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# Four Responses to the Changing Higher Education Landscape



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# Presentation Overview

Challenges and Responses to the Higher Education Landscape:

- |                          |   |                                  |
|--------------------------|---|----------------------------------|
| 1. Declining Enrollment  | ➔ | Improving Enrollment Health      |
| 2. Supporting Diversity  | ➔ | Customized Research Solutions    |
| 3. Retention Problem     | ➔ | Improving Retention              |
| 4. Workforce Development | ➔ | Aligning College-Career Pathways |

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# Challenges of Declining Enrollment

# Challenges of Declining Enrollments



There are [two million fewer students](#) enrolled in higher education than in 2011.



Post-Recession declines in the birth rate mean “traditional” students [will decline by 9 percent](#) by 2030.



International enrollment has [declined by 6 percent](#).



[Ninety-one percent](#) of adult students reported the ability to register for classes with few conflicts as important.

# Step 1: Stabilize Enrollment Ratios

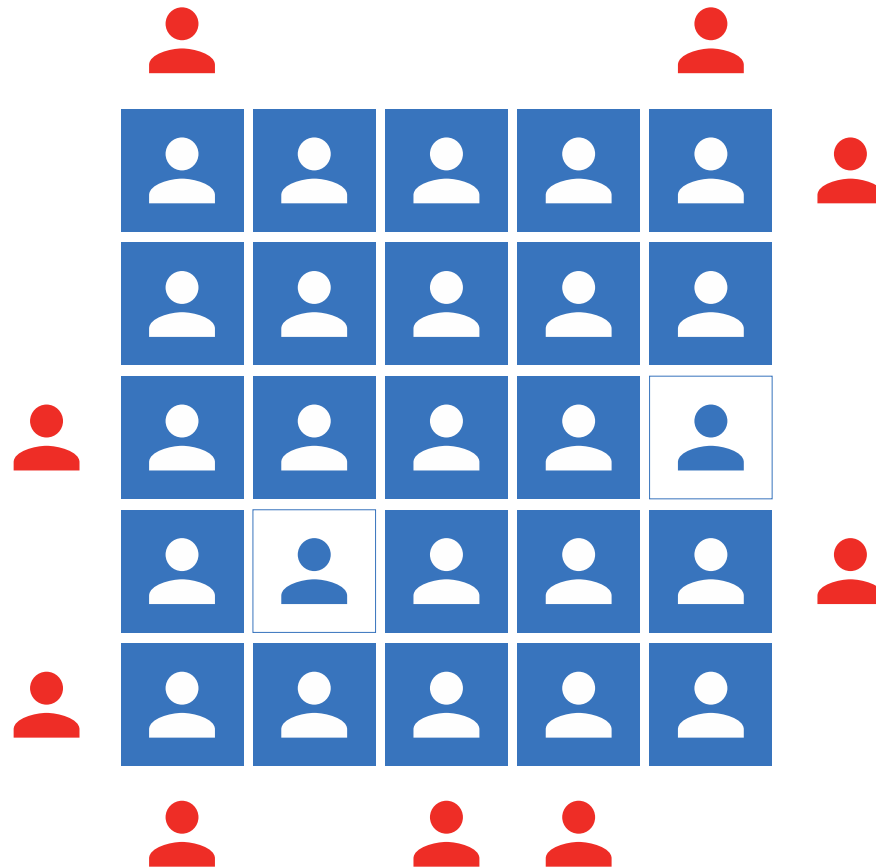
Enrollment Ratio Benchmarks by Two Standard Deviations (Goal: ~85%)



# Overloaded

>95%

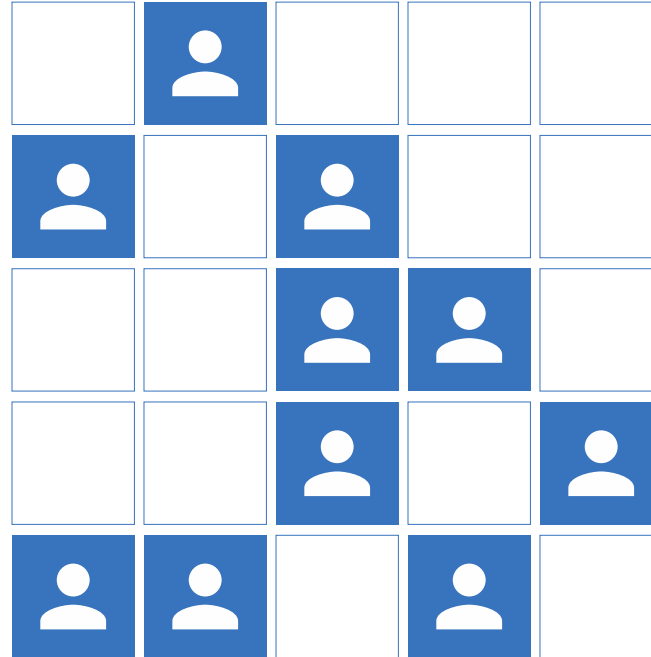
22%



# Underutilized

<70%

45%

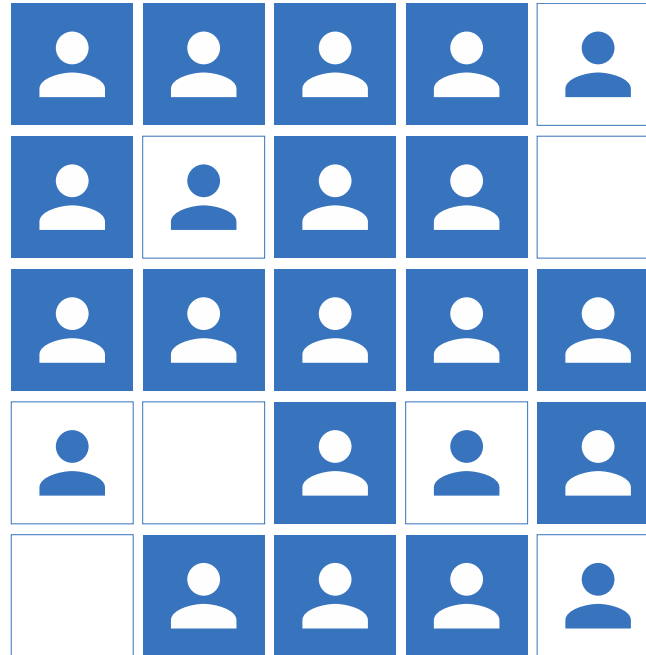




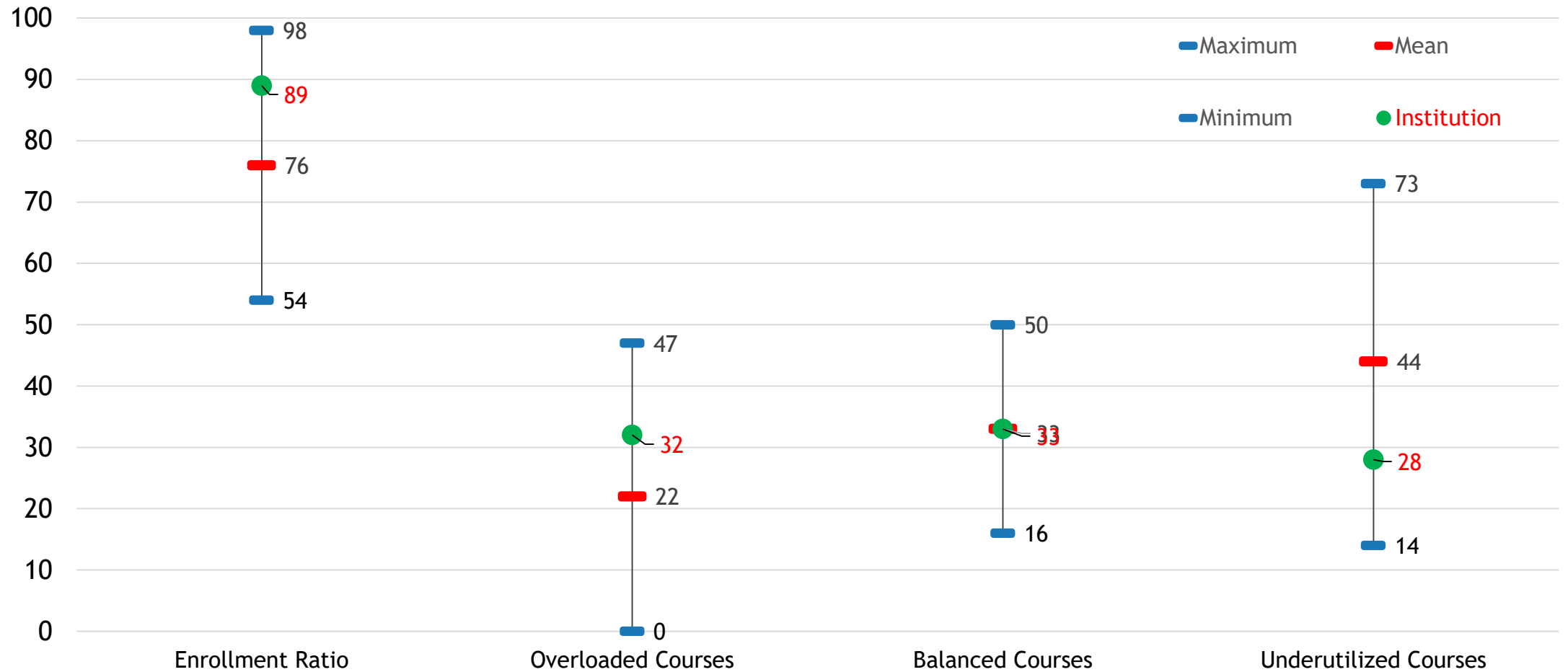
# Balanced

70-95%

33%



# Key HESI Benchmarks by Two Standard Deviations



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# Improving Enrollment Health

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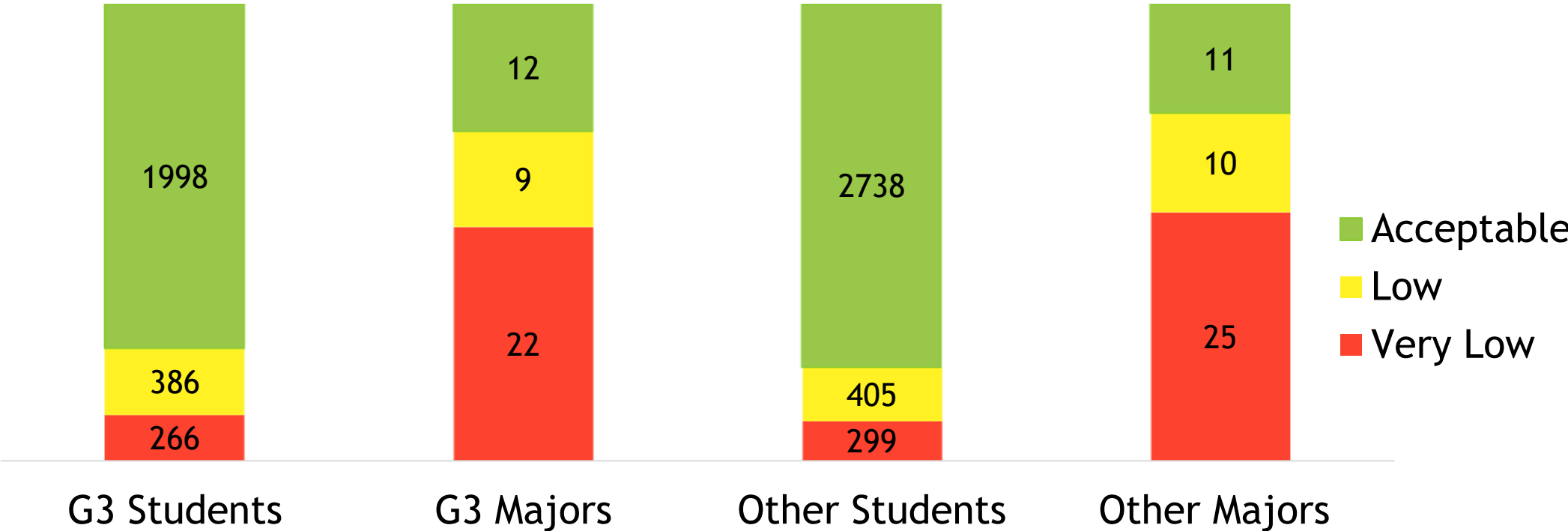
# What is Enrollment Health?

- **Enrollment Health Per Pathway-** The average number of students per pathway requirement. This is a proxy for enrollment in an absolute requirement within the pathway (no options), assuming that all demand for this course comes from this pathway (no course sharing).
- If 40 students are in a major that takes four terms (assuming a full-time load) to complete, the enrollment health per pathway for that major is  $(40 \text{ students} / 4 \text{ terms})$  10. This means that only 10 students might take a required course in this program, assuming that course is offered each term, no course sharing, and no student attrition.

# Enrollment Health of Majors

Most students are pursuing a small number of majors, creating Enrollment Health challenges in roughly 3/4 of all majors.

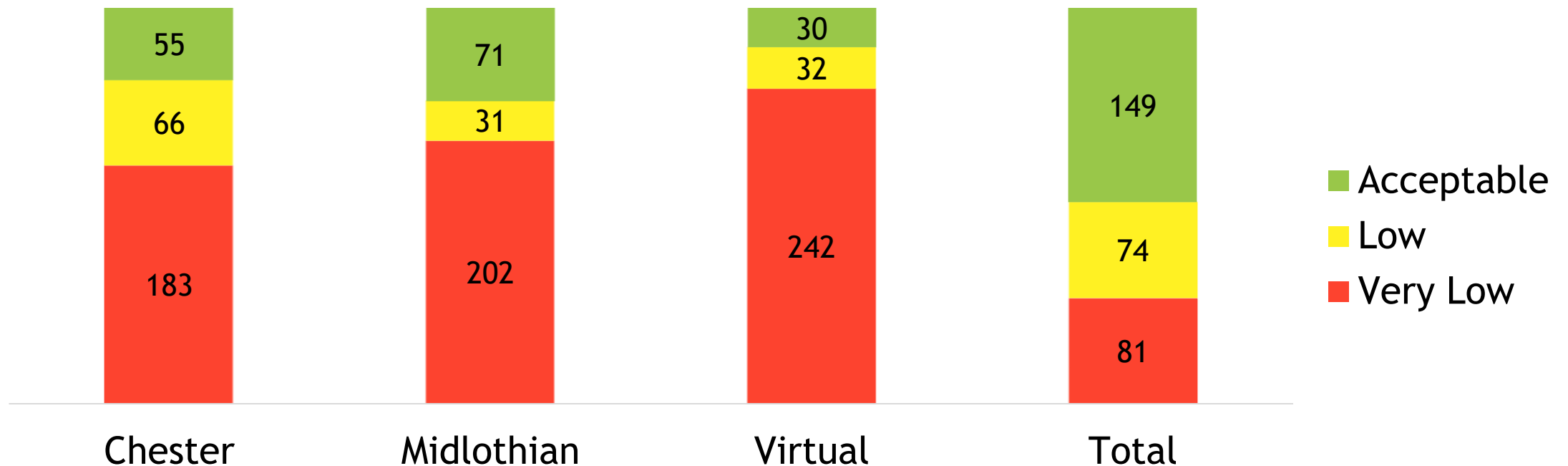
Enrollment Health Distribution (State Priority v. Other Pathways)



# Enrollment Health of Courses by Campus

Enrollment Health of courses is too low for most courses to be offered on each students' "Home Campus"

Critical Mass Distribution



# Enrollment Health Analysis by Pathway

Pathway Name	Major Critical Mass	Pathway Critical Mass			Low Critical Mass Requirements
		Chester	Midlothian	Virtual	
Accounting	7.2	62.9	94.1	54.6	47%
Advanced Manufacturing Technology	0.6	45.8		23.0	75%
Architectural Engineering Technology	7.0	53.7	74.1	34.1	67%
Building Construction	3.0	64.6	90.0		80%
Business Administration Paralegal Studies	7.3	93.6	149.9	78.3	23%
Business Administration	137.3	103.6	169.4	86.2	3%
Business Management	21.8	69.8	106.5	62.2	40%

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# Challenges of Diversity

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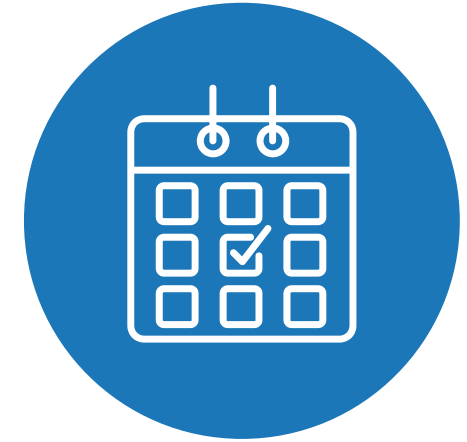
# Challenges of Access and Diversity



Dual Enrollment



Priority Registration



Custom Scheduling

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# What are Customized Research Solutions?



**Customized Research Solutions** - A customized institutional study of actionable data that demonstrates how an institution can improve retention, time-to-completion, graduation rates, and/or save money through course scheduling efficiencies based upon results with consultative guidance from higher education experts.

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## How are Customized Research Solutions selected?

- ✓ Must Be an Existing Client
- ✓ Special Project/Initiative
- ✓ Excellent Data (and Willingness to Share)
- ✓ Reasonable Expectation of Results Implementation
- ✓ Willingness to Share Success (Presentations, Earned Media, Publications)

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# Addressing Diversity at the Section-Level

1. What, if any, demographic differences exist between *students registering in their first year among the big four momentum metrics*? (Big Four: English Composition, College Algebra, Nine Credits in a Major, 30 Credits in the First Year)
2. What, if any, demographic differences exist between *students who are retained after their first year*? (There is a mutual interest in Latino and first-generation students.)
3. What, if any, demographic differences exist between *students who are retained by major after their first year*?
4. What, if any, demographic differences exist between *students at who graduate in two, three, or four years and those who do not graduate but entered in the same cohort*?

# Implications for Equality, Equity, Justice



In the first image, it is assumed that everyone will benefit from the same supports. They are being treated equally.



In the second image, individuals are given different supports to make it possible for them to have equal access to the game. They are being treated equitably.



In the third image, all three can see the game without any supports or accommodations because the cause of the inequity was addressed. The systemic barrier has been removed.

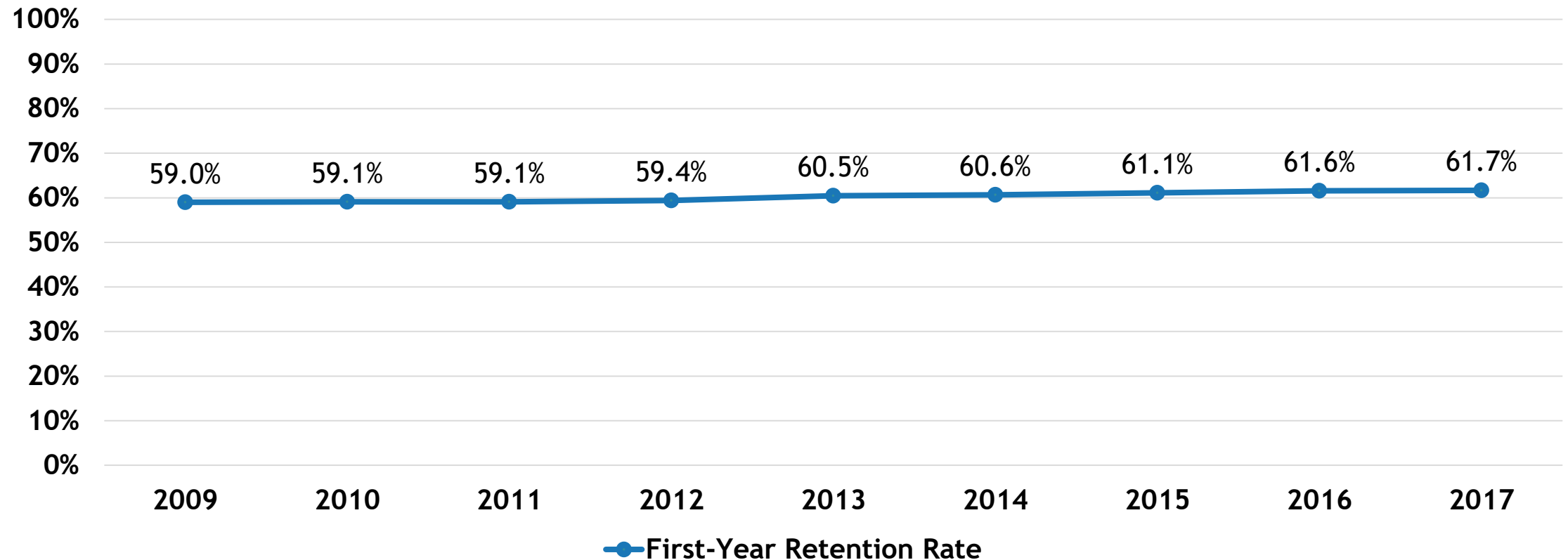
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# Challenges of Retention

# Challenges of Retention



## First-Year Retention Rate, 2009 - 2017





# What helps retain more students?

Selectivity  
+.580  
SAT Math

Course Times  
+.132  
Prime Ratio

Course Utilization  
-.144  
Underutilized Courses

Momentum  
+.184  
Student Credit Hours



# Momentum Year Setup

Home Dashboards Calendars Analytics Academics Events Reporting Settings

## Momentum Year Settings

Save Save and Close Cancel

The following settings will be used by Student Progress Analysis when calculating Momentum Year progress for students.

### English Gateway Requirement

Select a Course  ▼ ✕

Select a Course Group

### Math Gateway Requirement

Select a Course  ▼ ✕

Select a Course Group

### Pathway Progress

Pathway Progress Goal (hrs):  ↕

Select Course Group:  ▼ ✕

Use Students' Pathways (if available)

### Momentum Year Hours

Momentum Year Goal (hrs):  ↕

Apply transfer courses toward momentum hours

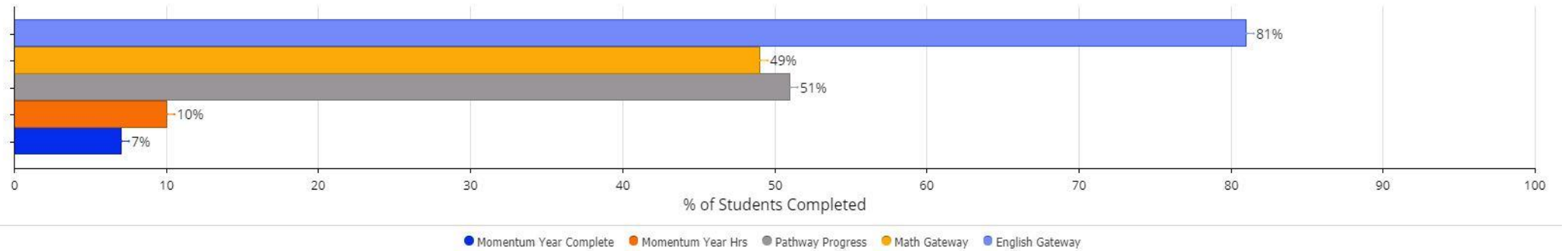
# Momentum Year Results

Home Dashboards Calendars Analytics Academics Events Reporting Settings

## Momentum Year Report

Select Start Term: 201901 Total Students: 4270

### Momentum Year Metrics for Spring Semester 2019



# Student Progress Analysis

Student Plan: Brumagen, Winter (276191)

Profile				Plan Summary			
Student Name:	Brumagen, Winter	ID:	276191	Required Credits:	116	Remaining Credits:	98
Program of Study:	U1BS_CHEM:CHEM:CHEB	Campus:	Main	Completed Credits:	26	Terms Remaining:	6
Pathway:	BS Chemical Sciences Biologic:	Availability:		Applied Credits:	15	Progress Status:	Off Schedule
Major:	CHEM - Chemical Sciences	Load:	Full Time 16	In Progress Credits:	17		
Catalog Term:	201730						

Term	Sequence <sup>▲</sup> 2	Course	Group	Title	Credits	Type	Status	On Time
[-] Term: 201720								
201720		MATH 005		Preparatory Calculus	4	Unprodu...	Complete...	
201720		WRI 001		Academic Writing	4	Unprodu...	Complete...	
201720	18	USTU 010	WritingElective	Intro to Undergraduate S...	1	Option	Complete...	Early
[-] Term: 201730								
201730		CHEM 001			3	Unprodu...	In Progress	
201730	1	WRI 010			4	Required	In Progress	Late
201730	2	MATH 021			4	Required	In Progress	Late

Close

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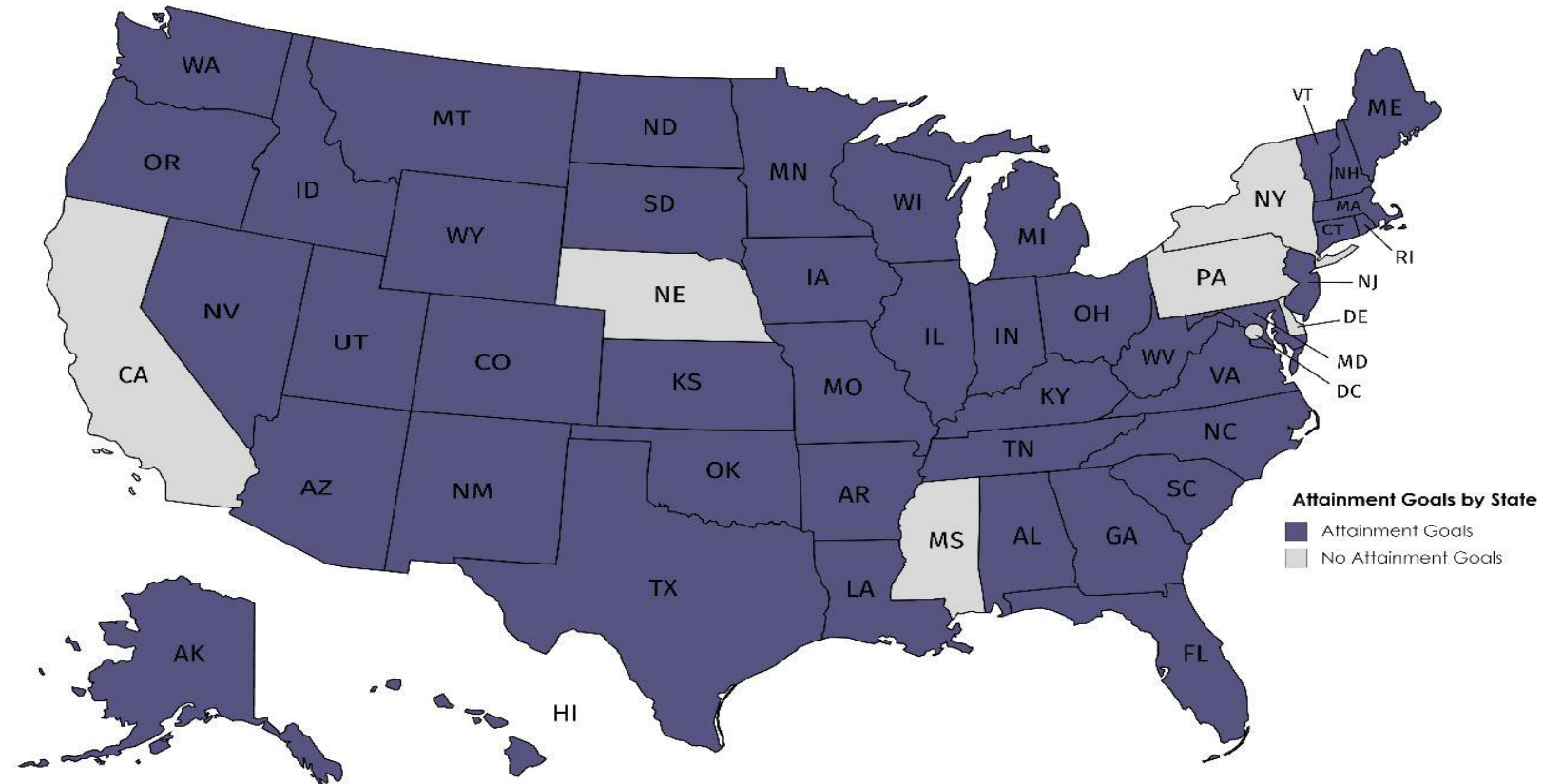
# Five Integrated Advantages of Momentum Year

1. Fulfill the promise of Guided Pathways to “help them stay on plan.”
2. Track progress in real-time.
3. Support “15-to-Finish” initiatives/Math Pathways and align outcomes.
4. Improve diversity outcomes through purposeful, first-year scheduling.
5. Strategic Summer engagement.

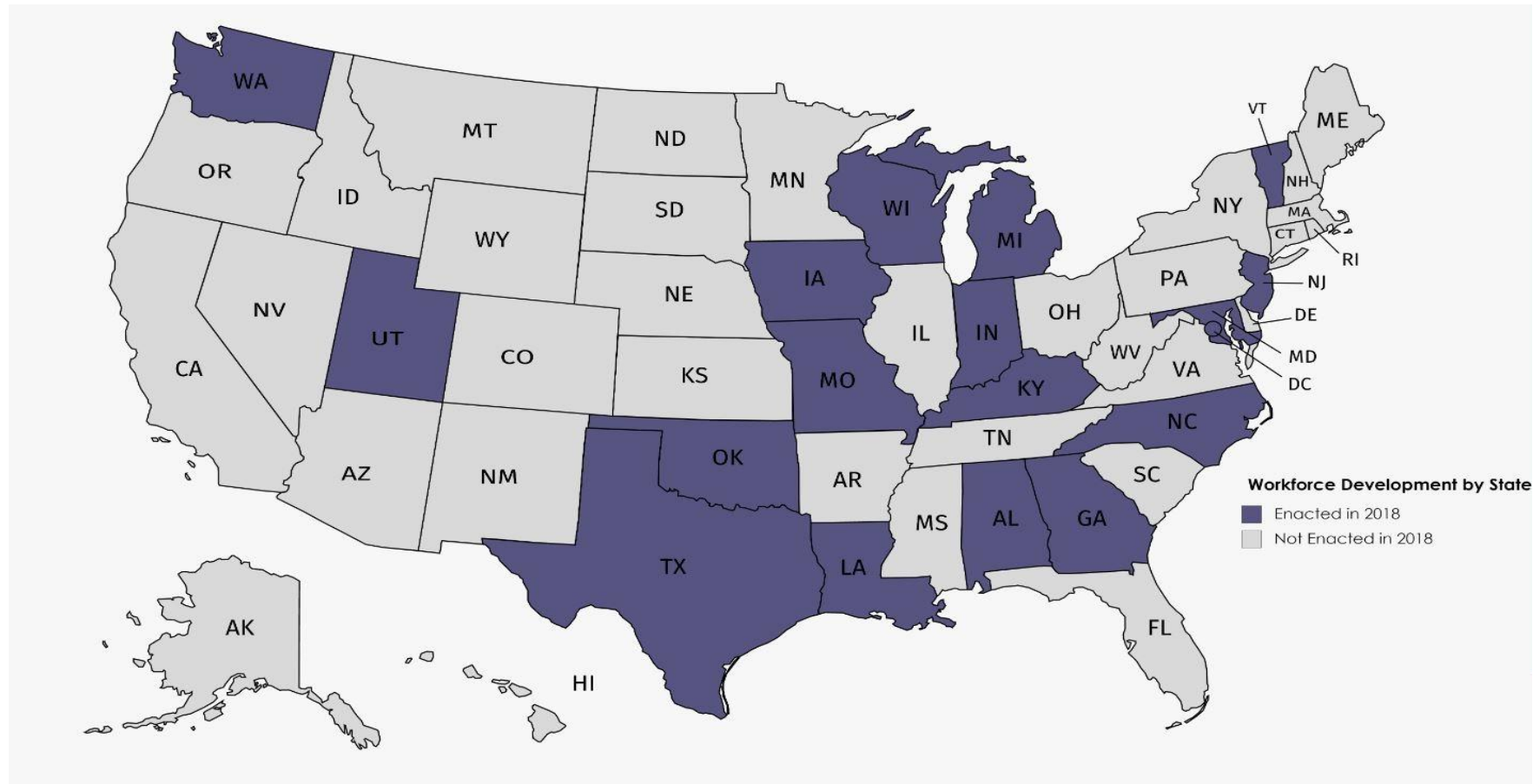
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# Challenges of Workforce Development

# Attainment Goals by State, 2018



# Enacted Workforce Development Policies by State, 2018





**95%**

of Chief Academic Officers rate their institution as very/somewhat effective at preparing students for work.

**34%**

of undergraduates strongly agree that they will graduate with the job market skills they need.

**11%**

of business leaders strongly agree that graduating students have the skills their businesses need.

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# Graduate More Students with Degree Velocity

Degree Velocity

41.65%

Time-To-Degree (Years)

4.80

Credits Per Year

16.77

Productive Credits  
Per Year

12.50

Productive Ratio

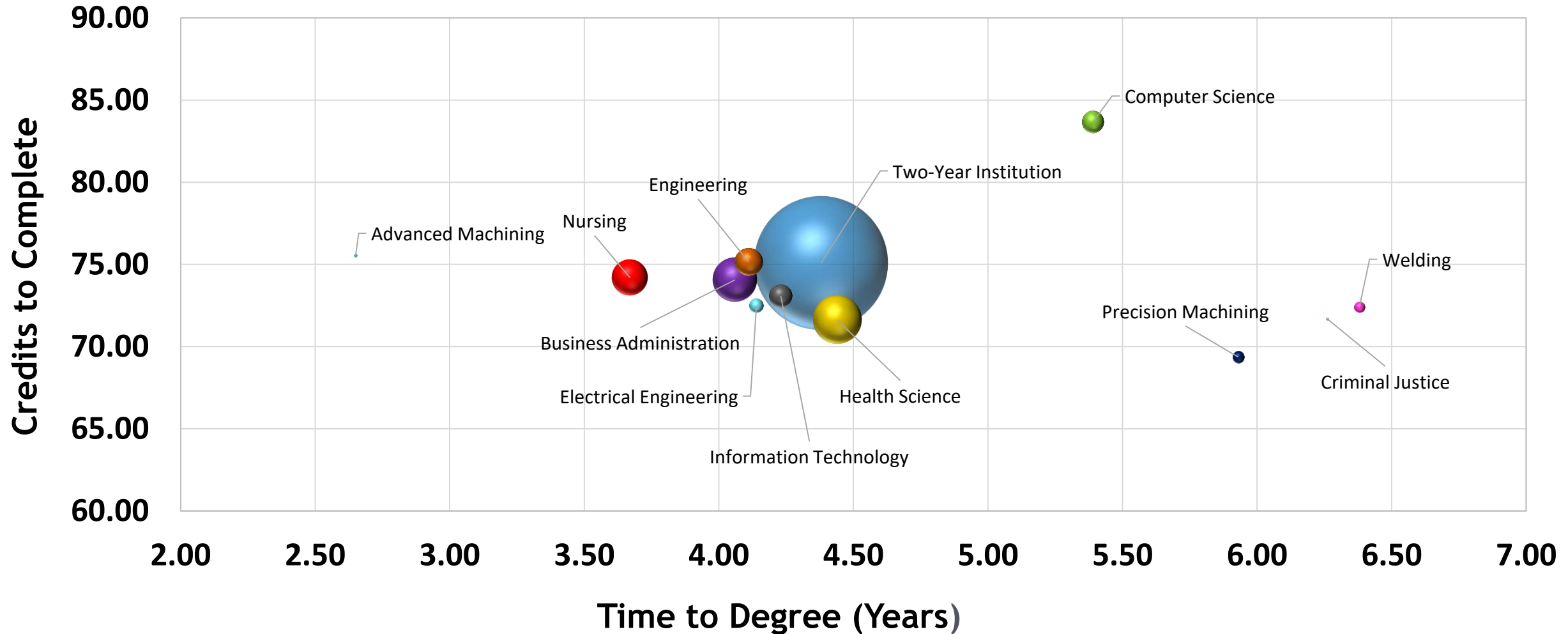
74.50%

Credits to Complete

80.54

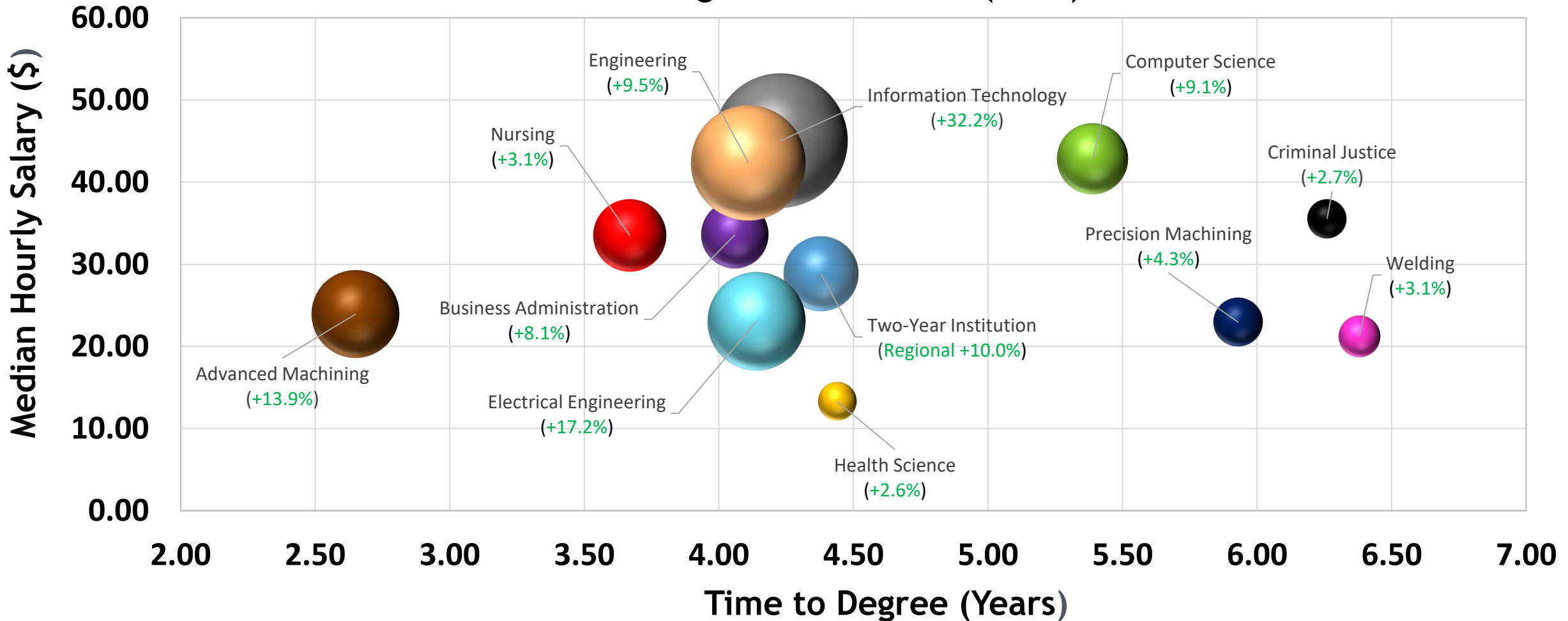
# Two-Year College Pathways

Bubble Plot by Credits to Complete, Time to Degree, and Students in Pathway



# Two-Year College-Career Pathways

Bubble Plot of Median Hourly Salary (\$), Time to Degree (Years) and Projected Regional Job Growth (2021)



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# Are we graduating more students faster?

Degree Velocity

75.08%

Time-To-Degree (Years)

5.33

Credits Per Year

24.36

Productive Credits  
Per Year

22.53

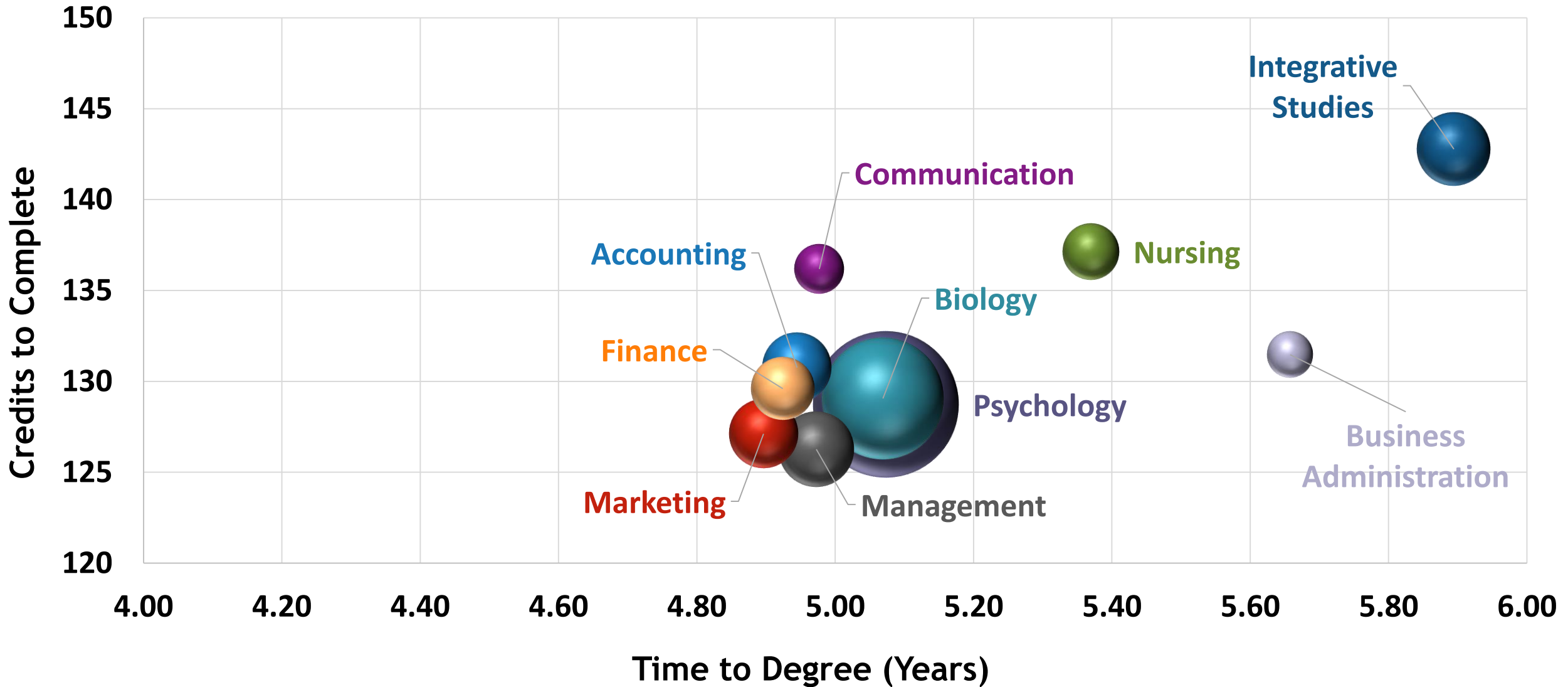
Productive Ratio

92.48%

Credits to Complete

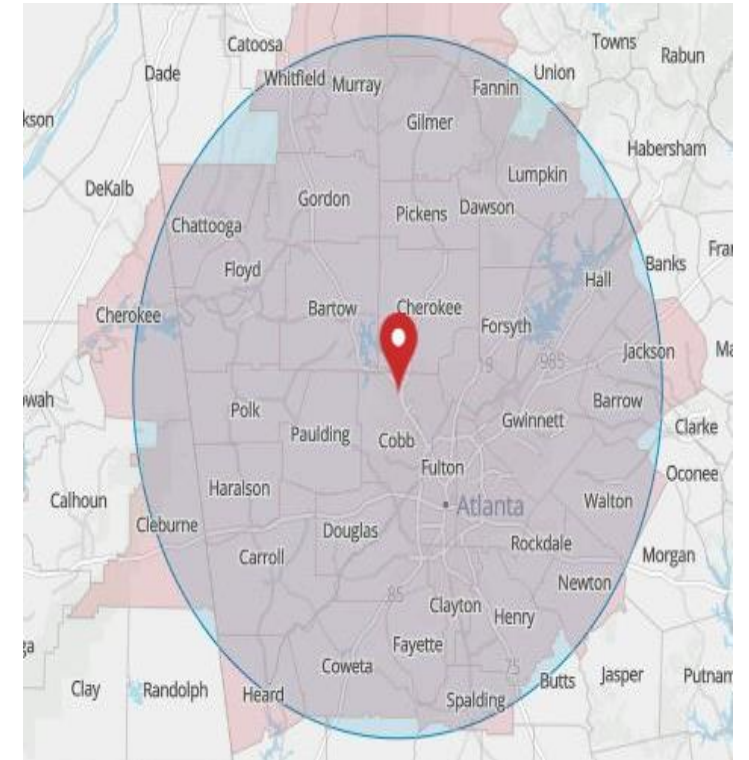
129.76

Bubble Plot by Credits to Complete, Time-to-Degree, and Students with Velocity



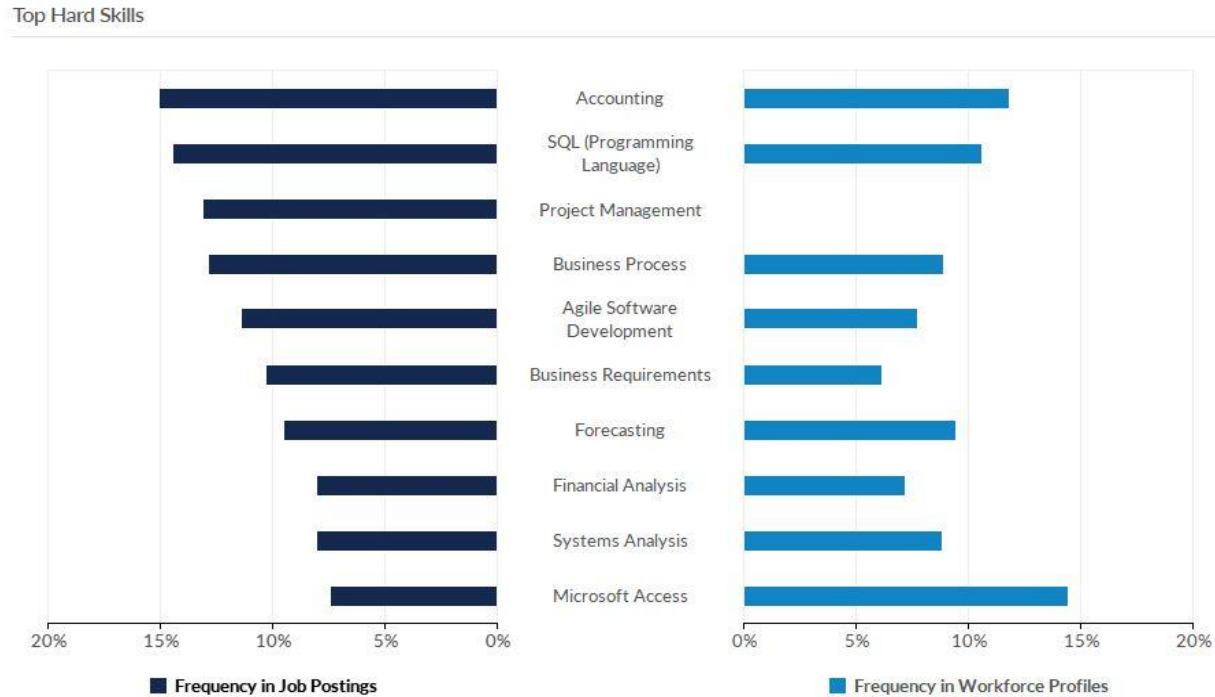
# Am I refining course offerings with in-demand skills?

- A doctoral public institution in Atlanta, Georgia is among the first data science and analytics programs in the world.
- Focusing on applied statistical skills and working directly with non-academic organizations led to an innovative curriculum.
- Do specific certifications change labor market outcomes?

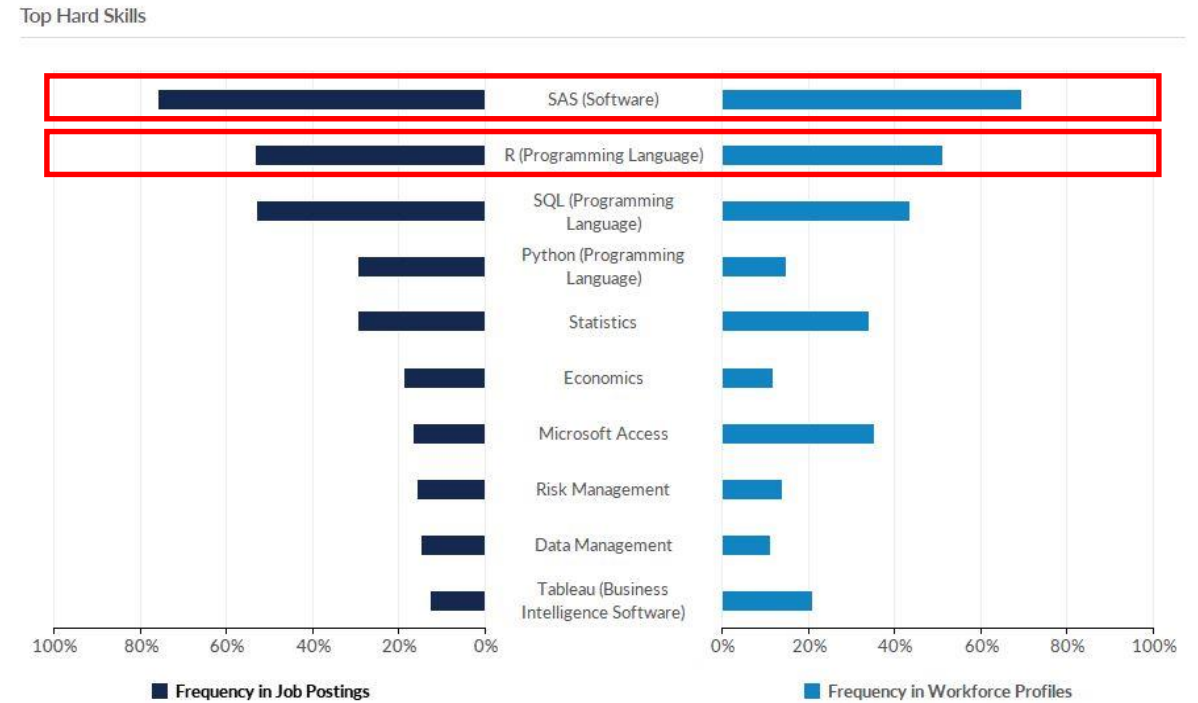


# Atlanta, GA - Top Hard Skills without and with Skill Refinement

## Without R and SAS Filter



## With R and SAS Filter














# Atlanta, GA Job Postings - Applied Statistics and Finance



















## Without R and SAS Filter

Top Companies Posting

Company	Total/Unique (Feb 2018 - Feb 2019)	Posting Intensity	Median Posting Duration
Anthem, Inc.	3,477 / 776	4 : 1 	24 days
Middle Georgia Employer Committee	1,917 / 716	3 : 1 	39 days
The Home Depot Inc	3,914 / 566	7 : 1 	42 days
Deloitte LLP	5,585 / 473	12 : 1 	41 days
International Business Machines Corporation	1,500 / 315	5 : 1 	52 days
SunTrust Banks, Inc.	1,904 / 292	7 : 1 	50 days
Fiserv, Inc.	1,160 / 269	4 : 1 	32 days
Comcast Corporation	2,962 / 252	12 : 1 	7 days
Emory University	942 / 237	4 : 1 	57 days
Robert Half International Inc.	1,907 / 227	8 : 1 	38 days
RANDSTAD HOLDING nv	1,753 / 195	9 : 1 	34 days
ACCENTURE, INC.	1,226 / 193	6 : 1 	42 days
Virtual Vocations	256 / 190	1 : 1 	9 days
CAP GEMINI	1,524 / 184	8 : 1 	48 days
U.S. Bancorp	966 / 156	6 : 1 	32 days

## With R and SAS Filter

Top Companies Posting

Company	Total/Unique (Feb 2018 - Feb 2019)	Posting Intensity	Median Posting Duration
Bank of America Corporation	1,107 / 67	17 : 1 	89 days
Anthem, Inc.	240 / 43	6 : 1 	24 days
Unitedhealth Group Incorporated	97 / 22	4 : 1 	41 days
Middle Georgia Employer Committee	29 / 19	2 : 1 	32 days
Emory University	101 / 18	6 : 1 	90 days
Fiserv, Inc.	83 / 17	5 : 1 	36 days
Delta Air Lines	125 / 16	8 : 1 	19 days
Aetna Inc.	93 / 15	6 : 1 	45 days
International Business Machines Corporation	59 / 15	4 : 1 	92 days
Synchrony Financial	220 / 14	16 : 1 	67 days
Newell Brands Inc.	65 / 13	5 : 1 	94 days
IQVIA	72 / 12	6 : 1 	55 days
The Coca-Cola Company	52 / 12	4 : 1 	38 days
U.S. Bancorp	64 / 11	6 : 1 	32 days
SunTrust Banks, Inc.	43 / 10	4 : 1 	41 days
lhrc, Incorporated	40 / 9	4 : 1 	57 days
Lexisnexis	50 / 9	6 : 1 	54 days
Costar Group, Inc.	82 / 8	10 : 1 	71 days

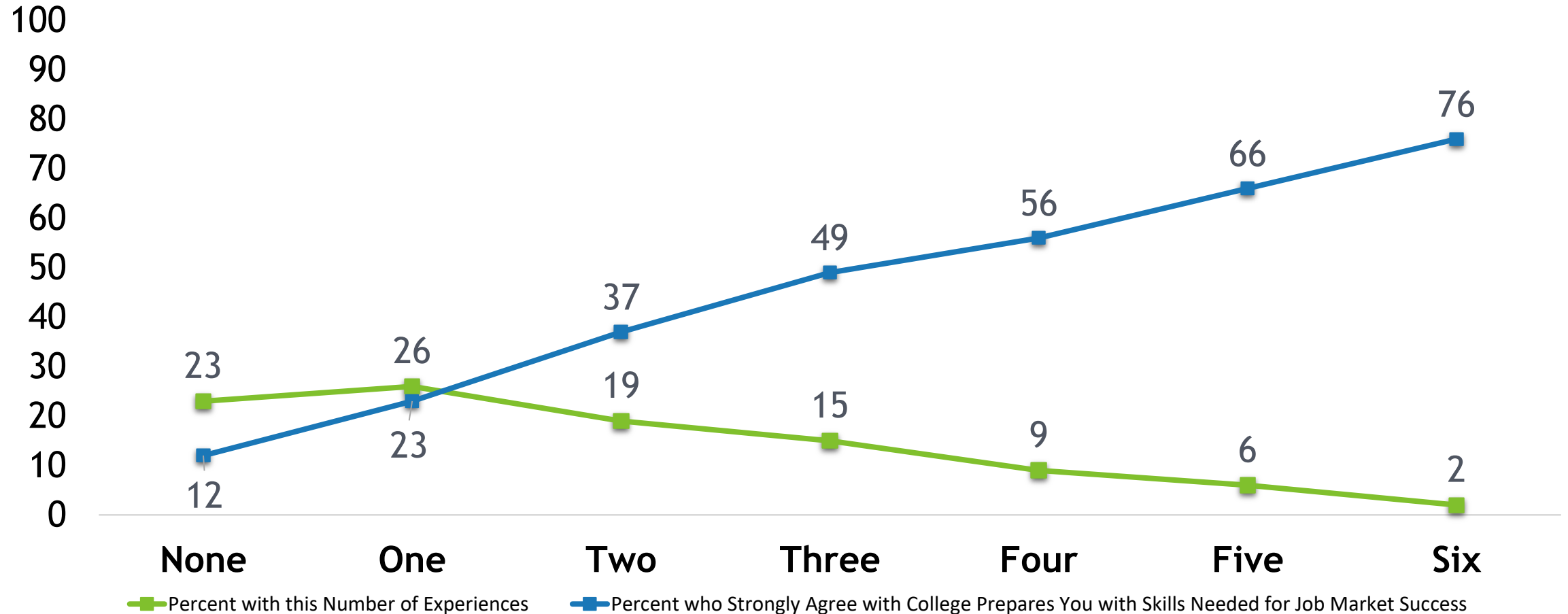
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# Delivering Value in Higher Education

- Perceptions varied widely and Gallup identified “The Big Six” experiences:
  1. My professors care about me as a person.
  2. I have at least one professor who made me excited about learning.
  3. I have a mentor who encouraged me to pursue my goals and dreams.
  4. I have a job or internship that allowed me to apply what I learn in the classroom.
  5. I work on a project that took a semester or more to complete.
  6. I am extremely active in extracurricular activities and organizations.

# Delivering Value in Higher Education

## Students' Job Confidence Rises with Key Collegiate Experiences

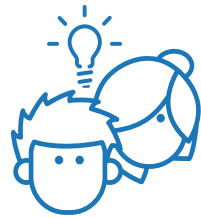


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# Addressing Four Challenges



Enrollment  
Health



Diversity



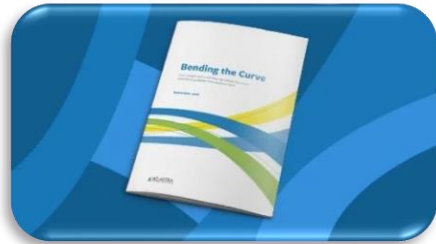
Retention



College-  
Career  
Pathways

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# Ways to Stay Engaged



- [Bending the Curve](#)



- February 13, 2020 - 3.00 PM Eastern - [Astra Academy](#), “NACUBO-TAA Study of Endowments”

save the date for aspire 2020  
october 18-21, 2020

- October 18 - 21, 2020 - [Aspire Conference](#), Kansas City, Missouri

# Addressing Your Questions and Comments