

Yale Center for Teaching and Learning
Yale University September 14, 2017

Eliminating Achievement Gaps Through Data and Analytics

Timothy M. Renick, Ph.D.
Vice President for Enrollment Management
& Student Success and Vice Provost

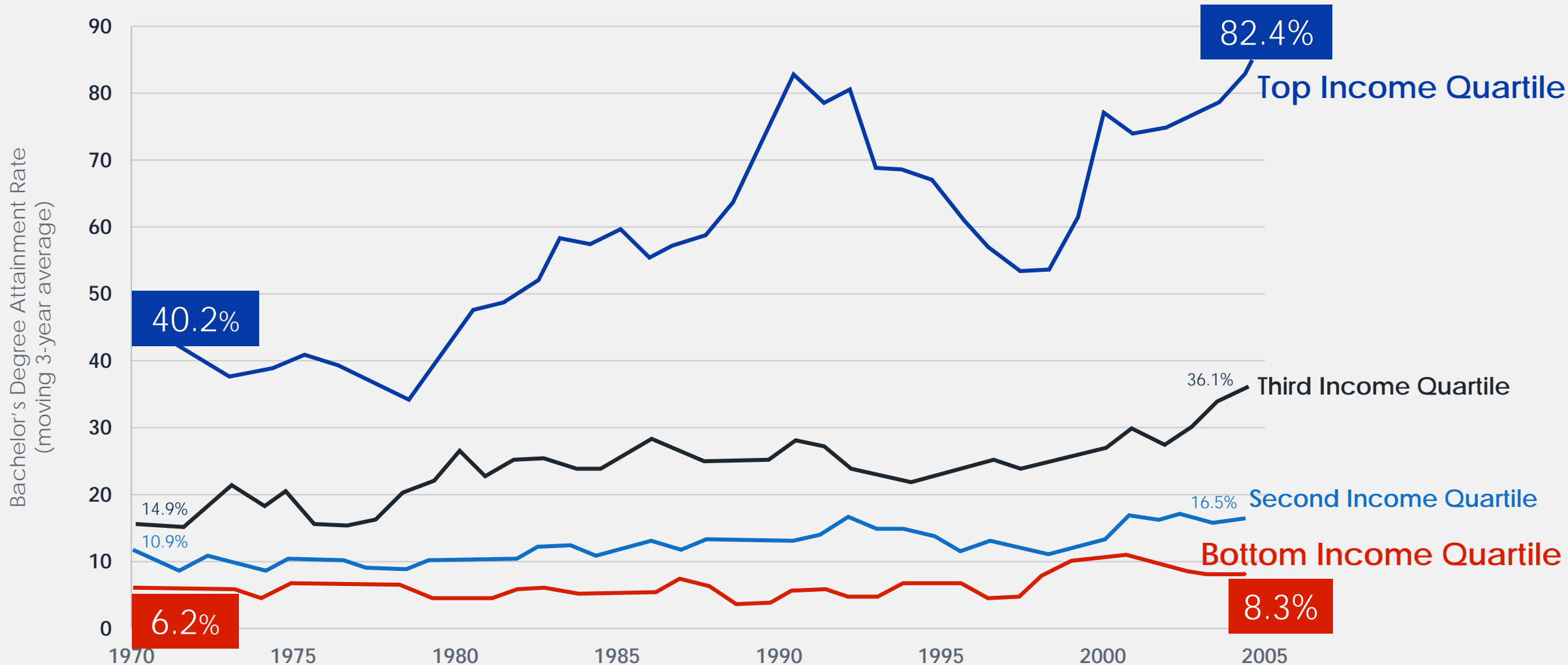


Georgia State
University®

The Challenge in Front of Us



Baccalaureate Degree Attainment by Age 24 by Family Income Quartile

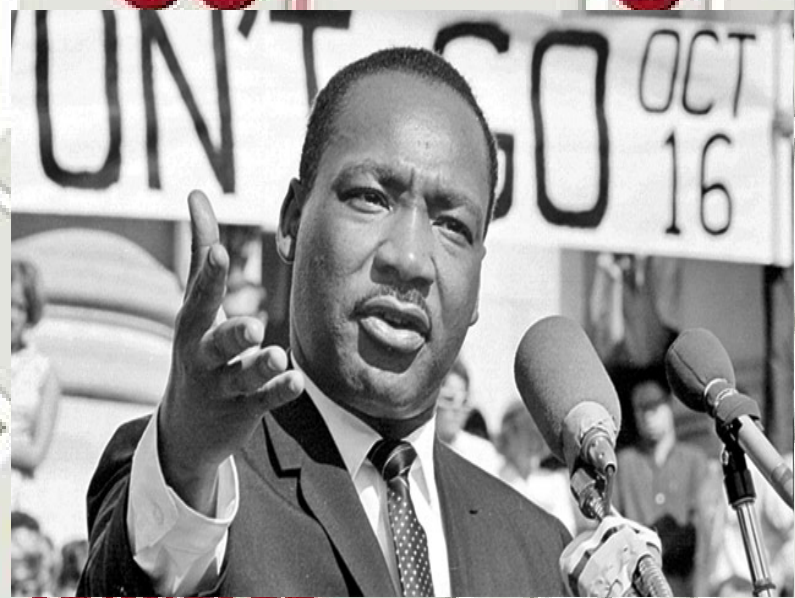
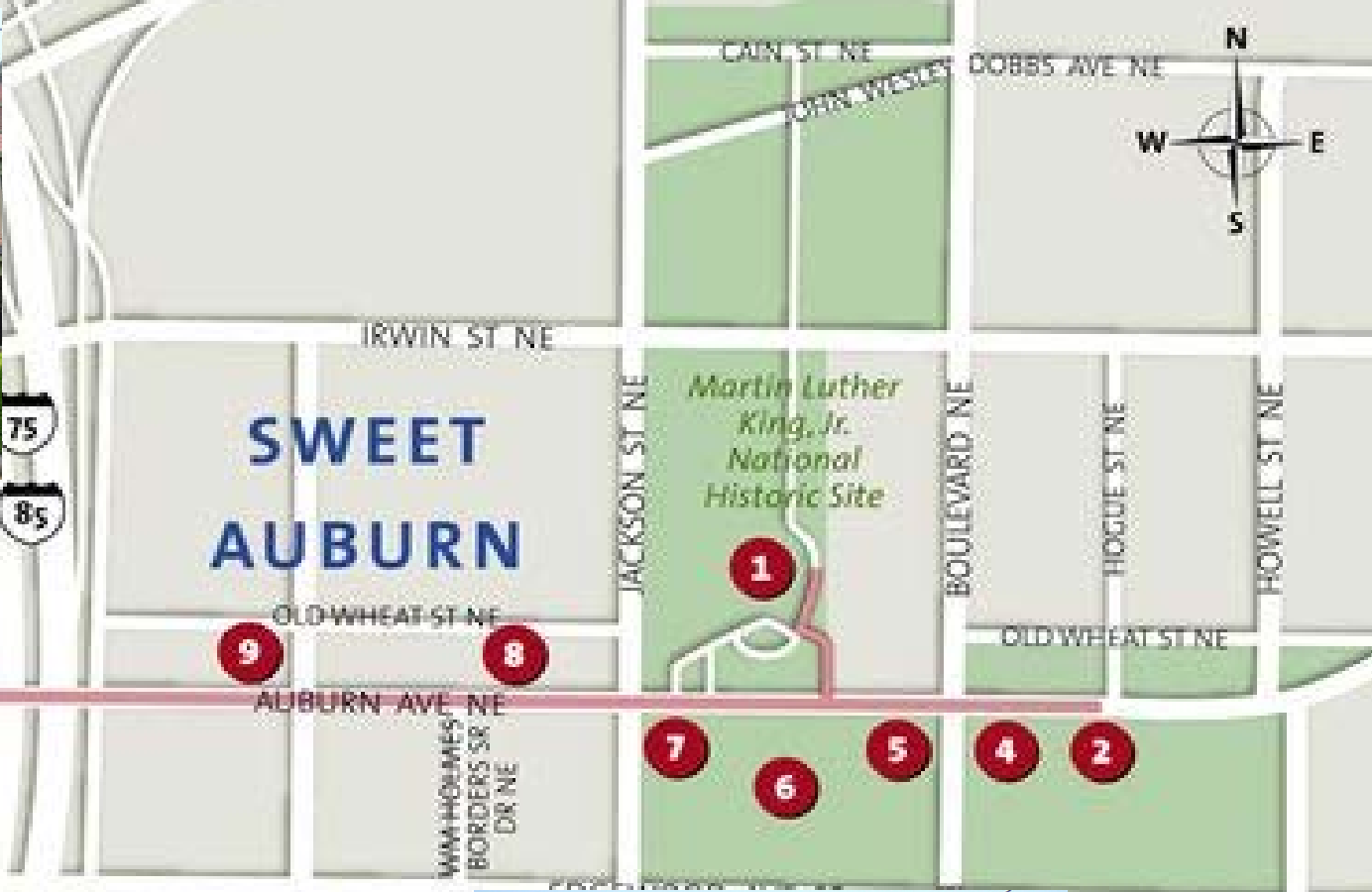


Source: New York Times, "The Reproduction of Privilege," March 12, 2012

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



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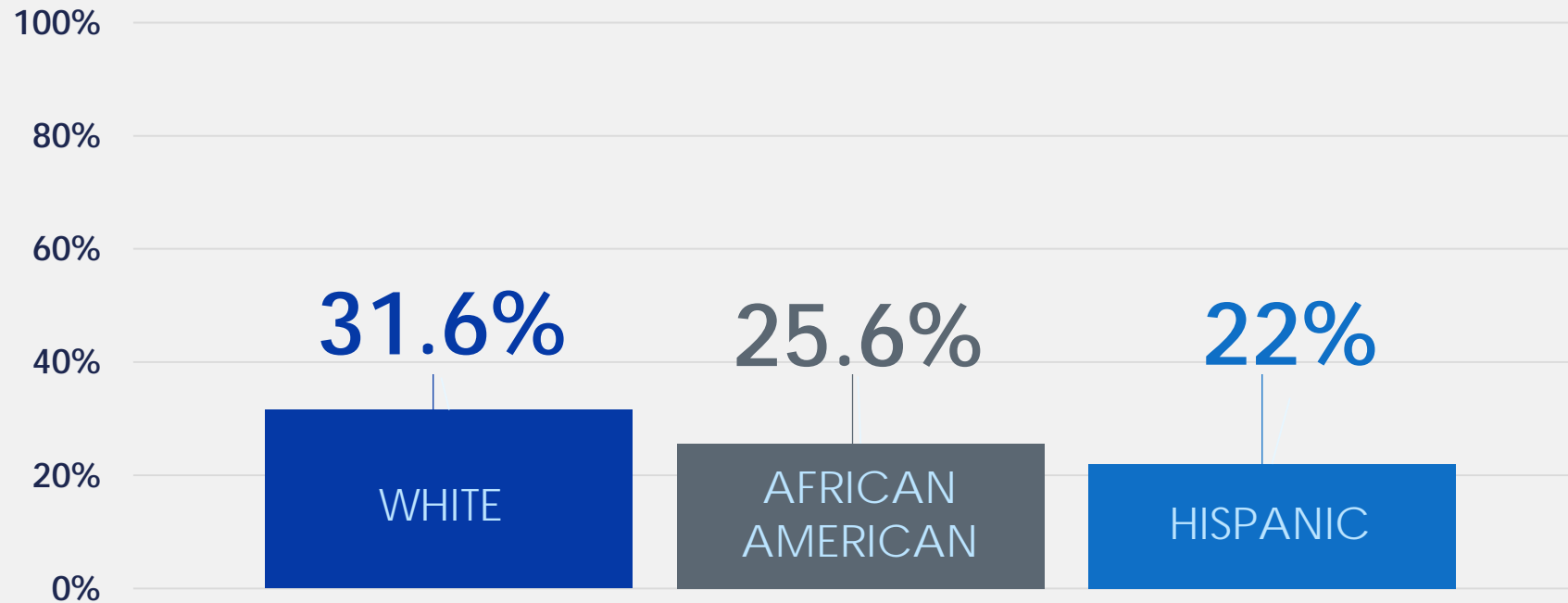
I TRAVELLER



Graduation Rates by Race & Ethnicity



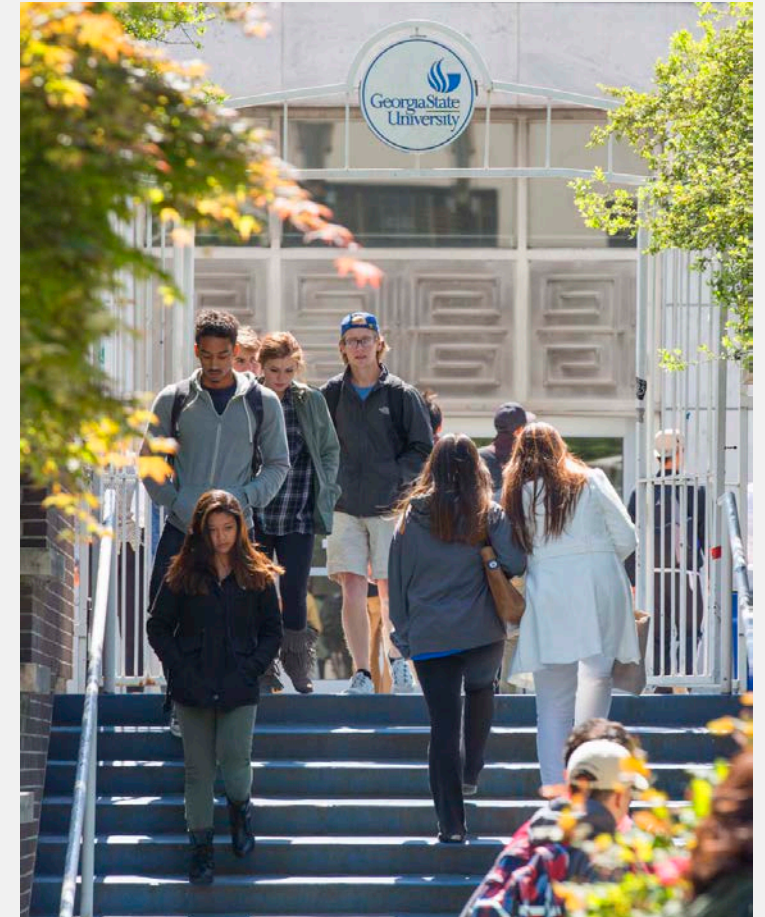
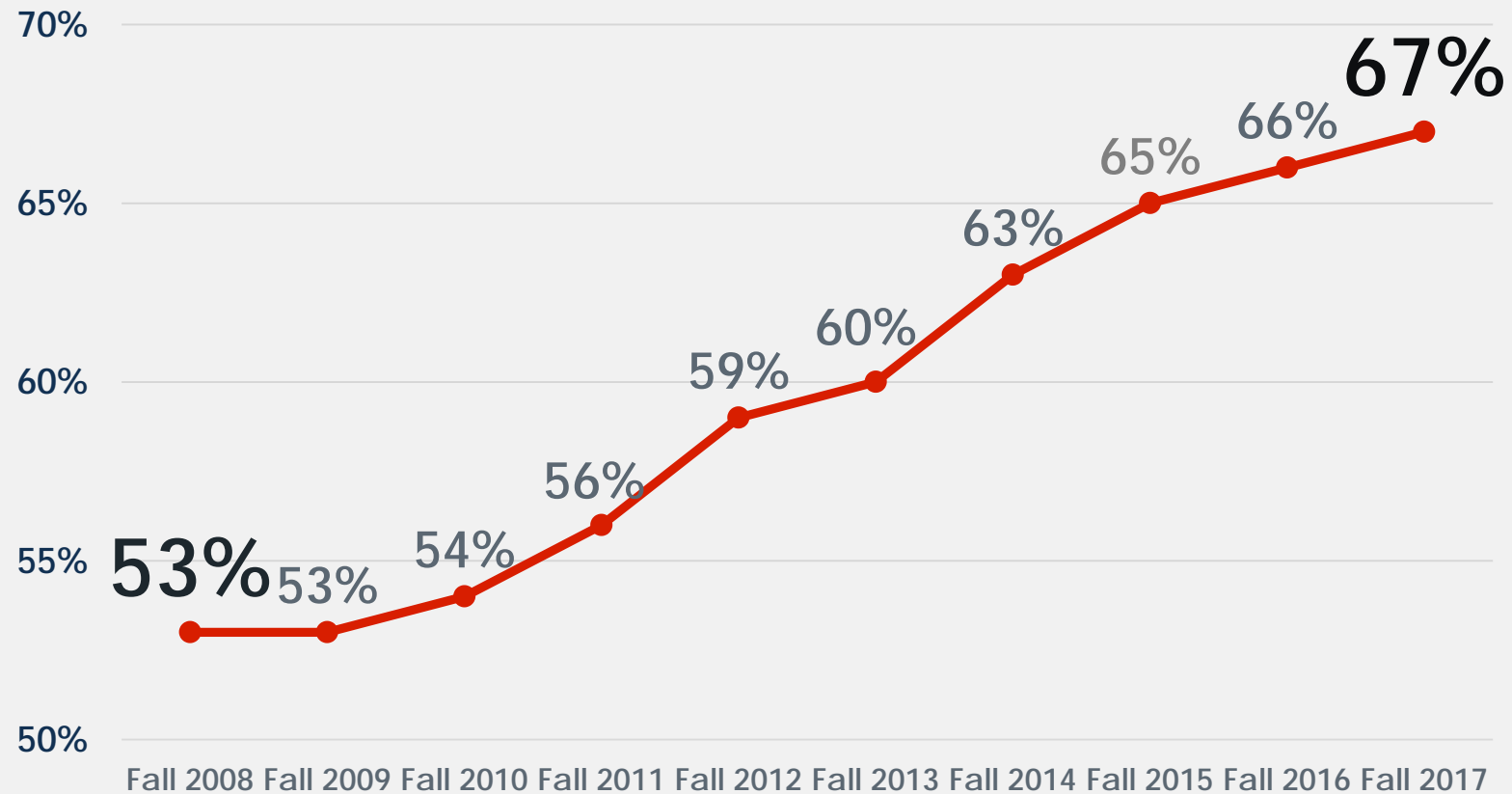
Where we were: 2003



Changing Demographics: Race & Ethnicity



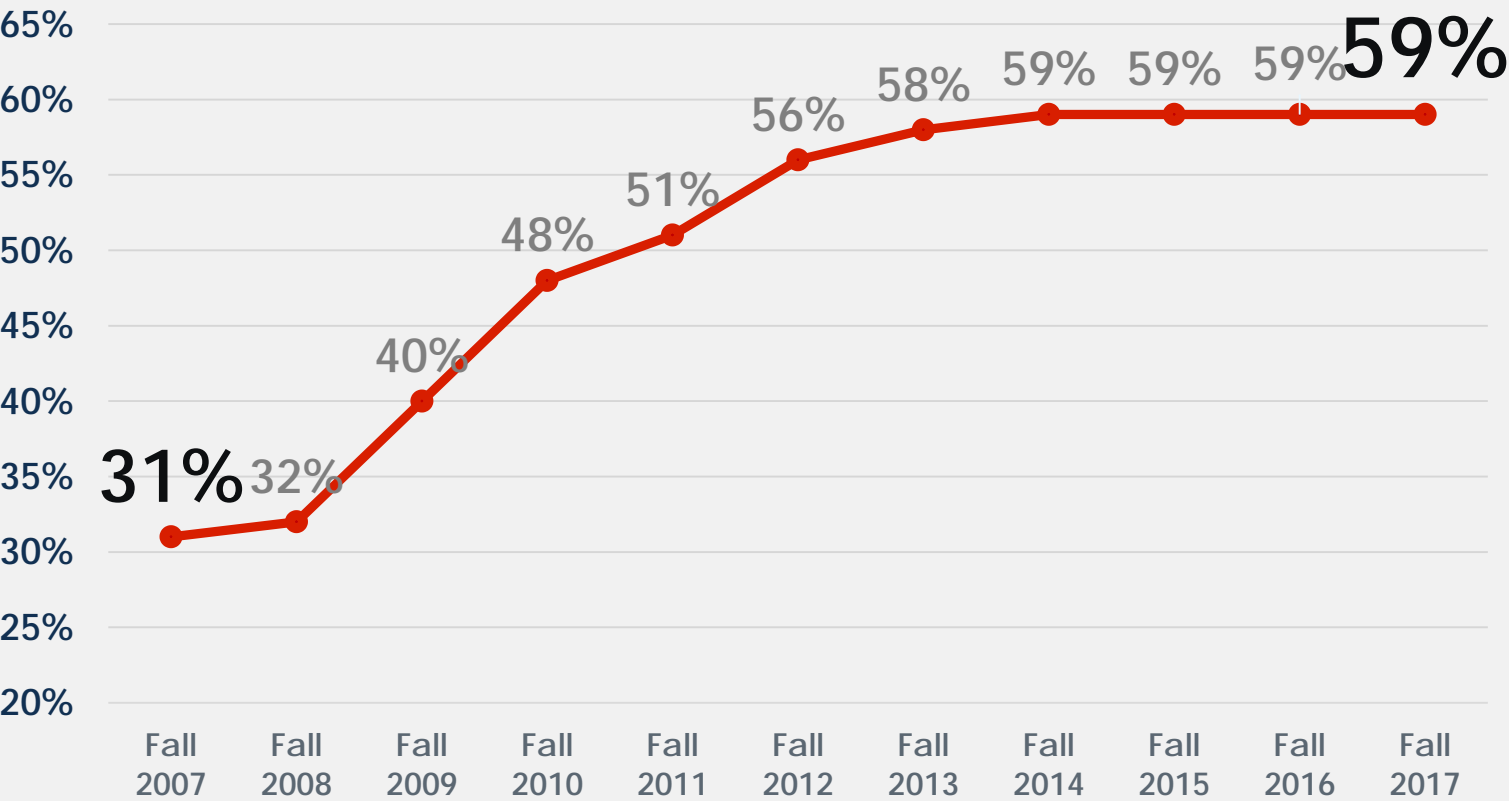
Underrepresented Minorities




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. The room has large windows in the background, letting in natural light. A blue semi-transparent rectangle is overlaid on the center of the image, containing text and a large blue arrow pointing downwards.

SAT SCORES
-33 points



FORECLOSURE
Appropriations Cuts

- \$40 million





Are We the Problem?

Challenge:

Summer Melt



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

📌 🔊 📄 🧠

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

📌 🔊 📄 🧠

3:32 PM

< Interests >

What are you interested in?

community service

finance & business

food & cooking

music & arts

professional development

science & technology

sports

📌 🔊 📄 🧠

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

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

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

✓ 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

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
In 2016

87%



Challenge:

Choosing A Major



Academic Guides with Live Job Data

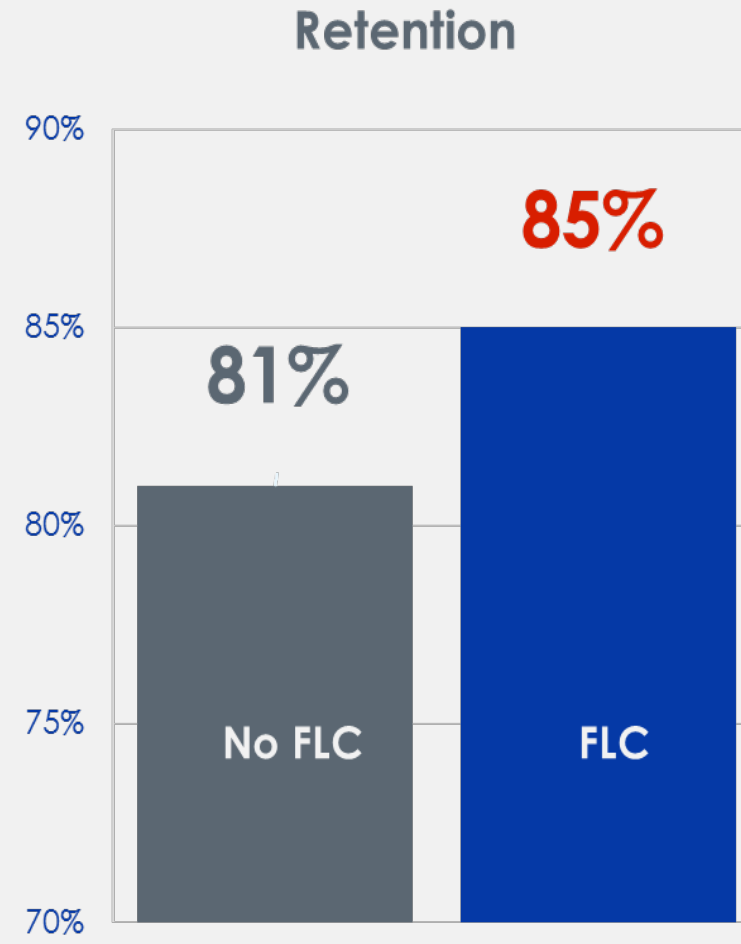
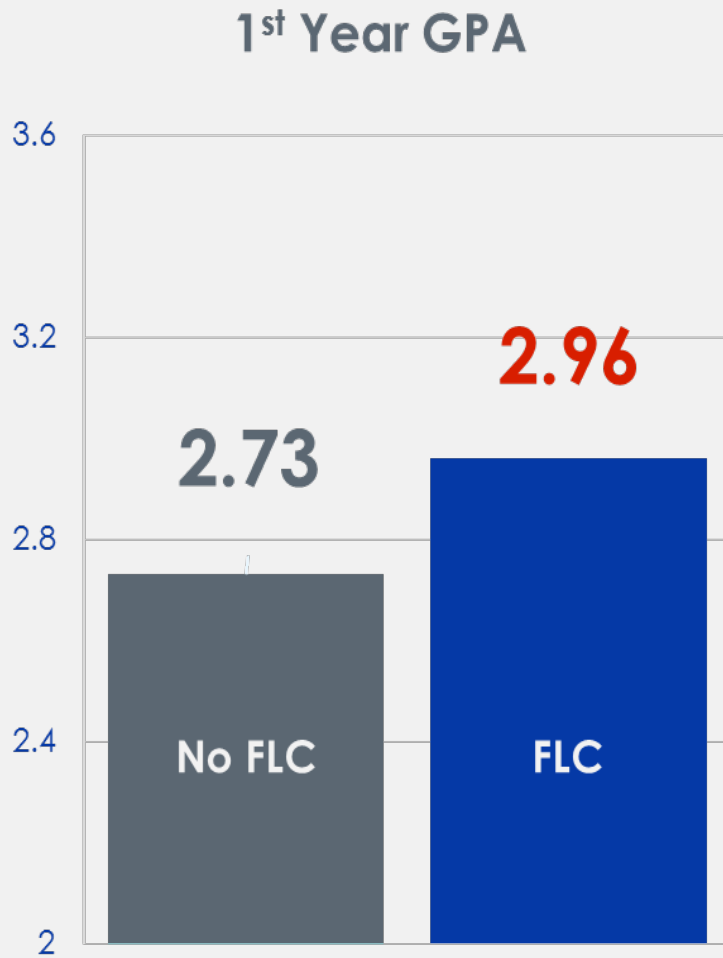


Program Picker ⌚ Est. Time: 10 min				
Take control of your future! Explore majors and certificates that work for you.				
You chose this... on your application		Would you consider... Explore these possibilities for you based on your interests and priorities Find more options		
	Nursing A.S. Learn More	Medical Office Assistant Certificate Learn More	Radiologic Technology A.A.S Learn More	Health Studies A.S. Learn More
	<input checked="" type="checkbox"/> Selected	<input type="checkbox"/> Explore	<input type="checkbox"/> Explore	<input type="checkbox"/> Explore
<i>Classes/Credits</i>	20 classes / 60 credits	8 classes / 24 credits	20 classes / 55 credits	20 classes / 62 credits
<i>Time to Complete</i>	2 years	1 year	2 years	2.25 years
<i>Financial Aid</i>	✓	May not be Financial Aid eligible	✓	✓
<i>Total Tuition</i>	\$9,176 in state	\$3,641 in state	\$8,850 in state	\$9,427 in state
<i>Outcomes</i>	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
<i>Average Salary</i>	\$38,500 \$51,100 with BA degree	\$29,129	\$37,819	\$42,774 \$51,553 with BS degree
<i>Hiring Demand</i>	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)





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





MAJOR
CHANGES
IN 2013

2,718

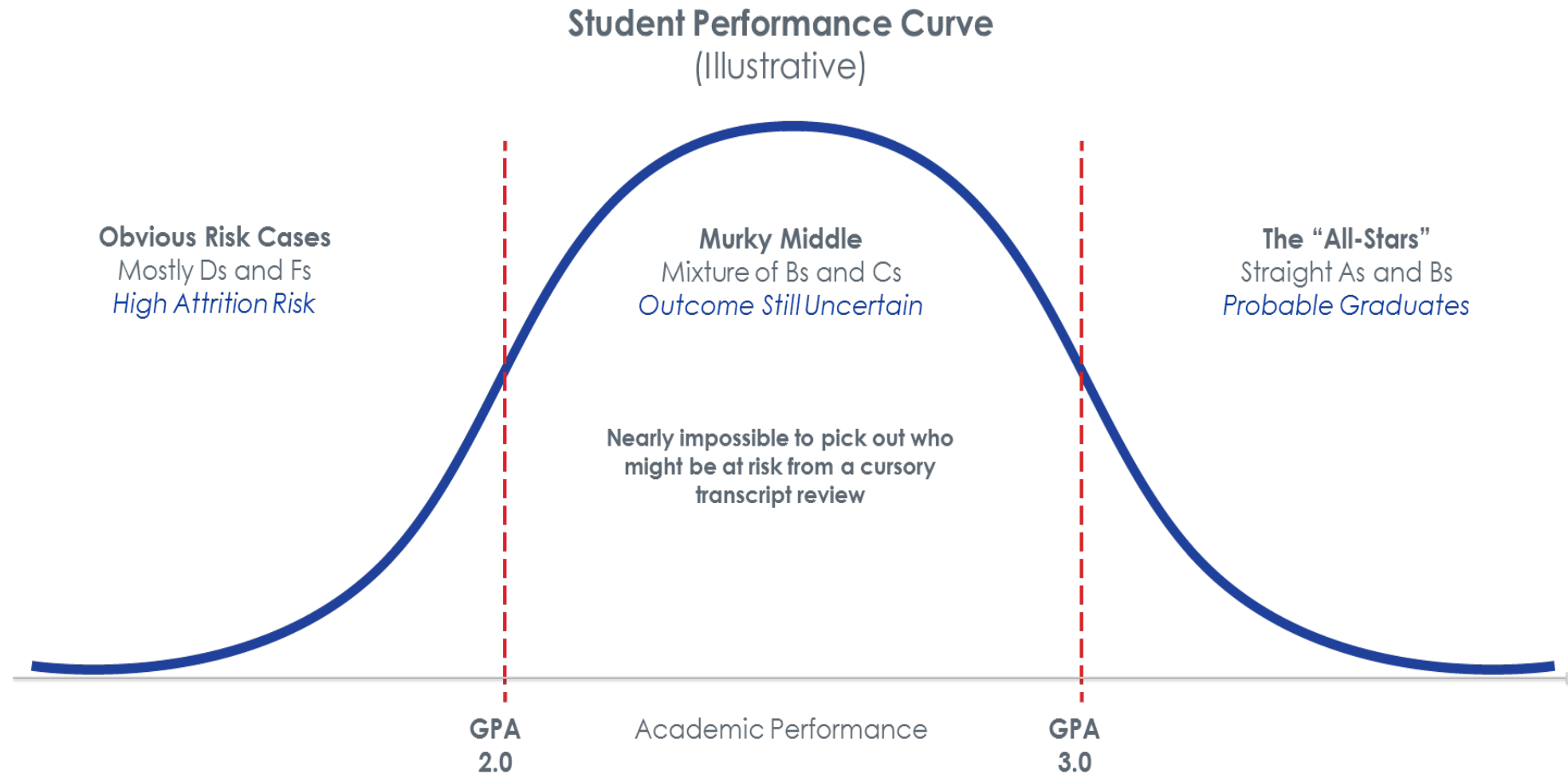
MAJOR
CHANGES
IN 2015

1,853

2-YEAR
CHANGE

-32%

The Advisement Challenge: The Murky Middle



Source: Education Advisory Board

Challenge:

Gateway Courses

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

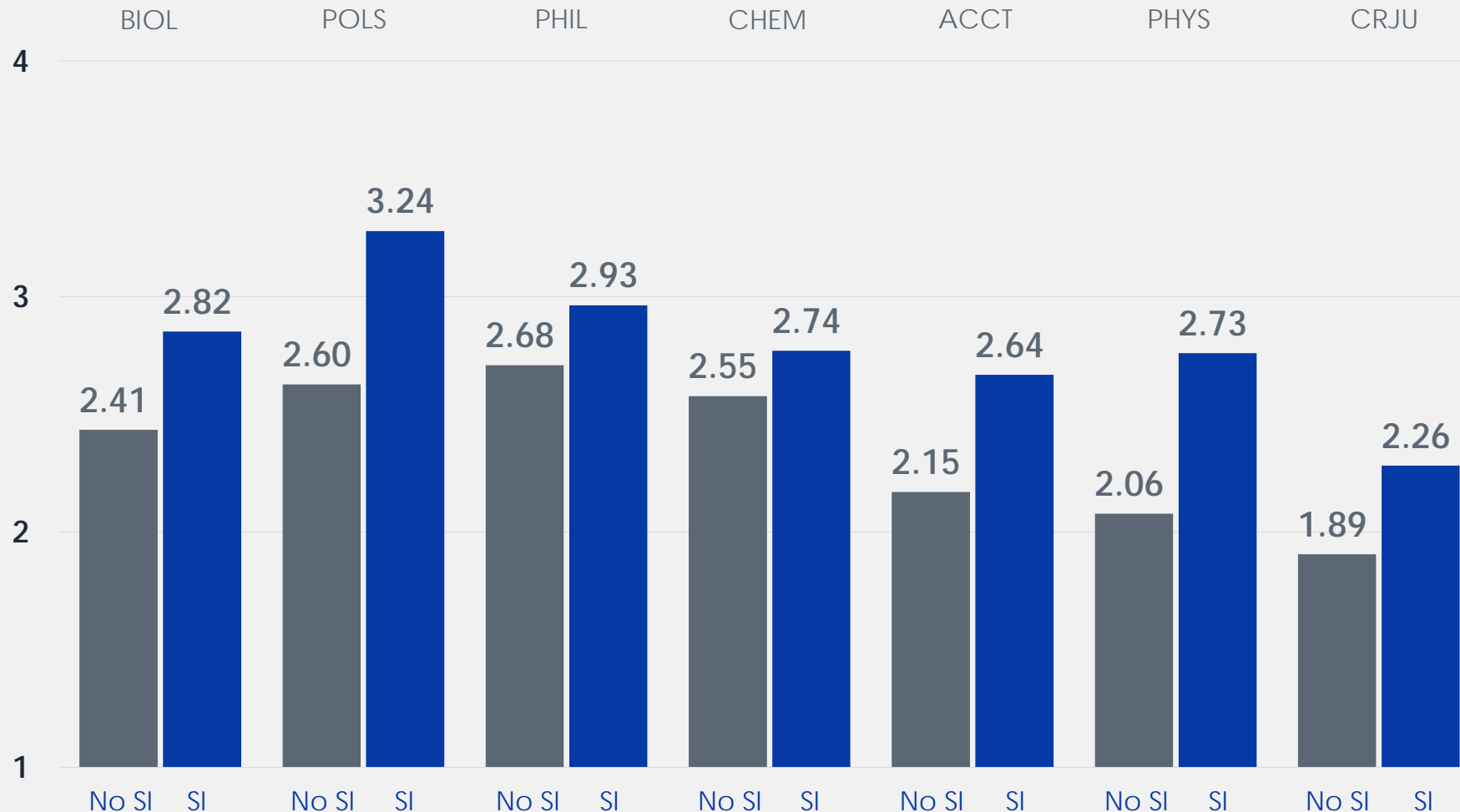


		STUDENTS	SECTIONS	DFW
POLS 1101	American Government	4694	55	16.3%
MATH 1070	Elementary Statistics	2701	76	25.2%
ECON 2105	Principle of Macroeconomics	2340	38	19.2%
PSYC 1101	Introduction to General Psychology	2252	26	21.8%
POLS 2401	Global Issues	2250	35	18.9%
FILM 2700	History of the Motion Picture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



Grants Since 2012: 8,000+

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

Seniors Graduated: 70%

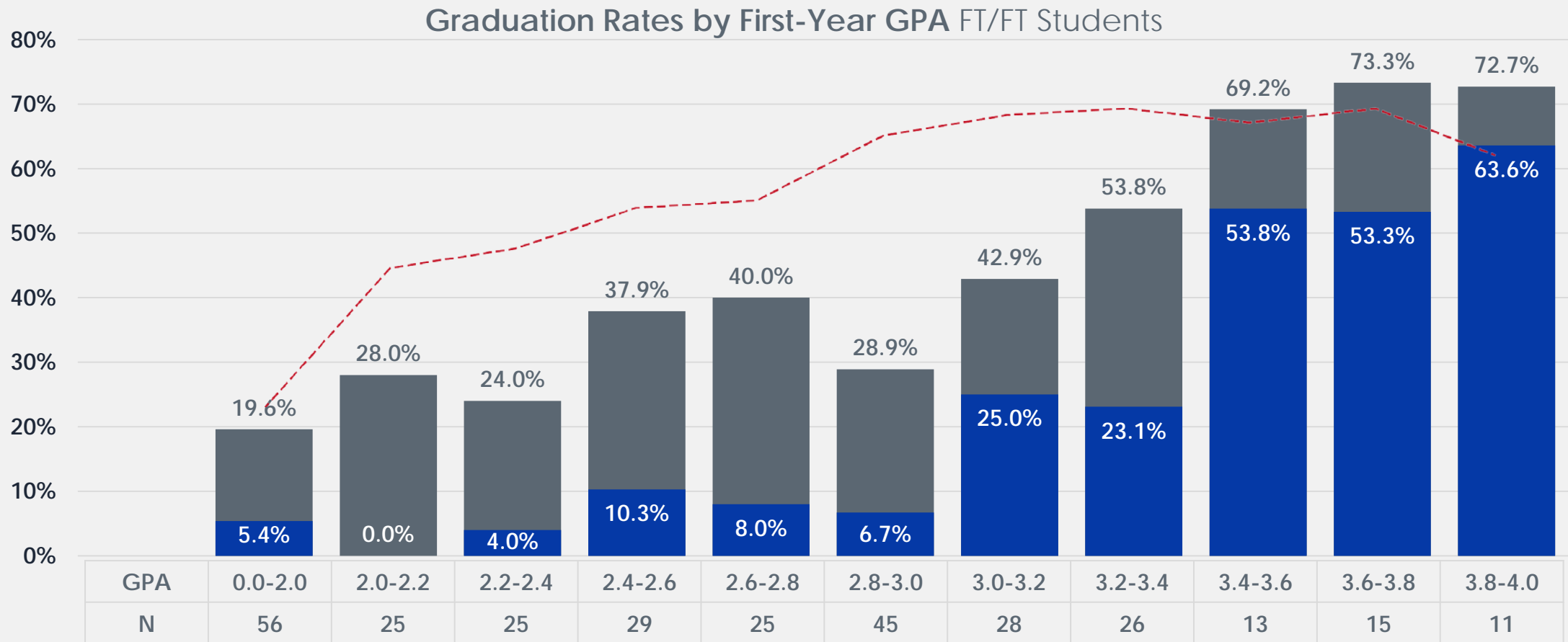
Grant Recipients
Graduated 2015-16: 1,257



Academic Program Redesign



2012 Graduation Rates of Pre-Nursing Majors



Advisement: GPS Advising



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

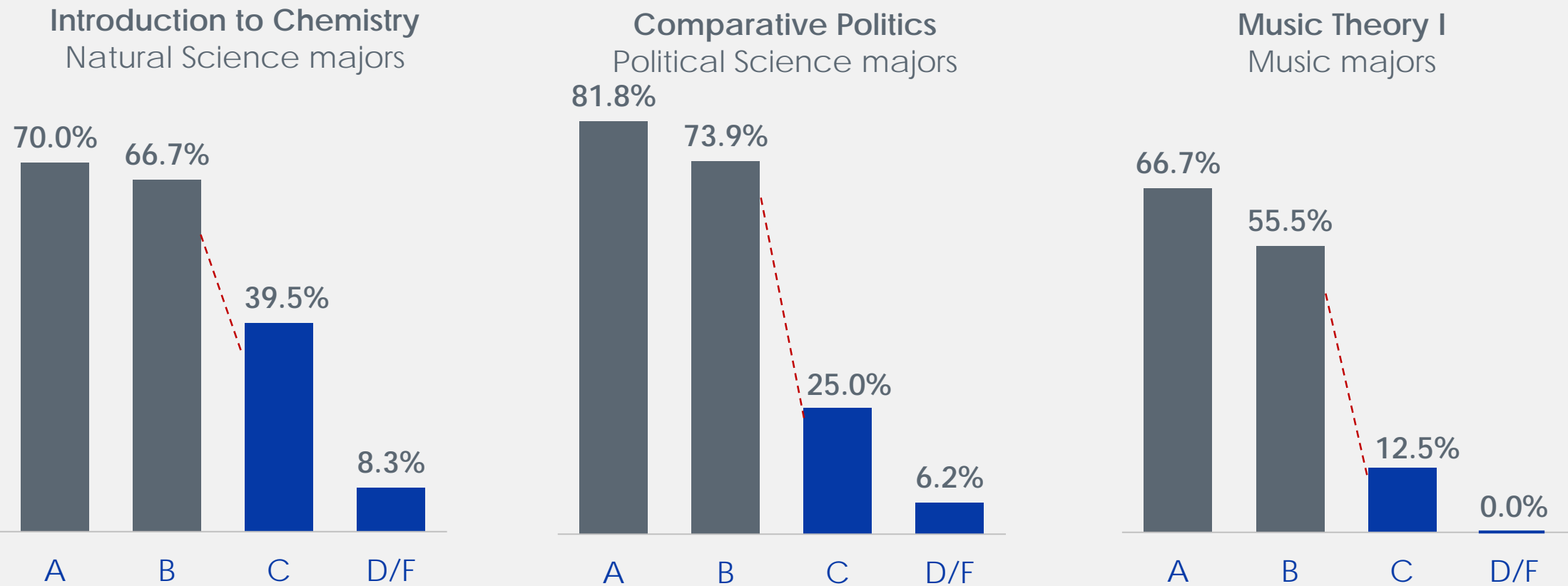


SEMESTER 1	SEMESTER 2
<ul style="list-style-type: none">• Complete 1 of ENGL 1101, ENGL 1102 or ENGL 1103 (C or Better)• Complete MATH 1113 or Higher (B- or Better)• Complete CHEM 1211K (B- or Better)	<ul style="list-style-type: none">• Complete ENGL 1102 or 1103 (C or Better)• Complete MATH 2211 or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

Alerts Based on Historical RPG Data



Graduation Rate in Major by Introductory Course Grade



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

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

MAJOR EXPLORER

ACADEMIC SUMMARY

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



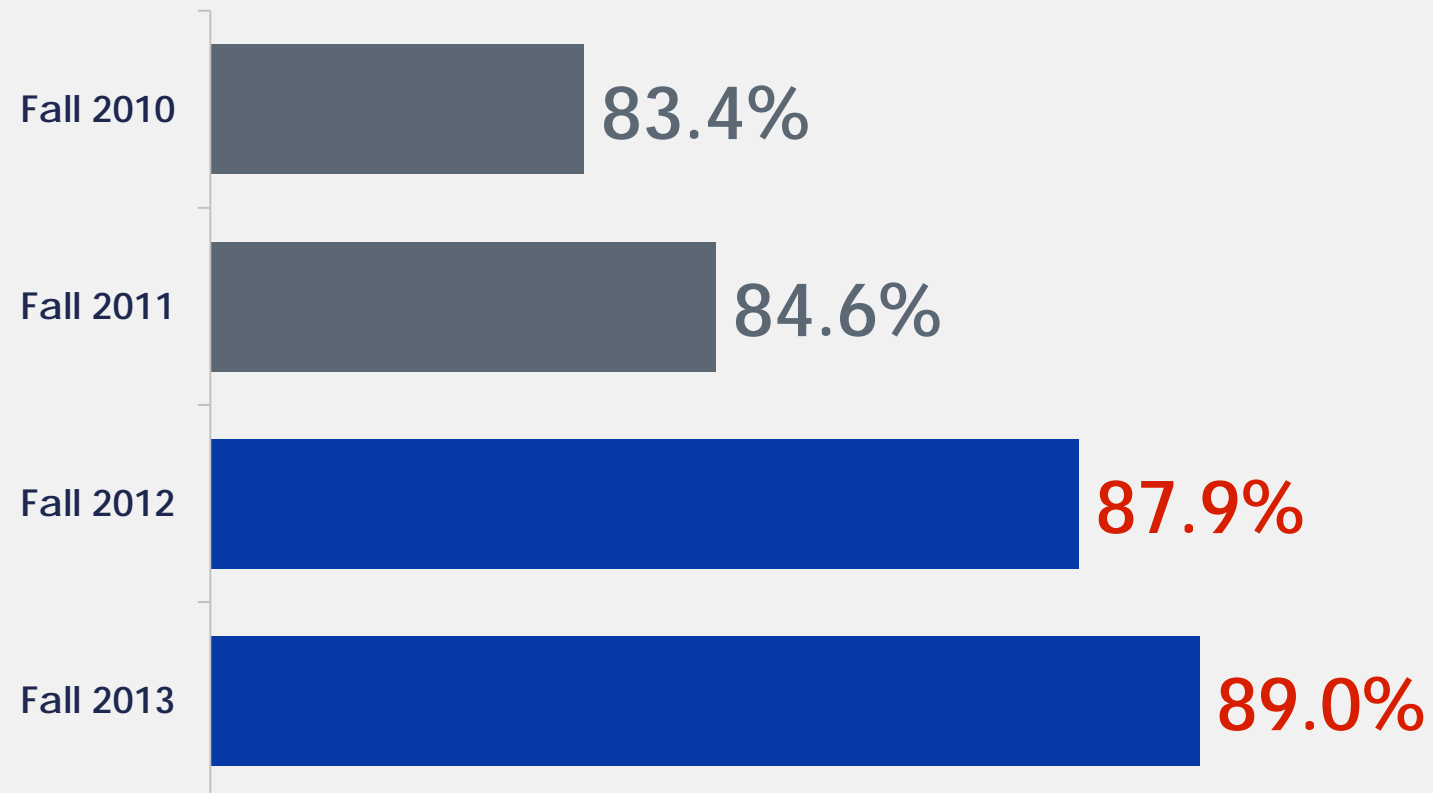


52,150

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%

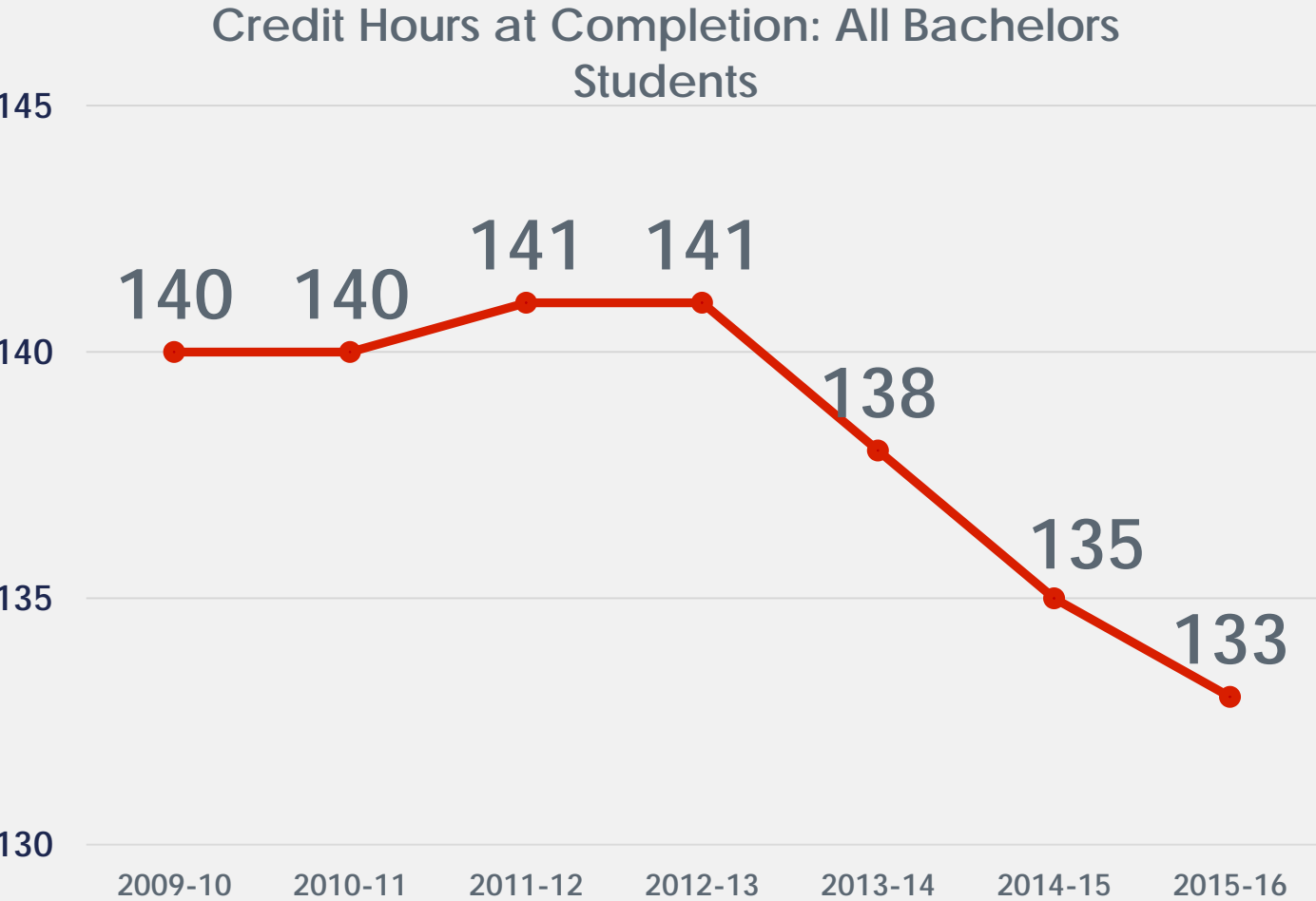
2013-14 53%

2014-15 56%

2015-16 63%



Results: Decline in Time to Degree





\$15 million

*Savings to the Class of 2016 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





Growing Recognition



The Cost of Inaction



The Calculus of Student Success: ROI

y

1-point increase in retention =
325 students

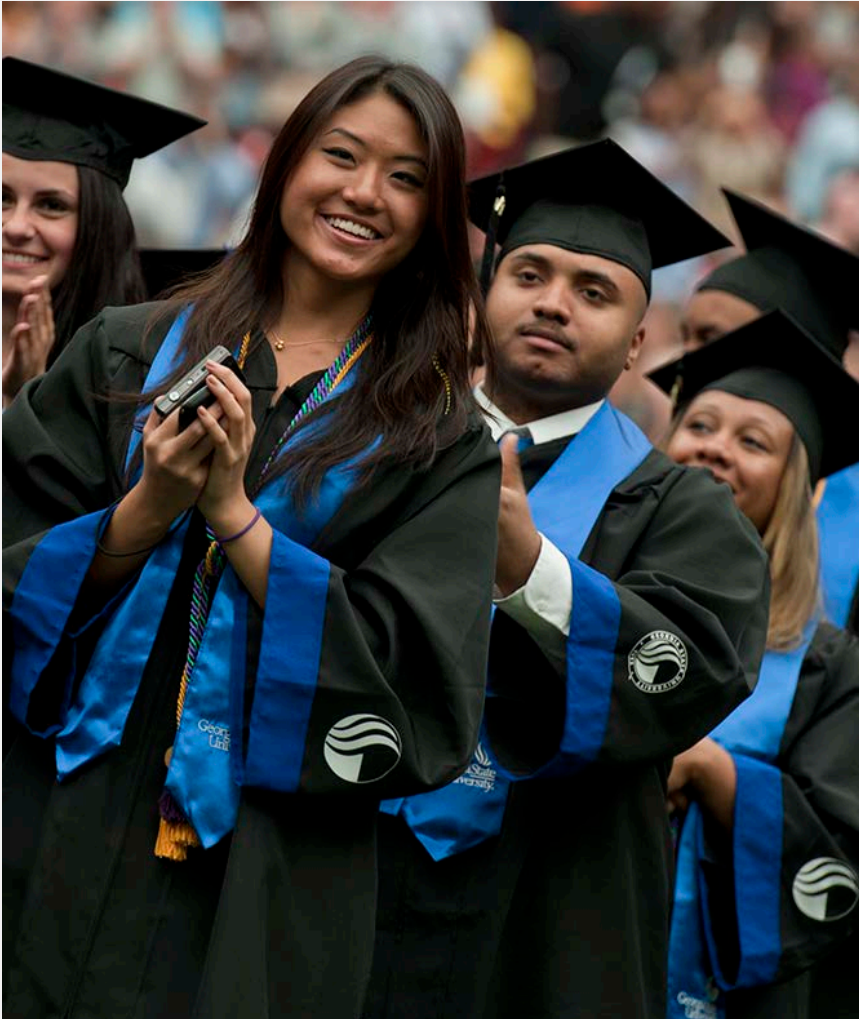
Average student tuition
& fees annually/student = **\$9,800**

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



x

Georgia State Undergraduate Degrees Awarded



2010-11:
4,222

2016-17:
7,047

INCREASE:
+2,825 (+67%)

Growing Recognition



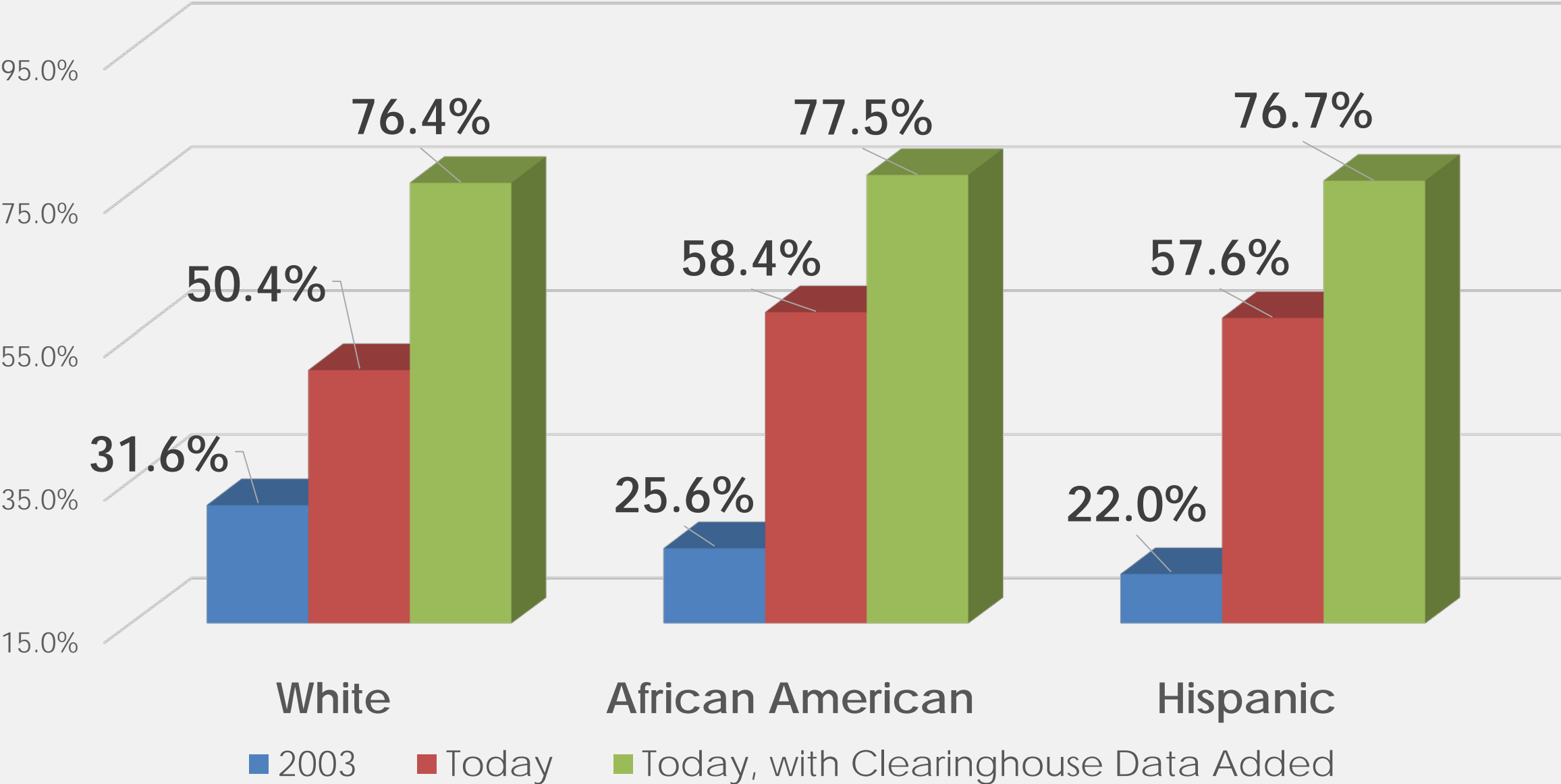
Bachelor's Degrees Awarded Annually



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



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



	Institutions	State	Total	%Grads	%Chg
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

