Building a Student-Ready University through Data and Analytics

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The Challenge in Front of Us

Baccalaureate Degree Attainment by Age 24 by Family Income Quartile

- **Top Income Quartile**: 82.4%
- **Third Income Quartile**: 36.1%
- **Second Income Quartile**: 16.5%
- **Bottom Income Quartile**: 8.3%

Percent of Low-Income Students in Public Schools

<table>
<thead>
<tr>
<th>United States</th>
<th>51%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mississippi</td>
<td>71%</td>
</tr>
<tr>
<td>N. Mexico</td>
<td>68%</td>
</tr>
<tr>
<td>Louisiana</td>
<td>65%</td>
</tr>
<tr>
<td>Arkansas</td>
<td>61%</td>
</tr>
<tr>
<td>Oklahoma</td>
<td>61%</td>
</tr>
<tr>
<td>Texas</td>
<td>60%</td>
</tr>
<tr>
<td>Georgia</td>
<td>60%</td>
</tr>
<tr>
<td>Utah</td>
<td>59%</td>
</tr>
<tr>
<td>Florida</td>
<td>59%</td>
</tr>
<tr>
<td>S. Carolina</td>
<td>58%</td>
</tr>
<tr>
<td>Tennessee</td>
<td>58%</td>
</tr>
<tr>
<td>Alabama</td>
<td>58%</td>
</tr>
<tr>
<td>California</td>
<td>55%</td>
</tr>
<tr>
<td>N. Carolina</td>
<td>53%</td>
</tr>
<tr>
<td>W. Virginia</td>
<td>52%</td>
</tr>
<tr>
<td>Delaware</td>
<td>51%</td>
</tr>
<tr>
<td>Nevada</td>
<td>51%</td>
</tr>
<tr>
<td>Arizona</td>
<td>51%</td>
</tr>
<tr>
<td>Hawaii</td>
<td>51%</td>
</tr>
<tr>
<td>Illinois</td>
<td>50%</td>
</tr>
</tbody>
</table>

Source: Southern Education Fund
• 32,500 Students on the Atlanta campus
• Research University status achieved in 1995
• 50,000+ Students as of 2016 with Perimeter College Consolidation
Graduation Rates by Race & Ethnicity

Where we were: 2003

- WHITE: 31.6%
- AFRICAN AMERICAN: 25.6%
- HISPANIC: 22%

No FLC
FLC
No FLC
FLC
Changing Demographics: Race & Ethnicity

Underrepresented Minorities

- 53% in Fall 2008
- 54% in Fall 2010
- 56% in Fall 2012
- 59% in Fall 2014
- 60% in Fall 2016
- 63% in Fall 2017
- 65% in Fall 2015
- 66% in Fall 2013
- 67% in Fall 2011

Note: The data shows a trend of increasing representation over the years.
Low-Income Students

Percent of Georgia State Undergraduates on PELL

- Fall 2007: 31%
- Fall 2008: 32%
- Fall 2009: 40%
- Fall 2010: 48%
- Fall 2011: 51%
- Fall 2012: 56%
- Fall 2013: 58%
- Fall 2014: 59%
- Fall 2015: 59%
- Fall 2016: 59%
- Fall 2017: 59%
SAT SCORES

-33 points
- $40 million

Appropriations Cuts
Are We the Problem?
Challenge:
Summer Melt
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

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

In high school, what was your...

- favorite class?
- hardest class?

- art
- math
- english/writing
- music
- history
- phys. ed
- geography
- science

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

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.

- **Career Guidance**
  Helping you find the right career path and prepare you for the job market. It’s never too early to start!

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

- **Housing Services**
  Resources to help you find a place to stay near campus.

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

- **Disability Services**
  Providing support and equipment to qualified students with physical, mental, or educational needs.
24/7 Responses Using a Chat Bot on Smart Devices

24/7 Responses Using a Chat Bot 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 Lusa.gov/1OpTcg

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: Lusa.gov/1OpTcg

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
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
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 Success Academy Students

87%

+170 students

Graduation Rate

62%
Challenge: Choosing An Academic Path
Overwhelming Choices

- Lost
- Confused
- Unsure
- Unclear
- Perplexed
- Disoriented
- Bewildered
# Academic Guides with Live Job Data

## Program Picker

Take control of your future! Explore majors and certificates that work for you.

### You chose this... on your application

<table>
<thead>
<tr>
<th>Nursing A.S.</th>
<th>Medical Office Assistant Certificate</th>
<th>Radiologic Technology A.A.S</th>
<th>Health Studies A.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Learn More</td>
<td>Learn More</td>
<td>Learn More</td>
<td>Learn More</td>
</tr>
<tr>
<td>Selected</td>
<td>Explore</td>
<td>Explore</td>
<td>Explore</td>
</tr>
<tr>
<td>20 classes / 60 credits</td>
<td>8 classes / 24 credits</td>
<td>20 classes / 55 credits</td>
<td>20 classes / 62 credits</td>
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<tr>
<td>2 years</td>
<td>1 year</td>
<td>2 years</td>
<td>2.25 years</td>
</tr>
<tr>
<td>May not be Financial Aid eligible</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>$9,176 in state</td>
<td>$3,641 in state</td>
<td>$8,850 in state</td>
<td>$9,427 in state</td>
</tr>
<tr>
<td>High rate of transfer to 4-year colleges</td>
<td>Students seek employment or another stackable certificate</td>
<td>Most students seek employment post-graduation</td>
<td>High rate of transfer to 4-year colleges</td>
</tr>
<tr>
<td>$38,500</td>
<td>$29,129</td>
<td>$37,819</td>
<td>$42,774</td>
</tr>
<tr>
<td>$51,100 with BA degree</td>
<td></td>
<td></td>
<td>$51,553 with BS degree</td>
</tr>
<tr>
<td>129 job posts</td>
<td>137 job posts</td>
<td>459 job posts</td>
<td>661 job posts</td>
</tr>
</tbody>
</table>

Find more options
Freshman Learning Communities & Meta Majors

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

1st Year GPA

- No FLC: 2.73
- FLC: 2.96

Retention

- No FLC: 81%
- FLC: 85%
Choice Architecture: Meta Majors

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

MAJOR CHANGES IN 2013: 2,718

MAJOR CHANGES IN 2015: 1,853

2-YEAR CHANGE: -32%
Challenge: Gateway Courses
Pre-Calculus, College Algebra, Intro to Statistics

• DFW Prior to Change: 43%
  DFW Today: 28% (35% drop)

• Number of Students enrolled in courses taught through the MILE, 2016-17: 8,500

+1,275 Students Passing
<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Students</th>
<th>Sections</th>
<th>DFW</th>
</tr>
</thead>
<tbody>
<tr>
<td>POLS 1101</td>
<td>American Government</td>
<td>4694</td>
<td>55</td>
<td>16.3%</td>
</tr>
<tr>
<td>MATH 1070</td>
<td>Elementary Statistics</td>
<td>2701</td>
<td>76</td>
<td>25.2%</td>
</tr>
<tr>
<td>ECON 2105</td>
<td>Principle of Macroeconomics</td>
<td>2340</td>
<td>38</td>
<td>19.2%</td>
</tr>
<tr>
<td>PSYC 1101</td>
<td>Introduction to General Psychology</td>
<td>2252</td>
<td>26</td>
<td>21.8%</td>
</tr>
<tr>
<td>POLS 2401</td>
<td>Global Issues</td>
<td>2250</td>
<td>35</td>
<td>18.9%</td>
</tr>
<tr>
<td>FILM 2700</td>
<td>History of the Motion Picture</td>
<td>2226</td>
<td>59</td>
<td>15.2%</td>
</tr>
<tr>
<td>ECON 2106</td>
<td>Principles of Microeconomics</td>
<td>2122</td>
<td>31</td>
<td>24.7%</td>
</tr>
<tr>
<td>MATH 1101</td>
<td>Introduction to Mathematical Modeling</td>
<td>2019</td>
<td>56</td>
<td>26.5%</td>
</tr>
<tr>
<td>MATH 1111</td>
<td>College Algebra</td>
<td>1540</td>
<td>45</td>
<td>20.2%</td>
</tr>
<tr>
<td>SOCI 1101</td>
<td>Introductory Sociology</td>
<td>1432</td>
<td>29</td>
<td>20.2%</td>
</tr>
<tr>
<td>MATH 1113</td>
<td>Pre-calculus</td>
<td>1289</td>
<td>34</td>
<td>27.5%</td>
</tr>
<tr>
<td>CHEM 1211</td>
<td>Principles of Chemistry I</td>
<td>1096</td>
<td>37</td>
<td>17.2%</td>
</tr>
<tr>
<td>BIOL 1103</td>
<td>Introductory Biology I</td>
<td>1051</td>
<td>48</td>
<td>24.8%</td>
</tr>
</tbody>
</table>
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: Stop Outs
< 30%

Likelihood that a college student who stops out for financial reasons will ever complete degree at the institution
Who were we dropping

• Seniors
• Academically on track
• Balance below $1,500
Panther Retention Grants

Average Grant: $900

Graduated: 86.5%

Grant Recipients Graduated 2016-17: 1,321
Panther Retention Grants

11,027

Grants awarded since 2011
The Advisement Challenge: The Murky Middle

Student Performance Curve
(Illustrative)

Obvious Risk Cases
Mostly Ds and Fs
High Attrition Risk

Murky Middle
Mixture of Bs and Cs
Outcome Still Uncertain

Nearly impossible to pick out who might be at risk from a cursory transcript review

The “All-Stars”
Straight As and Bs
Probable Graduates

Academic Performance

GPA 2.0
GPA 3.0
New Advising Structures

- All students assigned an advisor
- New University Advising Center with 70 Advisors
- Advisors trained by meta majors
- Coordinated tracking and notes
- Common training, HR, salary structures
- 6 Transition Advisors
Advisement: GPS Advising

Predictive Analytics Project with EAB

10 YEARS OF DATA  |  2.5 MILLION GRADES  |  800+ ANALYTICS-BASED ALERTS
144,000 STUDENT RECORDS  |  30,000 STUDENTS TRACKED DAILY
# Academic Program Maps: B.S. in Chemistry

## SEMESTER 1
- 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)
- 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 2
- 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
- Complete CHEM 2400 (B- or Better)
- Complete MATH 2212 (C or better)
- Complete PHY 2211K (C or better)
- Complete CHEM 3410 (C or better)
- PHY 2212k (B- or Better) (C or better)
- Maintain a cumulative GPA of 2.25 or Better

## SEMESTER 4
- 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
- Complete CHEM 4000 with a C or Better
- Complete CHEM 4110 with a C or Better
- Complete CHEM 4010 with a C or Better
- Complete CHEM 4120 with a C or Better

## SEMESTER 6
- Complete CHEM 4010 with a C or Better
- Complete CHEM 4120 with a C or Better

## SEMESTER 7
- Complete CHEM 4160 with a B- or better

## SEMESTER 8
- Complete CHEM 4190 with a C or Better
Alerts Based on Historical RPG Data

Graduation Rate in Major by Introductory Course Grade

**Introduction to Chemistry**
Natural Science majors
- A: 70.0%
- B: 66.7%
- C: 39.5%
- D/F: 8.3%

**Comparative Politics**
Political Science majors
- A: 81.8%
- B: 73.9%
- C: 25.0%
- D/F: 6.2%

**Music Theory I**
Music majors
- A: 66.7%
- B: 55.5%
- C: 12.5%
- D/F: 0.0%
Results: Increased Retention

Increased Average First Term Retention
Fall to Spring Retention

- Fall 2010: 83.4%
- Fall 2011: 84.6%
- Fall 2012: 87.9%
- Fall 2013: 89.0%
## Impact on Average Credits Attempted Based on Number of Fall/Spring Appointments

Analysis removes students who did not register for Spring term to create an equal comparison

<table>
<thead>
<tr>
<th># Appts</th>
<th>Average of Term Registered in Fall 2017</th>
<th>Average of Term Registered in Spring 2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>10.50</td>
<td>10.19</td>
</tr>
<tr>
<td>1+</td>
<td>12.16</td>
<td>12.00</td>
</tr>
<tr>
<td>1</td>
<td>11.57</td>
<td>11.19</td>
</tr>
<tr>
<td>2</td>
<td>12.22</td>
<td>12.03</td>
</tr>
<tr>
<td>3</td>
<td>12.43</td>
<td>12.44</td>
</tr>
<tr>
<td>4</td>
<td>12.51</td>
<td>12.52</td>
</tr>
<tr>
<td>5</td>
<td>12.63</td>
<td>12.55</td>
</tr>
<tr>
<td>6</td>
<td>12.74</td>
<td>12.76</td>
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<tr>
<td>7</td>
<td>12.96</td>
<td>13.28</td>
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<tr>
<td>8</td>
<td>12.58</td>
<td>12.57</td>
</tr>
<tr>
<td>9</td>
<td>12.57</td>
<td>12.87</td>
</tr>
<tr>
<td>10+</td>
<td>13.05</td>
<td>13.09</td>
</tr>
</tbody>
</table>
Results: Decline in Time to Degree

Credit Hours at Completion: All Bachelors Students

- 2009-10: 140
- 2010-11: 140
- 2011-12: 141
- 2012-13: 141
- 2013-14: 138
- 2014-15: 135
- 2015-16: 133
ROI for Students

$18 million

Savings to the Class of 2018 in tuition and fees when compared to the Class of 2012
Confounding Expectations

STEM Degrees Conferred Since 2011 (enrollment change)

<table>
<thead>
<tr>
<th>Group</th>
<th>Percentage Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>+114% (14%)</td>
</tr>
<tr>
<td>Black Male</td>
<td>+153% (15%)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>+275% (24%)</td>
</tr>
</tbody>
</table>
Impacts
Growing Recognition
The Calculus of Student Success: ROI

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
Georgia State Undergraduate Degrees Awarded

2010-11: 4,222  
2016-17: 7,047  

INCREASE: +2,825 (+67%)
# Bachelor’s Degrees Awarded Annually

<table>
<thead>
<tr>
<th></th>
<th>2009-10</th>
<th>2016 - 17</th>
<th>6-Year Change</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American</td>
<td>1,001</td>
<td>2,040</td>
<td>+1,039</td>
<td>+103%</td>
</tr>
<tr>
<td>Pell</td>
<td>1,298</td>
<td>2,957</td>
<td>+1,659</td>
<td>+128%</td>
</tr>
<tr>
<td>Hispanic</td>
<td>196</td>
<td>509</td>
<td>+313</td>
<td>+160%</td>
</tr>
</tbody>
</table>
Graduation Rates by Race & Ethnicity

- **White**
  - 2003: 31.6%
  - Today: 50.4%
  - Today, with Clearinghouse Data Added: 76.4%

- **African American**
  - 2003: 25.6%
  - Today: 58.4%
  - Today, with Clearinghouse Data Added: 77.5%

- **Hispanic**
  - 2003: 22.0%
  - Today: 57.6%
  - Today, with Clearinghouse Data Added: 76.7%

*Today, with Clearinghouse Data Added*
#1 in Degrees Conferred to African Americans

Top 100 Degree Producers: Non-Profit Universities
2016 African-American Bachelor’s - All Disciplines Combined

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

Source: Diverse Issues in Higher Education