

**Master Class 1:** 

**Overview of Integrated Program Evaluation and Management** 

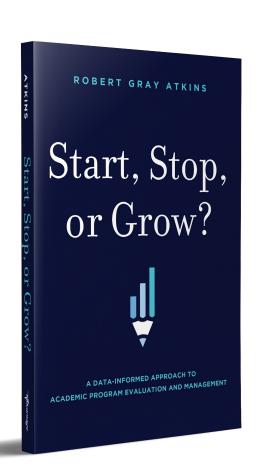
April 4, 2023



Robert Gray Atkins
CEO and Founder
Gray Associates

A data-informed approach to postsecondary education program evaluation and management.





**Available on Amazon** 

## Agenda

- 1. Myths and Realities
- 2. Program Evaluation System
- 3. Markets
  - 1. Student Demand
  - 2. Employment
  - 3. Program Scorecard
- 4. Program Economics and Benchmarking
- 5. Academic Program Portfolio Management

## Agenda

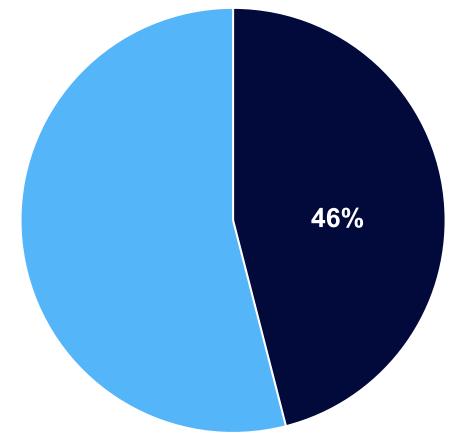
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You may have heard the question: Is college worth it?

According to Gallup, opinion is split almost 50/50.

46% of parents said they'd prefer not to send their children to a four-year college after high school.

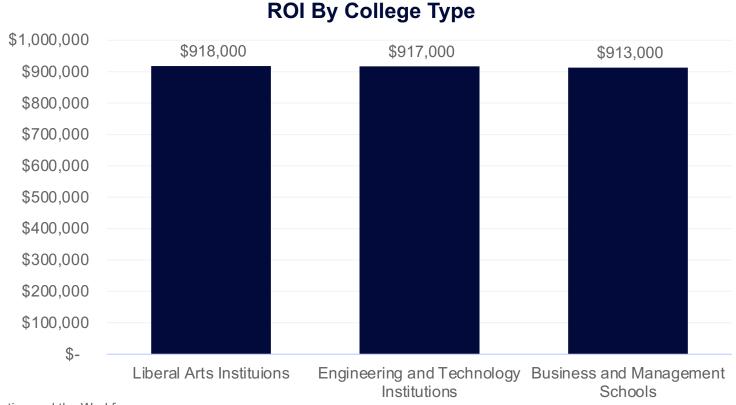
"Welders make more money than philosophers."
We need more welders and less philosophers."



Source: Gallup

## The value of a college degree

The ROI on a college degree is over \$900,000.



Source: Georgetown University Center on Education and the Workforce

#### Before age 30, Welder and Philosophy majors earn more than US median wage.



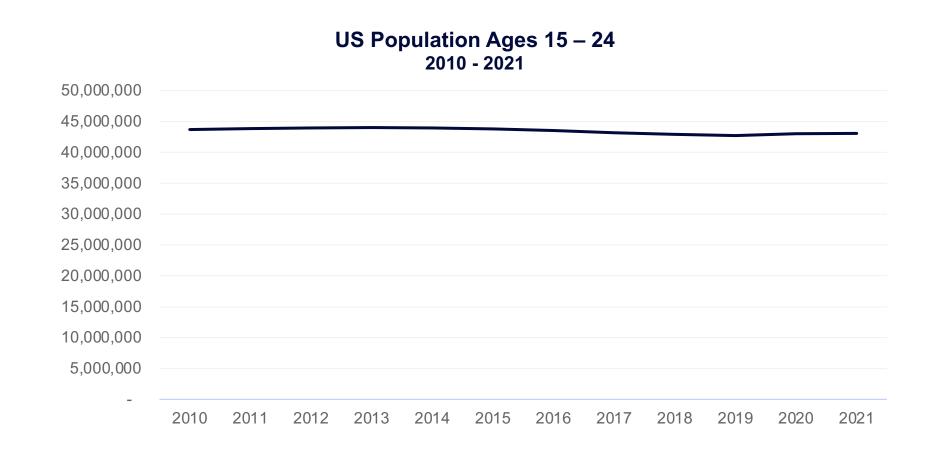
Sources: Bureau of Labor Statistics US Census, American Community Survey

#### After age 30, Philosophy majors earn much more.



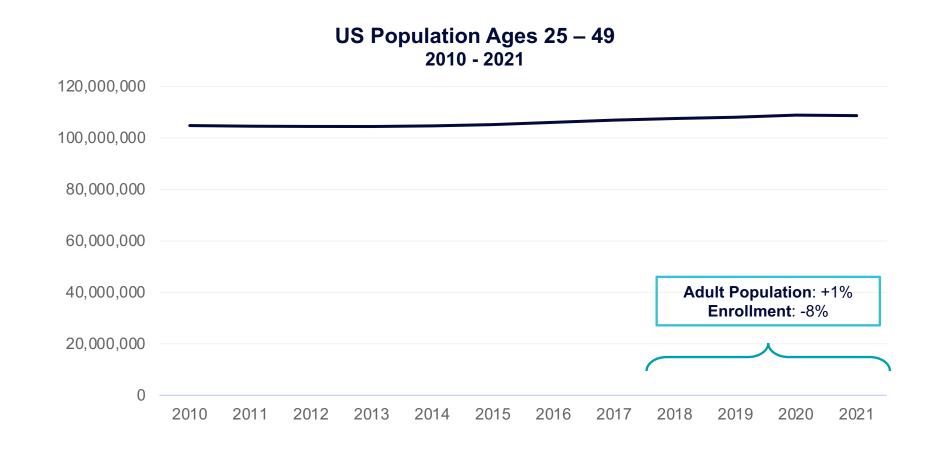
Sources: Bureau of Labor Statistics US Census, American Community Survey

#### The "demographic cliff" – a 0.1% annual decline, with local variations.



Source: US Census

#### The demographic upside: The adult learner population is growing slightly.

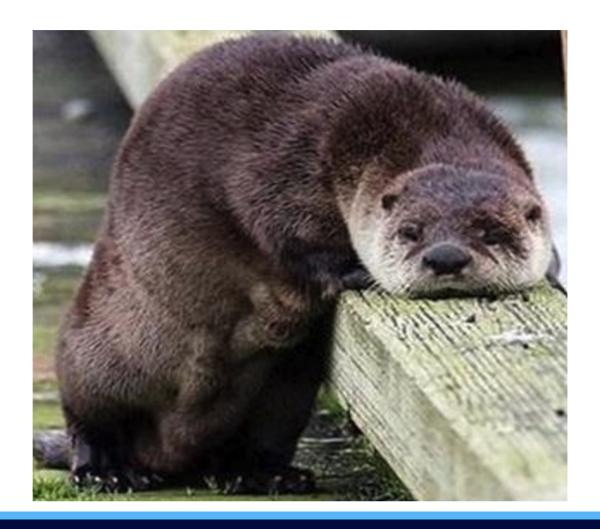


Source: US Census

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## Why bother?



A fundamental challenge: Knowledge is growing faster than budgets.



#### Many voices, data?

Everyone has a favorite program and a rationale for it.



## What is a Program Evaluation System (PES)?

Comprehensive data and easy-to-use software

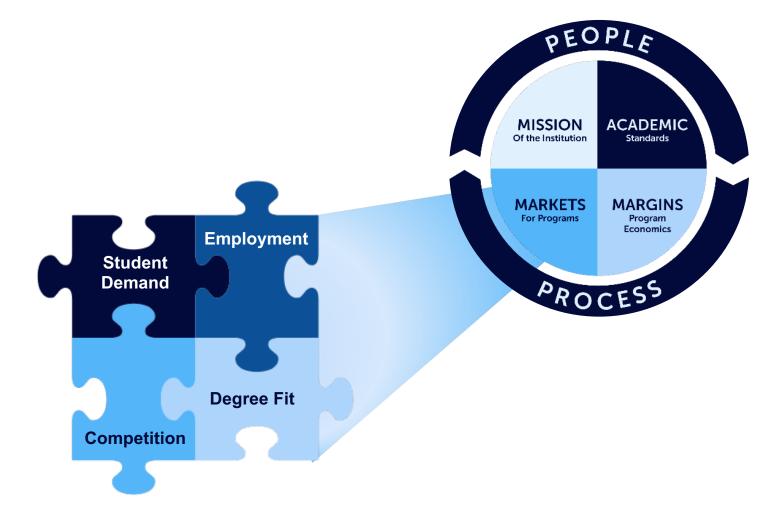


#### What is a Program Evaluation System?

An inclusive, data-informed evaluation process.



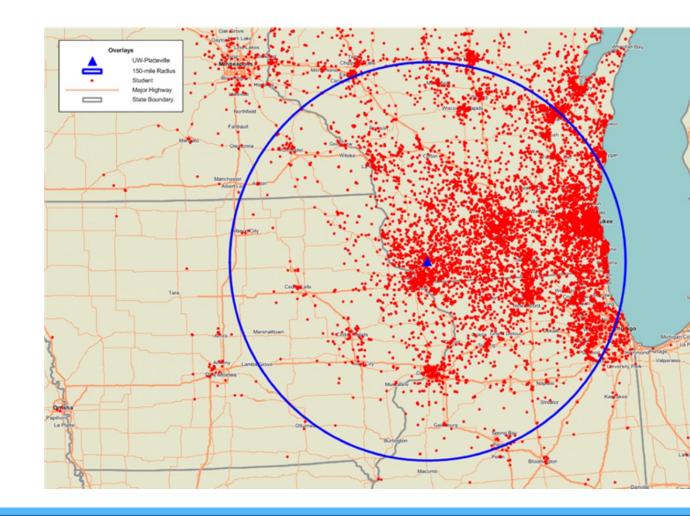
**PES: Markets** 



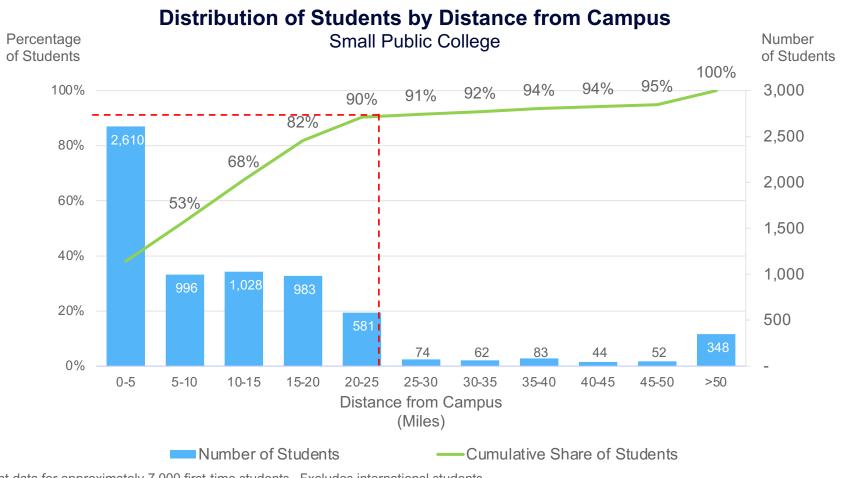
#### **Market Definition**

#### **Using Student Data to Define Markets**

- Student demand, employment, and competitor information are specific to local markets.
- Using student addresses or zip codes, you can identify the market or markets you serve.
- You will likely want regional and national data for online students and for jobs that can be done remotely.



## 90% of this college's students come from within 25 miles of its campus.



Source: Three years of enrollment data for approximately 7,000 first-time students. Excludes international students.

#### **Online Markets**

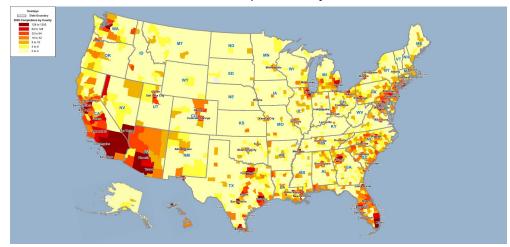
#### IPEDS completions can be very misleading.

- In Phoenix, the University of Phoenix's completions are overstated by more than 25,000.
- Of course, this means other markets, e.g., Miami, are significantly underestimated.
- This error confounds competitive analysis and labor market saturation metrics.



#### **University of Phoenix**

PES+ Enhanced Completions by Local Market



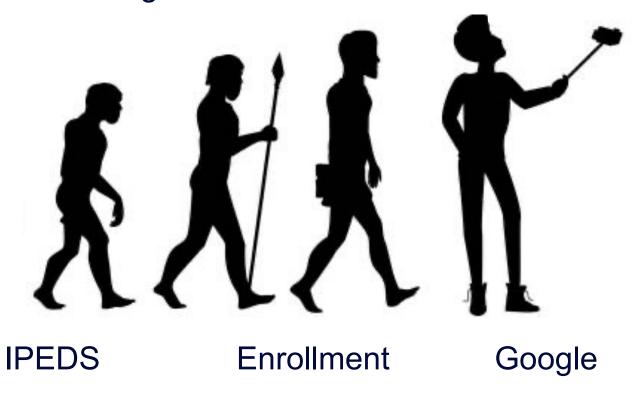
Source: NC-SARA

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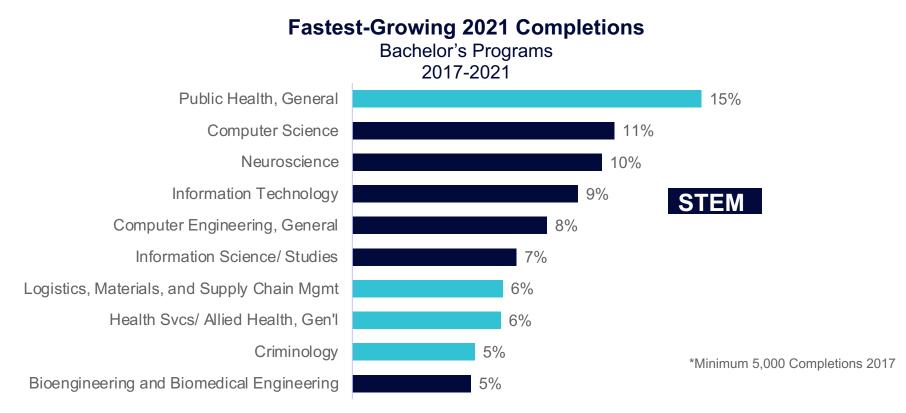
## IPEDS, Enrollment, and Google Search: Past, Present, and Future

Insights on Student Demand



#### **US Bachelor's 4-year Total Completions Growth\***

More than half of the fastest-growing bachelor's programs are in STEM fields.



Source: Gray Analysis of IPEDS data

## **US Bachelor's 4-Year Online Completions Growth**

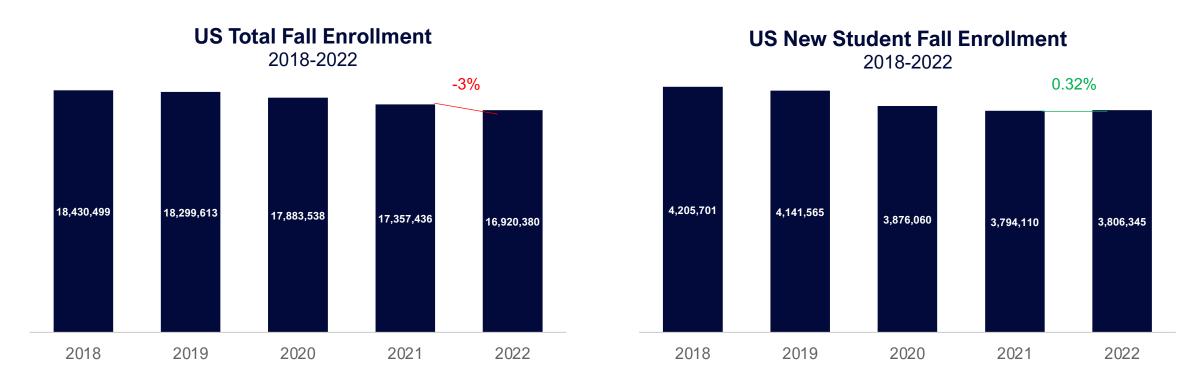
In contrast with total completions, only three fastest-growing online programs are in STEM.



Source: Gray Analysis of IPEDS data

#### Total Fall 2022 enrollment was down.

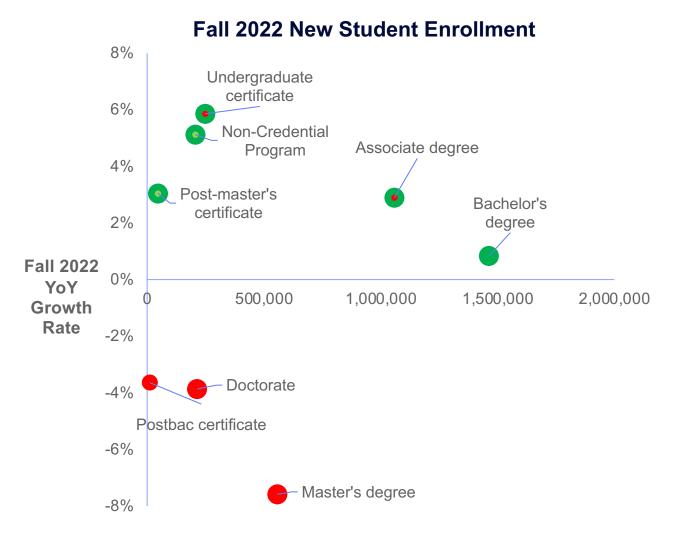
■ The good news: new student enrollment was slightly up.



Source: Gray Analysis of National Student Clearinghouse

# New student enrollment growth varies by award level.

- Associate and Bachelor's degrees grew.
- Master's degrees fell 8%.
- Doctoratal degrees fell 4%.
- Certificates were mostly up.

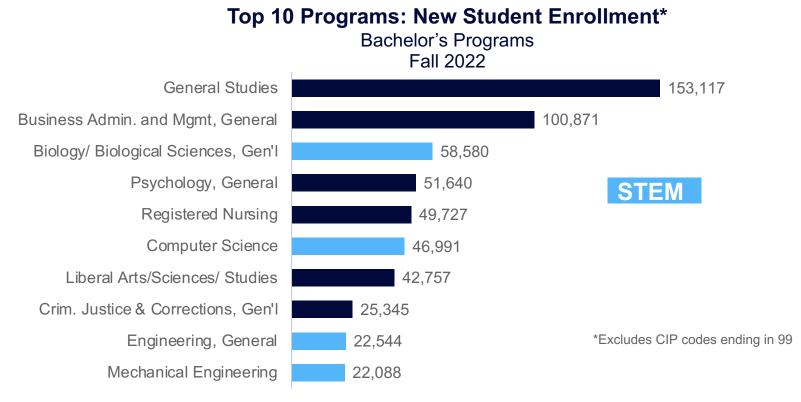


Source: Gray Analysis of National Student Clearinghouse

Fall 2022 Enrollment

In Fall 2022, 153,117 new bachelor's students enrolled in General Studies.

General studies has the highest enrollment, by far. STEM programs are four of the top 10.

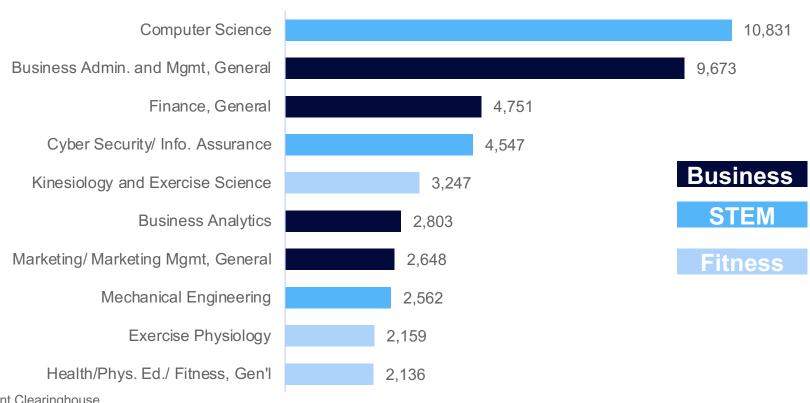


Source: Gray Analysis of National Student Clearinghouse

#### Growth: Computer Science and Business added the most new students.

#### **Fastest-Growing New Student Enrollment**

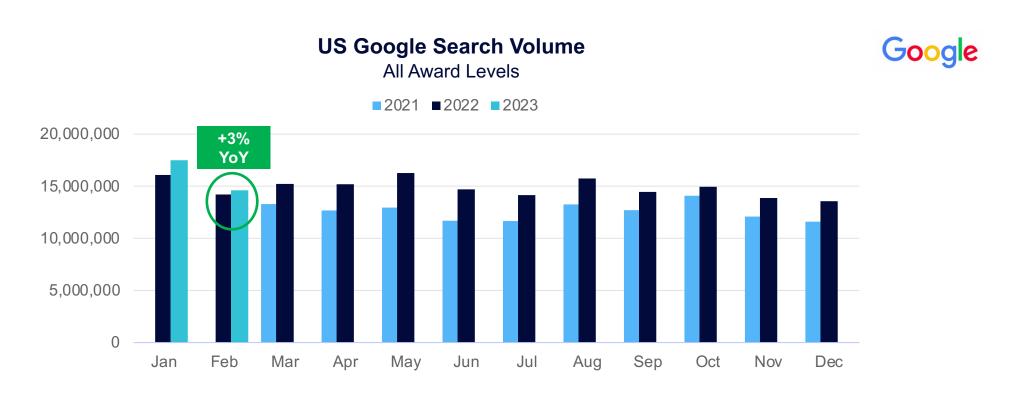




Source: Gray Analysis of National Student Clearinghouse

#### **Google Search Trends: Programs**

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



Source: Gray's PES Keyword Search Dashboard

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#### NCES CIP 2020 to SOC 2018 Crosswalk

What NCES thinks history majors do...

History, General
CIP 54.0101

Tour Guides and Escorts
39-7011

Managers, All Other SOC 11-9199

Historians soc 19-3093

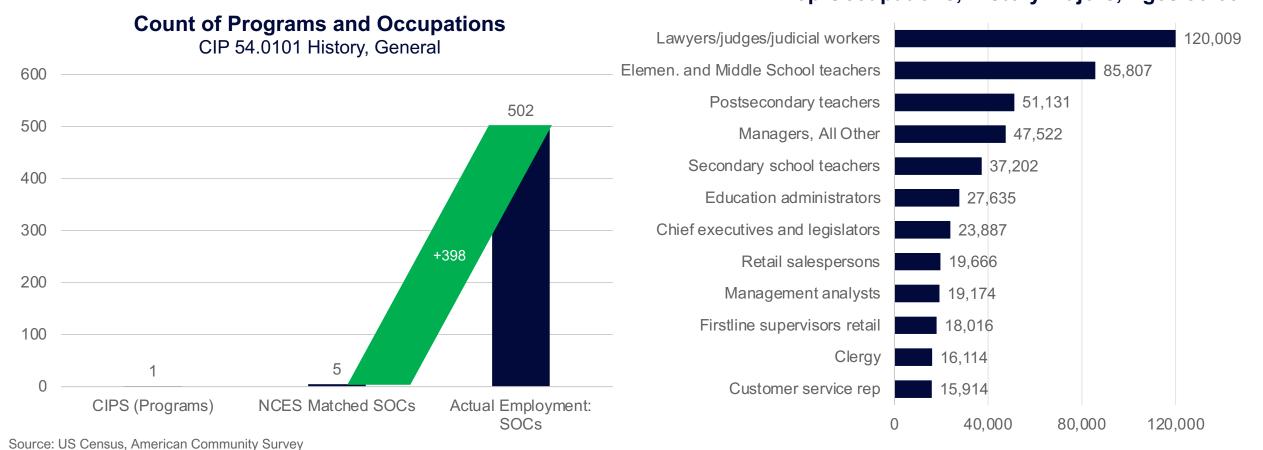
History Teachers, Postsecondary SOC 25-1125

Secondary School Teachers, Except Special and Career/Technical Education SOC 25-2031

Source: IES NCES: "CIP SOC Crosswalk", July, 2021 https://nces.ed.gov/ipeds/cipcode/post3.aspx?y=56,

## Reality: History majors work in 502 SOCs and earn \$106,456 (80th).

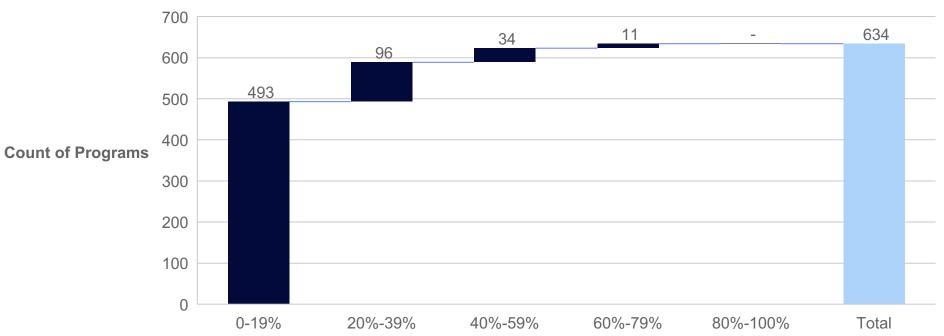
#### Top Occupations, History Majors, Ages 30-60



## NCES: "The CIP SOC Crosswalk is not based on actual empirical data."1

77% of programs place less than 20% of graduates in jobs for which they are directly prepared.





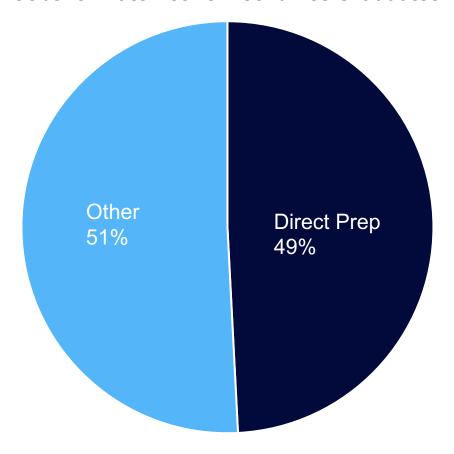
Percentage of Graduates entering fields for which they were directly prepared

<sup>1.</sup> Source: IES NCES: "CIP SOC Crosswalk", July 2021 <a href="https://nces.ed.gov/ipeds/cipcode/post3.aspx?y=56">https://nces.ed.gov/ipeds/cipcode/post3.aspx?y=56</a>,

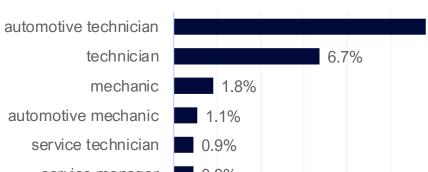
<sup>2.</sup> US Census, American Community Survey, Gray Analysis. Bachelor's-degree programs with over 100 completions.

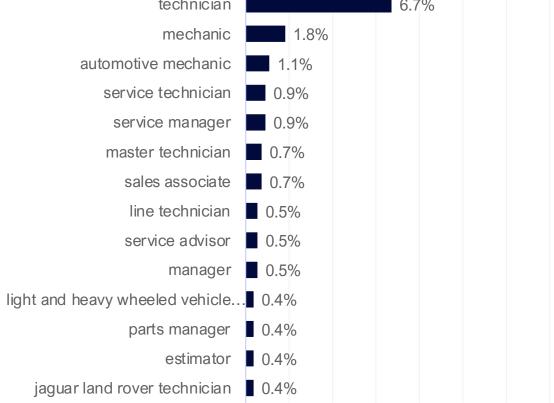
# GRAY ASSOCIATES

#### **Jobs for Automotive Mechanics Graduates**



#### **Direct Prep Jobs Automotive Mechanic Graduates**





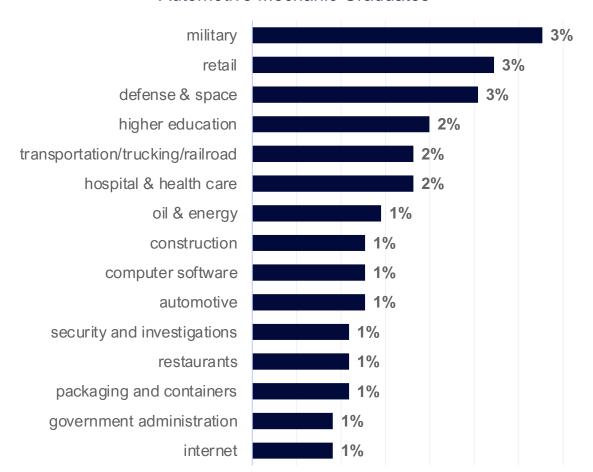
Source: Gray's analysis of People Data Lab data

11.6%

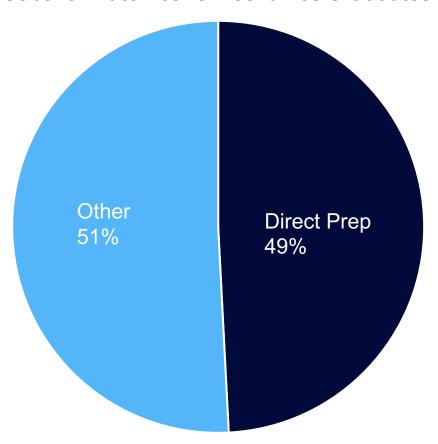
# GRAY ASSOCIATES

#### Other Jobs by Industry

**Automotive Mechanic Graduates** 



#### **Jobs for Automotive Mechanics Graduates**



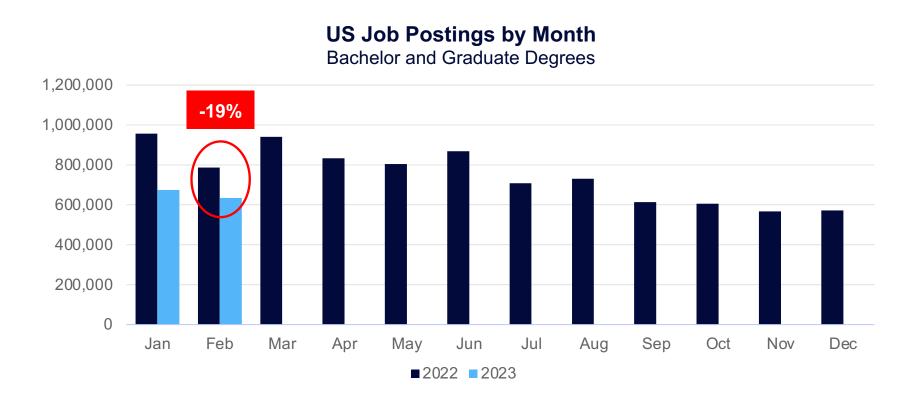
Source: Gray's analysis of People Data Lab data

# GRAY ASSOCIATES



Source: Gray's analysis of People Data Lab data

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



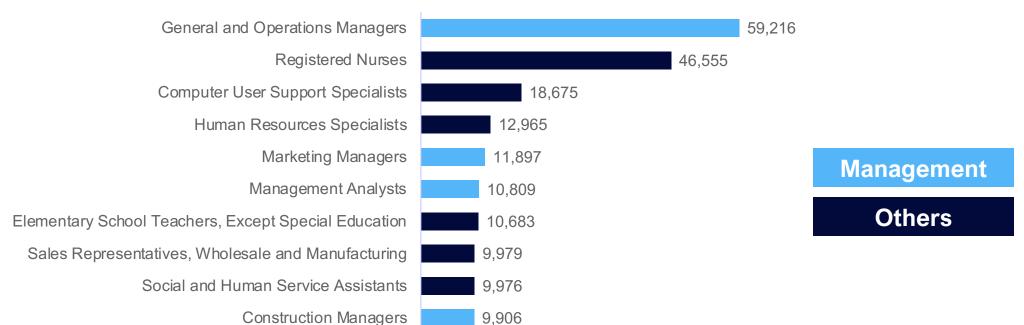
Source: Gray's PES Job Postings Dashboard

# 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)



Source: Gray's PES Job Postings Dashboard

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# Scoring identifies potentially attractive programs.

### **National Program Ranking**

Associate Transfer and Bachelor's

| CIP Q                                     | Total Percentile | Student Demand<br>Percentile | Competitive Intensity<br>Percentile | Employment Percentile | Degree Fit Percentile |
|---|------------------|------------------------------|-------------------------------------|-----------------------|-----------------------|
| 51.3801 Registered Nursing                | <sup>§</sup> 100 | 99                           | 87                                  | 99                    | 100                   |
| 11.1003 Cyber Security/ Info. Assurance   | 99               | 100                          | 1                                   | 78                    | 100                   |
| 52.0201 Business Admin. and Mgmt, General | 99               | 99                           | 81                                  | 92                    | 100                   |
| 45.0601 Economics, General                | 99               | 98                           | 20                                  | 98                    | 100                   |
| 51.0911 Radiologic Tech/ Radiographer     | 99               | 98                           | 20                                  | 90                    | 100                   |
| 11.0103 Information Technology            | 99               | 98                           | 1                                   | 92                    | 100                   |
| 49.0101 Aviation/Aero Science/Tech, Gen'l | 99               | 97                           | 62                                  | 94                    | 100                   |
| 52.0299 Business Admin/Mgmt/ Oper., Other | 99               | 96                           | 32                                  | 91                    | 100                   |
| 52.1201 Management Info. Systems, General | 99               | 94                           | 50                                  | 98                    | 100                   |
| 29.0201 Intelligence, General             | 99               | 90                           | 94                                  | 92                    | 100                   |

| Total Percentile | 0   | 20+ | 40+ | 70+ | 90+ | 95+ | 98+ | 100 |
|------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Total Score      | -39 | -16 | -11 | 4   | 15  | 21  | 29  | 112 |

172.092

## **Scorecard: Student Demand**

Business: 99<sup>th</sup> percentile.

Business is a large program.

- 99<sup>th</sup> percentile for Google searches
- 100<sup>th</sup> percentile for international
- 100<sup>th</sup> percentile for new student enrollment
- 100<sup>th</sup> percentile for on-campus completions
- 99<sup>th</sup> percentile for online completions

## Student Demand Score: 33 Percentile: 99

100

| Catego | Pctl | Criterion                                       | Value     | Score |
|--------|------|---|-----------|-------|
| •      | 99   | Google Search Volume (3 Months)*                | 1,330,010 | 8     |
|        | 100  | International Page Views (12 Months)            | 11,678    | NS    |
| Size   | 100  | New Student Enrollment Volume (12 Mo.)          | 123,854   | 8     |
| Size   | 100  | On-ground Completions at In-Market Institutions | 126,594   | 4     |
|        | 99   | Online Completions by In-Market Students        | 45,498    | 4     |

Sum of On-ground and Online Completions

## **Scorecard: Student Demand**

### **Business Growth**

- 50<sup>th</sup> percentile for Google year-over-year percent growth
  - 0 for unit change
- 61<sup>st</sup> percentile for new student enrollment year-over-year percent growth
  - 99<sup>th</sup> for unit change.
- 55<sup>th</sup> percentile for completions year-overyear percent growth
  - 99<sup>th</sup> percentile for unit change



**Implication**Start or Grow

### Student Demand

Score: 33 Percentile: 99

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|        | 100  | Sum of On-ground and Online Completions         | 172,092   | 4     |
|        | 0    | Google Search YoY Change (Units)*               | -29,750   | -1    |
|        | 99   | New Student Enrollment Vol. YoY Change (Units)  | 3,774     | 3     |
| Growth | 99   | Completion Volume YoY Change (Units)            | 2,897     | 3     |
| Growth | 50   | Google Search YoY Change (%)*                   | -2%       | 0     |
|        | 61   | New Student Enrollment Vol. YoY Change (%)      | 3%        | 0     |
|        | 55   | Completion Volume YoY Change (%)                | 2%        | 0     |

## In February, Google search volume for Business rose 7% year-over-year.



Source: Gray's PES Keyword Search Dashboard

## **Scorecard: Employment**

## Business: 92<sup>nd</sup> percentile.

- 100<sup>th</sup> percentile Job Posting volume
- 100<sup>th</sup> percentile BLS Employment
- 100<sup>th</sup> percentile ACS (non-direct prep)
- Conflicting data on growth
- 14.8 jobs per graduate, (87<sup>th</sup> percentile)
- Average wages
- 33% in direct prep fields (94<sup>th</sup> percentile)



**Implication**Start or Grow

Employment\*

Score: 8 Percentile: 92

| Category             | Pctl | Criterion                          | Value      | Score |
|----------------------|------|------------------------------------|------------|-------|
|                      | 100  | Job Postings Total (12 Months)*    | 6,058,777  | 2     |
| Size: Direct Prep    | 100  | BLS Current Employment*            | 12,595,541 | 2     |
|                      | 100  | BLS Annual Job Openings*           | 1,463,559  | NS    |
| Size: ACS Bach.      | 100  | Job Postings Total (12 Months)*    | 6,130,318  | NS    |
| Outcomes             | 100  | BLS Current Employment*            | 4,068,821  | NS    |
|                      | 70   | BLS 1-Year Historical Growth*      | -1.0%      | NS    |
| Growth (Direct Prep) | 76   | BLS 3-Year Historic Growth (CAGR)* | 2.6%       | 0     |
| гтер/                | 96   | BLS 10-Year Future Growth (CAGR)*  | 2.6%       | 1     |
| Saturation           | 87   | Job Postings per Graduate*         | 14.8       | 0     |
| (Direct Prep)        | 86   | BLS Job Openings per Graduate*     | 3.6        | NS    |
| Wages (Direct        | 64   | BLS 10th-Percentile Wages*         | \$44,098   | NS    |
| Prep)                | 70   | BLS Mean Wages*                    | \$76,918   | NS    |
|                      | 77   | Wages (Age < 30)                   | \$50,477   | 3     |
| 2000 10              | 65   | Wages (Age 30-60)                  | \$96,624   | 2     |
| National<br>American | 24   | % with Any Graduate Degree         | 24%        | NS    |
| Community            | 31   | % with Masters                     | 20%        | NS    |
| Survey Bachelor's    | 17   | % with Doct/Prof Degree            | 3%         | NS    |
| Degree<br>Outcomes   | 65   | % Unemp. (Age < 30)**              | 3%         | -1    |
| Outcomes             | 73   | % Unemp. (Age 30-60)**             | 2%         | -1    |
|                      | 89   | % in Direct Prep Jobs              | 33%        | NS    |

# Business majors go into 513 occupations and make an average of \$96,624 (65th percentile) – less than History and Philosophy majors.

#### **Top Occupations, Business Majors, Ages 30 - 60**



Source: Gray's analysis of American Community Survey, US Census

## **Scorecard: Competitive Intensity**

## Business: 92<sup>nd</sup> percentile.

- 1,492 competitors: 100<sup>th</sup> percentile
- Large median program size: 96<sup>th</sup> percentile
  - Flat year-over-year
- 100<sup>th</sup> percentile: national online programs
- High saturation metrics
  - 97<sup>th</sup> percentile cost per click
  - 38<sup>th</sup> percentile Google competition index



Implication

**Market Saturated?** 

## Competitive Intensity

Score: 1 Percentile: 92

| Category         | Pctl | Criterion                                     | Value | Score |
|------------------|------|---|-------|-------|
| Volume of        | 100  | Campuses with Graduates**                     | 1,492 | -8    |
| In-Market        | 2    | Campuses with Grads YoY Change (Units)**      | -7    | 2     |
| Competition      | 100  | Institutions with Online In-Market Students** | 551   | NS    |
| In-Market        | 98   | Average Program Completions                   | 85    | 6     |
|                  | 96   | Median Program Completions                    | 37    | 4     |
| Program<br>Sizes | 67   | YoY Median Prog. Compl. Change (Units)        | 0     | 0     |
| 7                | 67   | YoY Median Prog. Compl. Change (%)            | 0     | 0     |
| In-Market        | 97   | Google Search * Cost per Click**              | \$26  | -3    |
| Saturation       | 38   | Google Competition Index**                    | 0.14  | 0     |
| National         | 100  | National Online Institutions (Units)**        | 638   | NS    |
| Online           | 94   | Nat'l Online % of Institutions                | 34%   | NS    |
| Competiti        | 89   | Nat'l Online % of Completions                 | 26%   | NS    |

## **Scorecard: Degree Fit**

## A Bachelor's degree is appropriate.

- Bachelor's is the most common degree.
  - 42% of national completions
  - Master's is 28% of completions.
- 38% of the national workforce hold a bachelor's.
  - 20% hold a certificate.
  - 15% hold a master's.



Implication
Bachelor's Degree Program
Possibly Master's

Source: Gray's PES Markets

#### Degree Fit:

Score: 0 Percentile: 50

#### National Completions by Level

Score: 0

| Award Level                   | Completions<br>(National) | Completions<br>(Market) | Enrollment<br>(Market) |
|-------------------------------|---------------------------|-------------------------|------------------------|
| Certificate                   | 10%                       | 10%                     | 4%                     |
| Associates                    | 19%                       | 19%                     | 33%                    |
| Bachelors                     | 42%                       | 42%                     | 35%                    |
| Postbaccalaureate Certificate | 1%                        | 1%                      | 0%                     |
| Masters                       | 28%                       | 28%                     | 25%                    |
| Post-masters Certificate      | 0%                        | 0%                      | 1%                     |
| Doctoral                      | 1%                        | 1%                      | 2%                     |
| Unknown                       | 0%                        | 0%                      | 0%                     |

#### National Workforce Ed. Attainment

Score: 0

|   | Award Level  | BLS Educational Attainment |
|---|--------------|----------------------------|
|   | No College   | 15%                        |
|   | Some College | 20%                        |
|   | Associates   | 9%                         |
|   | Bachelors    | 38%                        |
|   | Masters      | 15%                        |
|   | Doctoral     | 3%                         |
| • |              |                            |

## CIP: 52.0201 Business Admin. and Mgmt, General

#### Student Demand Score: 33 Percentile: 99

| Catego | tego Pctl Criterion |   | Value     | Score |
|--------|---------------------|---|-----------|-------|
|        | 99                  | Google Search Volume (3 Months)*                | 1,330,010 | 8     |
|        | 100                 | International Page Views (12 Months)            | 11,678    | NS    |
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| Growth | 50                  | Google Search YoY Change (%)*                   | -2%       | 0     |
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|        | 55                  | Completion Volume YoY Change (%)                | 2%        | 0     |

#### Competitive Intensity

Score: 1 Percentile: 92

-20

-18

Total Percentile 0

Total Score

| Category                 | Pctl | Criterion                                     | Value | Score |
|--------------------------|------|---|-------|-------|
| Volume of                | 100  | Campuses with Graduates**                     | 1,492 | -8    |
| In-Market<br>Competition | 2    | Campuses with Grads YoY Change (Units)**      | -7    | 2     |
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| Competition              | 89   | Nat'l Online % of Completions                 | 26%   | NS    |

70+

-1

90+

95+

15

98+

24

#### Market: National

#### Employment\*

Score: 8 Percentile: 92

| Category                | Pctl | Criterion                          | Value      | Score |
|-------------------------|------|------------------------------------|------------|-------|
|                         | 100  | Job Postings Total (12 Months)*    | 6,058,777  | 2     |
| Size: Direct Prep       | 100  | BLS Current Employment*            | 12,595,541 | 2     |
|                         | 100  | BLS Annual Job Openings*           | 1,463,559  | NS    |
| Size: ACS Bach.         | 100  | Job Postings Total (12 Months)*    | 6,130,318  | NS    |
| Outcomes                | 100  | BLS Current Employment*            | 4,068,821  | NS    |
| Growth (Direct<br>Prep) | 70   | BLS 1-Year Historical Growth*      | -1.0%      | NS    |
|                         | 76   | BLS 3-Year Historic Growth (CAGR)* | 2.6%       | 0     |
|                         | 96   | BLS 10-Year Future Growth (CAGR)*  | 2.6%       | 1     |
| Saturation              | 87   | Job Postings per Graduate*         | 14.8       | 0     |
| (Direct Prep)           | 86   | BLS Job Openings per Graduate*     | 3.6        | NS    |
| Wages (Direct           | 64   | BLS 10th-Percentile Wages*         | \$44,098   | NS    |
| Prep)                   | 70   | BLS Mean Wages*                    | \$76,918   | NS    |
|                         | 77   | Wages (Age < 30)                   | \$50,477   | 3     |
| National                | 65   | Wages (Age 30-60)                  | \$96,624   | 2     |
| American                | 24   | % with Any Graduate Degree         | 24%        | NS    |
| Community               | 31   | % with Masters                     | 20%        | NS    |
| Survey Bachelor's       | 17   | % with Doct/Prof Degree            | 3%         | NS    |
| Degree<br>Outcomes      | 65   | % Unemp. (Age <30)**               | 3%         | -1    |
|                         | 73   | % Unemp. (Age 30-60)**             | 2%         | -1    |
|                         | 89   | % in Direct Prep Jobs              | 33%        | NS    |

#### CIP Description:

A program that generally prepares individuals to plan, organize, direct, and control the functions and processes of a firm or organization. Includes instruction in management theory, human resources management and behavior, accounting and other quantitative methods, purchasing and logistics, organization and production, marketing, and business decision-making.

## Total Score: 42

Percentile: 99

#### Degree Fit:

Score: 0 Percentile: 50

| Category    | Pctl | Criterion              | Value | Score |
|-------------|------|------------------------|-------|-------|
| NHEBI       | 13   | Cost Index**           | 67%   | NS    |
| Natl 2 Year | 87   | Student: Faculty Index | 124%  | NS    |

#### National Completions by Level

Score: 0

| Award Level                   | Completions<br>(National) | Completions<br>(Market) | Enrollment<br>(Market) |
|-------------------------------|---------------------------|-------------------------|------------------------|
| Certificate                   | 10%                       | 10%                     | 4%                     |
| Associates                    | 19%                       | 19%                     | 33%                    |
| Bachelors                     | 42%                       | 42%                     | 35%                    |
| Postbaccalaureate Certificate | 1%                        | 1%                      | 0%                     |
| Masters                       | 28%                       | 28%                     | 25%                    |
| Post-masters Certificate      | 0%                        | 0%                      | 1%                     |
| Doctoral                      | 1%                        | 1%                      | 2%                     |
| Unknown                       | 0%                        | 0%                      | 0%                     |

#### National Workforce Ed. Attainment

Score: 0

| Award Level  | BLS Educational Attainment |
|--------------|----------------------------|
| No College   | 15%                        |
| Some College | 20%                        |
| Associates   | 9%                         |
| Bachelors    | 38%                        |
| Masters      | 15%                        |
| Doctoral     | 3%                         |

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

Color scale in reverse.

- No data available/not currently tracked.

- Not Scored in Rubrics (values = 0). - Associates & certificate programs only.



Percentile (Reverse)

05+

10+



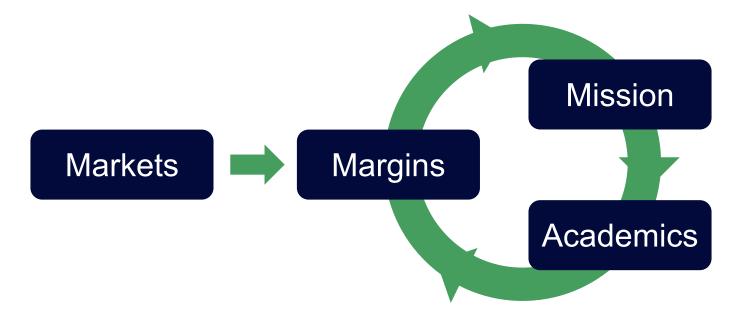
# Agenda

- 1. Myths and Realities
- 2. Program Evaluation System
- 3. Markets
  - 1. Student Demand
  - 2. Employment
  - 3. Program Scorecard
- 4. Program Economics and Benchmarking
- 5. Academic Program Portfolio Management

## Why are margins important?

Cross-subsidies fund what markets won't: investing in your mission.

- High margin programs produce more money than they cost.
- Institutions use the funds to subsidize other mission-critical programs and activities.

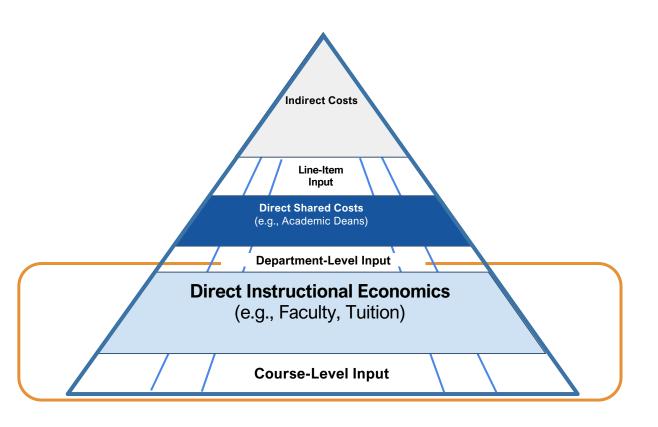


## What are academic program economics?

- Revenue minus direct instructional costs
- For all courses taken by students in the major
- Including courses outside the department

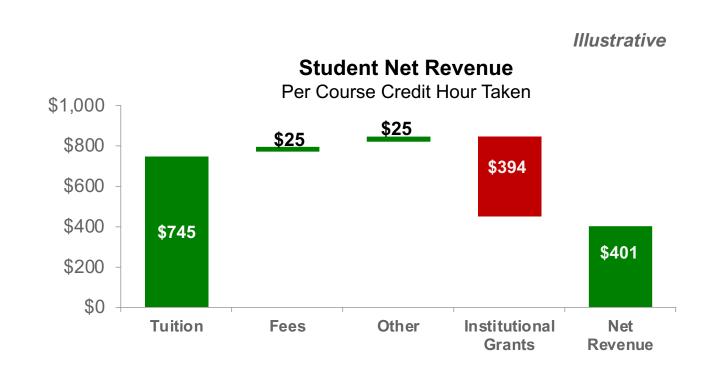
#### Rationale:

Program economics captures all the revenues, costs, and margins that are likely to change if you decide to grow or stop a program.



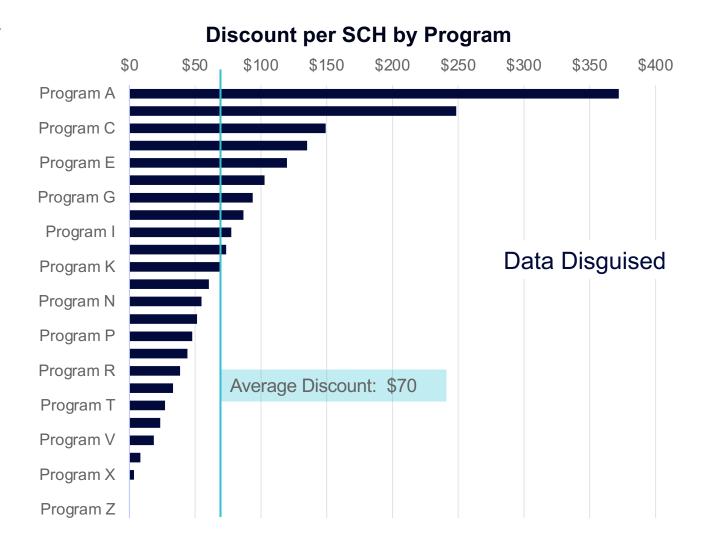
## 1. Calculate net revenue per credit hour

- For each student gather data on:
  - Tuition and fees
  - Institutional grants
  - Per student state funding, if applicable
  - External grants need not be included for each student, subtract grants from revenue to calculate their net revenue.
- For each student, divide net revenue by the student's course credit hours to calculate net revenue per course credit hour.
- Assign net revenue per course credit hour to the courses taken by each student.
- The assigned will follow the student into their major.



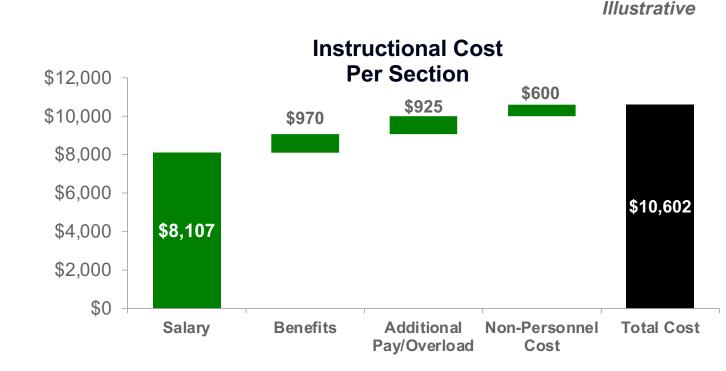
# Discounts must be calculated by program.

- It would be easier to use an average institutional discount.
- This approach would be valid if discounts were roughly the same across programs.
- In practice, discounts vary widely by program, so it is important to track them by program.



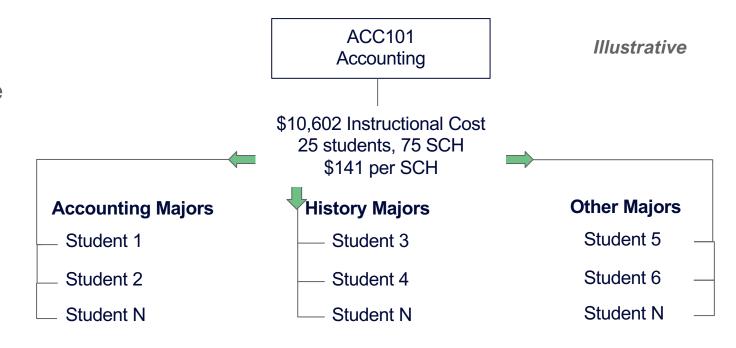
### 2. Calculate direct instructional cost

- Gather data on:
  - Faculty wages and benefits
  - Faculty load tables or standards
  - Courses taught by faculty member
  - Non-personnel cost by course
- Divide faculty cost by standard load (typically course credit hours)
- Subtract wages for credit hours of nonteaching time
- Assign remaining cost to courses or section per course credit hour
- Add in other instructional costs



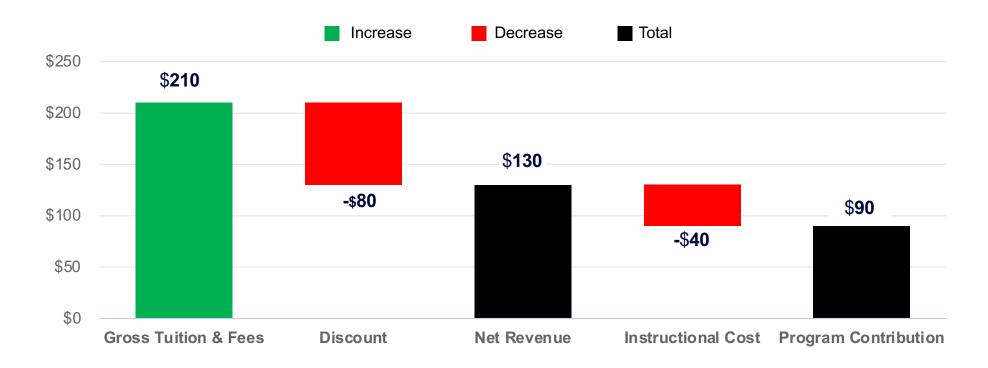
## 3. Assign cost to students

- Divide the section or course cost by the number of student credit hours to calculate cost per student credit hour (SCH)
- Multiply cost per SCH by the number of course credit hours
- Assign this amount to each student, regardless of major
- This course cost will follow each student into their major.



## 4. Build your Program Economics Scorecard with clear visual math.





4. Now, you may wish to add departmental overheads.



Illustrative

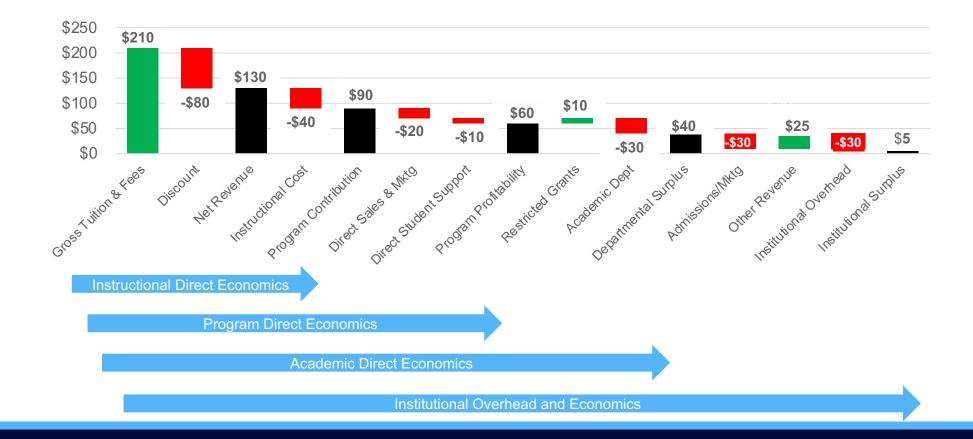
4. Institutional overhead can also be allocated to determine institutional surplus.



Illustrative

4. Build your Program Economics Scorecard with clear visual math.

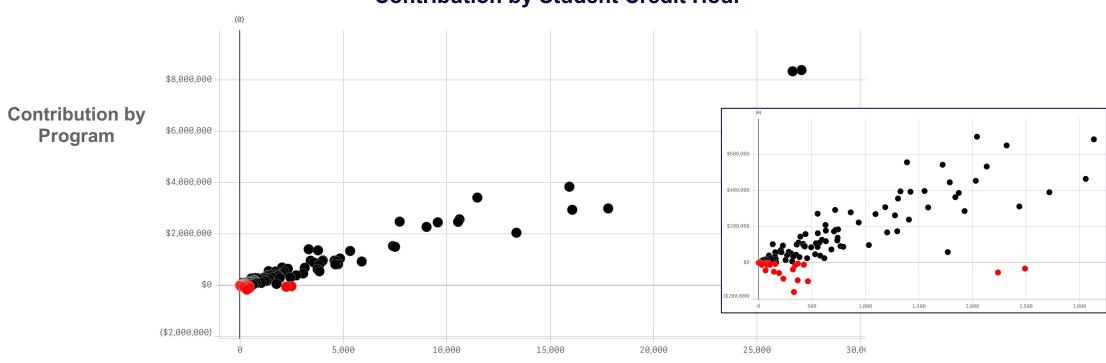




# **Program Economics**

Most programs make money; even small ones.

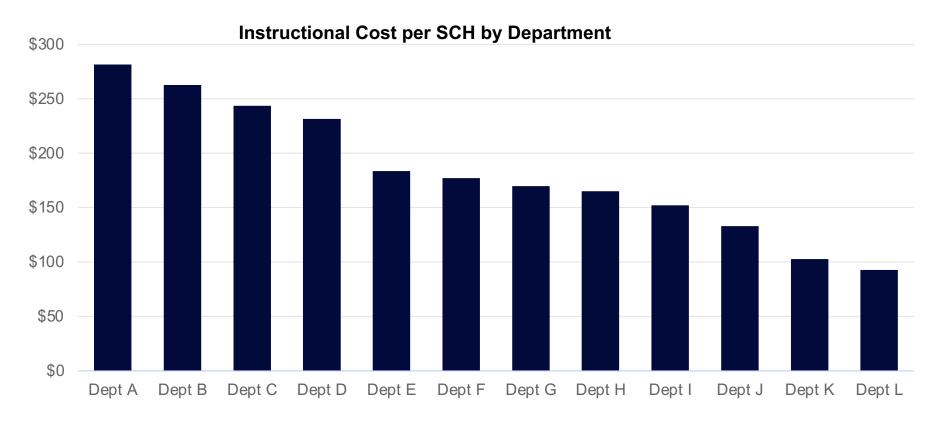
## **Contribution by Student Credit Hour**



**Student Credit Hour** 

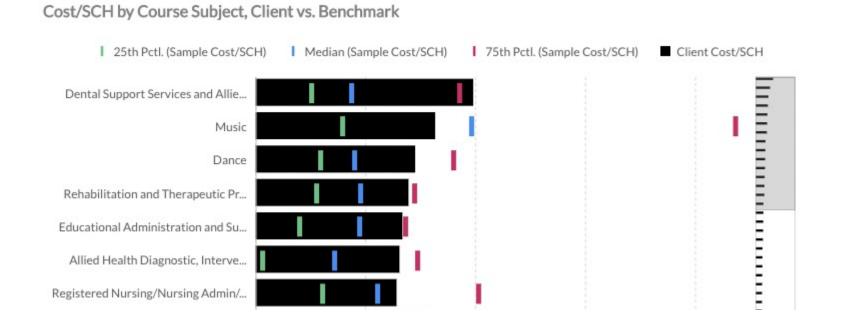
## **Evaluate: Internal Performance Benchmarks**

Comparing course-level costs across departments is a start.



## **External Performance Benchmarks: Programs**

External benchmarks are more representative (like for like).



## **Benchmark**

## Margins by program

### Difference from Average Bachelor's Contribution Margin per SCH\*

(Selected programs offered by 4 or more institutions)

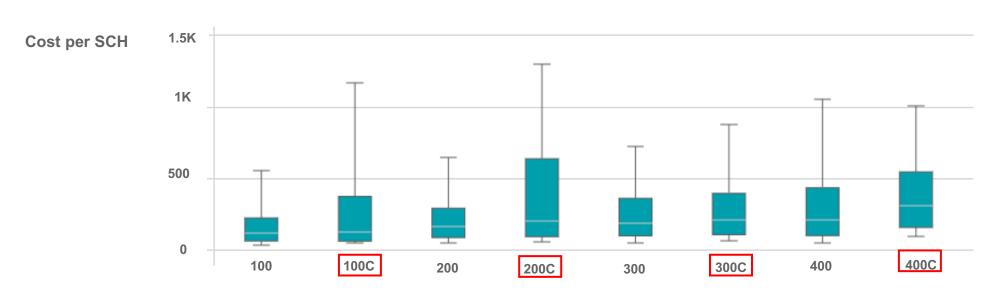


## **Evaluate: Internal Performance**

Greater variance than benchmarks indicates costs are less controlled.

## **Cost: Student Credit Hour by Course Level**

Client vs. Benchmark

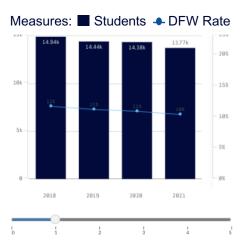


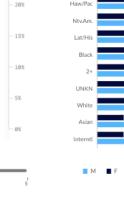


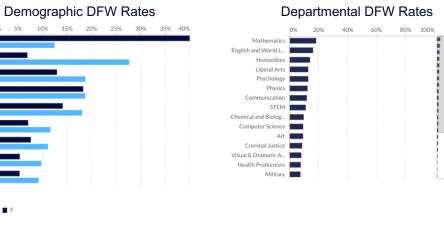
**Course Level** 

## **Academic Outcomes**

# of Students Course Enrollments # of DFWs DFW Rate # of Programs # of Courses # of Sections
13,767 127,951 13,346 10.4% 149 2,713 6,691









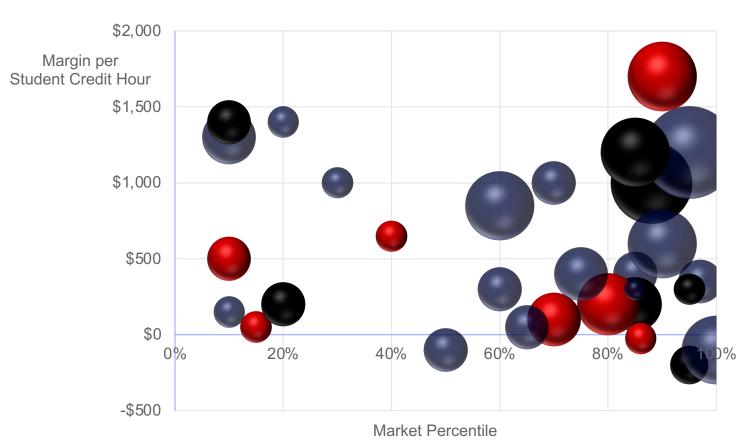
Scale to adjust the minimum no. of students in the course





# Putting it together: Mission, Markets, and Margins

- Mission-critical programs in healthy markets are candidates to grow or sustain.
- Low-margin discretionary programs in weak markets are candidates to stop.
- High-margin discretionary programs in healthy markets are tempting to grow...
  - They help fund the mission.
  - But they may also distract faculty and students from the mission.



#### Key:

Bubble area is proportional to program size. Fill color indicates importance to mission:

- Mission-Critical
- Mission-Aligned
- Discretionary

# Agenda

- 1. Myths and Realities
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## Run a Collaborative Process

### **Academic Program Evaluation Workshop**

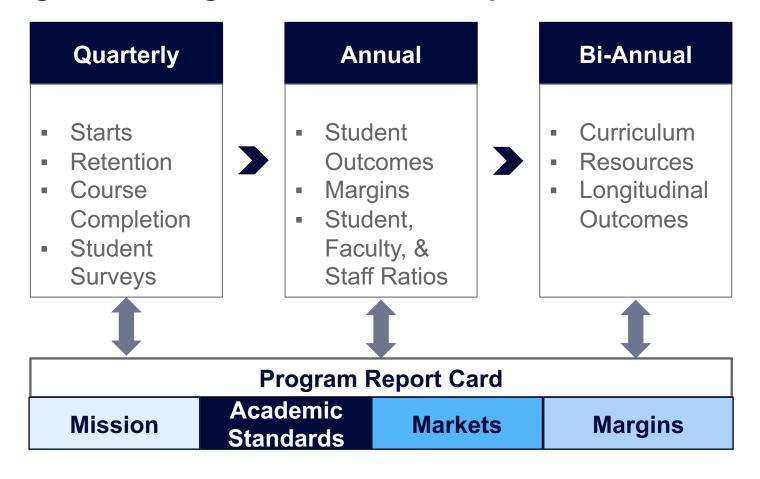
# **Day 1**New Programs

- Present workshop objectives
- Summarize approach to program selection
- Share initial scoring outcomes
- Review scoring system
- Evaluate proposed programs
- Rank and propose programs to start, pending further evaluation

# Day 2 Current Programs

- Review Day 1 outcomes
- Rank current programs
- Discuss high- and low-scoring programs
- Make preliminary recommendations on programs to sustain, stop, or grow, pending further evaluation
- Wrap-Up: Agree on next steps, tasks, owners, and deadlines

## Academic Program Management: More Frequent, Informed, and Automated



| Market: 100-Mile Radius ▼               |                   | Marke   | t                                  | Internal Performance |    |           |    |                | X.                                    |                   |                |              |                  |                                  |
|---|-------------------|---------|------------------------------------|----------------------|----|-----------|----|----------------|---------------------------------------|-------------------|----------------|--------------|------------------|----------------------------------|
| Program C                               | Goog<br>%<br>Chan | Posting | Median<br>Program Size<br>% Change | Enrollment           | al | Graduates | al | D/F/W<br>Rate* | Students<br>Return from<br>Prior Year | Discount<br>Rate* | Net<br>Revenue | Contribution | Cost per<br>SCH* | SCH Actual<br>Minus<br>Benchmark |
| Psychology (Bachelor's)                 | 21%               | 85      | 6%                                 | 436                  | 36 | 72        | 20 | 30%            | 58                                    | 20%               | \$4,974,479    | \$3,375,295  | \$126            | -\$13                            |
| Computer Science (Bachelor's)           | 18%               | 3,723   | 10%                                | 203                  | 17 | 20        | 8  | 32%            | 16                                    | 26%               | \$2,252,317    | \$1,342,614  | \$162            | -\$13                            |
| Business Administration<br>(Bachelor's) | 6%                | 21,620  | -19%                               | 653                  | 15 | 46        | 7  | 27%            | 37                                    | 23%               | \$7,384,381    | \$5,240,367  | \$113            | -\$17                            |
| Exercise Science (Bachelor's)           | 9%                | 141     | 0%                                 | 429                  | 18 | 51        | 10 | 28%            | 41                                    | 26%               | \$5,031,893    | \$3,572,940  | \$115            | -\$5                             |
| Biology (Bachelor's)                    | 19%               | 516     | -3%                                | 505                  | 11 | 82        | 1  | 27%            | 66                                    | 37%               | \$5,688,801    | \$3,196,005  | \$155            | \$18                             |

## Accounting (Bachelor's)

## Sustain

#### Pick Program:

Demographics

## Category Status



#### Goals

| # | Goal   | Status          |
|---|--|-----------------|
| 1 | Increase the number of internships   | Needs Attention |
| 2 | Increase accounting student professional exam performance outcomes                                       | On Track        |
| 3 | Increase accounting student job placement outcomes   | Satisfactory    |
| 4 | Enhance accounting students' accounting-related software skills in order to meet modern technology needs | Not Started     |

#### Size

350

300

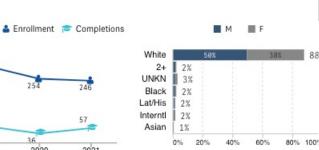
250

200 -

150

100

50



### Markets



#### Mission

| Academic Focus Students Served Learning Outc Highlight   |  |  |  |  |
|--|--|--|--|--|
| Program Fit  |  |  |  |  |
| The undergraduate program in Accounting blends theory and practice in generating job-ready graduates   |  |  |  |  |
| Accounting students intern at a wide variety of businesses, often holding multiple internships, leading to full-time placement. Student-practitioner day has been a hallmark for over two decades  |  |  |  |  |
| The Accounting program meets regional, state, and national needs through the creation of a diverse talent pipeline for both the profit- and non-profit sectors. Additionally, the faculty, students, and staff of the department help organizations to grow as well as becoming more efficient |  |  |  |  |
| High Student Placement rates in internships and full-time employment; Professionally credentialed and award-winning faculty  |  |  |  |  |
|  |  |  |  |  |

#### Academics

2018

2019

2020

| Category                | Metric                             | 2020  | 2021  | Chang |
|-------------------------|------------------------------------|-------|-------|-------|
| •                       | # of Students                      | 203   | 197   | -3%   |
| 11 <u>0</u> 10000000000 | # of SCH Taught                    | 5,475 | 4,730 | -14%  |
| Program<br>Profile      | % SCH in Online Courses            | 7%    | 9%    | 23%   |
| riville                 | % SCH Taught by FT Faculty         | 57%   | 57%   | 0% 4  |
|                         | % SCH Taught by Tenure/Track       | 50%   | 50%   | 0% 4  |
|                         | # of Full-Time Faculty             | 14    | 13    | -7%   |
| Department<br>Profile   | # of Part-Time Faculty             | 0     | 0     | NA -  |
| riville                 | % SCH Taught In-Dept               | 23%   | 24%   | 2%    |
|                         | # Students Enrolled 2+ Terms       | 159   | 139   | -8%   |
| 2007000                 | # Students Return from Prior Yr.   | 137   | 131   | -3%   |
| Student<br>Progress     | # Students Enrolled 15+ CH         | 202   | 188   | -7%   |
| riogiess                | % Students Complete 15+ CH         | 62%   | 65%   | 3%    |
|                         | Withdraw/D/F Rate                  | 27%   | 24%   | -11%  |
|                         | # of Completions                   | 28    | 45    | 38%   |
| 0.4                     | Median Time to Complete (Yrs)      | 3.10  | 3.20  | 3%    |
| Outcomes                | Benchmark Exam/Licensure Pass Rate | 83%   | 87%   | 3%    |
|                         | Avg. End-of-Program Survey Rating  | 77%   | 80%   | 3%    |

2021

## Margins

| YR: 2020      | *      | Term: All | *     |  |  |
|---------------|--------|-----------|-------|--|--|
|               | Tota   | al \$     | SCH   |  |  |
| Gross Revenue | \$2,30 | 7,543     | \$327 |  |  |
| State App     | \$931  | ,219      | \$132 |  |  |
| Discounts     | \$596  | 5,284     | \$84  |  |  |
| Net Revenue   | \$2,64 | 2,479     | \$374 |  |  |
| Costs         | \$1,26 | 4,867     | \$179 |  |  |
| Contribution  | \$1,37 | 7,612     | \$195 |  |  |

## Learn more about the topics covered today:

The Course on PES

Academic Program
Evaluation and
Management Certificate









#### **Academic Program Evaluation and Management**



Bay Path University and Gray Associates offer a course in program evaluation and management. It is an online, asynchronous, selfpaced course designed for higher-education leaders involved in decisions to start, stop, sustain, or grow academic programs. It is appropriate for senior administrators, academic leaders, faculty, researchers, consultants, assessment officers, and graduate students in higher education institutions. It should also be useful for state-level leaders who oversee higher education.

The course gives higher-education decision-makers and analysts an understanding of the data, systems, processes, and participants needed to make well-informed and broadly-supported program decisions consistent with an institution's mission, academic standards, markets, and program economics

Participants will learn the concepts, information, and tasks needed to make data-informed program decisions. They will learn to complete an academic portfolio evaluation, including finding, analyzing, and synthesizing relevant data and evaluation criteria. They will grasp the keys to effective decision-making processes for current and new programs. Specifically, participants will learn the mechanics of Integrated Program Analysis, program evaluation software, and program portfolio workshops, as well as the overall art and science of academic entrepreneurship.

Additionally, participants will receive temporary login credentials to our PES+ Markets dashboard.

Upon completing the ten modules, participants will receive a certificate in Academic Program Evaluation and Management (APEM). This certificate is co-sponsored by Gray Associates and The Center for Higher Education Leadership and Innovative Practice (CHELIP) at Bay Path University.

#### Faculty

- Robert Gray Atkins, CEO and Founder, Gray Associates
- Dr. Meilssa Morriss-Olson, Provost Emerita, Bay Path University
- Dr. William F. Massy, Senior Consultant at Gray, Emeritus Faculty and Vice President, Stanford University
- Steve Probst, Senior Partner, Gray Associates
- Mary P. Upchurch, Senior Partner, Gray Associates
- Peter Starrett, Partner, Gray Associates
- Zach Paz, Partner, Gray Associates
- Dr. Antoinette Farmer-Thompson, Deputy Vice President, Educational Outreach and Student Services, Arizona State University

#### Modules

- 1. Introduction
- 2. Mission of the Institution
- Understanding Student Demand
- 4. Understanding the Employment Market
- 5. Evaluate Competitive Intensity
- 6. Calculating Program Economics
- 7. Curricular Efficiency
- 8. Academic Standards
- 9. The Art and Science of Academic Entrepreneurship
- Managing Your Portfolio: Participants, Process, Analysis, Integration

Course Price: \$775

## **More Master Classes to come!**

# Gray can help you learn how to make better academic program decisions.

#### 2022 Gray Master Class Series



#### Master Class 2: Reaching Curricular Efficiency Featuring Steve Probst

April 11 2023, 2-3 pm ET

Learn how to use instructional economics data to identify ways to reduce the total teaching workload, reduce the need to hire more faculty, make college more affordable, and minimize how budget cuts translate into higher workloads or inferior education.

## Master Class 3: Advanced Analytics

Featuring Zachary Paz, Peter Starrett, and Youssef Aljabi

April 18 2023, 2-3 pm ET

Learn how to use predictive analytics to model the impact of program decisions on your institution's future. Using demographic data and market trends, we will demonstrate how to project the size and growth of programs in a proposed portfolio. Using predictive scenarios, we will show how to evaluate the effects of program decisions on your institution's bottom line.

# Master Class 4: The Future of Academic Portfolio Evaluation and Management

Featuring Bob Atkins and guest

April 25 2023, 2-3 pm ET

Join us as we look at how artificial intelligence, machine learning, and other new technologies provide more insight into what makes a successful academic program. We will show how using these tools in academic program planning and management can benefit the institution.