

# A GUIDE TO **PROGRAM ANALYTICS**

## A Framework for Quantitatively Evaluating Program Performance

Is your program portfolio sustainable?

Read this guide to program analytics to learn more about how you can leverage your data to build and deliver a successful academic program portfolio.



Jenzabar  
**Analytics**

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# The Higher Education Landscape

**The highly disruptive higher education landscape is facing intense enrollment challenges while combating growing competition and shrinking budgets.**

According to a 2019 Inside Higher Ed<sup>1</sup> study, a whopping 86 percent of admissions directors are concerned about hitting enrollment goals. Separately, Forbes recently analyzed data from the National Center of Education Statistics and found that mergers, acquisitions, and consolidations are becoming commonplace as smaller institutions find it more and more difficult to keep their doors open.<sup>2</sup>

In order to attract students from an ever-shrinking pool, keep the budget in check, and remain competitive in an increasingly precarious position, institutions must leverage their data.

One of the most effective ways for higher education institutions to transform and attract, enroll, and retain their best-fit students is to assess and improve their academic program portfolio regularly.



Just like a commercial enterprise must develop, upgrade, and deliver a suite of products to customers in order to remain competitive and keep clients happy, higher education institutions must also create, evolve, and support a unique portfolio of academic programs that ensure student satisfaction. Institutions must embrace this mindset in order to effectively diversify what they offer.

Proper academic program portfolio management should be driven by data and timely analysis. With this on-demand, objective management approach, higher education institutions can analyze institutional and student data to deliver fiscally sound academic offerings that are appealing and enable success.

This portfolio management model differs from how institutions traditionally managed their academic programs, but it is not without challenges. The data necessary to assess programs is often contained in many different areas like finance, academic affairs, human resources, and enrollment management. All this data needs to be brought together into one cohesive picture in order to perform a comprehensive assessment. This can take months to complete and hours and hours of employees' time since there is typically no single campus resource who knows all the data and how it fits together.

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## Meanwhile, the higher education landscape is being transformed by financial and market pressures.

### Financial Pressures

On the financial side, higher education institutions are facing growing labor expenses, which make up approximately 65-75 percent of expenses, according to Moody's Investors Service.<sup>3</sup> The costs of maintaining buildings; upgrading technology; and supporting staff, faculty, and administrators are increasing. This is especially true within specialty fields that require sophisticated and expensive labs, advanced technologies, and experienced professionals. At the same time, institutions are seeing their income streams tighten, in part due to increased tuition discounting and shrinking external funding.

Institutions need to measure the overall performance of courses and programs if they want to strengthen their program portfolios financially. Assessing their overall performance enables institutions to quantify their program portfolio's impact on their financial health and well-being.

“Colleges and universities will look to further control costs, which will lead to longer-term challenges related to programmatic and capital investment. For most colleges, rising labor costs, which are roughly 65-75% of expenses, will remain the largest hurdle.”

MOODY'S  
INVESTORS  
SERVICE

## Market Pressures

Higher education institutions are also facing increasingly diverse market challenges. Meeting enrollment goals has continued to be a struggle. While there was an initial enrollment boom during the Great Recession, numbers have steadily declined annually, according to data from the State Higher Education Executive Officers Association.<sup>4</sup> Meanwhile, the student body is different today than it was a decade ago. Rather than the conventional post-high school graduate, institutions are now working to enroll and retain the “new student.” According to Gartner, less than a third of undergraduates in the U.S. are “traditional” students, i.e. full-time, degree-seeking students at four-year colleges.<sup>5</sup>

Similarly, competition in the higher education landscape is growing as institutions take new approaches to deliver more accelerated paths to completion.

In order to succeed amidst these changes, institutions must quantify and manage their academic program portfolios by reviewing performance data, including costs, revenue, completions, and demand.

“ The phrase ‘nontraditional’ college student is a misnomer, as lifelong learners are becoming the future of the education landscape.”

GARTNER



# How Do You Define a Successful Academic Program?



In higher education, an academic program is comprised of required and elective courses that lead to a degree or certificate upon successful completion. Programs vary between schools, however, and cannot be compared one-to-one across the entire landscape of higher education.

Yet, despite these differences, the underlying need to quantitatively look at a program's effectiveness is universal. In order to thrive in a continually changing market, institutions need to have high-performing programs.

There are many ways for institutions to define a successful academic program. But at the highest level, institutions should balance the cost of running a program with the level of demand for a program and student outcomes.

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## Defining Program Analytics

Properly assessing and understanding academic program information has traditionally been a challenging task for higher education institutions; it's time-consuming and complex. The concept of analyzing data and applying it to the management of academic programs is not far-fetched. In fact, most institutions perform these duties—just not often enough.

Program evaluation data is often collected on different schedules and comprises different information. For example, some data may be aggregated by academic year and other data collected on a fiscal-year basis, which may consist of two distinct periods.

Fortunately, the evolution of business intelligence and data management tools has brought about program analytics technologies that enable institutions to measure the performance of the individual academic programs that make up their program portfolios.

With an “always-on” program analytics solution, institutions can regularly and easily quantify their programs' performance. Rather than checking a program's performance and impact on the institution every several years, institutions can evaluate their portfolio on demand.

This functionality also makes it so institutions do not need to reinvent the wheel every time they want to pull data and evaluate their academic programs, allowing them to operate faster, respond to challenges quicker, and improve the accuracy of year-over-year comparisons.

Part of this strategy means looking at student trends like applications, admissions, enrollment, and retention as well as how many students progress through the program to completion.

If more students are entering the pipeline, but institutions are not seeing higher completion numbers over time, that may be an indication of a problem that traditional metrics do not capture.

As a natural repository of vast quantities of data on students, staff, operations, and financial health, institutions may mine and explore that data to gather actionable insight into the performance of their academic programs.

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The background features a faded image of a large statue, likely a historical figure, standing in front of a multi-story brick building with many windows. The image is overlaid with a complex geometric design consisting of various shades of blue and green triangles and circles. In the bottom left, there are several white curved lines radiating from a point. In the bottom right, there are more white curved lines and a small dark blue circle.

# A Framework for **Quantitatively Evaluating Program Performance**



## Evaluate Health Score

When assessing the performance of their academic program portfolios, higher education institutions should use a program analytics solution that establishes a unified scoring system, or health score, which allows decision-makers to compare different types of programs on an even plane, even if the programs were not traditionally compared to one another. Overall, a program's health score is the combined average of several individual metrics, including the program's instructional cost, net tuition revenue, student enrollment, student demand, and credit hours consumed. Analyzing this information allows for apples-to-apples comparisons of all academic programs within an institution.

Further, implementing a health scoring strategy means institutions can compare academic programs holistically or break down comparisons by each metric, providing visibility into the contribution of each metric to the overall score. Metrics can be weighted to align with unique institutional objectives.

**Here is a breakdown of the five components that make up an academic program's health score.**

### 1. Instructional Cost

Assessing the overall costs associated with teaching academic programs is an effective way to compare different programs. In general, employee salaries and benefits make up the bulk of costs for an institution, especially with external market pressures driving up the cost of new faculty. However, some costs can go beyond base salaries for

pecially compensated courses. To remain fiscally sound, institutions need to establish the right mix of full-time and contingent faculty.

A program analytics solution should be able to see the actual costs of instruction by faculty rank within each department and program. This allows institutions to see how faculty costs are allocated to the section level of courses.

## 2. Net Tuition Revenue

An institution's net tuition revenue is the organization's true income per student. In some cases, students are offered discounted rates for academic programs. When an institution knows which programs have a high concentration of discounted students, it allows for better strategic planning.

When comparing academic courses, a program analytics solution should be able to calculate net tuition revenue at the student program and course section level. The actual discount—not discount rate—should be calculated at the student level so institutions can get accurate numbers at the program level. Calculations at the course level enable institutions to determine section profitability.

### 3. Student Enrollment

Monitoring and increasing—or at least maintaining—enrollment numbers is a fundamental need for higher education institutions. At its core, enrollment drives revenue, which means institutions need to see how the numbers change and trend, as well as how academic programs compare with those trends. Comparing programs by enrollment can help identify opportunities for future revenue growth and may highlight areas of potential losses.

A program analytics solution should support an institution's goals of monitoring enrollment data, including both headcount and full-time equivalent. Institutions should also be able to identify and observe data at the student-year level (e.g., freshman, sophomore, etc.) and the major and non-major levels across measures. This information can be rolled up into an academic program's health score to identify trends and room for growth.

### 4. Student Demand

The overall demand by students is a great area of measurement for institutions to identify the potential value for an academic program. When institutions know which programs students are applying for, they can get a better sense of market demands. Meanwhile, trends in student demand may indicate future enrollment trends and potential areas of investment.

A program analytics solution should be able to see applications, acceptances, and enrollments by each academic program. This will ensure that institutions can take the appropriate steps if they foresee issues with yield or staffing, which can impact revenue. The student demand data should also factor into an academic program's overall health score to determine its viability and strength to drive enrollment.



## 5. Credit Hours Consumed

The number of credit hours consumed represents the overall consumption of courses, allowing institutions to evaluate how students are completing academic programs. This number is often tied to on-time graduation progress, as advisors can view a student's total credit hours and intervene if a student will not have enough credits to graduate.

A program analytics solution should be able to calculate all credit hours consumed across all subject areas by program. Using this information, institutions can compare credit hour consumption trends with enrollment to identify any imbalances. This metric should be factored into a program's health score.

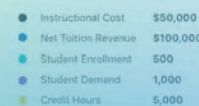
# Nearly 90%

**of CAOs** say their institution  
is focusing more on how  
their degree programs help  
students get a good job.

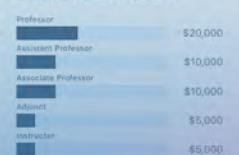
INSIDE HIGHER ED<sup>6</sup>



Overview (AY 2018-2019)



Breakdown of Instructional Cost



## Consider Mission Alignment

Financial, demand, and outcome metrics are all important factors when assessing the value of an academic program within an institution's portfolio. Still, if a program doesn't align with an institution's overall mission, then it isn't the right fit for that institution. It's important that higher education facilities not abandon their foundational responsibilities for the sake of pursuing an extraneous, albeit rewarding, program.

This aspect of assessing a program portfolio is not purely quantitative. Every higher education institution has a mission. And, in many cases, organizations specialize in a specific field. A program portfolio must align with an institution's mission and goals. At the same time, it is important that institutions raise up students to become productive, conscientious members of society.

Higher education provides an opportunity for individuals to learn more and further their knowledge in a variety of fields, but it can also support the development of critical thinking, analytical reasoning, teamworking, decision-making, and communication skills. When assessing their academic program portfolios, institutions should be sure they support the growth of these skills so students can become productive members of society with the tools and resources they need to succeed in the workforce.

“Higher education leaders must increase the quality of education with the goal of enabling more people with the competencies they need to contribute to society and live successful, fulfilling lives.”

**GARTNER<sup>7</sup>**

Following a framework and understanding how to manage an academic program portfolio can give higher education institutions a competitive advantage and introduce unique opportunities to address the needs of the new student.

**Are you using all your available resources  
to measure and manage your program portfolio?**

**Jenzabar can help.**



Jenzabar  
**Analytics**



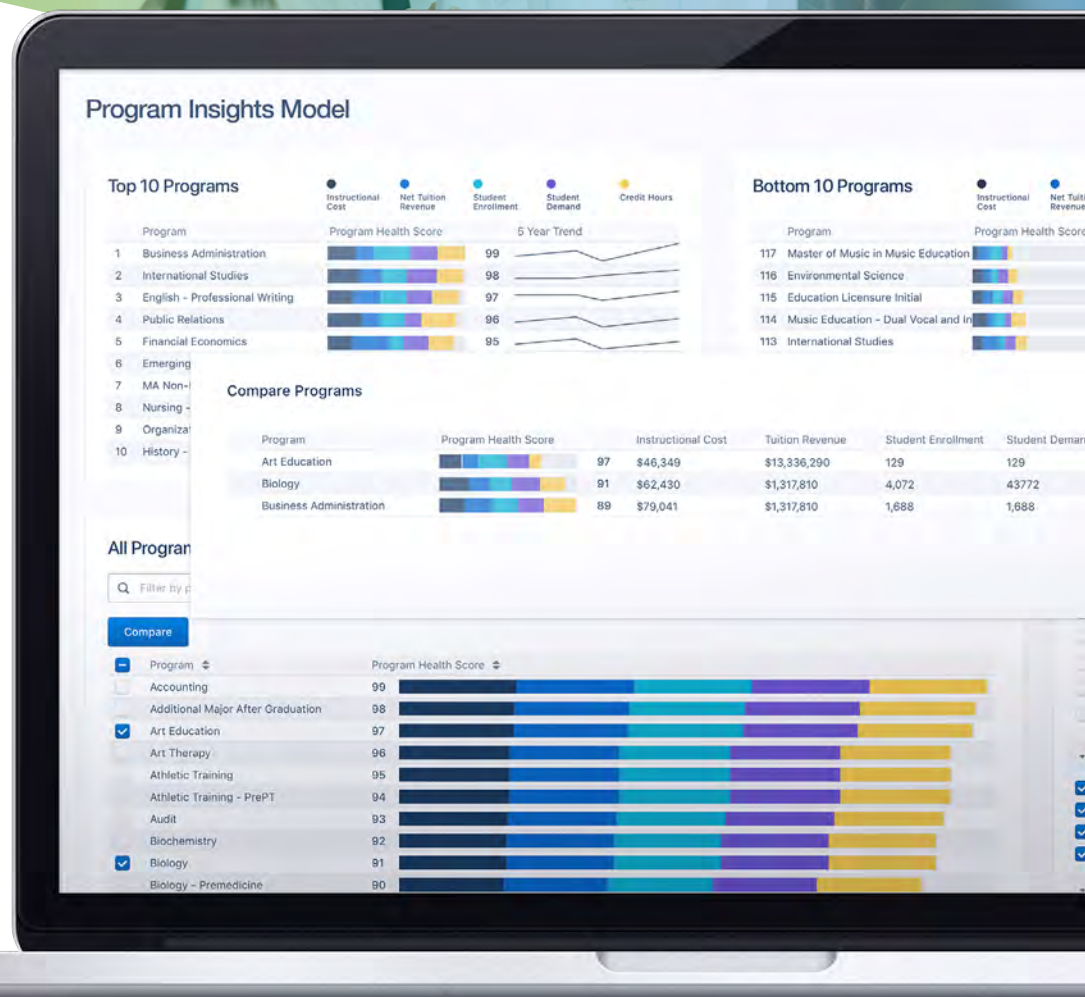


# Jenzabar Analytics

Developing metrics that allow you to compare all academic programs on an apples-to-apples basis takes time and effort. All metrics need to work for all programs so institutions can rank and compare their programs evenly. Jenzabar's innovative solutions can help institutions collect and make sense of this data in an on-demand way.

Jenzabar Analytics is a portfolio of descriptive, diagnostic, and predictive analytics tools that give higher education institutions the ability to convert complex data into actionable insights.

Jenzabar Analytics includes a comprehensive Program Insights Model offering, which can help institutions assess the strength, cost, demand, and success of their program portfolio.



The dashboard in Jenzabar's Program Insights Model provides at-a-glance views into the five core criteria for measuring academic program performance: instructional cost, net tuition revenue, student enrollment, student demand, and credit hours.

Learn more at [www.jenzabar.com/analytics](http://www.jenzabar.com/analytics)

## Review a program's health score instantly



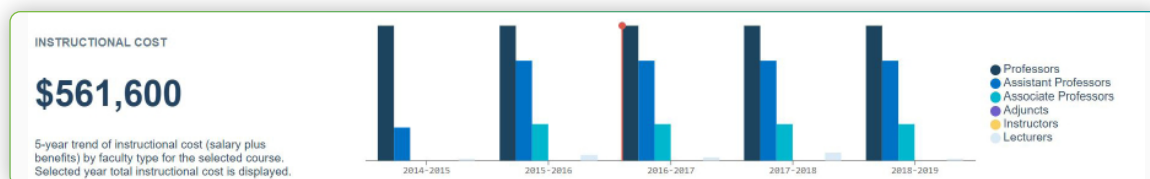
View a program's instructional costs, net tuition revenue, student enrollment numbers, total credit hours generated and consumed, and more on demand.

## Break down programs by the numbers on demand



Look at a program's specific information, including the number of students, total faculty, and more.

## Track a program's short- and long-term financial performance



Dive into financial performance trends for each academic program, including detailed analyses of individual instructional costs.

## See performance measures at the section level

Course Sections (AY 2018-2019)

Export

All Sections (25)

Additional columns ?

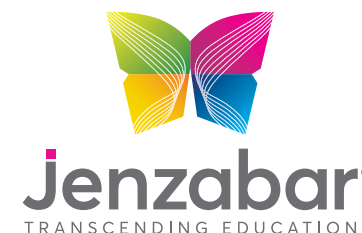
Section	Term	Faculty	Faculty Type	Enrollment	Unused Capacity	% DFW	Instructional Cost Per Credit Hour	Section Margin Per Credit Hour	Net Tuition Revenue Per Credit Hour
ACCT101 - A1	Fall	Robert Terry	Professor	48	5	0.5%	\$393	\$393	\$231
ACCT101 - A2	Fall	Emilie Wade	Assistant Professor	20	1	1	\$604	\$604	\$508
ACCT101 - A3	Fall	Corey McDaniel	Associate Professor	99	0	0	\$658	\$658	\$274
ACCT101 - A4	Winter	Sadie Hines	Adjunct	36	0	0	\$232	\$232	\$495
ACCT101 - A5	Fall	Jane Bailey	Instructor	3	1	1	\$107	\$107	\$174
ACCT101 - B1	Winter	Eugenia Herrera	Professor	6	0	0	\$838	\$838	\$502

Compare different academic programs across the most important metrics to see an easy apples-to-apples comparison.

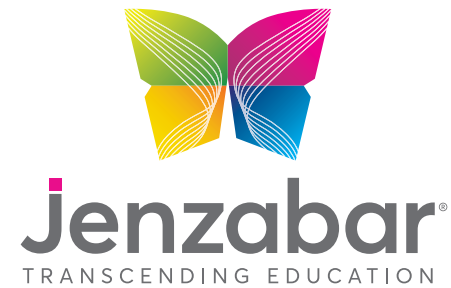
With the Program Insights Model, institutions can dig deep into program, course, and even section performance with the click of a button. The Program Insights Model allows institutions to assess and improve the performance of academic programs by creating a standardized health score leveraging key metrics. Institutions can now directly compare programs across cost, net tuition revenue, student enrollment, student demand, and credit hours consumed.

Jenzabar's Program Insights Model gives institutions the means to ensure they have the right faculty mix teaching courses; have an appropriate number of sections for key courses; and the ability to generate fiscally sound programs to support their mission, student outcomes, and the bottom line.

Learn more at [www.jenzabar.com/analytics](http://www.jenzabar.com/analytics)



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## About Jenzabar

Created out of a passion for education and a vision for technology, Jenzabar offers disruptive, innovative software solutions and services that empower students' success and helps higher education institutions meet the demands of the modern student. Over 1,350 higher educational campuses harness Jenzabar solutions for improved performance across campus and a more personalized and connected experience for the student.

For further information, please visit [jenzabar.com](http://jenzabar.com) or on twitter @Jenzabar or LinkedIn.

## Find out more

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