AdmitHub AI

Divorced  
Jan 19 2017 6:38:40 PM

If your parents are divorced, the custodial parent (or the one you lived with the most in the past 12 months) is usually responsible for filling out the FAFSA. Check out this website to learn more: [1.usa.gov/1OgfTcg](https://1.usa.gov/1OgfTcg)

Undo ✓ Approved by AdmitHub AI

OK and when is it due?  
Jan 19 2017 6:39:07 PM

The FAFSA is available starting Oct. 1. Fill it out ASAP! (Use last year's tax info.) Some aid is first-come, first-served, so don't delay! [fafsa.gov](https://fafsa.gov)

✓ Accent    ⚠ Reject

NUMBER OF  
KNOWLEDGE-  
BASED TEXTS  
SENT OVER FIRST  
3 MONTHS:  
**201,000**





One-Year Drop in  
Summer Melt: 22%

**+324**  
Students

Challenge:

Getting Off to a  
Good Start

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# The Human Cost of Inaction

# 50%

First-Year Retention  
Rates for Academically  
At-Risk Freshmen in 2011



# Summer Success Academy

400 highest risk freshmen by academic analytics

Summer session before freshman fall with 7 credit hours of bachelor's-level work

Intensive advisement

Academic skills

Financial literacy training

Team/mindset building



Denzel,

Congratulations on your acceptance to Georgia State University! While your acceptance letter makes its way to you via post, we would like to provide you with additional information regarding your specialized admissions status.

As we reviewed your application for fall admission, we recognized you as a perfect candidate for our Success Academy. This is a wonderful opportunity to move on campus early, start using valuable campus resources, meet your peers, and take initiative and develop the skills that will help you make the most of your college education.

You may view your acceptance letter by logging in to the [Check Your Status portal](#). We realize you may have questions about the program prior to enrolling, and we're here to help! In addition to the [Success Academy website](#), we've put together the following [Success Academy brochure](#).

Should you have any additional questions, please feel free to contact Amina Moss, Success Academy liaison.



Retention Rate of  
Summer Success  
Academy Students

87%

+148 students

5-Year  
Graduation Rate

51%



Challenge:

# Choosing A Major





# Academic Guides with Live Job Data



Program Picker <span>⌚ Est. Time</span>				
Take control of your future! Explore majors and certificates that work for you.				
You chose this... on your application		Would you consider... Explore these possibilities for you based on your interests and priorities		
		<a href="#">Find more options</a>		
	Nursing A.S.	Medical Office Assistant Certificate	Radiologic Technology A.A.S	Health Studies A.S.
	<a href="#">Learn More</a>	<a href="#">Learn More</a>	<a href="#">Learn More</a>	<a href="#">Learn More</a>
	<input checked="" type="checkbox"/> Selected	<input type="checkbox"/> Explore	<input type="checkbox"/> Explore	<input type="checkbox"/> Explore
Classes/Credits	20 classes / 60 credits	8 classes / 24 credits	20 classes / 55 credits	20 classes / 62 credits
Time to Complete	2 years	1 year	2 years	2.25 years
Financial Aid	✓	May not be Financial Aid eligible	✓	✓
Total Tuition	\$9,176 in state	\$3,641 in state	\$8,850 in state	\$9,427 in state
Outcomes	High rate of transfer to 4-year colleges	Students seek employment or another stackable certificate	Most students seek employment post-graduation	High rate of transfer to 4-year colleges
Average Salary	\$38,500 \$51,100 with BA degree	\$29,129	\$37,819	\$42,774 \$51,553 with BS degree
Hiring Demand	129 job posts	137 job posts	459 job posts	661 job posts
	<input checked="" type="checkbox"/> Selected	<input type="checkbox"/> Explore	<input type="checkbox"/> Explore	<input type="checkbox"/> Explore

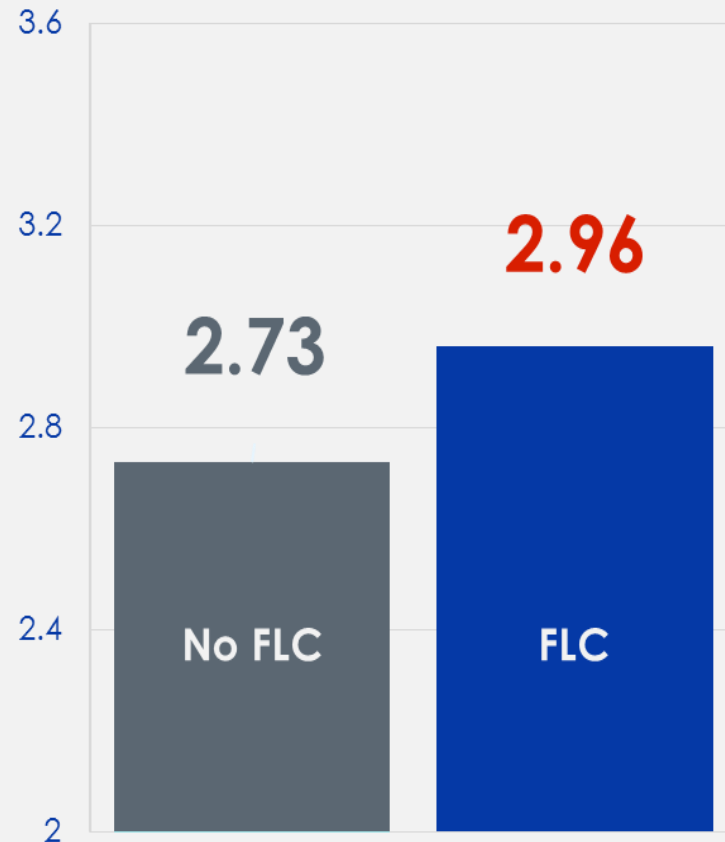


# Freshman Learning Communities & Meta Majors

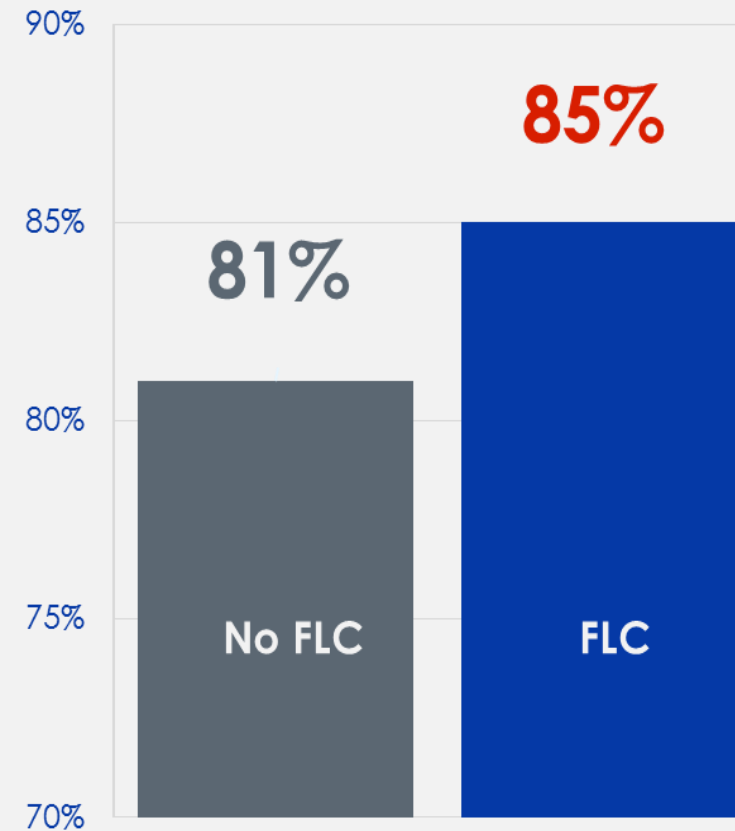


Freshman Learning Communities with block schedules of 5 to 6 courses:  
95% of non-Honors freshmen (Opt-out model)

1<sup>st</sup> Year GPA



Retention





**Business**  
**Education**  
**Exploratory**  
**STEM**  
**Humanities & Arts**  
**Health Professions**  
**Policy/Social Science**







MAJOR  
CHANGES  
IN 2013

2,718

MAJOR  
CHANGES  
IN 2015

1,853

2-YEAR  
CHANGE

-32%

Challenge:

# Gateway Courses

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# Strengthening Math Pathways



## Pre-Calculus, College Algebra, Intro to Statistics

- DWF Prior to Change: **43%**  
DWF Today: **28% (35% drop)**
- Number of Students enrolled in courses taught through the MILE, 2016-17: **8,500**

**+1,275** Students Passing



# Adaptive Learning at Scale



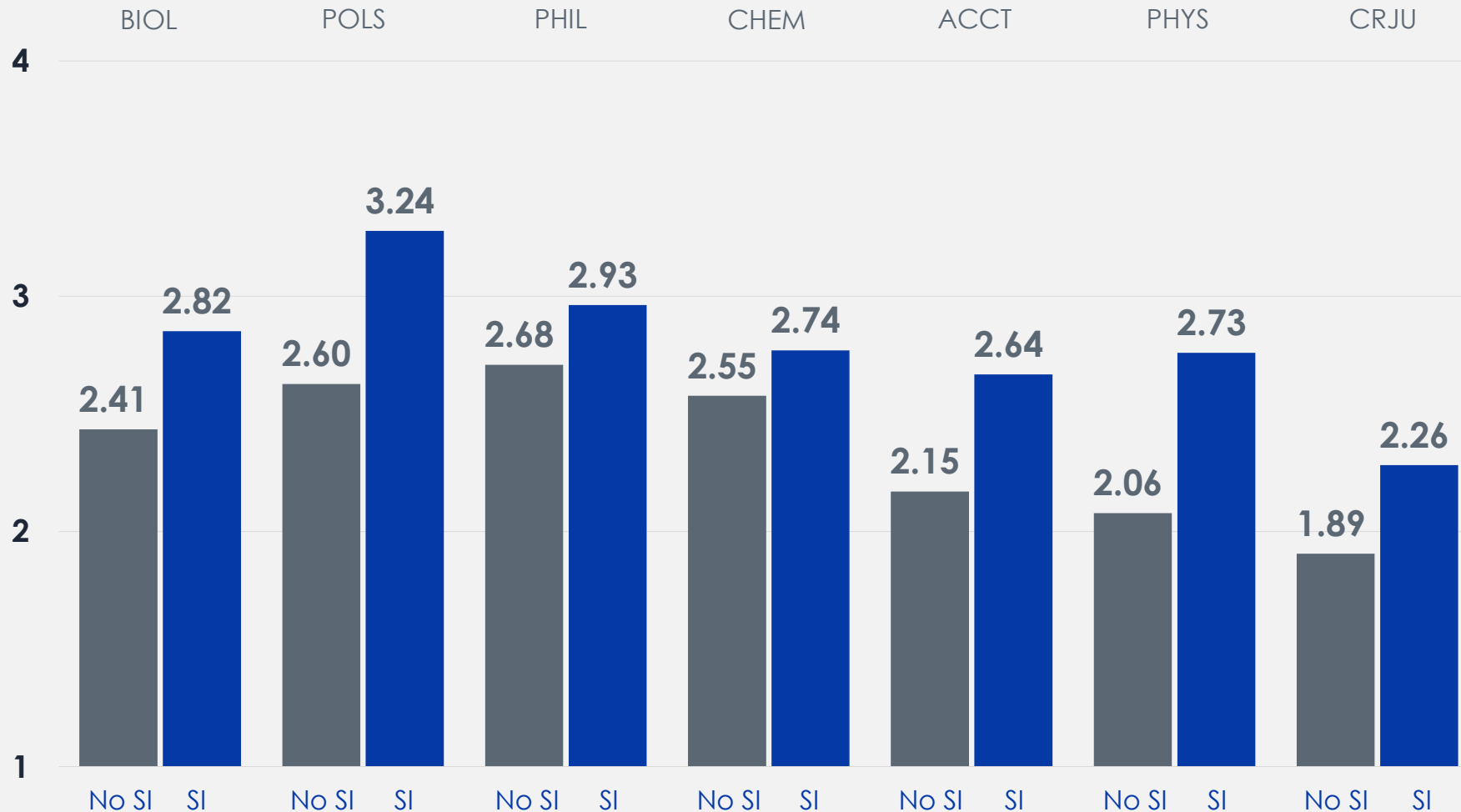
		STUDENTS	SECTIONS	DFW
<b>POLS 1101</b>	<b>American Government</b>	<b>4694</b>	<b>55</b>	<b>16.3%</b>
<b>MATH 1070</b>	<b>Elementary Statistics</b>	<b>2701</b>	<b>76</b>	<b>25.2%</b>
<b>ECON 2105</b>	<b>Principle of Macroeconomics</b>	<b>2340</b>	<b>38</b>	<b>19.2%</b>
<b>PSYC 1101</b>	<b>Introduction to General Psychology</b>	<b>2252</b>	<b>26</b>	<b>21.8%</b>
<b>POLS 2401</b>	<b>Global Issues</b>	<b>2250</b>	<b>35</b>	<b>18.9%</b>
<b>FILM 2700</b>	History of the Motion Picture	2226	59	15.2%
<b>ECON 2106</b>	<b>Principles of Microeconomics</b>	<b>2122</b>	<b>31</b>	<b>24.7%</b>
<b>MATH 1101</b>	Introduction to Mathematical Modeling	2019	56	26.5%
<b>MATH 1111</b>	<b>College Algebra</b>	<b>1540</b>	<b>45</b>	<b>20.2%</b>
<b>SOCI 1101</b>	Introductory Sociology	1432	29	20.2%
<b>MATH 1113</b>	<b>Pre-calculus</b>	<b>1289</b>	<b>34</b>	<b>27.5%</b>
<b>CHEM 1211</b>	Principles of Chemistry I	1096	37	17.2%
<b>BIOL 1103</b>	Introductory Biology I	1051	48	24.8%



# Eliminating Bottlenecks: Peer Tutors



## Supplemental Instruction (SI)



Course GPA

No SI: **2.41**

SI: **2.91**

One-Year  
Retention

No SI: **83.5%**

SI: **91.2%**

Students: **9,700**

Challenge:

# Staying On Track

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- Analytics-Based Proactive Outreach

**72,000** Student visits in the past year

**32%** Increase in on-time FAFSA completions





Grants Since 2011: **10,744**

**AVERAGE  
GRANT** **\$900**

Seniors Graduated: **78%**

Grant Recipients  
Graduated 2016-17: **1,321**





# Advisement: GPS Advising

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## Predictive Analytics Project with EAB

**10 YEARS**  
OF DATA

**2.5 MILLION**  
GRADES

**144,000**  
STUDENT RECORDS

**800+**  
ANALYTICS-BASED  
**ALERTS**

**30,000** STUDENTS  
TRACKED **DAILY**

# Academic Program Maps: B.S. in Chemistry

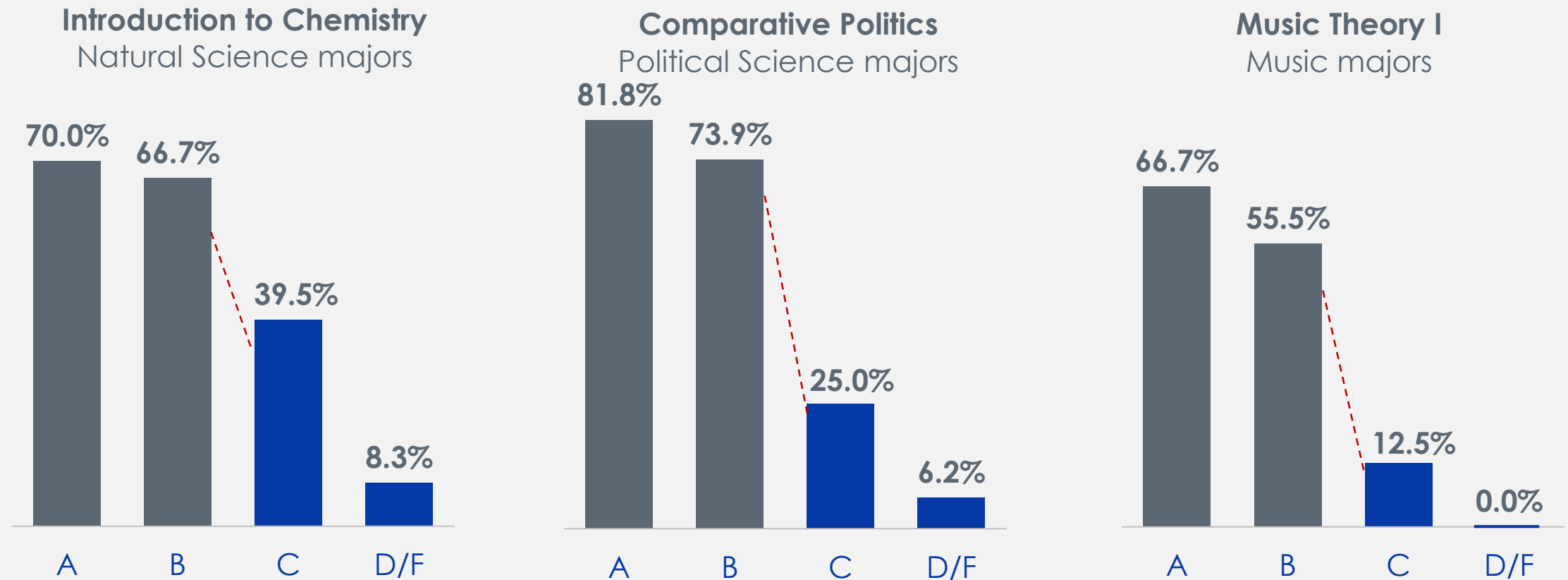


SEMESTER 1	SEMESTER 2
<ul style="list-style-type: none"><li>• Complete 1 of ENGL 1101, ENGL 1102 or ENGL 1103 (C or Better)</li><li>• Complete MATH 1113 or Higher (B- or Better)</li><li>• Complete CHEM 1211K (B- or Better)</li></ul>	<ul style="list-style-type: none"><li>• Complete ENGL 1102 or 1103 (C or Better)</li><li>• Complete MATH 2211 or Higher (B- or Better)</li><li>• Complete CHEM 1212K (B- or Better)</li><li>• Maintain a cumulative GPA of 2.25 or Better</li></ul>
SEMESTER 3	SEMESTER 4
<ul style="list-style-type: none"><li>• Complete CHEM 2400 (B- or Better)</li><li>• Complete MATH 2212 (C or better)</li><li>• Complete PHY 2211k (C or better)</li></ul>	<ul style="list-style-type: none"><li>• Complete CHEM 3410 (C or better)</li><li>• PHY 2212k (B- or Better) (C or better)</li><li>• Maintain a cumulative GPA of 2.25 or Better</li></ul>
SEMESTER 5	SEMESTER 6
<ul style="list-style-type: none"><li>• Complete CHEM 4000 with a C or Better</li><li>• Complete CHEM 4110 with a C or Better</li></ul>	<ul style="list-style-type: none"><li>• Complete CHEM 4010 with a C or Better</li><li>• Complete CHEM 4120 with a C or Better</li></ul>
SEMESTER 7	SEMESTER 8
<ul style="list-style-type: none"><li>• Complete CHEM 4160 with a B- or better</li></ul>	<ul style="list-style-type: none"><li>• Complete CHEM 4190 with a C or Better</li></ul>

# Alerts Based on Historical RPG Data



## Graduation Rate in Major by Introductory Course Grade





# Common Proactive Interventions

- Registration holds
- Drops & Withdrawals
- Major Changes
- Faculty alerts
- Underperformance in Gateway courses



# Linking Academics to Career Pathways



Georgia State University

Welcome Timothy Log Out

Students Institutional Analytics

Students > Joe Student

Previous student Next student

**MAJOR EXPLORER**

**ACADEMIC SUMMARY** **RISK**

COURSE GRADE of D/F 0 REPEATED COURSES 0 COURSE WITHDRAWALS 0 Current risk LOW

Expand

**CURRENT MAJOR**

Major Name	Risk Level	Related Careers
Biological Science College of Arts & Sciences	Low Risk	Biochemist Biological Technician Biologist Biomedical Engineer Biostatistician 12 more...

**MAJOR OPTIONS** Search for a major or career

College All colleges

Major Name	Risk Level	Related Careers
Real Estate Robinson College of Business	Low Risk	Apartment Manager Appraiser / Assessor Community Manager Leasing Manager Property Manager Real Estate Agent / Broker

**STUDENT ADV: In Person**

I want to...

Change student status

Email student

Remind me to follow-up

Add a note on this student

Browse student majors

**Joe Student**

ID: 000000000  
Age: 20  
DOB: 06/03/1994

Overview  
Success Progress  
Term Details  
History

Major Explorer

KEY INFO

Email: joe1@student.gsu.edu  
Phone: (404) 555-1212  
Address: 1234 Avenue St.  
Atlanta, GA 30303







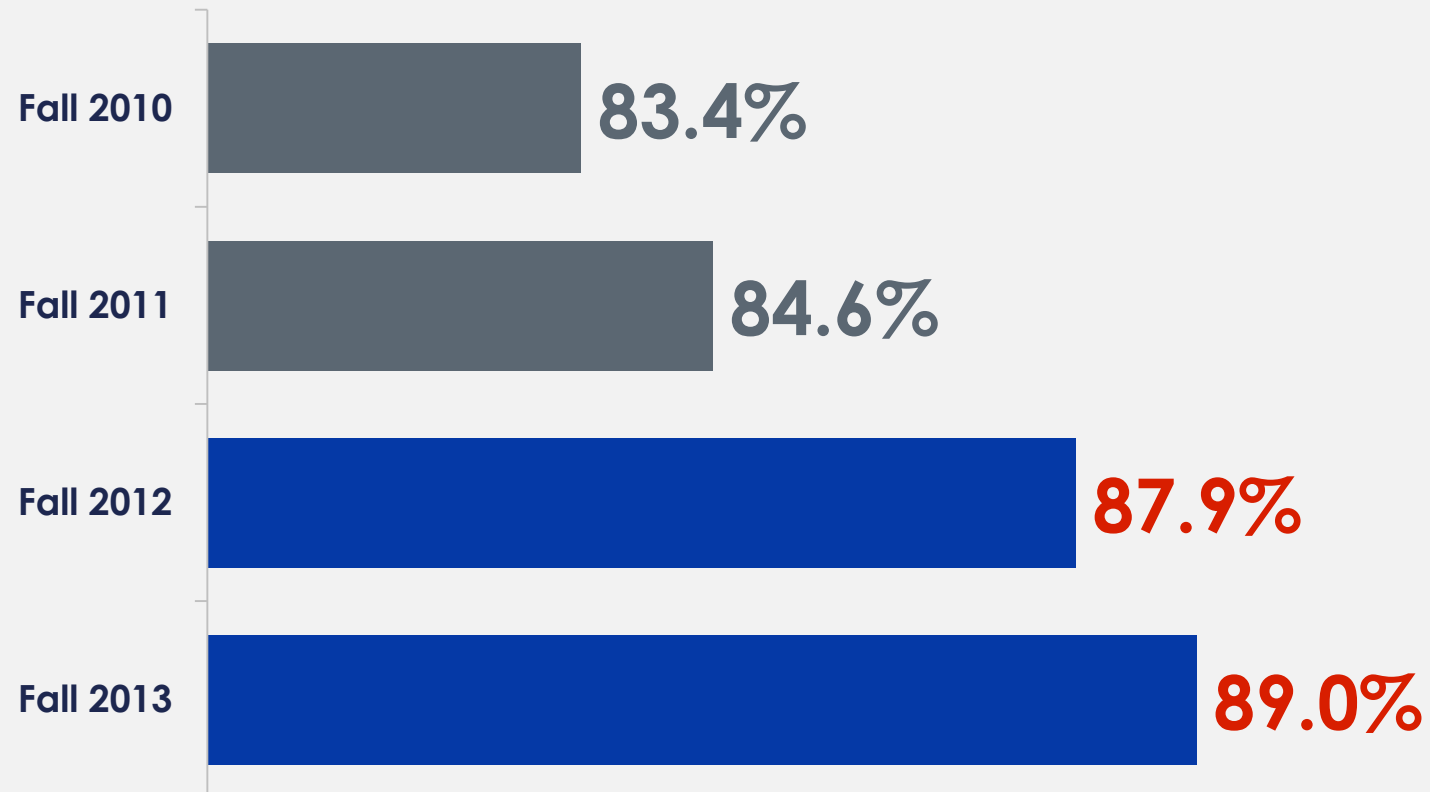
52,150



# Results: Increased Retention



## Increased Average First Term Retention Fall to Spring Retention



# Rapidly Improving Progression Rates

Freshmen with 30-hours of  
Passing Credit After 12  
Months

**2012-13      47%**

**2013-14      53%**

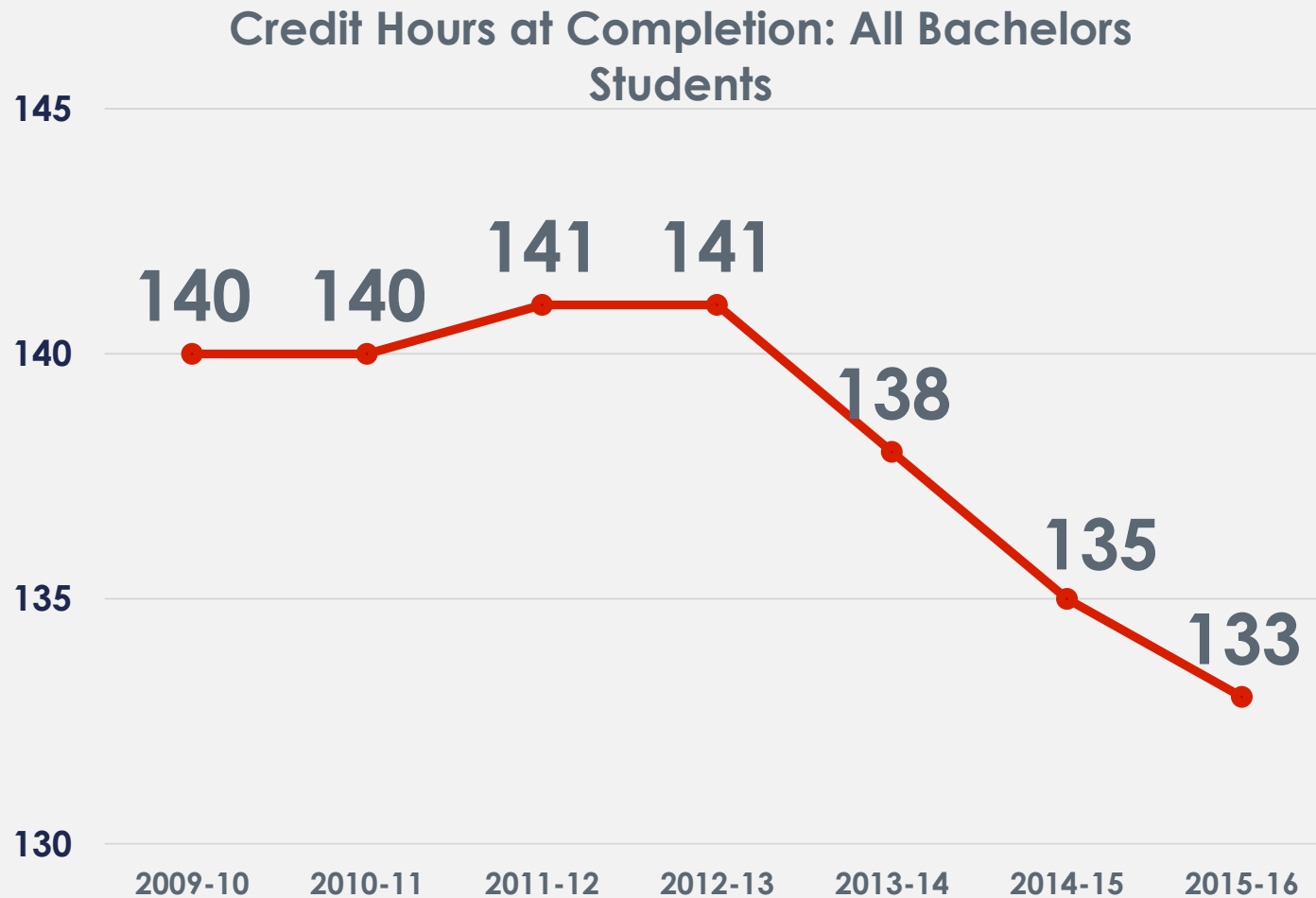
**2014-15      56%**

**2015-16      63%**





# Results: Decline in Time to Degree







# \$15 million

*Savings to the Class of 2017 in tuition  
and fees when compared to the  
Class of 2013*



## STEM Degrees Conferred Since 2011 (enrollment change)

Black **+69%** (12%)

Black Male **+111%** (15%)

Hispanic **+226%** (22%)

# Impacts

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JUNIOR

ST. TRACK

Attention Rate of  
Summer Success  
Academy Students  
87%

SENIOR

GRADUATING AND  
APPLYING







# Growing Recognition





# The Cost of Inaction



## The Calculus of Student Success: ROI

$y$

1-point increase in retention =  
**325 students**

Average student tuition  
& fees annually/student = **\$9,800**

ROI for each 1-point increase =  
**\$3.18** million/year



$x$

# Georgia State Undergraduate Degrees Awarded



2010-11:  
**4,222**

2016-17:  
**7,047**

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INCREASE:  
**+2,825 (+67%)**

# Bachelor's Degrees Awarded Annually

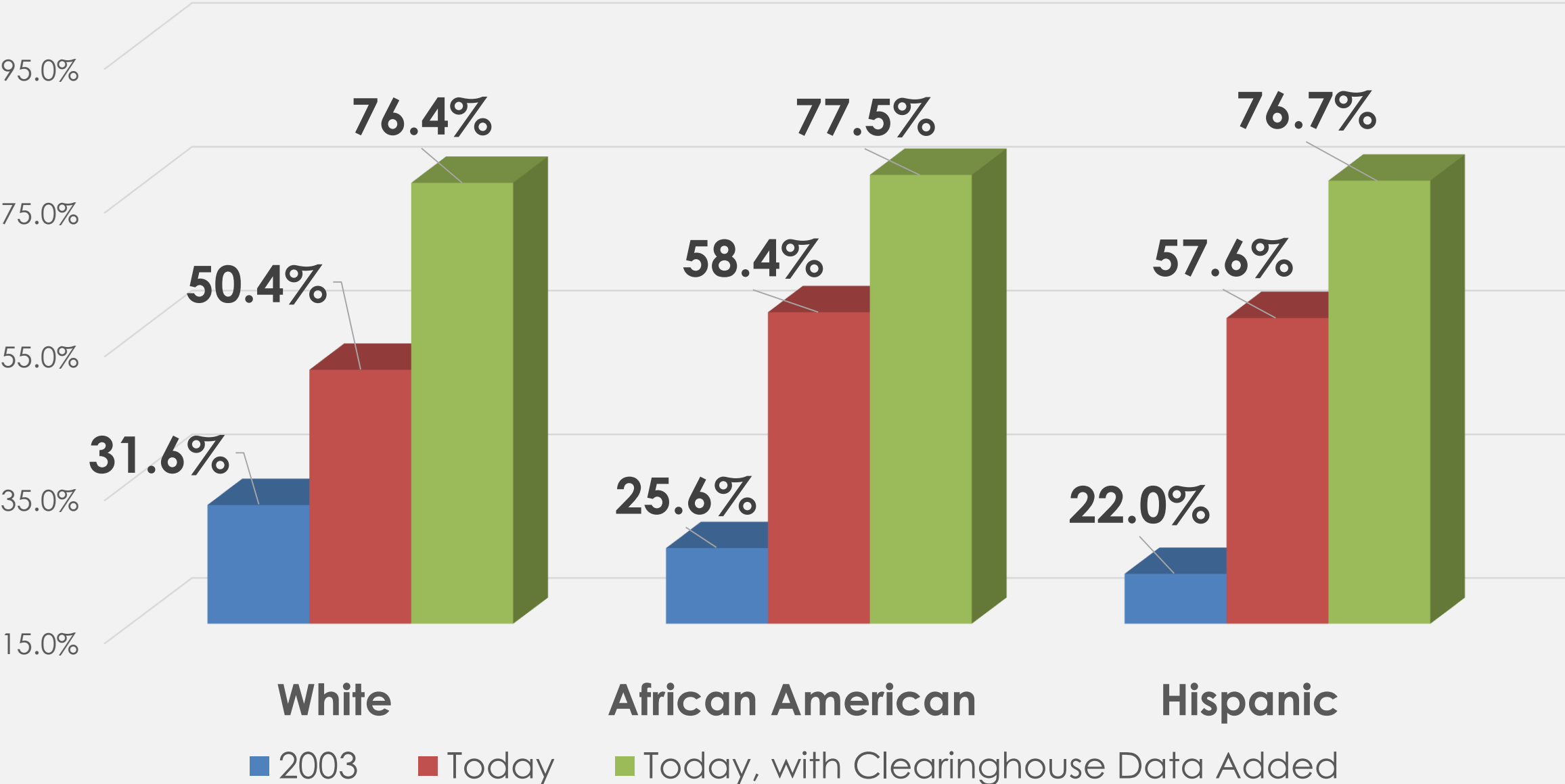


	2009-10	2016 - 17	6-Year Change	% Change
African American	1,001	2,040	<b>+1,039</b>	<b>+103%</b>
Pell	1,298	2,957	<b>+1,659</b>	<b>+128%</b>
Hispanic	196	509	<b>+313</b>	<b>+160%</b>





# Graduation Rates by Race & Ethnicity



# #1 in Degrees Conferred to African Americans



## Top 100 Degree Producers: Non-Profit Universities

2016 African-American Bachelor's - All Disciplines Combined



		Total	%Grads	%Chg
Institutions	State			
1 Georgia State University	GA	1805	38%	8%
2 FAMU	FL	1584	95%	6%
3 University of Maryland-University College	MD	1409	26%	19%
4 University of Central Florida	FL	1316	10%	1%
5 North Carolina A & T State University	NC	1196	80%	7%
6 Howard University	D.C.	1160	90%	-6%
7 Florida Atlantic University	FL	1087	19%	7%
8 Florida International University	FL	1020	11%	11%
9 University of Memphis	TN	1011	33%	3%
10 The University of Texas at Arlington	TX	992	13%	-7%

Source: Diverse Issues in Higher Education

# 2017 Brookings Institution Social Mobility Ranking

**#1 University in Georgia**  
**#25 in the United States**

*Student Income Growth from  
College Entry to Mid Career*

**\$82,200**

*Median Income Mid Career*







<http://success.gsu.edu>

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