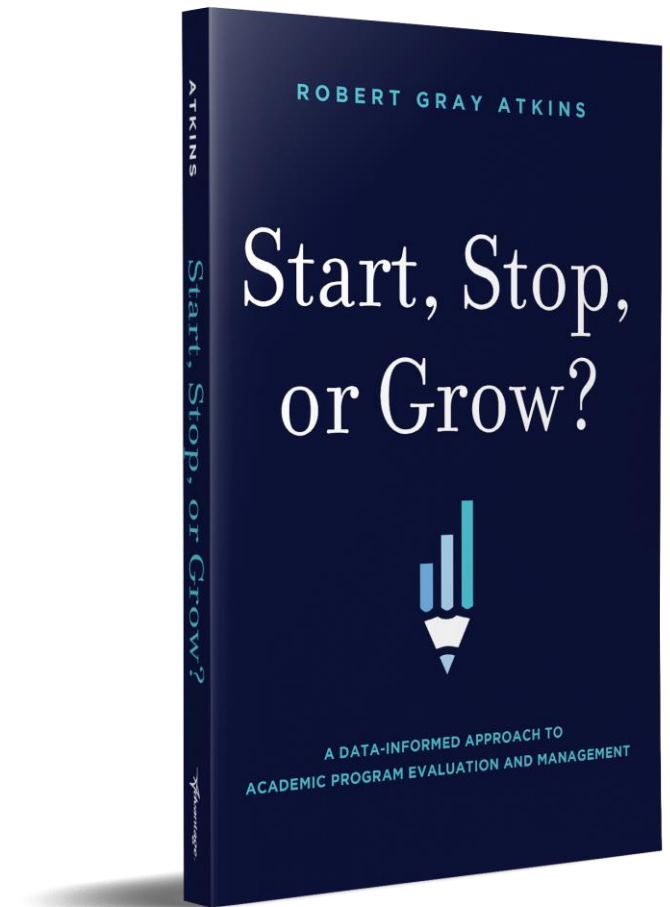




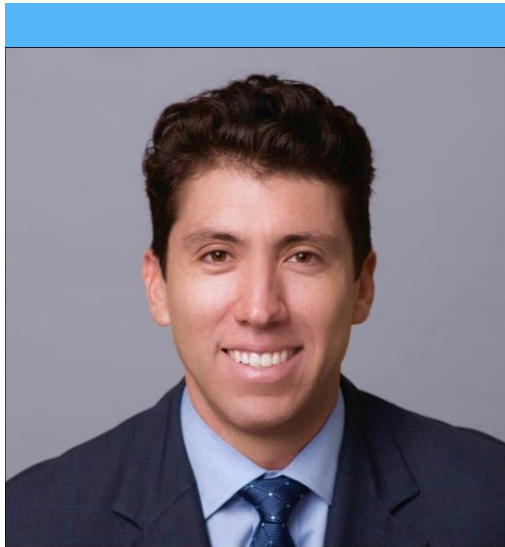
GRAY
ASSOCIATES

Demand for Higher Education Programs

Results through February 2023



Today's Speakers



Zach Paz
Chief Product Officer: Markets
Senior Partner

Gray Associates



Dr. Keith Howard
Vice Provost
Professor of Mathematics

MERCER
UNIVERSITY

Gray has developed a complete Program Evaluation System (PES).

We assemble the data in easy-to-use software.



Gray has developed a complete Program Evaluation System.
We facilitate an inclusive, data-informed evaluation process.



Agenda

Student Demand

- **Current Demand: Enrollment**
- **Leading Indicators: Google Searches**
- **Non-Degree Courses**

Employment: Current Indicators

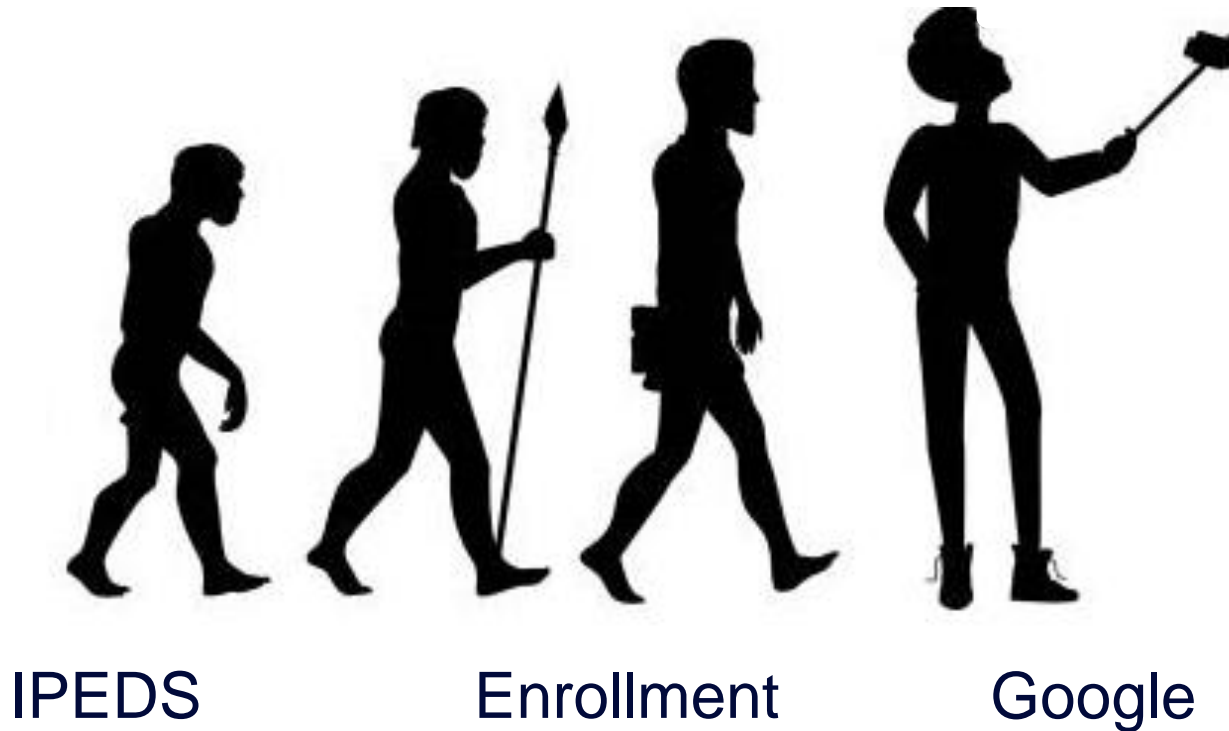
Program of the Month

Case Study: Mercer University

Summary

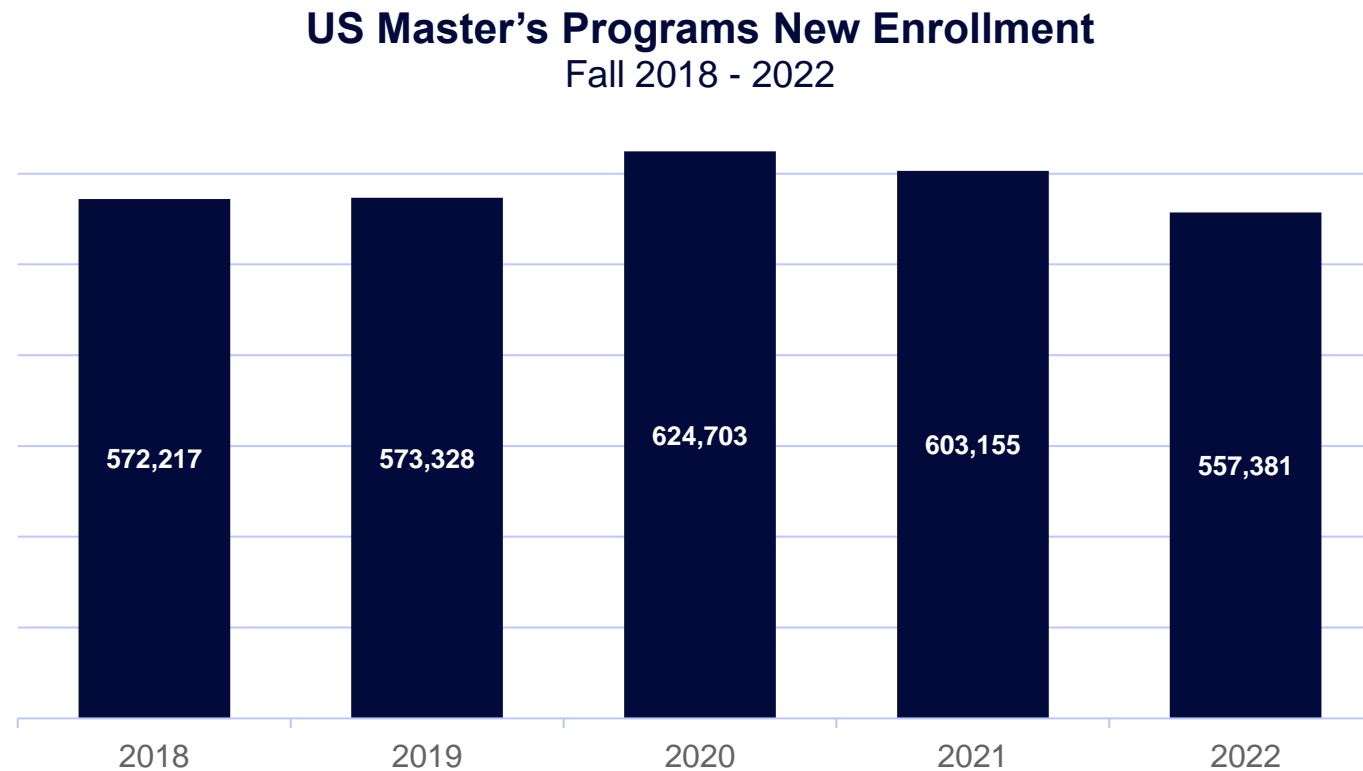
IPEDS, Enrollment, and Google Search: Past, Present, and Future

Insights on Student Demand



Fall new master's enrollment decreased 1% annually over the last four years.

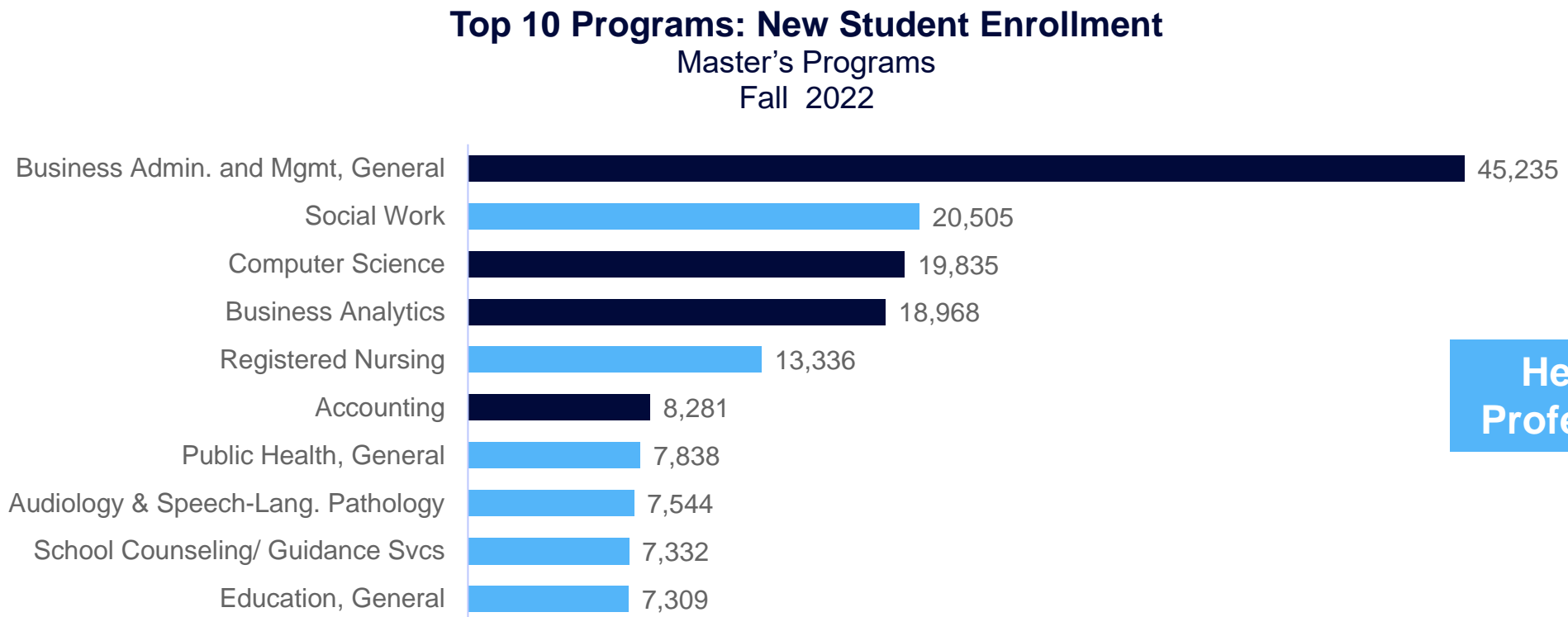
- It fell 8% year-over-year.



Source: Gray Analysis of National Student Clearinghouse

In Fall 2022, Master's in Business programs enrolled 45,235 new students.

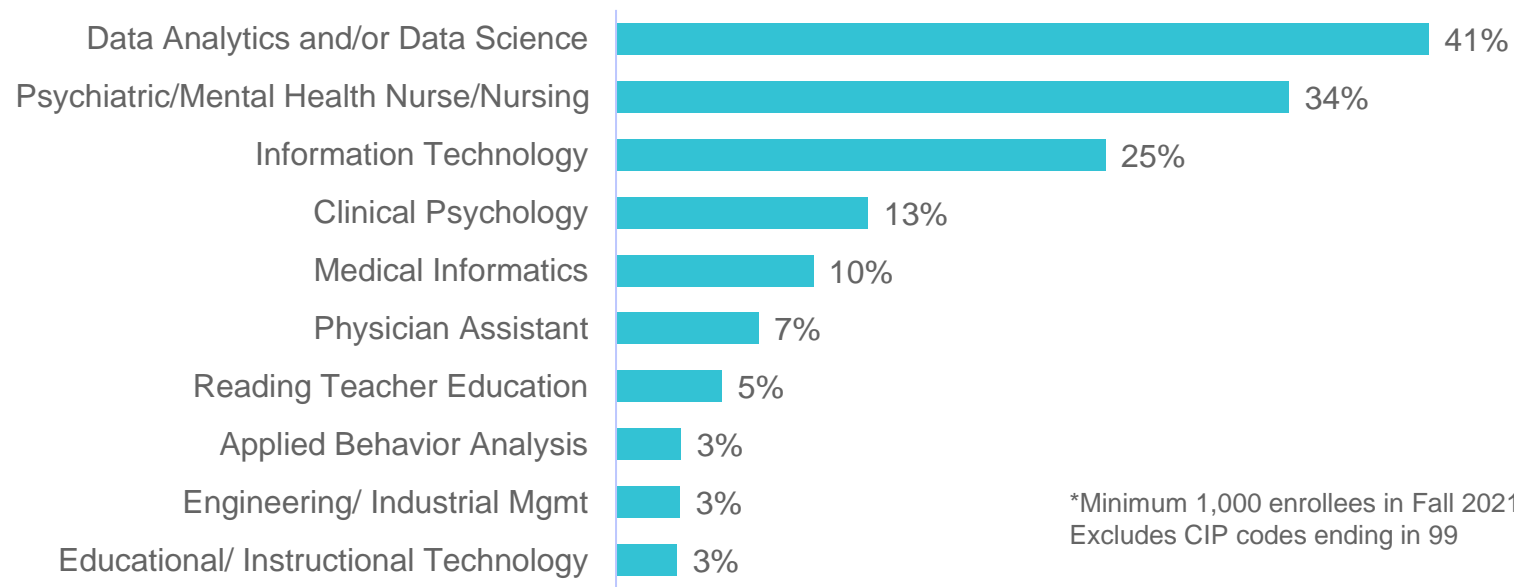
Six of the top 10 were in helping professions.



**Helping
Professions**

New master's enrollment in Data Analytics/Science grew 41% year-over-year.

Fastest-Growing New Student Enrollment* Master's Programs Fall 2022 YoY

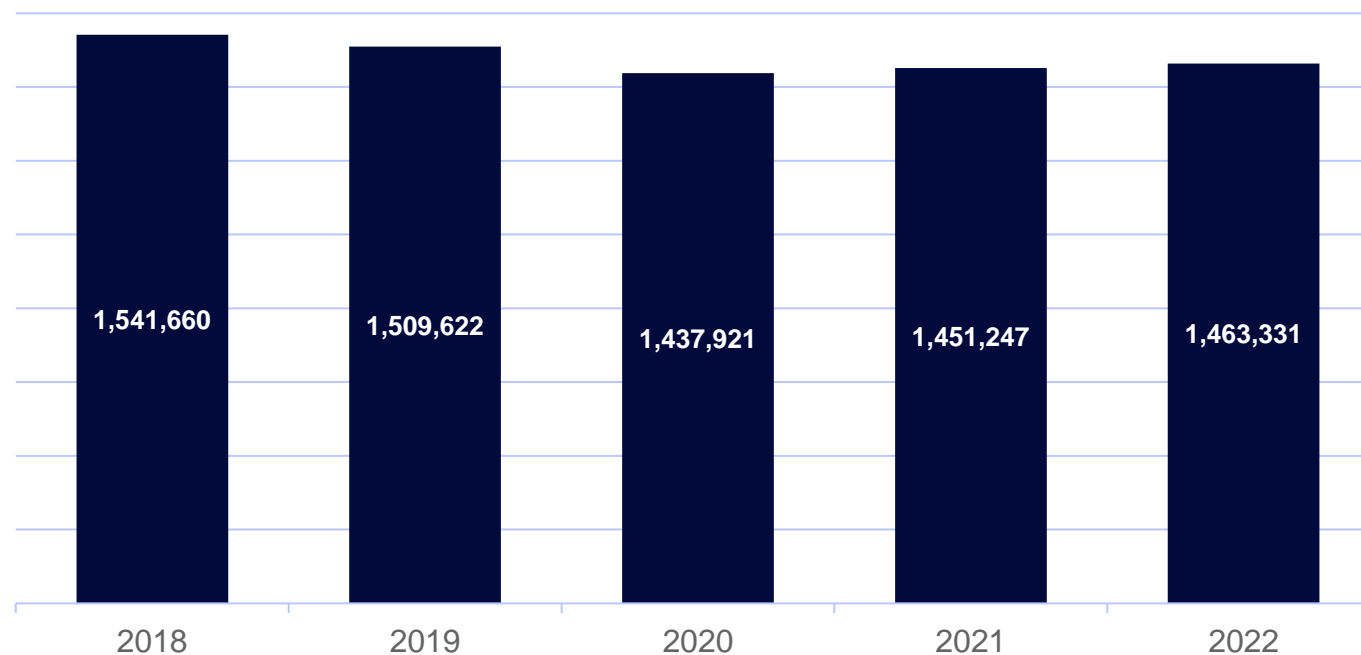


Source: Gray Analysis of National Student Clearinghouse

Fall new bachelor's enrollment decreased 1% annually over the last four years.

- However, it grew 1% year-over-year.

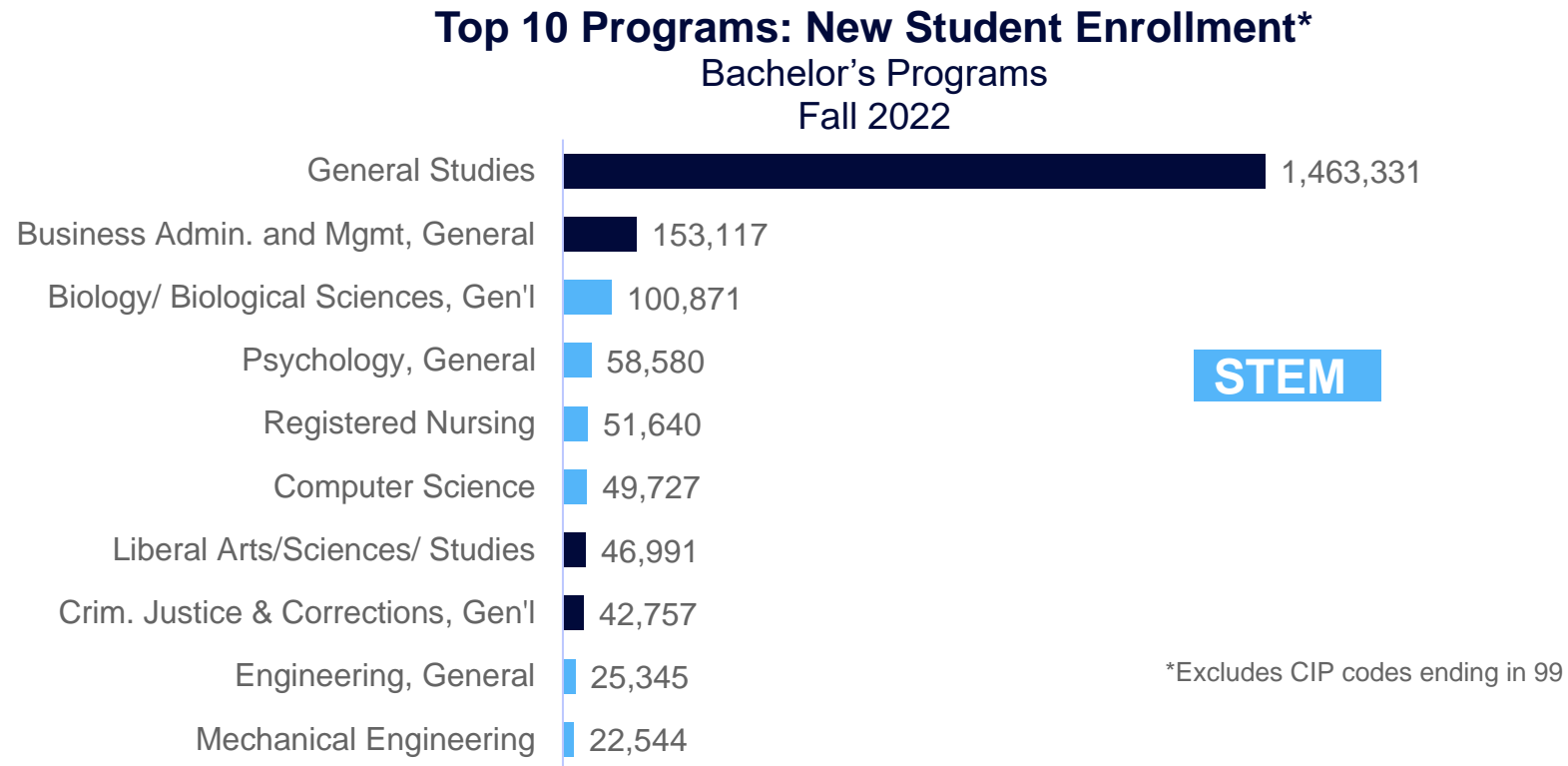
US Bachelor's Programs New Enrollment
Fall 2018 - 2022



Source: Gray Analysis of National Student Clearinghouse

In Fall 2022, 1,463,331 new bachelor's students enrolled in General Studies.

Half of the top highest program enrollment was in STEM programs.

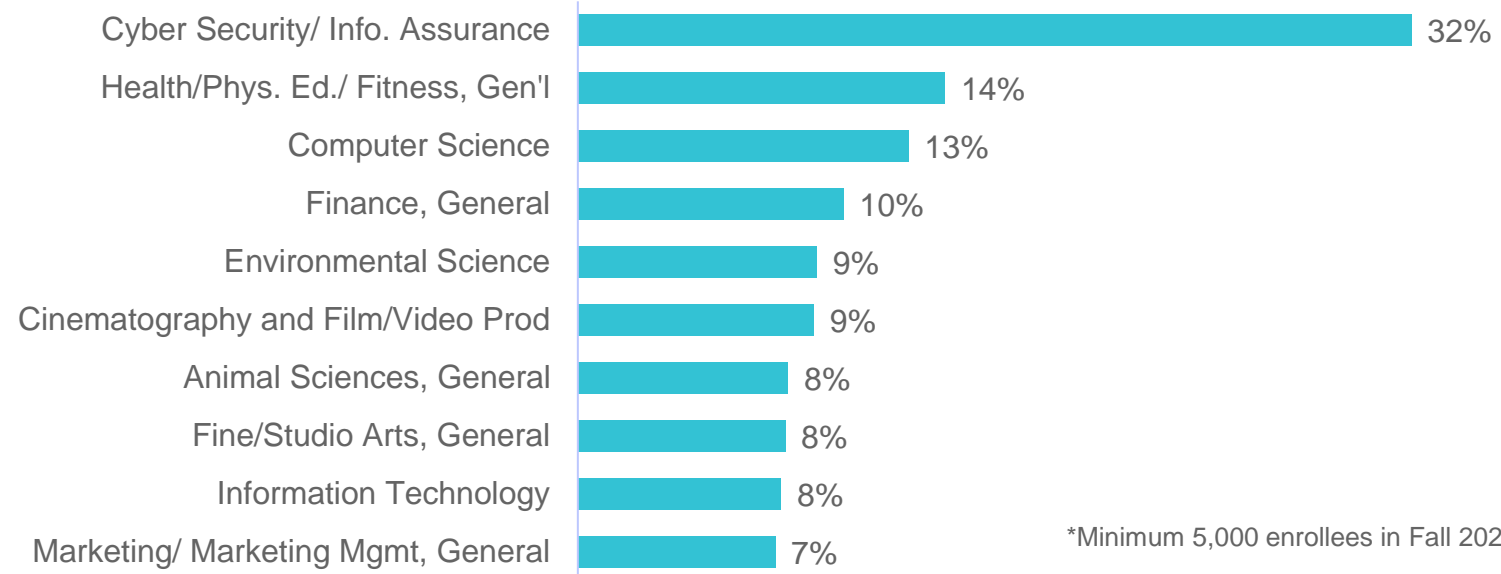


Source: Gray Analysis of National Student Clearinghouse

New bachelor's enrollment in Cybersecurity grew 32% year-over-year.

Fastest-Growing New Student Enrollment*

Bachelor's Programs
Fall 2022 YoY



*Minimum 5,000 enrollees in Fall 2021

Agenda

Student Demand

- Current Demand: Enrollment
- Leading Indicators: Google Searches
- Non-Degree Courses

Employment: Current Indicators

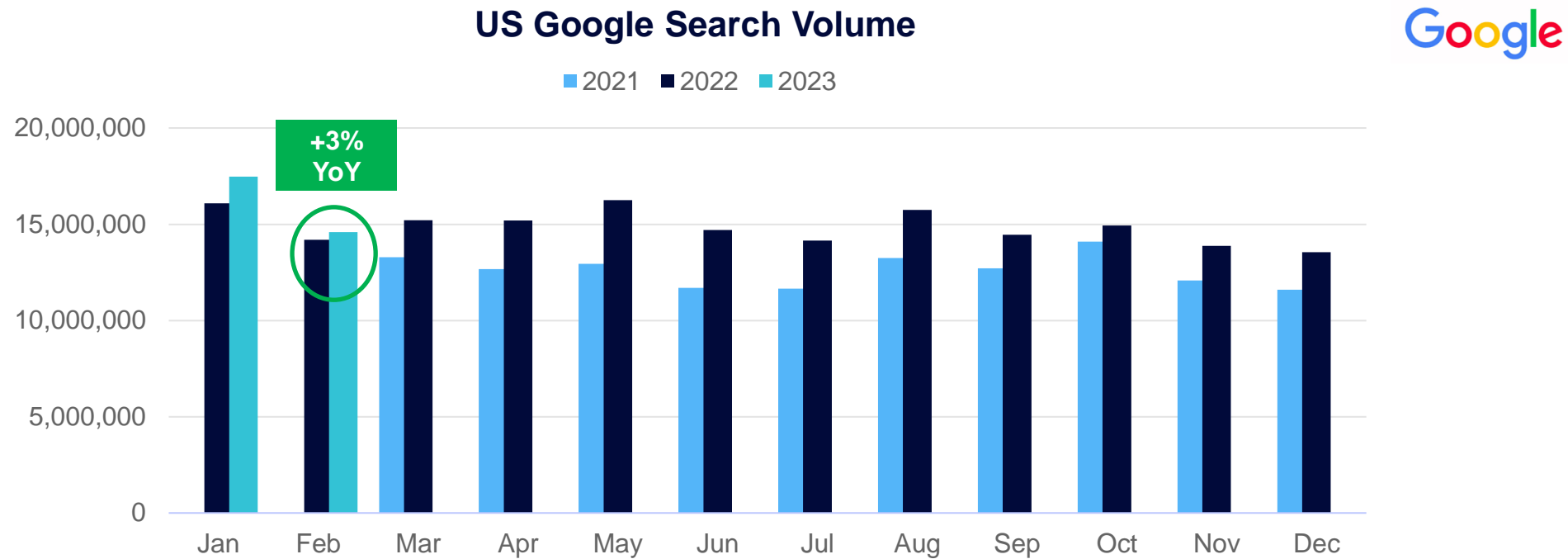
Program of the Month

Case Study: Mercer University

Summary

Google Search Trends: Programs

In February, Google searches for academic programs rose 3% year-over-year.*



*Excludes associate and certificate non-transfer programs.

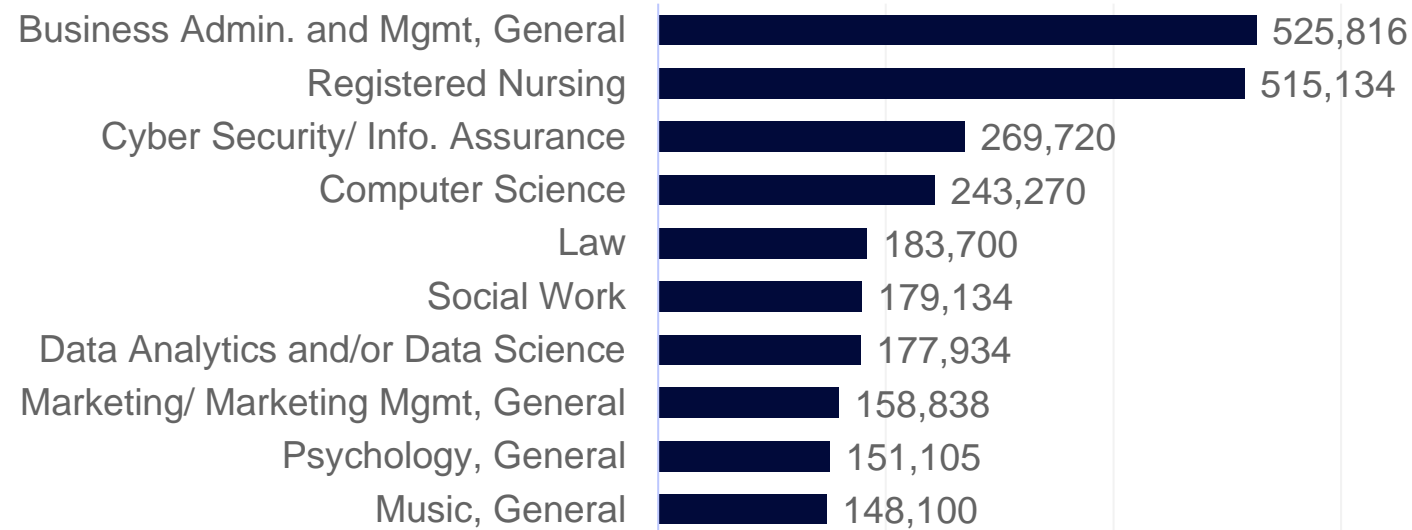
Source: PES Keyword Search Dashboard

Google: US Highest Search Volume, Bachelor's and Above

In February, Business had the highest search volume.



Programs with the Highest Volume of Keyword Searches February 2023



*Excludes associate and certificate non-transfer programs.

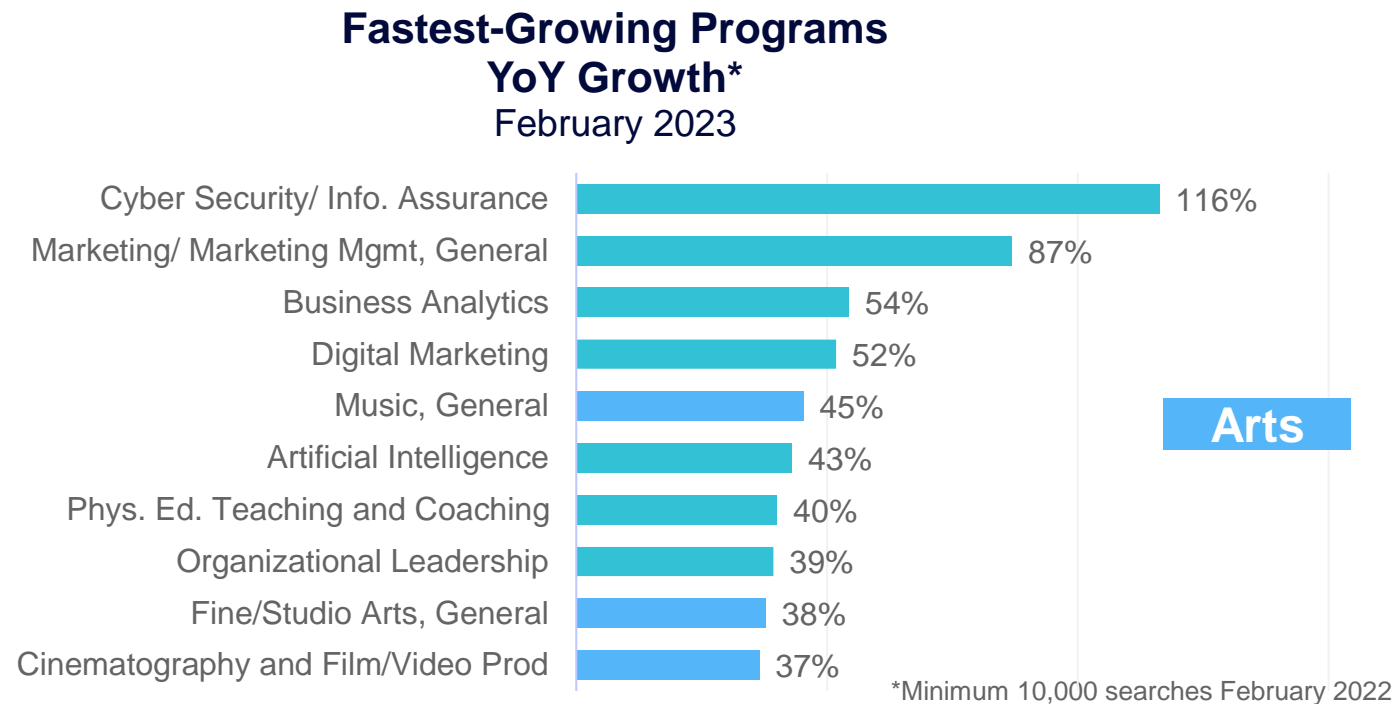
Source: PES Keyword Search Dashboard

Google: US Fastest-Growing Programs

In February, searches for Cyber Security programs rose 116%.



- Google searches for arts programs have been in the top 10 fastest-growing for over six months.



*Excludes associate and certificate non-transfer programs.

Source: PES Keyword Search Dashboard

Agenda

Student Demand

- Current Demand: Enrollment
- Leading Indicators: Google Searches
- Non-Degree Courses

Employment: Current Indicators

Program of the Month

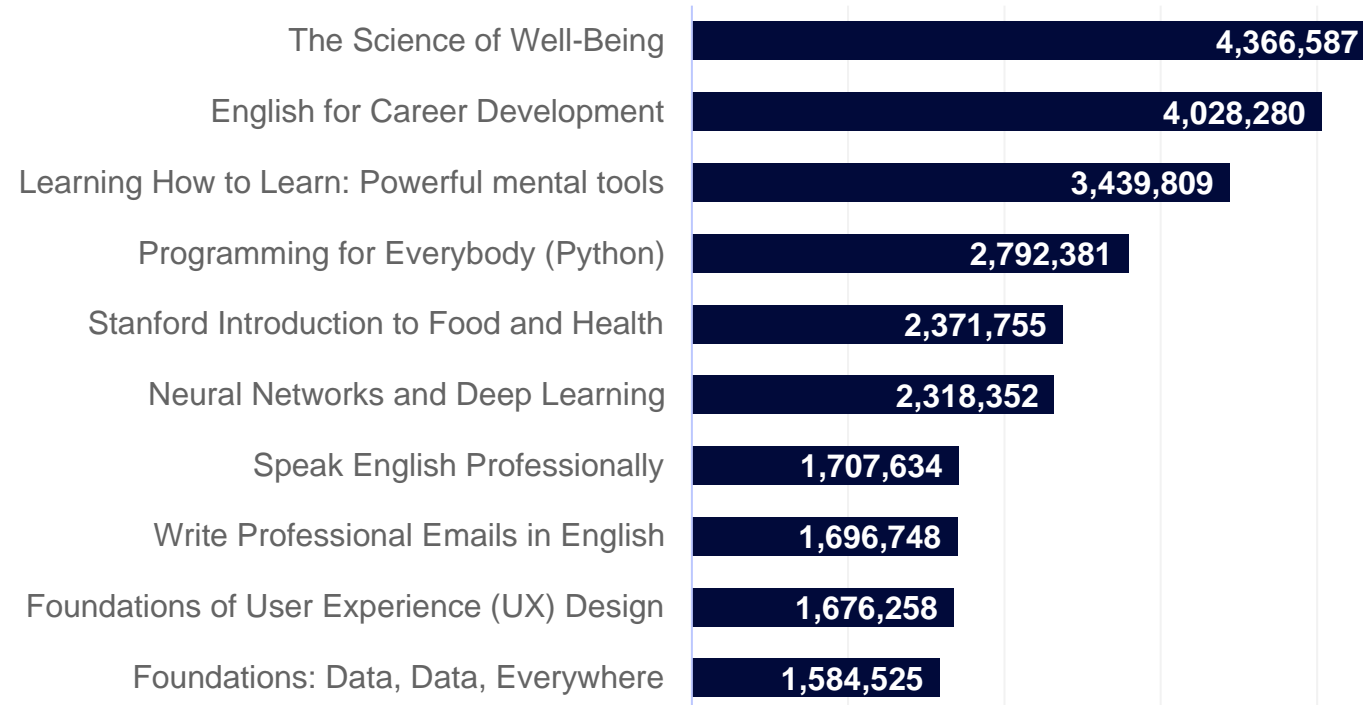
Case Study: Mercer University

Summary

Coursera: Highest Cumulative Course Enrollment

In February, The Science of Well-Being had the highest cumulative course enrollment.

Highest Cumulative Course Enrollment Volume
February 2023

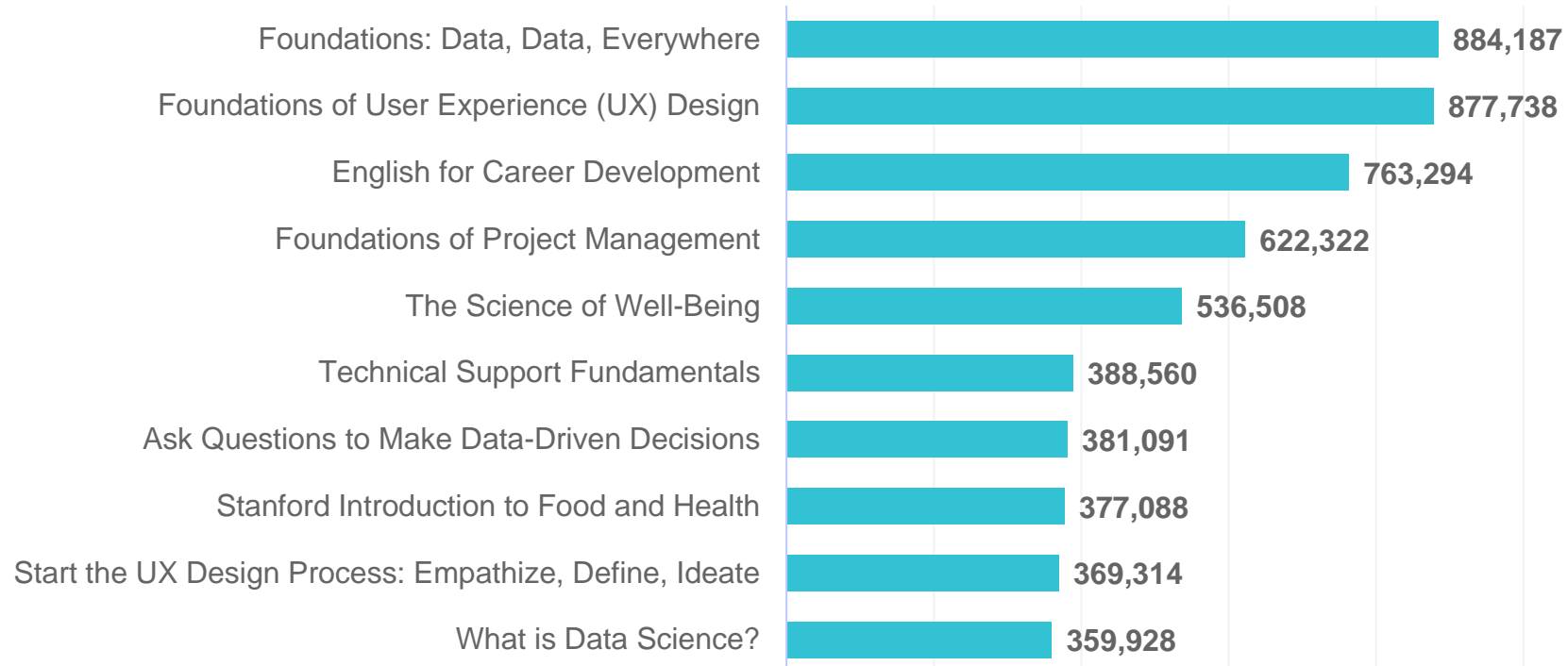


Source: PES Non-Degree Demand: Coursera

Coursera: Largest-Growing Courses

In February, Foundations: Data, Data, Everywhere added the most students year-over-year.

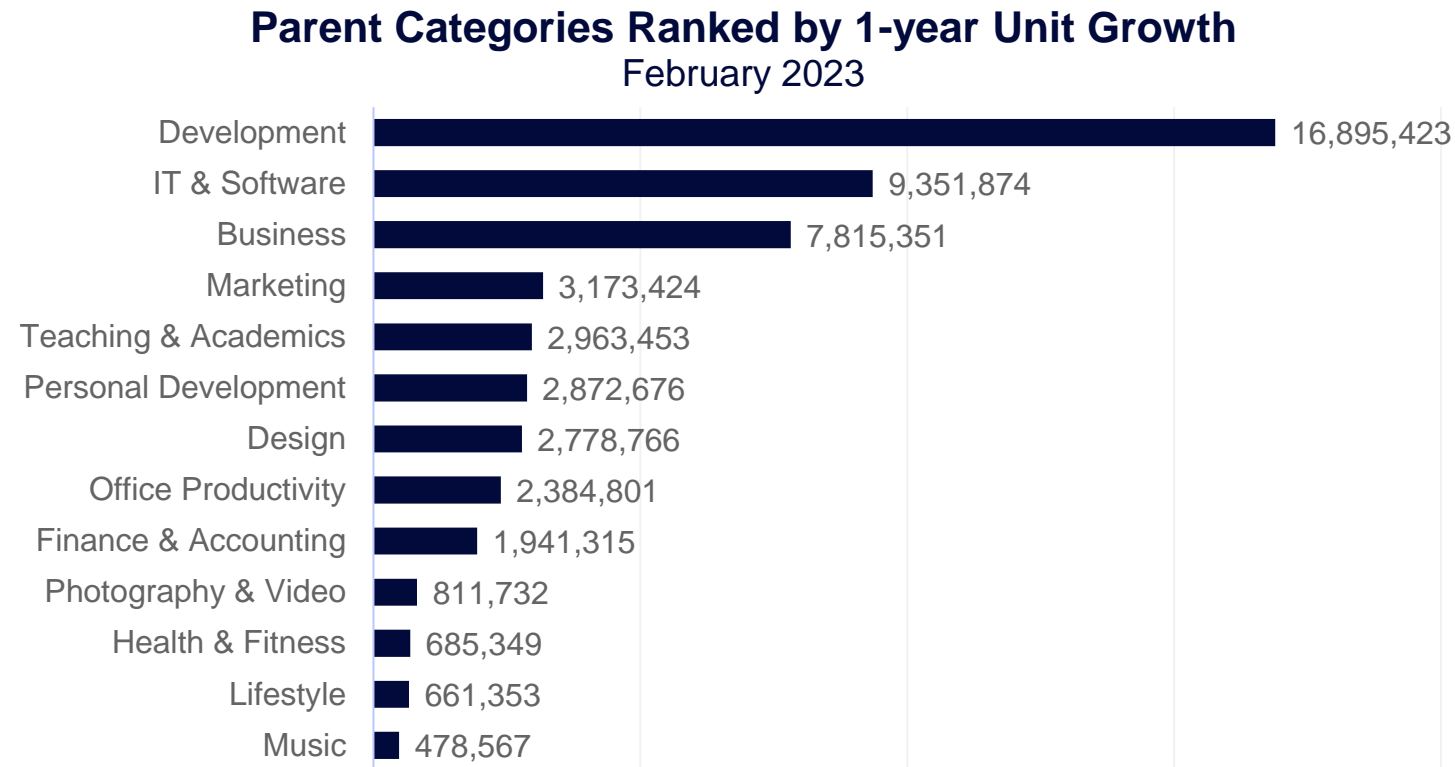
Highest Year-Over-Year Unit Change in Cumulative Enrollment February 2023



Source: PES Non-Degree Demand: Coursera

Udemy: Parent Categories Ranking

In February, Software Development had the highest one-year unit growth in parent category enrollment.



Agenda

Student Demand

- Current Demand: Enrollment
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- Non-Degree Courses

Employment: Current Indicators

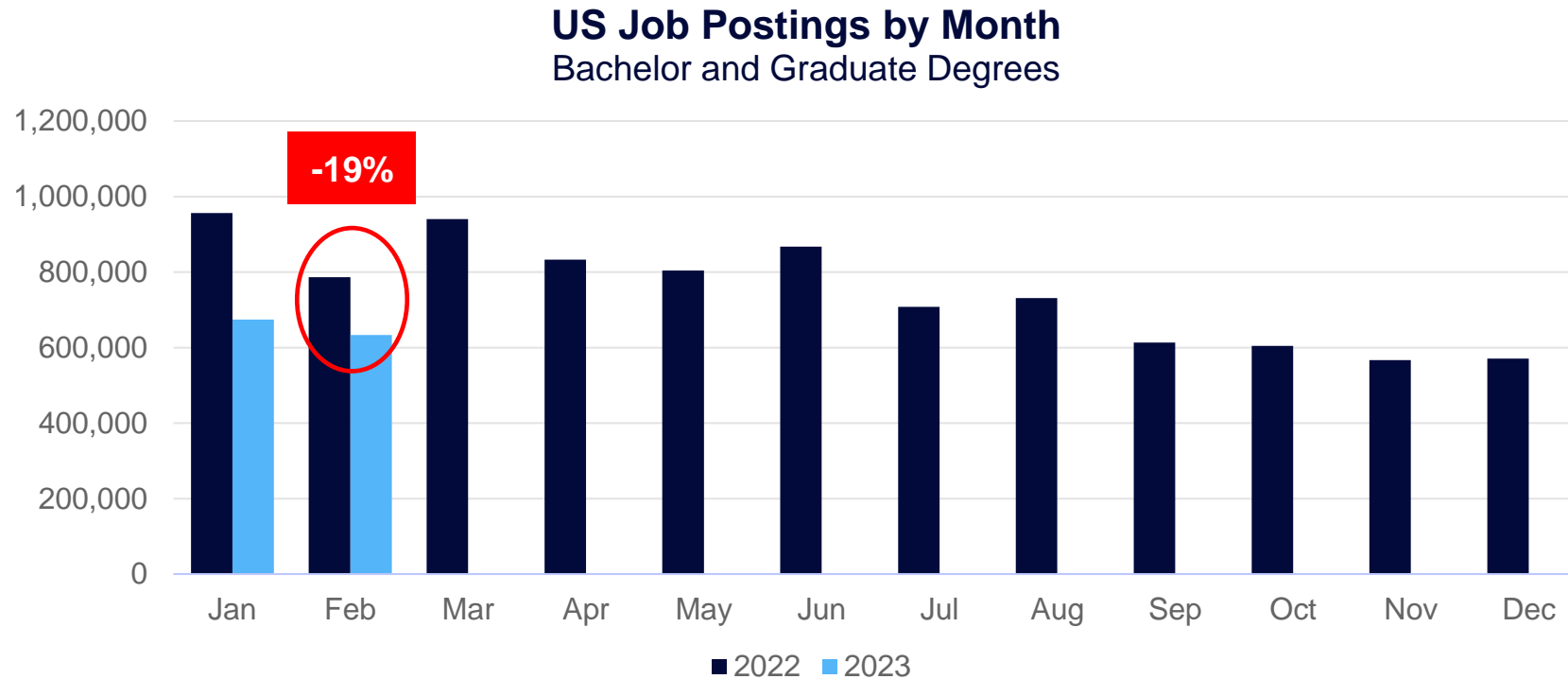
Program of the Month

Case Study: Mercer University

Summary



In February, total job postings volume for bachelor and above degree-holders fell 19% year-over-year.



In February, General and Operations Managers had the highest number of job postings.

Highest Number of Job Postings by Occupation

February 2023

By Standard Occupational Code (SOC Code)

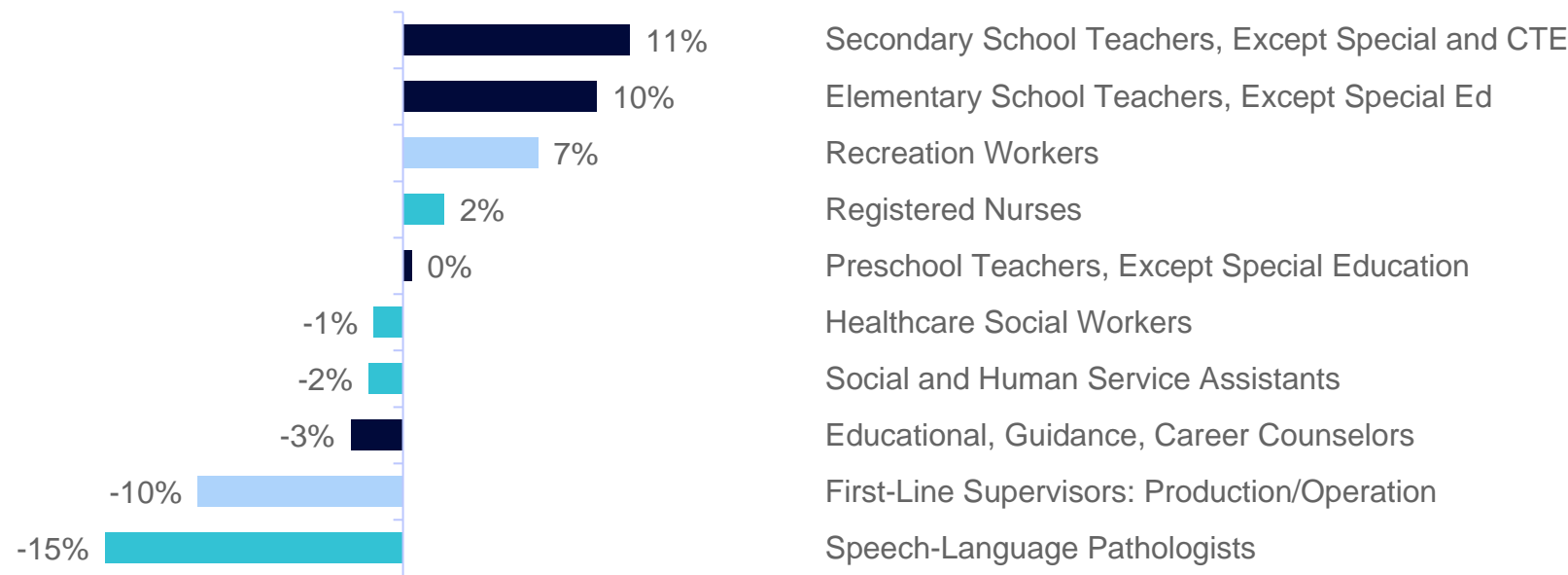


Management

Others

In February, job postings for Secondary School Teachers grew 11% year-over-year.*

10 Fastest-Growing Occupations
By Job Postings



Education

Health-Related

Others

*Minimum 2,000 postings February 2023

Agenda

Student Demand

- Current Demand: Enrollment
- Leading Indicators: Google Searches
- Non-Degree Courses

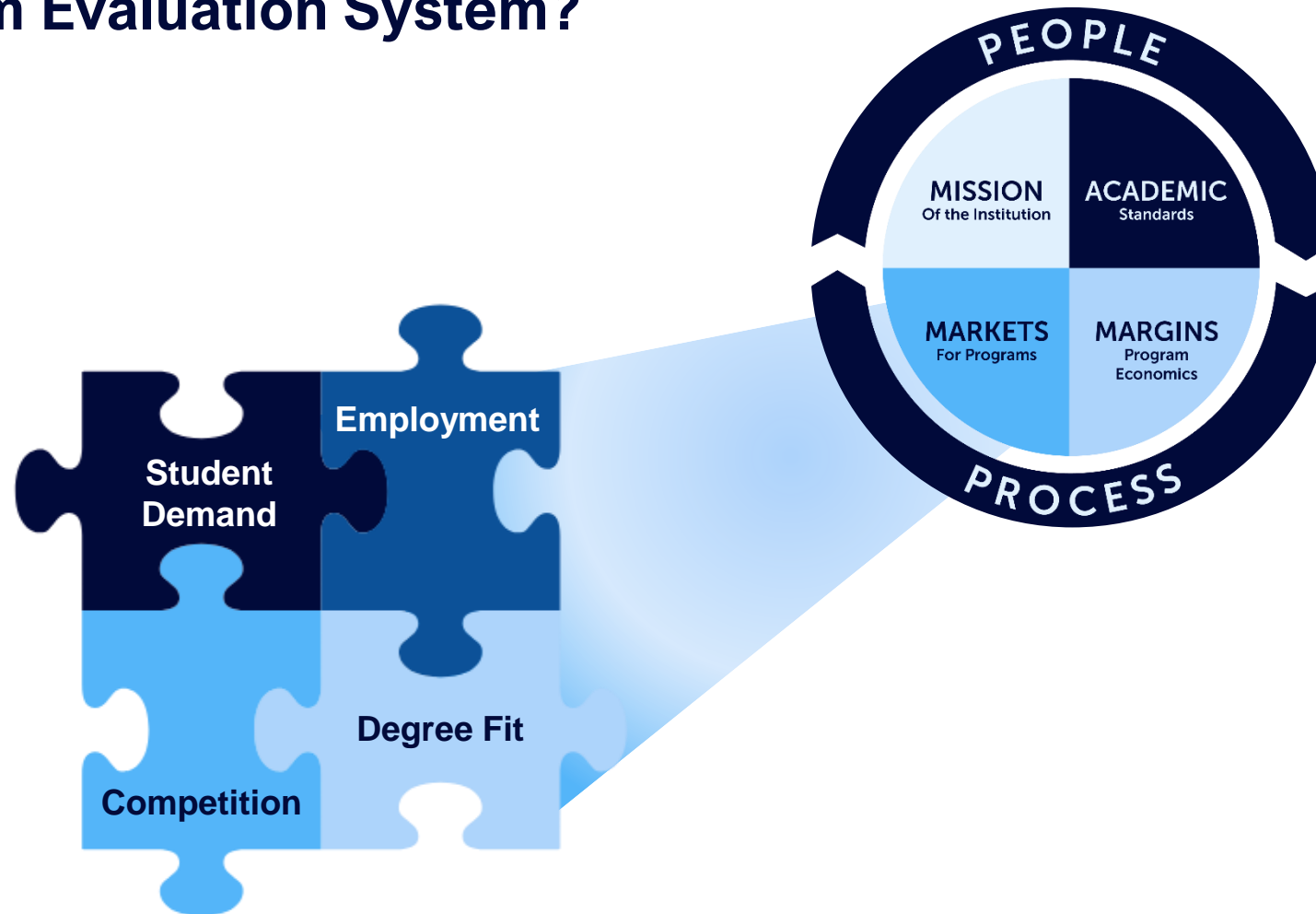
Employment: Current Indicators

Program of the Month

Case Study: Mercer University

Summary

What is a Program Evaluation System?



Program Markets: Program Rank

We score on Student Demand, Employment, Competitive Intensity, and Degree Fit.

- Let's focus on the national market for a Bachelor's in Economics.

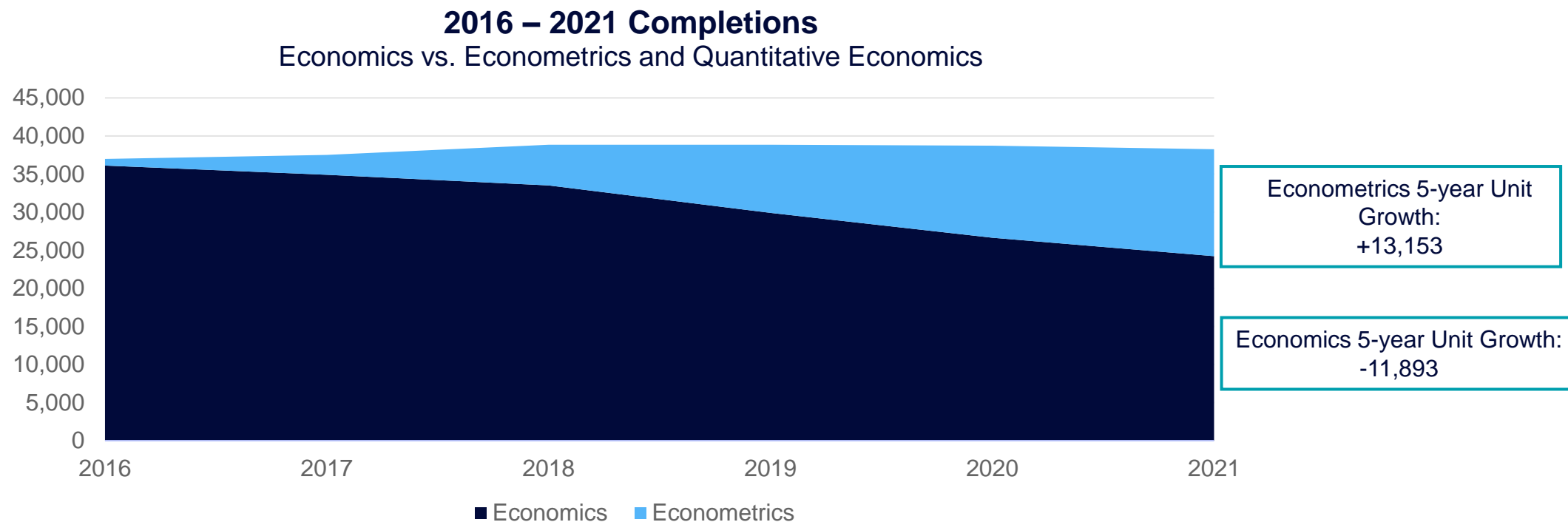
US Program Ranking Bachelor's Programs

CIP	Total Percentile	Student Demand Percentile	Competitive Intensity Percentile	Employment Percentile	Degree Fit Percentile
51.3801 Registered Nursing	100	99	84	99	50
11.0701 Computer Science	99	100	3	94	50
52.0201 Business Admin. and Mgmt, General	99	99	92	92	50
52.0801 Finance, General	99	99	14	100	50
52.1401 Marketing/ Marketing Mgmt, General	99	99	3	87	50
52.0301 Accounting	99	99	1	98	50
45.0603 Econometrics and Quantitative Economics	99	98	98	97	50
14.1901 Mechanical Engineering	99	98	89	99	50
45.0601 Economics, General	99	98	20	98	50
14.0901 Computer Engineering, General	99	98	8	99	50
14.0201 Aero/ Astro/ Space Engineering	99	97	99	99	50
01.0901 Animal Sciences, General	99	97	99	76	50
49.0101 Aviation/Aero Science/Tech, Gen'l	99	97	89	94	50
14.0801 Civil Engineering, General	99	97	84	99	50
04.0902 Architectural & Building Sciences/Tech	99	96	97	84	50
14.0501 Bioengineering and Biomedical Engineering	99	96	95	94	50
51.2010 Pharmaceutical Sciences	99	94	99	97	50
26.1503 Neurobiology and Anatomy	99	84	99	94	50
11.1003 Cyber Security/ Info. Assurance	98	99	5	78	50
26.0101 Biology/ Biological Sciences, Gen'l	98	98	30	90	50
<div> <div>Total Percentile</div> <div>020+40+70+90+95+98+100</div> <div>Total Score</div> <div>-32-6-1311162449</div> </div>					

Source: Gray's PES Markets

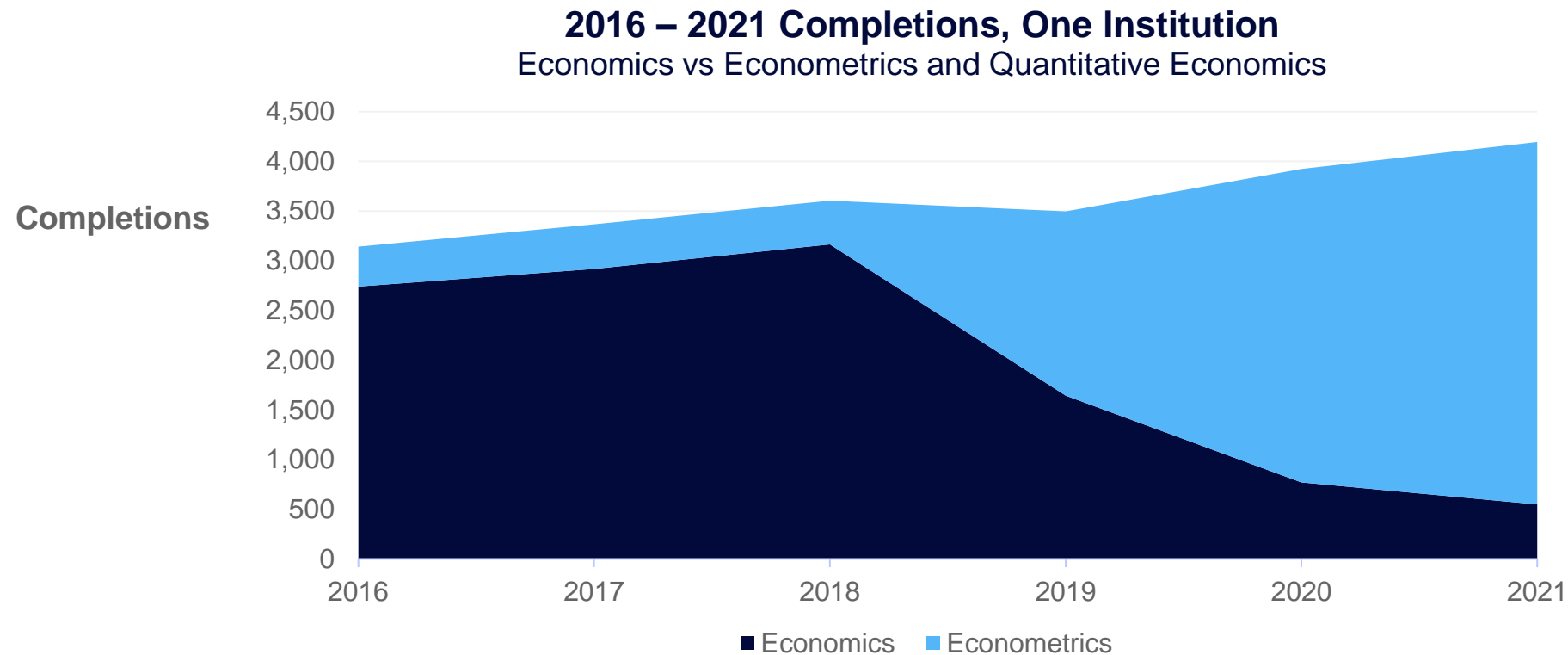
Completions in Economics programs are a little misleading.

Econometrics and Quantitative Economics is a similar program – but STEM-qualified.



Source: Gray's Analysis of IPEDS Completions

At the University of California, students shifted between economics programs.



Source: Gray's analysis of IPEDS data

Program Scorecard: Student Demand

A Bachelor's in Economics scores in the 98th percentile for Student Demand.

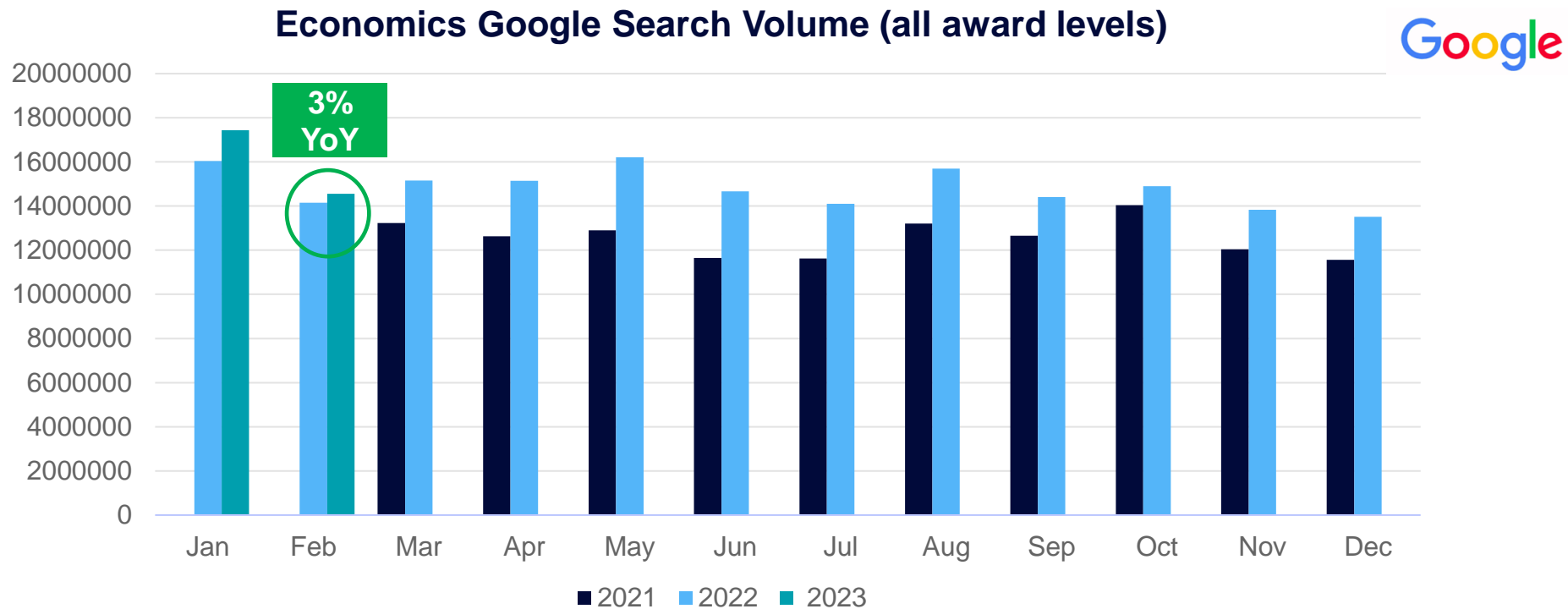
- New student enrollment is strong and grew 4% year-over-year.
- There is very high international interest in this program.
- Completions volume is at the 98th percentile but fell 9% year-over-year.
- Google searches were healthy but flat year-over-year.

Student Demand Score: 24 Percentile: 98

Catego...	Pctl	Criterion	Value	Score
Size	91	Google Search Volume (3 Months)*	95,101	4
	99	International Page Views (12 Months)	1,915	NS
	97	New Student Enrollment Volume (12 Mo.)	7,519	6
	98	On-ground Completions at In-Market Institutions	23,526	4
	96	Online Completions by In-Market Students	633	3
	98	Sum of On-ground and Online Completions	24,159	4
Growth	67	Google Search YoY Change (Units)*	140	1
	98	New Student Enrollment Vol. YoY Change (Units)	312	3
	0	Completion Volume YoY Change (Units)	-2,480	-1
	57	Google Search YoY Change (%)*	0%	0
	64	New Student Enrollment Vol. YoY Change (%)	4%	0
	25	Completion Volume YoY Change (%)	-9%	0



Google searches: In February 2023, searches for Economics programs grew 3% year-over-year for all award levels.



Program Scorecard: Employment

A Bachelor's in Economics ranks in the 98th percentile for Employment.

- Direct prep job volume is healthy for this program.
 - It rose 3.5% over the last three years.
- BLS current employment is strong.
- Direct prep job postings per graduate are low.
- American Community Survey outcomes are strong.
 - Wages are high.

Employment*

Score: 12 Percentile: 98

Category	Pctl	Criterion	Value	Score
Size: Direct Prep	81	Job Postings Total (12 Months)*	25,939	1
	81	BLS Current Employment*	72,878	0
	82	BLS Annual Job Openings*	7,074	NS
Size: ACS Bach. Outcomes	83	Job Postings Total (12 Months)*	26,340	NS
	98	BLS Current Employment*	662,661	NS
Growth (Direct Prep)	89	BLS 1-Year Historical Growth*	2.0%	NS
	84	BLS 3-Year Historic Growth (CAGR)*	3.5%	0
	78	BLS 10-Year Future Growth (CAGR)*	1.1%	0
Saturation (Direct Prep)	31	Job Postings per Graduate*	0.9	-1
	33	BLS Job Openings per Graduate*	0.2	NS
Wages (Direct Prep)	53	BLS 10th-Percentile Wages*	\$40,368	NS
	63	BLS Mean Wages*	\$71,860	NS
National American Community Survey Bachelor's Degree Outcomes	96	Wages (Age < 30)	\$66,468	9
	98	Wages (Age 30-60)	\$152,279	6
	62	% with Any Graduate Degree	45%	NS
	64	% with Masters	30%	NS
	75	% with Doct/Prof Degree	15%	NS
	86	% Unemp. (Age <30)**	4%	-2
	73	% Unemp. (Age 30-60)**	2%	-1
	66	% in Direct Prep Jobs	12%	NS



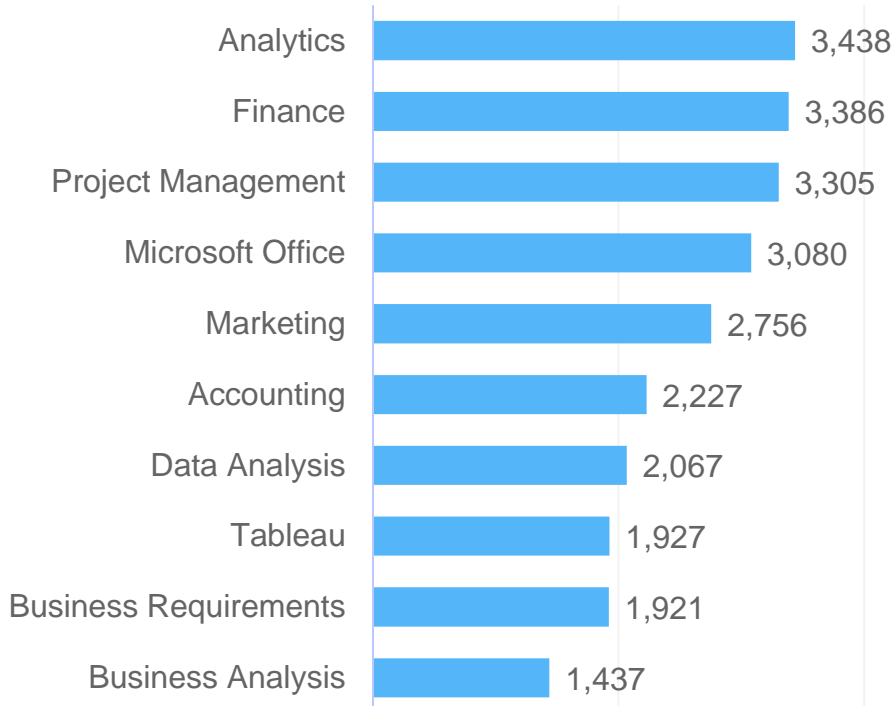
Economics: In February, Business Analysts were in high demand.

The most frequent skill listed in job postings was Analytics.

Highest Job Postings Volume
Economics, February 2023



Top Skills
Economics, February 2023

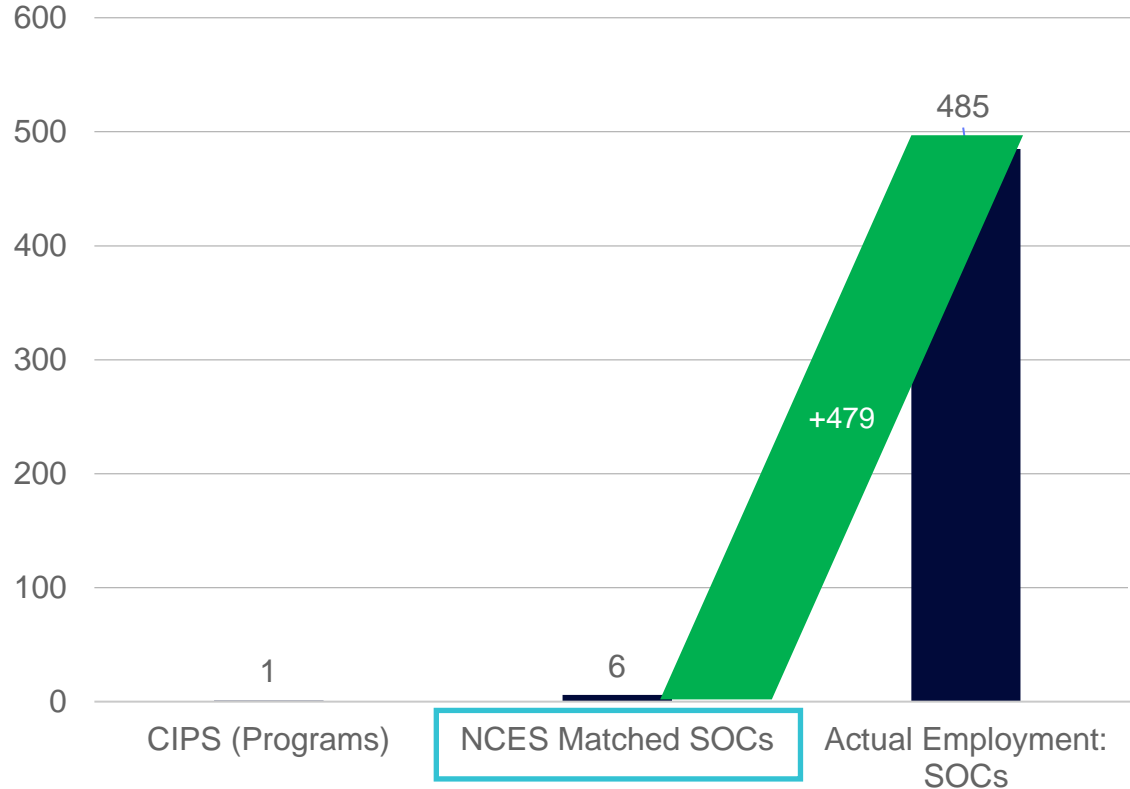


Source: PES Job Postings Dashboard



ACS Outcomes: Economics majors go into 485 SOCS and earn \$152,279 mid-career.

Count of Programs and Occupations
CIP 45.0601, Economics



Top Occupations, Economics Majors, Ages 30-60



Program Scorecard: Competitive Intensity

Economics is in the 20th percentile for competitive intensity.

- 613 institutions have Economics graduates.
 - 25 programs are offered online.
- Median program size is fair.
 - It fell 8% year-over-year.
- Marketing costs are moderate for this program
 - 70th percentile for a Google click
 - 39th percentile competition index

Competitive Intensity

Score: -5 Percentile: 20

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	98	Campuses with Graduates**	613	-8
	0	Campuses with Grads YoY Change (Units)**	-28	2
	96	Institutions with Online In-Market Students**	18	NS
In-Market Program Sizes	90	Average Program Completions	38	2
	71	Median Program Completions	13	0
	47	YoY Median Prog. Compl. Change (Units)	-1	0
	46	YoY Median Prog. Compl. Change (%)	-8%	0
In-Market Saturation	70	Google Search * Cost per Click**	\$7	-1
	39	Google Competition Index**	0.15	0
National Online Competition	96	National Online Institutions (Units)**	25	NS
	60	Nat'l Online % of Institutions	3%	NS
	63	Nat'l Online % of Completions	3%	NS

Program Scorecard: Degree Fit

A bachelor's degree is an appropriate award level for Economics.

- 84% of completions are at the bachelor's level.
- 44% of the workforce hold a bachelor's degree.
- Master's degrees are also common in the workforce.

National Completions by Level

Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
Certificate	0%	0%	1%
Associates	12%	12%	21%
Bachelors	84%	84%	67%
Postbaccalaureate Certificate	0%	0%	0%
Masters	3%	3%	8%
Post-masters Certificate	0%	0%	0%
Doctoral	1%	1%	2%
Unknown	0%	0%	0%

National Workforce Ed. Attainment

Score: 0

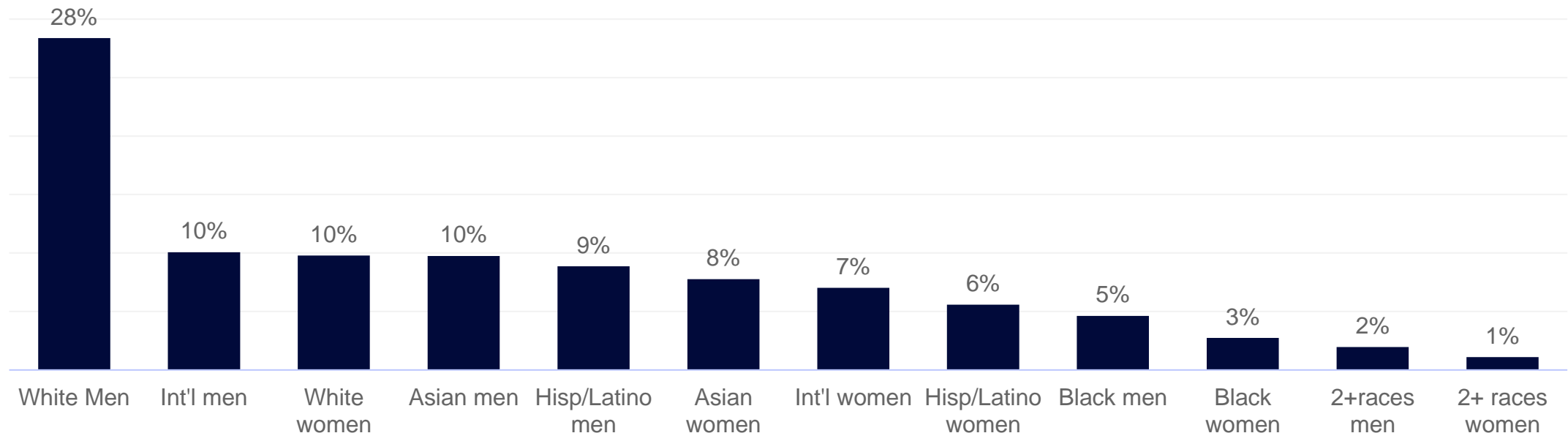
Award Level	BLS Educational Attainment
No College	5%
Some College	10%
Associates	5%
Bachelors	44%
Masters	27%
Doctoral	9%

Demographics: Economics

In 2021, 64% of completions were by men.

- 28% of 2021 completions were by white men.
- International men, white women, and Asian men made up 30% of completions.

2021 Completions by Demographic Group



Source: Gray's PES Markets

Program Scorecard: A Bachelor's in Economics ranks in the 99th percentile.

CIP: 45.0603 Econometrics and Quantitative Economics

Market: National

Award Level: Bachelors

Select Program

Export PDF

Support

CIP: 45.0603 Econometrics and Quantitative Economics

Market: National

Total Score: 39

Percentile: 99

Student Demand

Score: 22 Percentile: 98

Category	Pctl	Criterion	Value	Score
Size	86	Google Search Volume (3 Months)*	59,938	2
	92	International Page Views (12 Months)	344	NS
	93	New Student Enrollment Volume (12 Mo.)	3,228	4
	98	On-ground Completions at In-Market Institutions	13,978	4
	83	Online Completions by In-Market Students	50	1
Growth	98	Sum of On-ground and Online Completions	14,028	4
	66	Google Search YoY Change (Units)*	134	1
	98	New Student Enrollment Vol. YoY Change (Units)	437	3
	99	Completion Volume YoY Change (Units)	1,967	3
	57	Google Search YoY Change (%)	0%	0
	77	New Student Enrollment Vol. YoY Change (%)	16%	0
	79	Completion Volume YoY Change (%)	16%	0

Competitive Intensity

Score: 6 Percentile: 98

Category	Pctl	Criterion	Value	Score
Volume of In-Market Competition	93	Campuses with Graduates**	138	-4
	99	Campuses with Grads YoY Change (Units)**	16	-3
	0	Institutions with Online In-Market Students**	0	NS
In-Market Program Sizes	99	Average Program Completions	101	6
	98	Median Program Completions	47	6
	96	YoY Median Prog. Compl. Change (Units)	6	2
In-Market Saturation	76	YoY Median Prog. Compl. Change (%)	13%	0
	70	Google Search * Cost per Click**	\$7	-1
	39	Google Competition Index**	0.15	0
National Online Competition	79	National Online Institutions (Units)**	2	NS
	52	Nat'l Online % of Institutions	1%	NS
	0	Nat'l Online % of Completions	0	NS

Employment*

Score: 11 Percentile: 97

Category	Pctl	Criterion	Value	Score
Size: Direct Prep	79	Job Postings Total (12 Months)*	21,550	1
	78	BLS Current Employment*	48,066	0
	78	BLS Annual Job Openings*	4,610	NS
Size: ACS Bach. Outcomes	81	Job Postings Total (12 Months)*	21,922	NS
	94	BLS Current Employment*	122,287	NS
Growth (Direct Prep)	71	BLS 1-Year Historical Growth*	-0.8%	NS
	45	BLS 3-Year Historic Growth (CAGR)*	0.2%	-1
	89	BLS 10-Year Future Growth (CAGR)*	1.6%	0
Saturation (Direct Prep)	36	Job Postings per Graduate*	1.2	-1
	41	BLS Job Openings per Graduate*	0.3	NS
Wages (Direct Prep)	57	BLS 10th-Percentile Wages*	\$41,301	NS
	63	BLS Mean Wages*	\$71,071	NS
	National American Community Survey Bachelor's Degree Outcomes	96	Wages (Age < 30)	\$66,468
98		Wages (Age 30-60)	\$152,279	6
62		% with Any Graduate Degree	45%	NS
64		% with Masters	30%	NS
75		% with Doct/Prof Degree	15%	NS
86		% Unemp. (Age <30)**	4%	-2
73		% Unemp. (Age 30-60)**	2%	-1
67		% in Direct Prep Jobs	13%	NS

CIP Description:

A program that focuses on the systematic study of mathematical and statistical analysis of economic phenomena and problems. Includes instruction in economic statistics, optimization theory, cost/benefit analysis, price theory, economic modeling, and economic forecasting and evaluation.

Degree Fit:

Score: 0 Percentile: 50

Category	Pctl	Criterion	Value	Score
NHEBI Natl 2 Year		Cost Index**	NA	NS
		Student: Faculty Index	NA	NS

National Completions by Level

Score: 0

Award Level	Completions (National)	Completions (Market)	Enrollment (Market)
Certificate	0%	0%	0%
Associates	0%	0%	0%
Bachelors	77%	77%	46%
Postbaccalaureate Certificate	0%	0%	0%
Masters	18%	18%	39%
Post-masters Certificate	0%	0%	1%
Doctoral	5%	5%	14%
Unknown	0%	0%	0%

National Workforce Ed. Attainment

Score: 0

Award Level	BLS Educational Attainment
No College	5%
Some College	9%
Associates	5%
Bachelors	38%
Masters	30%
Doctoral	14%

* - Google search, employment data and Jobs Per Grad Ratio do not filter by award level.

** - Color scale in reverse.

NA - No data available/not currently tracked.

NS - Not Scored in Rubrics (values = 0).

2-Yr - Associates & certificate programs only.

PCTL - Percentile

Total Percentile

020+40+70+90+95+98+100

Total Score

-32-6-1311162449

** Color Scale in Reverse

Percentile (Reverse)

<020+05+10+30+60+

GRAY ASSOCIATES

Agenda

Student Demand

- Current Demand: Enrollment
- Leading Indicators: Google Searches
- Non-Degree Courses

Employment: Current Indicators

Program of the Month

Case Study: Mercer University

Summary



**To teach, to learn, to create, to discover, to inspire, to
empower and to serve.**

Stand-Alone Certificate for Federal Aid Eligibility

Federal Student Aid funds for stand-alone certificate programs requires that the program meet certain employment and wage expectations.

- Policy
 - The Federal repayment rate is at least 45%, or
 - Students who completed the program have a debt-to-earnings ratio of less than 20% of discretionary income or less than 8% of total income.
- Required Metrics
 1. Repayment rate
 2. Completion rate
 3. Debt-to-earnings ratio for completers



Application Report Requirements

- Enrollment Market Demand
 - Total Enrollment
 - New Student Enrollment
 - Completions
- Program Cost/Expected Student Dept
- Employability Market Demand
 - % Jobs by Award Level
 - Alignment of CIP with SOC
 - BLS % Employment Growth Rate
 - Market Jobs by SOC (Postings)
 - Market Jobs per Month (Postings)
 - Market Jobs by Employer (Postings)

- Wage Analysis
 - Market Posting Trend for Direct to Employer for CIP
 - Market Posting Trend for Direct to Employer by Degree Level
 - Market Posting Trend for Direct to Employer by SOC Title
- Metrics
- Wage Analysis
 - Market Posting Trend for Direct to Employer for CIP
 - Market Posting Trend for Direct to Employer by Degree Level
 - Market Posting Trend for Direct to Employer by SOC Title

Demonstrating Gainful Employment requires connecting Academic CIP to Employability

CIP Code: 30.7101
Data Analytics
and/or Data Science

Top Five Job Postings Volume Data Analytics/Science February 2023

Business Analyst	927
Business Systems Analyst	352
IT Business Analyst	182
Business Intelligence Analyst	172
Supply Chain Analyst	155

Top 10 Skills Business Analyst February 2023

Business Analysis	318
Project Management	292
Finance	231
Business Process	189
Information Systems	153
Accounting	132
Microsoft Office	112
JIRA	97
Marketing	96
Acceptance Testing	91

Agenda

Student Demand

- Current Demand: Enrollment
- Leading Indicators: Google Searches
- Non-Degree Courses

Employment: Current Indicators

Program of the Month

Case Study: Mercer University

Summary

Summary

- Fall 2022 new student enrollment in Data Analytics/Data Science master's programs grew 41% year-over-year.
 - At the bachelor's level, Cybersecurity grew the fastest: 32% year-over-year.
- In February, US Google searches for academic programs increased 3% year-over-year.
 - Cybersecurity was the fastest-growing program for searches.
- Job postings volume fell 19% year-over-year.
 - Job postings for secondary school teachers increased 11% year-over-year.
- Demand for a Bachelor's in Economics is high.
 - New student enrollment is high and grew 4% year-over-year.
 - There is high interest from international students.
 - Job openings volume and wages are high.
- Leveraging micro-credentials with degree programs impacts employability outcomes.

Upcoming Webinars

Topic	Date
Demand Trends Webcast: Community Colleges	<i>Wednesday</i> April 26 th at 2 PM ET
Demand Trends Webcast: Bachelor's and Above	<i>Thursday</i> April 27 th at 2 PM ET

Contact:
Robert Atkins
RobertGrayAtkins.com

