THE 2019 NACUBO TUITION DISCOUNTING STUDY
Foreword

As NACUBO releases the 2019 NACUBO Tuition Discounting Study (TDS), colleges and universities are ending their 2019-20 academic year with students displaced from campus and continuing their education online due to the COVID-19 pandemic. States are beginning to unveil plans for reopening businesses after several months of stay-at-home orders, but most college classrooms remain empty and uncertainty abounds about how social distancing expectations will impact campus life in the fall. Further, unemployment is soaring, and the economic outlook is distressing.

A little more than 10 years after the Great Recession, colleges and universities have continued to respond to many financial pressures—changing demographics, regional population shifts, students and families resistant to rising tuition and untenable student loan burdens, and more. Ultimately, however, the microscopic novel coronavirus could prove to be the most titanic economic force to affect the higher education sector in decades.

Many higher education experts are expecting the crisis to increase the number of students who will need financial help, negatively impact institutions’ ability to recruit new students due to travel and other restrictions, and raise costs in a multitude of other ways as colleges bolster the online learning experience and respond to social distancing requirements and expectations of students and the workforce.

Even before these issues, administrators at many private, nonprofit institutions had already started questioning whether current levels of tuition discounting are financially sustainable. For some, the rising discount rates have led to flat or declining net tuition revenue. They may be experiencing declining yields in student enrollment or considering reducing the tuition discount rate or implementing new pricing strategies. At the same time, in recent years, tuition discount rates reported in the TDS have been rising steadily, if not accelerating—and this year’s study proves FY19 did not break the mold.

A multitude of challenges now lie ahead, as colleges must simultaneously address their long-standing tuition pricing, revenue, and enrollment challenges and contend with the new obstacles and ambiguities introduced by the COVID-19 pandemic. We hope administrators, policymakers, advisers, and others will use data from the 2019 NACUBO Tuition Discounting Study as a tool to inform decision-making in these challenging times.

Susan Whealler Johnston
President and Chief Executive Officer
National Association of College and University Business Officers
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Executive Summary

Conducted annually since 1994, the 2019 NACUBO Tuition Discounting Study (TDS) looks at scholarships, fellowships, and other grants (including athletic scholarships) funded by private, nonprofit colleges and universities and provided to their undergraduates.

The good news is that these institutions are delivering on their commitment to college access: Most students at private colleges and universities receive scholarships from their schools, and this grant aid is getting bigger every year. And the grant money isn’t just increasing – it’s outpacing growth in sticker prices as well.

At the same time, the commitment these schools are making to affordable higher education has taken a toll on college budgets, requiring administrators to find efficiencies and new ways to offer high-quality postsecondary education without growing tuition revenue.

Each institution’s tuition discount rate is defined as its total institutional grant aid awarded to first-time, full-time, degree- or certificate-seeking first-year undergraduates as a percentage of the gross tuition and fee revenue the institution would collect if all students paid the sticker price.

Despite concerns about the sustainability of rising tuition discounting rates in recent years, rates continued to climb in FY19. This year’s study includes 366 institutions and explores the following findings:

Tuition discount rates reach record highs. Between academic years 2016-17 and 2018-19, the average institutional tuition discount rate for first-time undergraduates grew by 3 percentage points, to a record high of 51.2 percent. For 2019-20, early projections suggest that the average rate for first-time undergraduates rose to 52.6 percent.

More students are receiving grant aid—and they are receiving larger grants. Over the past decade, the share of undergraduates attending private, nonprofit colleges and universities who received institutional grants grew from about 76 percent to nearly 82 percent. The average grant as a share of the tuition and fee price jumped from about 45 percent to nearly 55 percent.

Net tuition revenue was impacted at some institutions. Initial TDS data show that from 2018-19 to 2019-20, net tuition and fee dollars per undergraduate grew on average by only 1.19 percent in non-inflation-adjusted dollars at private colleges (see Figure 1). In the year prior, net tuition and fee revenue per undergraduate grew by more than 3 percent. What’s more, the 1.19 percent current-dollar change in net revenue equates to a 1.29 percent decrease once inflation is taken into account.

More and larger discounts are not universally resulting in enrollment growth. Over the past four academic years, 47.4 percent of TDS-participating institutions have experienced declines in first-time undergraduate enrollment, despite increases in discounting. Nearly 46.3 percent have seen their first-time undergraduate enrollments rise.
More institutions are trying new approaches to meet their students’ financial needs in more financially sustainable ways. About three-quarters of survey participants changed or planned to use new student recruitment strategies, more than 40 percent of TDS participants added new programs to improve enrollment and advancement toward degrees, and a small but growing number of institutions lowered their listed tuition and fee “sticker price.” These changes could allow schools to assume greater control of their aid budgets while remaining attractive to more potential students.

New Feature. In a new component to the annual TDS report, we are featuring closer looks at trends in tuition discounting practices in three Carnegie Classification areas: baccalaureate institutions (primarily undergraduate colleges with a major emphasis on baccalaureate programs); master’s institutions (which typically offer a wide range of baccalaureate programs and are committed to graduate education through the master’s degree); and doctoral/research institutions (which typically offer a wide range of baccalaureate programs and are committed to graduate education through the doctorate).
Introduction

NACUBO has been studying tuition discount rates at private, nonprofit colleges and universities every year since 1994. The NACUBO Tuition Discounting Study focuses chiefly on institutional grants awarded to first-time, full-time, first-year undergraduates in degree or certificate programs; these students are often the focus of discounting strategies at many institutions and thus are a leading indicator of current and future trends in tuition discounting.

Under tuition discounting strategies, independent colleges and universities award institutional grants, scholarships, or fellowships to undergraduates who otherwise might be unable or unwilling to pay the full tuition and fee sticker price for attending their schools. Discounting strategies can also help institutions increase enrollment or retention of undergraduates, and to meet revenue goals.

The annual TDS measures institutional tuition discount rates and other indicators of institutional grant aid awards provided to undergraduates attending private, nonprofit colleges and universities. The TDS defines each institution’s tuition discount rate as its total institutional grant aid awarded to first-time, full-time, degree- or certificate-seeking first-year undergraduates as a percentage of its gross tuition and fee revenue the institution would collect if all students paid the sticker price. The institutional discount rate for all undergraduates is based on revenue and grant dollars from all students in undergraduate programs.

The NACUBO Tuition Discounting Study defines the institutional discount rate for first-time undergraduates as: the total institutional grant aid awarded to first-time undergraduates as a percentage of the gross tuition and fee revenue the institution would collect if all students paid the sticker price, or,

\[
\text{Total institutional grant aid awarded to first-time undergraduates} = \frac{\text{Dollars awarded to first-time undergraduates}}{\text{Number of first-time undergraduates}} \times \text{Sticker Price}
\]

Total institutional grant aid in the TDS includes all institutionally funded scholarships, fellowships, and other grants (including athletic scholarships) provided to undergraduates. The survey data include grants funded by institutional resources and tuition waivers awarded to undergraduates based on institutionally developed criteria.

More specifically, institutional grant aid includes grants, scholarships, and fellowships funded by tuition and fee revenue, restricted and unrestricted endowment funds, general investment earnings, donations to the institution’s general scholarship/financial aid fund, and other sources of revenue.

Under NACUBO’s definition, institutional grant aid does not include tuition remission (which is generally provided as a benefit of employment at an institution and thus is not considered financial aid available to all undergraduates) or tuition exchange programs (which are usually awarded as part of an exchange agreement between two or more institutions but not
considered part of general financial aid expenditures). External grants from other organizations (such as fraternal organizations and civic or religious groups) also are excluded.

In addition, the TDS does not include institutional matching funds provided to federal or state financial aid programs, because colleges and universities usually do not develop the criteria used to award aid under such programs.

While public institutions also award institutional grants, independent colleges and universities historically have been the focus of the TDS because they award larger amounts of such aid to a larger portion of their undergraduates. Calculations from the National Center for Education Statistics’ 2015-16 National Postsecondary Student Aid Study reveal that 30.2 percent of undergraduates attending public, four-year institutions receive institutional grants, with an average grant award of $4,900. In contrast, 56.8 percent of undergraduates at private, nonprofit four-year institutions received institutional grants, with an average award of $16,100 (Radwin et al., 2018).

The 2019 survey instrument asked institutions to report their final institutional grant expenditures and tuition revenue for academic year (AY) 2018-19, as of fall 2018, and preliminary estimates of these data for AY 2019-20, as of fall 2019 (the date by which institutions report their enrollment numbers).¹ Note: Data collection for the 2019 TDS came before the onset of the COVID-19 pandemic. The 2020 TDS will update the data collected for this academic year and will provide preliminary estimates for AY 2020-21.

¹ For most colleges and universities, the academic year runs from July 1 to June 30.

In addition to collecting data on institutional grant recipients, dollars awarded, and tuition and fee revenue, the 2019 TDS asked participating institutions to report the percentage of their institutional grants funded by endowment dollars as of the fall, the percentage of their total awarded institutional grant dollars that met students’ demonstrated financial need, and the portion of undergraduate aid funded by endowment earnings (see Appendix A for the survey instrument).

The TDS focuses on tuition discounting from the point of view of the colleges and universities in the study. That is, the survey attempts to measure the effect institutional grant aid expenditures have on college and university finances, rather than the impact of grant aid on students’ ability to pay higher education expenses.

One key statistic in the report—the institutional discount rate—measures total institutional grant dollars awarded by the participating private, nonprofit colleges and universities as a percentage of the gross tuition and fee revenue institutions would collect if all students paid the sticker price.

The second important data point in the survey, the student aid rate, examines the average institutional aid award as a percentage of the average tuition and fee sticker price among students who receive grant aid. Note: The definitions for these key statistics are not designed to adhere to traditional accounting terminology, but they do allow for an examination of key overall trends and issues with institutional grant aid at the responding institutions.
Overall TDS Results

Trends in Institutional Discount Rates

Despite having different missions, academic programs, and levels of research and other activities, many of the 366 independent colleges and universities that participated in the 2019 TDS have increased their tuition discount rates. The overall results from the 2019 TDS show that over the past decade:

- Institutional discount rates have increased dramatically;
- Student aid rates also have risen; and,
- The majority of institutional aid is distributed based on students’ demonstrated financial need.

As Figure 1 illustrates, between 2010-11 and 2019-20, the average tuition discount rate for first-time undergraduates increased by 10.6 percentage points and the all-undergraduate tuition discount rate rose by 11.2 percentage points.

This finding illustrates that colleges and universities have, on average, provided a higher share each year of institutional aid relative to the gross total tuition and fees they charged.

The estimated institutional discount rates for first-time undergraduates (52.6 percent) and all undergraduates (47.6 percent) represent all-time highs for the study. This finding suggests that for every dollar of undergraduate tuition and fees charged, schools awarded nearly 48 cents to undergraduate institutional grant aid recipients.

**Figure 1: Average Institutional Tuition Discount Rate, by Student Category**

Source: NACUBO Tuition Discounting Study, 2010 to 2019; data are as of the fall of each academic year.

*Note: Preliminary estimates.*
Student Aid Rates

Moreover, the increases in institutional discount rates are underscored by the rising average student aid rates. For students who receive aid, the student aid rate is the average institutional grant awarded as a percentage of the sticker price those students would have had to pay for tuition and fees. In other words, student aid rates illustrate changes in institutional grant amounts relative to increases in tuition and fee prices for students who received aid. As estimates in Figure 2 and Figure 3 show, in 2019-20, nearly 90 percent of first-time students and 82 percent of all undergraduates received some form of institutional aid. Additionally, student aid rates for first-time undergraduates have increased to almost 60 percent for first-year students and 55 percent for all recipients. This means that the majority of students and their families ultimately pay much smaller shares of tuition and fees, on average, than what’s published. Coupled together, the percentage of students receiving aid and the average institutional grant relative to tuition and fees suggest that institutions are providing more aid to more students.

FIGURE 2: PERCENTAGE OF FIRST-TIME UNDERGRADUATES WHO RECEIVED INSTITUTIONAL GRANTS AND AVERAGE STUDENT AID RATES FOR FIRST-TIME UNDERGRADUATES

Source: NACUBO Tuition Discounting Study, 2010 to 2019; data are as of the fall of each academic year.
*Note: Preliminary estimates.
Need- Versus Merit-Based Institutional Grants

The 2019 TDS also shows that the majority of grants awarded to students were distributed in whole or in part based onto students with their demonstrated financial need, as Figure 4 illustrates. On average, the combined total of exclusively need-based aid and merit aid used to meet need was approximately 79.6 percent across all respondents. This result suggest that many private, nonprofit universities are attempting to meet students’ need when distributing this aid. However, it is important to note that institutions can set their own criteria for determining financial need, and that the TDS does not take into account student demographics (e.g., race/ethnicity, socioeconomic status, academic achievement, parental education) to discern which students receive institutional aid.
Enrollment and Net Tuition & Fee Revenue

Although tuition discounting strategies may expand educational affordability for students with financial need, they come at a heavy cost for many schools, which often forgo tuition revenue to provide these opportunities. However, when institutional grant dollars rise faster than gross tuition and fee revenue, it could result in net revenue declines. Moreover, because changes in enrollment are at least in part related to changes in net tuition and fee revenue (gross tuition and fee dollars less institutional grant aid), enrollment declines may result in fewer net revenue dollars for institutions to fund their operations.

The 2019 TDS results regarding enrollment and net tuition revenue show the following trends:

- In spite of rapidly rising discount rates, first-time undergraduate enrollment has decreased at many schools;
- Net tuition revenue for first-time undergraduates has been flat in inflation-adjusted terms; and
- Revenue from other sources (i.e., non-tuition and fees) increased, but likely not enough to offset any declines in net tuition.

Figure 5 shows that nearly 54 percent of institutions experienced either no change or declines in fall enrollment of first-time, first-year undergraduates between 2016 and 2019. Among the top cited reasons for flat or declining enrollment were: (1) increased competition from other colleges and universities; (2) price sensitivity of students; and (3) changing demographics of prospective students.
To address these trends, more than 68 percent of institutions in the 2019 TDS indicated that they have implemented new financial aid strategies to increase net tuition revenue, among other strategies.²

Net Tuition and Fee Revenue

As illustrated in Figure 6, the annual changes in net tuition revenue for first-year undergraduates have been extremely volatile over the last decade, making it a very unpredictable source of funding for many independent colleges. Not adjusting for inflation, net revenue per first-time student grew just 1 percent on average between 2018-19 and 2019-20, a noticeable decline from the previous one-year period.³

Previous TDS reports have suggested that schools may have compensated for net tuition revenue shortfalls by generating additional funds through new or expanded post-baccalaureate programs, by

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² See Appendix Table 2.
³ See Appendix Table 3 for the annual changes in revenue after adjusting for inflation.
generating other revenue from other non-tuition revenue sources, such as gifts from alumni and other donors, contracts, and by generating revenue from auxiliary services, such as bookstores or dining halls.

To investigate this possibility, this year’s TDS report includes, for the first time, a summary of non-tuition revenue for the 366 participating institutions, drawn from the National Center for Education Statistics’ Integrated Postsecondary Education Data System (IPEDS) Finance surveys.

As Figure 7 demonstrates, between 2010 and 2018 net tuition revenue per full-time equivalent student in current dollars remained relatively flat—even when tuition from graduate and other post-baccalaureate students is included. Net tuition revenue continued to be the largest source of revenue across the institutions in the study, accounting for nearly two years of the total revenue collected by these schools during the eight-year period. However, the average amount of non-tuition and fee revenue per FTE appears to have increased slightly between 2010 and 2018. This finding may suggest that institutions are trying to find other sources of revenue to make up for the stagnation in net tuition dollars, but more research is necessary to confirm this initial finding.

**FIGURE 7: NET TUITION & FEE REVENUE VERSUS NON-TUITION & FEE REVENUE**

![Graph showing net tuition & fee revenue versus non-tuition & fee revenue from 2009 to 2018](image)

**Source:** NACUBO analysis of the National Center for Education Statistics’ Integrated Postsecondary Education Data System (IPEDS) Finance surveys, 2008-2018.

**Note:** The non-tuition and fee financial variables include the following: federal, state, and local grants and contracts; federal, state, and local appropriations; private gifts, grants, and contracts; affiliated revenue; revenue from the sale of educational services; independent operations revenue; and all revenue classified as “other.” Investment income was excluded from the analysis because IPEDS includes realized and unrealized gains and losses in the calculation of that variable. The revenue variables were divided by total FTE which includes both undergraduate and graduate FTEs. Dollars amounts are unadjusted for inflation.
Vignette: Tuition Discounting by Carnegie Classification

The previous sections of this report discussed the overall trends in discount rates, enrollment, and revenue among the TDS participating schools. But there is a great deal of variation within these overall trends. The next section of the report provides vignettes, or short data summaries about the data based on the institutional Carnegie Classifications among the respondents. These vignettes underscore how changes in institutional financial aid, enrollment, and net tuition revenue vary across each Carnegie Classification.

These analyses of TDS data break out the survey results based on a simplified version of the 2018 Basic Carnegie Classification system. The responding institutions were categorized into the following classes:

- **Baccalaureate Institutions**, which are primarily undergraduate colleges with a major emphasis on baccalaureate programs.

- **Master’s Institutions**, which typically offer a wide range of baccalaureate programs and are committed to graduate education through the master’s degree.

- **Doctoral/Research Institutions**, which typically offer a wide range of baccalaureate programs and are committed to graduate education through the doctorate.

- **Special Focus Institutions**, which include institutions that focus on a specific academic field, such as medicine, law, engineering, art, music, design, business, management, teaching, faith-related subjects, culinary arts, and more.

Although special focus institutions are included in NACUBO’s analysis of overall trends, this report does not break out trends for these schools, in part due to a small sample size – only 17 schools with this designation responded to the survey – and in part because institutional characteristics vary widely within this classification, making it difficult to provide meaningful analysis for these schools as a cohesive group.
Vignette: Baccalaureate Institutions

In 2019, 124 baccalaureate institutions participated in the Tuition Discounting Study, constituting over a third of all respondents. Schools from across the United States participated in the survey, with baccalaureate institutions following roughly the same pattern in geographic distribution as all respondents as a whole, although the Great Lakes region was modestly over-represented. One in four TDS respondents with this classification was located in the Great Lakes region, which had the greatest representation, while just over 23 percent of baccalaureate responses came from the Mid-East region.

NACUBO’s analysis of the most recent TDS survey data indicates that among baccalaureate institutions:

- An estimated 89.0 percent of first-time undergraduates received institutional grants in 2019-20, covering 64.2 percent of published tuition and fees on average, based on preliminary data.
- An estimated 86.0 percent of all undergraduates received institutional grants in 2019-20, covering 60.5 percent of published tuition and fees on average, based on preliminary data.
- Institutional aid meeting some degree of demonstrated student financial need accounted for 83.8 percent of all undergraduate grant dollars distributed at baccalaureate colleges in the fall of 2018, the highest percentage of need-based grant dollar allocation across all institution types.
- IPEDS data for 2017-18 indicate that baccalaureate institutions remain heavily reliant on tuition and fees, with these dollars accounting for 65.7 percent of overall revenue, excluding funds from hospitals and investment returns.
- Preliminary estimates show that first-time undergraduate enrollment at baccalaureate institutions declined 5 percent between the fall of 2018 and the fall of 2019, with overall undergraduate enrollment declining 1.5 percent over that same period.

Annual Trends in Institutional Discount Rates

Baccalaureate colleges have provided slightly higher tuition discount rates compared with all TDS participants. As Figure 8 illustrates, between 2010-11 and 2018-19, baccalaureate tuition discount rates for first-year undergraduates grew by nearly 11 percentage points. Initial estimates for the 2019-20 academic year suggest the average first-year student rate at these schools jumped to 57 percent, a record high across all institution types.
Similarly, tuition discount rates for all undergraduates at baccalaureate institutions have steadily increased over the last decade. In 2019-20, the institutional discount rate for all undergraduates hovered just below 53 percent, roughly four percentage points below the rate granted to first-time undergraduates, a gap that’s held relatively steady over the last 10 years.\(^{12}\)

However, as Table 1 reveals, there is a great deal of variation in discount rates across baccalaureate colleges. While the median institutional tuition discount rate for first-time undergraduates at baccalaureate institutions was roughly 58 percent in 2019-20, about 25 percent of participating schools offered first-time undergraduate discount rates of 66 percent or higher, and another quarter reported offering first-time undergraduates tuition discount rates of 49 percent or lower.

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\(^{12}\) See Appendix Table 11.
### TABLE 1: DISTRIBUTION OF INSTITUTIONAL TUITION DISCOUNT RATES AT BACCALAUREATE INSTITUTIONS BY STUDENT CATEGORY, 2019-20*

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<th>Student Category</th>
<th>25&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
<th>Median</th>
<th>75&lt;sup&gt;th&lt;/sup&gt; Percentile</th>
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<tbody>
<tr>
<td>First-Time Undergraduates</td>
<td>48.8%</td>
<td>58.0%</td>
<td>66.4%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>43.8%</td>
<td>55.0%</td>
<td>61.2%</td>
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Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year. Annual percentage changes are not adjusted for inflation. *Preliminary estimates.

### Need- and Non-Need-Based Institutional Grants

The 2019 TDS asked participants to report the percentages of their total institutional grant dollars awarded in 2018-19 (as of Fall of 2018) divided into three groups: exclusively need-based aid, non-need-based aid that met students’ demonstrated financial need, and non-need aid that did not meet need. The “merit aid used to meet need” category includes grants that may have been awarded on the basis of academic merit or some other “non-need” criteria but still went to students with any demonstrated financial need.

Eligibility for need-based grants usually depends on a financial aid application that collects information on students’ family income, assets, and other measures of financial circumstances. Non-need, or merit, award determination varies by school and award criteria. Consequently, grants classified as “merit aid used to meet need” are given to students with some degree of unmet need, as defined by the awarding institution, but are not necessarily awarded to students from the lowest-income households.

However, as concerns over affordability and access continue to grow, it is important to note that the vast majority of undergraduate institutional grant...
dollars at baccalaureate institutions go to students with financial need.

On average, institutional grants based exclusively on merit represent just 16 percent of award dollars at baccalaureate schools, while funds distributed based exclusively on financial need accounted for almost 54 percent. Collectively, dollars awarded based in whole or in part on students’ demonstrated need accounted for about 84 percent of institutional grant dollars distributed to all undergraduates in the 2017-18 academic year, similar to what has been seen during the past five years.13

Effects of Discounting on Net Tuition Revenue

Per-student net tuition and fee revenue—calculated as gross tuition and fee dollars minus institutional grant aid—is an important measure for understanding the effects of institutional grants on college and university finances. Grant dollars rising faster than total revenue may result in net revenue declines.

In current dollars, net tuition and fee revenue rose by 1.2 percent across all institution types between 2018-19 and 2019-20. However, among baccalaureate colleges, net tuition during this time period remained virtually flat, increasing by just 0.7 percent.14 After adjusting for inflation, baccalaureate institutions experienced a 1.8 percent decline in net revenue between 2018-19 and 2019-20, slightly underperforming all institutions, which saw a 1.3 percent drop.15

Changes in Undergraduate Enrollment

The decrease in net revenue is likely related to the 5 percent decline in first-year undergraduates attending baccalaureate institutions between 2018-19 and 2019-20, shown in Figure 10, a slightly steeper drop than the 3.2 percent decrease in first-time undergraduate enrollment across all institution types. Similarly, baccalaureate colleges saw a slightly higher dip in total undergraduate enrollment during this period, with overall enrollment declining 1.5 percent at these schools, compared to a 0.1 percent drop across all institution types.16

Roughly 45 percent of baccalaureate institutions reported a decline in first-year student enrollment between fall 2016 and fall 2019. Of those schools, more than 73 percent identified price sensitivity of students as a reason for the drop, and 71 percent cited increased competition. Baccalaureate respondents with declining enrollments also considered changing demographics (66 percent) and a decrease in 18- to 24-year-olds in the region (50 percent) as significant factors behind lost first-time undergraduate enrollment. Taken together, the results suggest that greater price sensitivity has increased competition for a changing, shrinking pool of traditional first-time, full-time undergraduate students.17

13 See Appendix Table 12.
14 See Appendix Table 15.
15 Inflation adjustments are based on the Commonfund Higher Education Price Index, available here: https://www.commonfund.org/commonfund-institute/higher-education-price-index-hepi-2/
16 See Appendix Table 10.
17 See Appendix Table 1.
Among the baccalaureate colleges that reported increased enrollment, 77 percent credited improved recruitment and/or marketing strategies for their institution’s uptick in enrollment, over 30 percentage points higher than improved admissions processing systems and procedures, the second-most commonly cited reason for enrollment growth.  

Baccalaureate colleges with declining first-time undergraduate enrollment reported that they were more likely to implement new strategies to increase net tuition revenue than baccalaureate colleges that had not experienced falling enrollment. Of baccalaureate institutions with declining enrollment that provided insight into the practices for increasing net tuition revenue, 82 percent said they employed student recruitment strategies, 73 percent used student retention strategies, 73 percent adopted financial aid strategies, and 14 percent implemented tuition pricing strategies.

The Importance of Tuition and Fee Revenue

Tuition and fee dollars are just one source of revenue for colleges and universities. Institutions also receive revenue from a variety of other sources, including donations and other financial gifts, grants and contracts, government

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18 See Appendix Table 17.
19 See Appendix Table 17.
appropriations, contributions from affiliated entities, sales and service of educational activities, independent operations, and other revenue streams.

In 2017-18, the most recent year for which IPEDS data is available, baccalaureate institutions took in an average of $20,700 per FTE student in tuition and fee revenue, and $13,000 from all other sources, excluding investment returns and hospital revenue. In other words, tuition and fees constituted nearly 62 percent of all revenue at baccalaureate institutions, down from 69 percent of all revenue in 2008-09. Despite this 7-percentage point decline in reliance on tuition and fees dollars, baccalaureate institutions remain heavily dependent on this revenue source.

These data suggest that flat or modest growth in net tuition revenue constitutes a serious concern for the overall fiscal health of baccalaureate schools, particularly as institutions adapt to the financial implications of the COVID-19 pandemic and its potential impact on undergraduate enrollment.

**FIGURE 11: AVERAGE NET TUITION & FEE REVENUE VERSUS NON-TUITION & FEE REVENUE AT BACCALAUREATE INSTITUTIONS, IN CURRENT DOLLARS**

![Graph showing average net tuition and fee revenue versus non-tuition and fee revenue at baccalaureate institutions in current dollars.]

**Source:** NACUBO analysis of the National Center for Education Statistics’ Integrated Postsecondary Education Data System (IPEDS) Finance surveys, 2008-2018.

**Note:** The non-tuition and fee financial variables include the following: federal, state, and local grants and contracts; federal, state, and local appropriations; private gifts, grants, and contracts; affiliated revenue; revenue from the sale of educational services; independent operations revenue; and all revenue classified as “other.” Investment income was excluded from the analysis because IPEDS includes realized and unrealized gains and losses in the calculation of that variable. The revenue variables were divided by total FTE which includes both undergraduate and graduate FTEs. Dollars amounts are unadjusted for inflation.

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20 See Appendix Table 20.
Vignette: Master’s Institutions

In 2019, 133 master’s institutions participated in the Tuition Discounting Study, constituting over a third of all respondents. Schools from across the United States participated in the survey, with master’s institutions following roughly the same pattern in geographic distribution as all respondents as a whole, although the Mid-East region was modestly over-represented. Thirty percent of TDS respondents with this classification were located in the Mid-East region, which had the greatest representation, while nearly one in five of master’s responses came from the Great Lakes region.

NACUBO’s analysis of the most recent TDS survey data indicates that among master’s institutions:

- An estimated 95.3 percent of first-time undergraduates received institutional grants in 2019-20, covering 56.9 percent of published tuition and fees on average, based on preliminary data.

- An estimated 83.3 percent of all undergraduates received institutional grants in 2019-20, covering 50.2 percent of published tuition and fees on average, based on preliminary data.

- Institutional aid meeting some degree of demonstrated student financial need accounted for 76.2 percent of all undergraduate grant dollars distributed at master’s colleges in the fall of 2018.

- IPEDS data for 2017-18 indicate that master’s institutions remain heavily reliant on tuition and fees, with these funds accounting for 78.2 percent of overall revenue, excluding dollars from hospitals and investment returns.

- Preliminary estimates show that first-time undergraduate enrollment at master’s institutions declined 2.0 percent between the fall of 2018 and the fall of 2019, with overall undergraduate enrollment remaining relatively flat over that same period, decreasing by only 0.3 percent.

Annual Trends in Institutional Discount Rates

In general, increases in tuition discount rates at master’s-level colleges and universities have mirrored the average growth across all institution types. As Figure 12 shows, between 2010-11 and 2018-19, the average master’s institution tuition discount rates for first-time undergraduates increased roughly 10 percentage points. Based on preliminary 2019-20 data, the average first-year student institutional discount rate among these institutions was 54.1 percent, slightly higher than the average tuition discount rate for all institution types.
Similarly, tuition discount rates for all undergraduates at master’s institutions have steadily increased over the last decade, as shown in Figure 12. In 2019-20, the institutional discount rate for all undergraduates was 47.3 percent, roughly 7 percentage points below the rate offered to first-time undergraduates, a gap that’s held relatively steady over the last decade.29

However, as Table 2 illustrates, there is a great deal of variation in discount rates across master’s colleges. While the median institutional tuition discount rate for first-time undergraduates at master’s institutions was roughly 56 percent in 2019-20, about 25 percent of participating schools saw first-time undergraduate discount rates of 61 percent or higher, while another quarter had first-time undergraduate tuition discount rates of 48 percent or lower.

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29 See Appendix Table 11.
TABLE 2: DISTRIBUTION OF INSTITUTIONAL TUITION DISCOUNT RATES AT MASTER’S INSTITUTIONS BY STUDENT CATEGORY, 2019-20*

<table>
<thead>
<tr>
<th>Student Category</th>
<th>25th Percentile</th>
<th>Median</th>
<th>75th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-time Undergraduates</td>
<td>48.4%</td>
<td>55.9%</td>
<td>61.1%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>41.1%</td>
<td>48.1%</td>
<td>55.0%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year. Annual percentage changes are not adjusted for inflation. *Preliminary estimates.

Need- and Non-Need-Based Institutional Grants

The 2019 TDS asked participants to report the percentages of their total institutional grant dollars awarded in 2018-19 (as of the fall of 2018) divided into three groups: exclusively need-based aid, non-need-based aid that was used to meet students’ demonstrated financial need, and non-need aid that did not meet need. The “merit aid used to meet need” category includes grants that may have been awarded on the basis of academic merit or some other “non-need” criteria but still went to students with any demonstrated financial need.

Eligibility for need-based grants usually depends on a financial aid application that collects information on students’ family income, assets, and other measures of financial circumstances. Non-need, or merit, award determination varies by school and award criteria. Consequently, grants classified as “merit aid used to meet need” are given to students with some degree of unmet need, as defined by the awarding institution, but are not necessarily awarded to students from the lowest-income households.

However, as concerns over affordability and access continue to grow, it is important to note that the majority of undergraduate institutional grant dollars at master’s institutions was went to students with demonstrated financial need. As Figure 13 illustrates, institutional aid based exclusively on merit represented

![Figure 13: Average percentage of total undergraduate institutional grant dollars](image-url)

- Need-Based Aid
- Merit Aid Used to Meet Need
- Merit Aid Not Used to Meet Need

Source: NACUBO 2019 Tuition Discounting Study.
only 24 percent of the total institutional aid dollars distributed by these institutions.

On average, nearly 76 percent of total undergraduate institutional grant dollars at master’s institutions were awarded in whole or in part on students’ demonstrated financial need in academic year 2018-19. This is a modest increase from the 2017-18 academic year average of roughly 78 percent but reflects a relatively stable trend over the last five years.³⁰

Effects of Discounting on Net Tuition Revenue

Per-student net tuition and fee revenue—calculated as gross tuition and fee dollars minus institutional grant aid—is an important measure for understanding the effects of institutional grants on college and university finances. Grant dollars rising faster than total revenue may result in net revenue declines.

In current dollars, net tuition and fee revenue rose by 1.2 percent across all institution types between 2018-19 and 2019-20. Similarly, net tuition revenue at master’s institutions followed a comparable trend, increasing modestly by 1.3 percent during this period.³¹ After adjusting for inflation, master’s institutions experienced a 1.2 percent decline in net revenue between 2018-19 and 2019-20, performing slightly better than all institutions as a whole, which collectively saw a 1.3 percent drop.³²

Changes in Undergraduate Enrollment

This modest decrease in net tuition revenue is likely related to the 2 percent decline in first-time undergraduates attending master’s institutions between 2018-19 and 2019-20, a slightly lower drop than the 3.2 percent decrease in first-time undergraduate enrollment across all institution types. Similarly, master’s colleges saw a minor dip in total undergraduate enrollment during this period, with overall enrollment declining 0.3 percent at these schools, compared to a 0.1 percent drop across all institution types.³³

TDS participants saw modest declines in full-time equivalent (FTE) undergraduate enrollment between 2018-19 and 2019-20, and master’s institutions experienced similar decreases in both first-time undergraduate and total undergraduate enrollment. However, since 2012-13, master’s colleges and universities have seen more variable enrollment levels among both the first-time undergraduates and all undergraduates compared to baccalaureate and doctoral/research institutions.³⁴

Approximately 45 percent of TDS master’s institutions reported a decline in first-time undergraduates between fall 2016 and fall 2019. Of those schools, more than 73 percent identified increased competition as a reason for the drop, 70 percent identified price sensitivity, and 70 percent cited changing demographics.

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³⁰ See Appendix Table 13.
³¹ See Appendix Table 15.
³² Inflation adjustments are based on the Commonfund Higher Education Price Index, available here: https://www.commonfund.org/commonfund-institute/higher-education-price-index-hepi-2/
³³ See Appendix Table 10.
³⁴ See Appendix Table 10.
Master’s respondents with declining enrollments also considered a decrease in 18- to 24-year-olds in the region (62 percent) and a decrease in the yield rate of accepted students (42 percent) as significant factors behind their falling numbers of first-time undergraduates. Taken together, the results suggest that greater price sensitivity has increased competition for a changing, shrinking pool of traditional first-time, full-time undergraduate students.35

Among master’s institutions that reported increased enrollment, 73 percent credited improved recruitment and/or marketing strategies for their institution’s uptick in enrollment, over 15 percentage points higher than those who said they offered new academic programs, the second-most commonly cited reason for enrollment growth.36

Master’s colleges and universities with declining first-time undergraduate enrollment reported that they were more likely to implement student recruitment and student retention strategies to increase net tuition revenue than all master’s institutions. Of master’s institutions with declining enrollment that provided insight into the practices for increasing net tuition revenue, 90 percent used student retention strategies, 88 percent employed student recruitment strategies, 83 percent adopted financial aid strategies, and 44 percent changed or added academic programs.37

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35 See Appendix Table 1.
36 See Appendix Table 18.
37 See Appendix Table 18.
The Importance of Tuition and Fee Revenue

Tuition and fees are just one source of revenue for colleges and universities. Institutions also receive revenue from a variety of other sources, including donations and other financial gifts, grants and contracts, government appropriations, contributions from affiliated entities, sales and service of educational activities, independent operations, and other revenue streams. In 2017-18, the most recent year for which IPEDS data is available, master’s institutions took in an average of $18,200 per FTE student in tuition and fee revenue, and $5,200 from all other sources, excluding investment returns and hospital revenue. In other words, tuition and fees constituted 77.7 percent of all revenue at master’s institutions in 2017-18, down from 78.3 percent in 2008-09.

Figure 15: Average Net Tuition & Fee Revenue Versus Non-Tuition & Fee Revenue at Master’s Institutions, in Current Dollars


Note: Figures exclude Doctoral/Research institutions with annual non-tuition and fee revenue exceeding $1 billion in 2018-19. The non-tuition and fee financial variables include the following: federal, state, and local grants and contracts; federal, state, and local appropriations; private gifts, grants, and contracts; affiliated revenue; revenue from the sale of educational services; independent operations revenue; and all revenue classified as “other.” Investment income was excluded from the analysis because IPEDS includes realized and unrealized gains and losses in the calculation of that variable. The revenue variables were divided by total FTE which includes both undergraduate and graduate FTEs. Dollars amounts are unadjusted for inflation.

See Appendix Table 20.
Despite this modest decline in reliance on tuition and fees dollars as a share of all revenue, master’s institutions remain heavily dependent on tuition revenue. In fact, as a share of total revenue, master’s institutions rely more heavily on dollars from tuition and fees than all institutions as a whole. However, these schools also have the lowest tuition and fee revenue per FTE student than all other institutional types.

These data suggest that flat or modest growth in net tuition revenue constitutes a serious concern for the overall fiscal health of master’s schools, particularly as institutions adapt to the financial implications of the COVID-19 pandemic and its potential impact on undergraduate enrollment.
Vignette: Research/Doctoral Institutions

In 2019, 92 doctoral/research institutions participated in the Tuition Discounting Study, constituting roughly a quarter of all respondents. \(^{39}\) Schools from across the United States participated in the survey, with doctoral/research institutions following roughly the same pattern in geographic distribution as all respondents as a whole, although the Southeast region was modestly over-represented. Twenty-four percent of TDS respondents with this classification were located in the Mid-East region, which had the greatest representation, while nearly one in five of doctoral/research responses came from the Southeast. \(^{40}\)

NACUBO’s analysis of the most recent TDS survey data indicates that among doctoral/research institutions:

- An estimated **82.9 percent** of first-time undergraduates received institutional grants in 2019-20, covering **60.2 percent** of published tuition and fees on average, based on preliminary data. \(^{41}\)

- An estimated **75.6 percent** of all undergraduates received institutional grants in 2019-20, covering **56.2 percent** of published tuition and fees on average, based on preliminary data. \(^{42}\)

- Institutional aid meeting some degree of demonstrated student financial need accounted for **76.2 percent** of all undergraduate grant dollars distributed at doctoral/research colleges in the fall of 2018. \(^{43}\)

- IPEDS data for 2017-18 indicate that doctoral/research institutions remain heavily reliant on tuition and fees, with these funds accounting for **68.8 percent** of overall revenue, excluding funds from hospitals and investment returns. \(^{44}\)

- Preliminary estimates show that first-time undergraduate enrollment at doctoral/research institutions declined **3.7 percent** between the fall of 2018 and the fall of 2019, with overall undergraduate enrollment remaining relatively flat over that same period, decreasing by only **0.1 percent**. \(^{45}\)

**Annual Trends in Institutional Discount Rates**

Across Carnegie Classification types, the average institutional discount rate for first-time undergraduates has continued to climb steadily over the last decade. However, on average, doctoral/research institutions have provided slightly lower tuition discount rates compared with all other institution types. As Figure 16 illustrates, between 2010-11 and 2018-19, the average doctoral/research tuition discount rates for first-year undergraduates increased roughly 8 percentage points. Based on preliminary 2019-20 data, the average first-year undergraduate institutional discount rate at doctoral/research colleges was 48.1 percent, roughly 4.5 percentage points lower than the average tuition discount rate for all institution types. \(^{46}\)

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39 See Appendix Table 4.  
40 See Appendix Table 5.  
41 See Appendix Table 6.  
42 See Appendix Table 7.  
43 See Appendix Table 8.  
44 See Appendix Table 9.  
45 See Appendix Table 10.  
46 See Appendix Table 11.
Similarly, institutional tuition discount rates for all undergraduates at doctoral/research institutions have increased steadily over the last decade, as shown in Figure 16. In 2019-20, the average institutional discount rate for all undergraduates at these institutions was 44.3 percent.\textsuperscript{47}

However, as Table 3 shows, there is a great deal of variation in discount rates across doctoral/research colleges and universities. While the median institutional tuition discount rate for first-time undergraduates at doctoral/research institutions was roughly 48 percent in 2019-20, about 25 percent of participating schools had first-time undergraduate discount rates of nearly 56 percent or higher, and another quarter reported offering tuition discount rates of 41 percent or lower.
TABLE 3: DISTRIBUTION OF INSTITUTIONAL TUITION DISCOUNT RATES AT DOCTORAL/RESEARCH INSTITUTIONS BY STUDENT CATEGORY, 2019-20*

<table>
<thead>
<tr>
<th>Student Category</th>
<th>25th Percentile</th>
<th>Median</th>
<th>75th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Time Undergraduates</td>
<td>41.1%</td>
<td>48.3%</td>
<td>55.7%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>37.5%</td>
<td>42.5%</td>
<td>51.3%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year. Annual percentage changes are not adjusted for inflation. *Preliminary estimates.

Need- and Non-Need-Based Institutional Grants

The 2019 TDS asked participants to report the percentages of their total institutional grant dollars awarded in 2018-19 (as of the fall of 2018) divided into three groups: exclusively need-based aid, non-need-based aid that met students’ demonstrated financial need, and non-need aid that did not meet need. In the “merit aid used to meet need” category, institutions included grants that may have been awarded on the basis of academic merit or some other “non-need” criteria but still went to students with any demonstrated financial need.

Eligibility for need-based grants usually depends on a financial aid application that collects information on students’ family income, assets, and other measures of financial circumstances. Non-need, or merit, award determination varies by school and award criteria. Consequently, grants classified as “merit aid used to meet need” are given to students with some degree of unmet need, as defined by the awarding institution, but are not necessarily awarded to students from the lowest-income households.

However, as concerns over affordability and access continue to grow, it is important to note that the vast majority of undergraduate institutional grant dollars at doctoral/research institutions went to students with demonstrated need.

![Figure 17: Average Percentage of Total Undergraduate Institutional Grant Dollars Awarded at Research/Doctoral Institutions by Aid Category, AY 2018-19](image)

Source: NACUBO 2019 Tuition Discounting Study.
financial need. As Table 18 shows, on average, institutional aid based exclusively on merit represents just 22.5 percent of the total amount awarded to recipients.

On average, roughly 77.5 percent of total undergraduate institutional grant dollars at doctoral/research institutions were awarded in whole or in part based on students’ demonstrated financial need in academic year 2018-19. This is a modest increase from the 2017-18 academic year average of 76.5 percent but reflects a relatively stable trend over the last five years.48

Effects of Discounting on Net Tuition Revenue

Per-student net tuition and fee revenue—calculated as gross tuition and fee dollars minus institutional grant aid—is an important measure for understanding the effects of institutional grants on college and university finances. Grant dollars rising faster than total revenue may result in net revenue declines.

In current dollars, net tuition and fee revenue rose by 1.2 percent across all institution types between 2018-19 and 2019-20. Similarly, net tuition at doctoral/research institutions followed a comparable trend, increasing by 2.1 percent.49 Adjusting for inflation, however, shows that net revenue dropped by 0.4 percent at these schools, slightly better than all institutions, which collectively saw a 1.3 percent decline.50

Changes in Undergraduate Enrollment

The overall decrease in net tuition revenue is likely related to the 3.7 percent decline in first-year undergraduates attending doctoral/research institutions between 2018-19 and 2019-20, a slightly lower drop than the 3.2 percent decrease in enrollment across all institution types. Doctoral/research universities also saw a dip in total undergraduate enrollment during this period, with overall enrollment declining 0.1 percent at these schools, on par with the decrease experienced across all institution types.51

TDS participants saw declines in FTE undergraduate enrollment between 2018-19 and 2019-20. Doctoral/research institutions experienced similar decreases in both first-time undergraduates and total undergraduate enrollment. This is part of a nearly decade-long trend. Enrollment at doctoral/research institutions has dropped by 6 percent since 2012-13, a less dramatic decline than the 9.4 percent enrollment decrease across all institutions during that period.52

Roughly 43.4 percent of TDS participants from doctoral/research institutions reported a decline in numbers of first-year undergraduates attending between Fall 2016 and Fall 2019. Of those schools, more than 58 percent identified demographic changes as a reason for the drop, 50 percent identified price sensitivity, and 50 percent cited increased competition. Doctoral/research university respondents with declining enrollments also considered a decrease in 18- to 24-year-olds in the region (41.7 percent) and a decrease in the yield rate of accepted students (25 percent) as significant factors behind lost first-time undergraduate enrollment. Taken together, the results suggest that

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48 See Appendix Table 14.
49 See Appendix Table 15.
50 Inflation adjustments are based on the Commonfund Higher Education Price Index, available here: https://www.commonfund.org/commonfund-institute/higher-education-price-index-hepi-2/
51 See Appendix Table 10.
52 See Appendix Table 10.
greater price sensitivity has increased competition for a changing, shrinking pool of traditional first-time, full-time undergraduate students.\textsuperscript{53}

Among doctoral/research institutions that reported increased enrollment, 72 percent credited improved recruitment and/or marketing strategies for their institution’s uptick in enrollment, over 10 percentage points higher than improved admissions processing systems and procedures, the second most commonly cited reason for enrollment growth.\textsuperscript{54}

Doctoral/research colleges and universities with declining enrollment of first-time first-year students were more likely to have implemented new student recruitment and student retention strategies to increase net tuition revenue than all doctoral/research institutions. Of doctoral/research institutions with declining enrollment that provided insight into their practices for increasing net tuition revenue, 83 percent employed student recruitment strategies, 77 percent used student retention strategies, 63 percent adopted financial aid strategies, and 57 percent changed or added academic programs. Among all doctoral/research respondents (regardless of enrollment change), 40 percent of institutions employed new student recruitment strategies, 39 percent implemented student retention strategies, and 41 percent implemented financial aid strategies.\textsuperscript{55}

\begin{figure}
\centering
\includegraphics[width=\textwidth]{fig18.png}
\caption{Average Enrollment and Change in Enrollment for All Undergraduates at Doctoral/Research Institutions}
\end{figure}

\textbf{Source:} NACUBO Tuition Discounting Study, 2010 to 2019; data are as of the fall of each academic year.

\textbf{*Note:} Preliminary estimate.

\textsuperscript{53} See Appendix Table 1.
\textsuperscript{54} See Appendix Table 16.
\textsuperscript{55} See Appendix Table 19.
The Importance of Tuition and Fee Revenue

More than any other Carnegie Classification, doctoral/research institutions derive a wide range of their revenue from non-tuition-and-fee sources. Some schools with this classification receive modest or moderate income from these alternative revenue sources, while others get substantial amounts. To provide statistically meaningful insight into these trends, the following analysis excludes schools that reported annual non-tuition revenue streams that exceeded $1 billion; however, analysis for these institutions is included in Appendix Table 18.

**FIGURE 19: AVERAGE NET TUITION & FEE REVENUE VERSUS NON-TUITION & FEE REVENUE AT TYPICAL DOCTORAL/RESEARCH INSTITUTIONS, IN CURRENT DOLLARS**


Note: This figure excludes Doctoral/Research institutions with annual non-tuition and fee revenue exceeding $1 billion in 2018-19. The non-tuition and fee financial variables include the following: federal, state, and local grants and contracts; federal, state, and local appropriations; private gifts, grants, and contracts; affiliated revenue; revenue from the sale of educational services; independent operations revenue; and all revenue classified as “other.” Investment income was excluded from the analysis because IPEDS includes realized and unrealized gains and losses in the calculation of that variable. The revenue variables were divided by total FTE which includes both undergraduate and graduate FTEs. Dollars amounts are unadjusted for inflation.
Tuition and fees are just one source of revenue for colleges and universities. Institutions also receive revenue from a variety of other sources, including donations and other financial gifts, grants and contracts, government appropriations, contributions from affiliated entities, sales and service of educational activities, independent operations, and other revenue streams.

Since 2008-09, revenue from non-tuition sources has declined as a share of overall revenue for doctoral/research schools as these institutions have become increasingly reliant on tuition and fees.

In 2017-18, the most recent year for which IPEDS data are available, doctoral/research institutions took in an average of $24,400 per FTE student in tuition and fee revenue, and $12,600 from all other sources, excluding investment returns and hospital revenue. In other words, tuition and fees constituted 66 percent of all revenue at doctoral/research institutions in 2017-18, up from 64 percent in 2008-09.

These data suggest that flat or modest growth in net tuition revenue constitutes a serious concern for the overall fiscal health of doctoral/research schools, particularly as institutions adapt to the financial implications of the COVID-19 pandemic and its potential impact on undergraduate enrollment.

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56 See Appendix Table 20.
Glossary

Data Elements Provided by Participating Institutions

1. Number of entering first-time undergraduates
2. Number of entering first-time undergraduates receiving institutional grants
3. Number of all undergraduates (including freshmen)
4. Number of undergraduates receiving institutional grants
5. Total institutional grants for entering class of first-time undergraduates
6. Total institutional grants for all undergraduates
7. Tuition amount and mandatory fees (individual rate)
8. Total undergraduate tuition and mandatory fees revenue
9. Percentage of institutional aid funded by endowment
10. Percentage of institutional grants awarded to all undergraduates that met students’ financial need

Definitions

All Undergraduates: The total number of all undergraduates enrolled at the institution as of the fall term of the survey year. This includes all full-and part-time students, guests, and special students.

Entering First-Time Undergraduates: The total number of new first-time undergraduate students who matriculated on a full-time basis for the fall term of the survey year. Part-time students, guests, and special students are not included in this figure.

Entering First-Time Undergraduates Receiving Institutional Grants: The subset of entering first-time undergraduates who received institutional grant aid (defined below).

Financial Need: As determined by institutions, based on undergraduate students’ income, assets, and other financial resources that are reported by students on their applications for institutionally awarded financial aid. Institutions use either the federal methodology, the College Board “Profile,” and/or institutionally specific methodology to determine students’ financial need.

Grant Aid that Meets Students’ Financial Need: Any institutional scholarships, grants, or fellowships that were used to meet students’ financial need. Any non-need-based grants (athletic scholarships or merit aid) that were used to meet students’ financial need should be counted as aid that meets need.
Institutional Discount Rate: The total institutional grant aid awarded to first-time, full-time, degree- or certificate-seeking first-year undergraduates as a percentage of the gross tuition and fee revenue the institution would collect if all students paid the sticker price.

Student Aid Rate: For students who receive aid, the student aid rate is the average institutional grant awarded as a percentage of the sticker price those students would have had to pay for tuition and fees. This measure illustrates changes in institutional grant amounts relative to changes in tuition and fee sticker prices.

Total Institutional Grants for All Undergraduate Classes: The total dollar amount of institutionally funded scholarships, fellowships, and grants awarded to all undergraduate students. This figure includes athletic scholarships, grants funded by restricted and unrestricted endowment income, and all other grant-based aid that is distributed by institutionally specific criteria. It does NOT include tuition remission and tuition exchange programs, institutional matches for externally funded federal or state student aid programs, or transfers from the current fund to student loan funds.

Total Institutional Grants for Entering Class of First-Time Undergraduates: The total dollar amount of institutionally funded scholarships, fellowships, and grants awarded to first-time undergraduates for the fiscal year. This figure includes athletic scholarships, grants funded by restricted and unrestricted endowment income, and all other grant-based aid that is distributed by institutionally specific criteria. It does NOT include tuition remission and tuition exchange programs, institutional matches for externally funded federal or state student aid programs, or transfers from the current fund to student loan funds.

Total Undergraduate Tuition and Mandatory Fee Revenue for All Undergraduate Students: The gross tuition and mandatory fee revenue for all undergraduate students (matriculated, non-matriculated, full-time, part-time, etc.) for the fiscal year. This figure does not include room and board or other charges.

Tuition Amount and Mandatory Fees (Individual Rate): The published individual tuition and mandatory fee rate per year for full-time undergraduate students. This figure does not include room and board or other charges.

Calculations

1. Average Tuition Discount Percentages: First-Time Undergraduates: With the data collected, the first-time undergraduate tuition discount percentage can be calculated two ways, either directly or by using the product of the components (the two main operational drivers) of the discount rate.

Direct Formula—total institutional grants for first-time undergraduates divided by total tuition and mandatory fee revenue for first-time undergraduates.

Component Formula—the product of the percentage of first-time undergraduates aided and the average first-time undergraduates grant as a percentage of tuition and mandatory fees.

By definition, the tuition discount rate for each individual institution will be the same using both methods of calculation.

2. Average Tuition Discount Percentages: All Undergraduates: The tuition discount percentage for all undergraduates is calculated directly by the total amount of institutional grants awarded to all undergraduates divided by total tuition and mandatory fee revenue for all undergraduates.
3. **Percentage of First-time Undergraduates Receiving Institutional Grants**: The percentage of first-time undergraduates aided is calculated as the number of first-time undergraduates receiving institutional grants divided by the number of first-time undergraduates.

4. **Percentage of Undergraduates Receiving Institutional Grants**: The percentage of all undergraduates aided is calculated as the number of undergraduates receiving institutional grants divided by the number of all undergraduates.

5. **Average Institutional Grant for First-Time Undergraduates as a Percentage of Tuition and Fees**: The average institutional grant as a percentage of tuition and fees is calculated by dividing the aggregate institutional grant dollars awarded to first-time undergraduates by the product of the number of first-time undergraduates receiving institutional aid and the tuition and mandatory fee rate.

6. **Average Institutional Grant for All Undergraduates as a Percentage of Tuition and Fees**: The dollars awarded to all undergraduates divided by the product of the number of undergraduates receiving institutional aid and the tuition and mandatory fee rate.

7. **Average Student Aid Rate**: The average institutional grants awarded to students divided by the product of the students who received aid and listed price of tuition and fees.

8. **Average Gross and Net Tuition Rate for First-Time Undergraduates**: The gross tuition rate is the reported mandatory tuition and fee rate for first-time undergraduates. It does not include room and board. The net tuition rate is calculated as the aggregate gross tuition revenue for first-time undergraduates minus institutionally funded financial aid grants for first-time undergraduates, divided by the number of first-time undergraduates.

9. **Average Financial Aid for First-Time Undergraduates**: Financial aid (imputed) is calculated as the difference between the average gross and net tuition rate.
References


Acknowledgements

NACUBO’s Tuition Discounting Study grew out of an Eastern Association of College and University Business Officers’ (EACUBO) annual survey of tuition discounting rates at independent colleges and universities in its region. NACUBO is grateful to EACUBO for launching this important initiative. NACUBO assumed responsibility for the project in 1994 with a national study and has conducted it annually since then.

NACUBO would also like to thank the members of its research team—particularly Kathleen Masterson, assistant director of research and policy analysis, and Steffon Gray, assistant director of research and policy analysis—for their work on survey design, data analysis, and preparation of this year’s TDS.

Finally, NACUBO would like to acknowledge the dedication of the various staff members at the 366 NACUBO member institutions that participated in the 2019 TDS—their participation truly makes this annual project a success.
## Appendix A: Survey Instrument

### Institutional Financial Aid - First-time First-year Undergraduates

**First-time, first-year undergraduate students**

For this section, you are asked to provide data on entering first-time, first-year undergraduates for final data for academic year 2018-19 and estimated data for academic year 2019-20.

HELP text/FAQs

<table>
<thead>
<tr>
<th>Final Data for Academic Year 2018-19</th>
<th>Preliminary Data for Academic Year 2019-20</th>
</tr>
</thead>
</table>

1. Total number of entering first-time, first-year degree or certificate seeking undergraduates:
   *Please use the same census date that you used for the IPEDS survey (approximately October 1, 2018)*

2. Total number of first-time, first-year undergraduates who received an institutional scholarship, fellowship, or grant (include athletic scholarships, do NOT include tuition remission)

3. Total dollar amount of institutional scholarships, fellowships, and grants awarded to first-time, first-year undergraduates (include athletic scholarships, do NOT include tuition remission):
   *Provide the actual dollar amount awarded in Academic Year 2018-19 and the estimated amount awarded in 2019-20.*
Institutional Financial Aid - All Undergraduates

All Undergraduates

For this section, you are asked to provide data on all undergraduates for final data for academic year 2018-19 and estimated data for 2019-20.

4. Total number of all undergraduates:

* For Final Data, please use the same census date that you used for the IPEDS survey (approximately October 1, 2018)

5. Total number of all undergraduates (as reported in question 4) who received an institutional scholarship, fellowship, or grant (include athletic scholarships, do NOT include tuition remission):

6. Total dollar amount of institutional scholarships, fellowships, and grants awarded to all undergraduates (include athletic scholarships, do NOT include tuition remission):

*Provide the actual dollar amount awarded in Academic Year 2018-19 and the estimated amount awarded in 2019-20.

Published Prices and Total Gross Tuition and Mandatory Fee Revenue

7. Published individual price for tuition and mandatory fees (or "sticker price") (excluding room and board): (as reported in IPEDS Institutional Characteristics Survey Part D. Student Charges)

8. Total gross tuition and mandatory fee revenue for all undergraduate students:
Funded Institutional Grants

9. What percentage (approximately) of your total undergraduate institutional aid awarded in academic year 2018-19 (as reported in Question 6) was funded by earnings from your endowment?

HELP text/FAQs

Changes in Enrollment

10. What percentage increase or decrease (approximately) have you experienced in your first-time first-year undergraduate enrollment over the last four years (Fall 2016-Fall 2019)? If your enrollment has stayed the same, please select 0.
10a. To what do you attribute this decrease in enrollment? (check all that apply)

- Changing demographics
- Decrease in the number of 18-24-year-olds in your region
- Price sensitivity of students
- Falling demand for your programs
- Closure of academic program(s)
- Decrease in institutional financial aid
- Becoming more selective
- Purposeful decrease to balance a prior year(s) larger than expected enrollment
- Decrease in the yield rate of accepted students
- Increased competition from other public and private institutions in the region
- Changes in state aid programs
- Intentional decision to lower the number of students
- Other (please separate multiple reasons with a comma)

10b. To what do you attribute this increase in enrollment? (check all that apply)

- New academic programs
- New athletic programs
- Updated/new facilities
- Changing demographics
- Increase in overall demand for your institution
- Increase in institutional financial aid
- Increase in yield rate of accepted students
- Decreasing selectivity
- State budget cuts to public institutions
- Improved recruitment and/or marketing strategies
- Improved admissions processing systems/procedures
- Other (please separate multiple reasons with a comma)

**Institutional Grants Meeting Need**

11. What percentage (approximately) of your total institutional grant aid awarded to all undergraduates in Fall 2018 (as reported in Question 6) was need-based aid, non-need-based aid that was used to meet need, and/or non-need-based aid not used to meet need? The three percentages should sum to 100.

If your institution cannot or will not answer this question, please report 100 in the "opt out" line.

**HELP text/FAQs**

<table>
<thead>
<tr>
<th>Grant Type</th>
<th>0 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need-Based Aid</td>
<td></td>
</tr>
<tr>
<td>Non-Need-Based Aid Used to Meet Need</td>
<td></td>
</tr>
<tr>
<td>Non-Need-Based Aid NOT Used to Meet Need</td>
<td></td>
</tr>
</tbody>
</table>

To OPT OUT of this question, please report 100 here. If you want to answer this question, please report zero on this line and split your values among the three categories above.

<table>
<thead>
<tr>
<th>Total</th>
<th>0 %</th>
</tr>
</thead>
</table>
### Strategies and Practices

12. Which of the following tuition rate structures apply to undergraduate students (full-time or part-time) in the following categories? (Select all that apply)

<table>
<thead>
<tr>
<th></th>
<th>First-time first year undergraduates</th>
<th>Upper-division undergraduates</th>
<th>New (entering) transfer students, regardless of class level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charge a flat amount per term</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Charge by the credit hour</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Tiered charges (defined as when students are charged a set amount for the first X credit hours/classes and a different rate for additional credit hours)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Charges by course type</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Charge by program or major</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Charge by class level</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Guaranteed rate for entering cohort (i.e., fixed tuition price guaranteed for all undergraduate years)</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
13. What strategies (or combination of strategies) did your institution implement to attempt to increase net tuition revenue in FY18 or FY19?

HELP text/FAQs

Responses will be kept confidential. No identifiable information will be shared; however, we may use some of your free response statement(s) as a quote in the report.

☐ Recruitment (e.g., targeted population recruitment or higher yield target)
☐ Retention (e.g., student success strategies)
☐ Financial aid (e.g., changing packaging strategies)
☐ Tuition pricing (e.g., tuition freeze/reset)
☐ Academic program changes/additions
☐ Facility changes/additions (e.g., new dorms)
☐ No new strategies implemented
☐ Other

14. What strategies (or combination of strategies) did your institution implement to attempt to increase total revenue (revenue from all sources such as graduate education, fundraising, etc.) in FY18 or FY19? Were these strategies successful?

Responses will be kept confidential. No identifiable information will be shared; however, we may use some of your free response statement(s) as a quote in the report.

15. What strategies, if any, did your institution implement to reduce or contain costs (e.g., eliminating programs, consolidating services) in FY18 or FY19?

Responses will be kept confidential. No identifiable information will be shared; however, we may use some of your statement(s) as a quote in the report.

16. Does your institution identify with any of the following categories? Select all that apply.

☐ Religiously affiliated institution
☐ HBCU (Historically Black College and University)
☐ Women’s College
☐ HSI (Hispanic Serving Institution)
☐ None of these
Please review your responses before advancing to the next page. You will not be able to edit your responses once you click the "save and continue" button.

If you were clicking through the survey for a preview of the questions, please click "back" so that you are not accidentally locked out of your survey. Click [HERE](#) for a link to preview the survey instrument for your planning purposes.

After you submit your survey, a summary of your responses will appear on the screen. Please print this screen for your records or click the "Download PDF" button near the top of the page to save your summary as a PDF.
Appendix B: Additional Tables

Appendix B contains tables with data from all institutions that participated in the NACUBO Tuition Discounting Study from 2010 to 2019. The 2019-20 data are preliminary estimates.

**APPENDIX TABLE 1: PERCEIVED REASONS FOR LOSS OF ENROLLMENT AT INSTITUTIONS THAT HAVE LOST FIRST-TIME UNDERGRADUATE ENROLLMENT FROM FALL 2016 TO FALL 2019, BY CARNEGIE CLASSIFICATION***

<table>
<thead>
<tr>
<th>Reasons</th>
<th>All Institutions</th>
<th>Baccalaureate</th>
<th>Master’s</th>
<th>Doctoral/Research</th>
<th>Special Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increased competition</td>
<td>66.5%</td>
<td>71.4%</td>
<td>73.3%</td>
<td>50.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Price sensitivity of students</td>
<td>65.2%</td>
<td>73.2%</td>
<td>70.0%</td>
<td>50.0%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Changing demographics</td>
<td>63.3%</td>
<td>66.1%</td>
<td>70.0%</td>
<td>58.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Decrease in 18-24-year-olds in region</td>
<td>51.9%</td>
<td>50.0%</td>
<td>61.7%</td>
<td>41.7%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Decrease in yield rate</td>
<td>34.8%</td>
<td>33.9%</td>
<td>41.7%</td>
<td>25.0%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Falling demand for programs</td>
<td>10.1%</td>
<td>16.1%</td>
<td>8.3%</td>
<td>5.6%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>10.1%</td>
<td>10.7%</td>
<td>6.7%</td>
<td>13.9%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Becoming more selective</td>
<td>9.5%</td>
<td>8.9%</td>
<td>8.3%</td>
<td>11.1%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Purposeful decrease to balance prior year(s)</td>
<td>7.0%</td>
<td>5.4%</td>
<td>3.3%</td>
<td>16.7%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Intentional decision to lower the number of students</td>
<td>6.3%</td>
<td>7.1%</td>
<td>0.0%</td>
<td>13.9%</td>
<td>16.7%</td>
</tr>
<tr>
<td>Changes in state aid programs</td>
<td>5.1%</td>
<td>5.4%</td>
<td>8.3%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Decrease in institutional financial aid</td>
<td>3.2%</td>
<td>5.4%</td>
<td>1.7%</td>
<td>2.8%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Closure of academic program(s)</td>
<td>0.6%</td>
<td>1.8%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.
*Based on the 2018 Carnegie Classification of Institutions of Higher Education. For more information, go to https://carnegieclassifications.iu.edu/*
### APPENDIX TABLE 2: PERCENTAGE OF INSTITUTIONS THAT IMPLEMENTED OR CHANGED STRATEGIES TO INCREASE NET TUITION REVENUE IN FY 2019, BY CARNEGIE CLASSIFICATION AND STRATEGY TYPE

<table>
<thead>
<tr>
<th>Strategy</th>
<th>All Institutions</th>
<th>Baccalaureate</th>
<th>Master’s</th>
<th>Doctoral/Research</th>
<th>Special Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Recruitment Strategies</td>
<td>77.5%</td>
<td>77.0%</td>
<td>86.4%</td>
<td>62.5%</td>
<td>77.5%</td>
</tr>
<tr>
<td>Student Retention Strategies</td>
<td>74.9%</td>
<td>71.7%</td>
<td>84.8%</td>
<td>61.3%</td>
<td>74.9%</td>
</tr>
<tr>
<td>Financial Aid Strategies</td>
<td>68.3%</td>
<td>67.3%</td>
<td>74.4%</td>
<td>63.8%</td>
<td>68.3%</td>
</tr>
<tr>
<td>Changed/Added Academic Programs</td>
<td>43.7%</td>
<td>36.3%</td>
<td>53.6%</td>
<td>36.3%</td>
<td>43.7%</td>
</tr>
<tr>
<td>Changed/Added Facilities</td>
<td>26.9%</td>
<td>30.1%</td>
<td>26.4%</td>
<td>25.0%</td>
<td>26.9%</td>
</tr>
<tr>
<td>Tuition Pricing Strategies</td>
<td>15.0%</td>
<td>14.2%</td>
<td>12.8%</td>
<td>17.5%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Other</td>
<td>8.4%</td>
<td>10.6%</td>
<td>0.0%</td>
<td>18.8%</td>
<td>8.4%</td>
</tr>
<tr>
<td>No New Strategies</td>
<td>4.5%</td>
<td>4.4%</td>
<td>4.0%</td>
<td>6.3%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.

### APPENDIX TABLE 3: ANNUAL CHANGES IN NET TUITION REVENUE PER FTE STUDENT FOR FIRST-TIME UNDERGRADUATES, ADJUSTED AND UNADJUSTED FOR INFLATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Net Tuition Revenue in Current Dollars</td>
<td>$16,618</td>
<td>$17,182</td>
<td>$17,365</td>
<td>$17,732</td>
<td>$18,004</td>
<td>$18,508</td>
<td>$18,358</td>
<td>$18,940</td>
<td>$19,124</td>
</tr>
<tr>
<td>Percent Change in Net Tuition Revenue in Current Dollars</td>
<td>-</td>
<td>3.4%</td>
<td>1.1%</td>
<td>2.1%</td>
<td>1.5%</td>
<td>2.8%</td>
<td>-0.8%</td>
<td>3.2%</td>
<td>1.0%</td>
</tr>
<tr>
<td>Net Tuition Revenue in Constant 2019 Dollars</td>
<td>$19,931</td>
<td>$20,270</td>
<td>$20,169</td>
<td>$19,999</td>
<td>$19,903</td>
<td>$20,189</td>
<td>$19,509</td>
<td>$19,417</td>
<td>$19,124</td>
</tr>
<tr>
<td>Percent Change in Net Tuition Revenue in Constant 2019 Dollars</td>
<td>-</td>
<td>1.7%</td>
<td>-0.5%</td>
<td>-0.8%</td>
<td>-0.5%</td>
<td>1.4%</td>
<td>-3.4%</td>
<td>-0.5%</td>
<td>-1.5%</td>
</tr>
</tbody>
</table>

Inflation adjustments are based on the Commonfund Higher Education Price Index. © [https://www.commonfund.org/commonfund-institute/higher-education-price-index-hepi-2/](https://www.commonfund.org/commonfund-institute/higher-education-price-index-hepi-2/)
### APPENDIX TABLE 4: NUMBER OF INSTITUTIONS PARTICIPATING IN THE NACUBO TUITION DISCOUNTING STUDY, SURVEY YEARS 2010 TO 2019, BY CARNEGIE CLASSIFICATION

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td>171</td>
<td>185</td>
<td>163</td>
<td>171</td>
<td>177</td>
<td>160</td>
<td>183</td>
<td>165</td>
<td>158</td>
<td>124</td>
</tr>
<tr>
<td>Master’s</td>
<td>138</td>
<td>134</td>
<td>132</td>
<td>142</td>
<td>147</td>
<td>150</td>
<td>131</td>
<td>148</td>
<td>158</td>
<td>133</td>
</tr>
<tr>
<td>Doctoral/Research</td>
<td>51</td>
<td>55</td>
<td>62</td>
<td>62</td>
<td>60</td>
<td>64</td>
<td>65</td>
<td>60</td>
<td>62</td>
<td>92</td>
</tr>
<tr>
<td>Special Focus</td>
<td>21</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>27</td>
<td>27</td>
<td>32</td>
<td>31</td>
<td>27</td>
<td>17</td>
</tr>
<tr>
<td>All Institutions</td>
<td>381</td>
<td>400</td>
<td>383</td>
<td>401</td>
<td>411</td>
<td>401</td>
<td>411</td>
<td>404</td>
<td>405</td>
<td>366</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.

### APPENDIX TABLE 5: DISTRIBUTION OF INSTITUTIONS PARTICIPATING IN THE 2019 NACUBO TUITION DISCOUNTING STUDY WITHIN CARNEGIE CLASSIFICATIONS, BY REGION*

<table>
<thead>
<tr>
<th>Region</th>
<th>Baccalaureate</th>
<th>Master’s</th>
<th>Doctoral/Research</th>
<th>Special Focus</th>
<th>All Institutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Far West</td>
<td>8.9%</td>
<td>9.0%</td>
<td>14.1%</td>
<td>17.6%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Great Lakes</td>
<td>25.0%</td>
<td>19.5%</td>
<td>14.1%</td>
<td>29.4%</td>
<td>20.5%</td>
</tr>
<tr>
<td>Mid-East</td>
<td>23.4%</td>
<td>30.8%</td>
<td>23.9%</td>
<td>17.6%</td>
<td>26.0%</td>
</tr>
<tr>
<td>New England</td>
<td>9.7%</td>
<td>12.0%</td>
<td>13.0%</td>
<td>17.6%</td>
<td>11.7%</td>
</tr>
<tr>
<td>Plains</td>
<td>12.9%</td>
<td>6.8%</td>
<td>6.5%</td>
<td>5.9%</td>
<td>8.7%</td>
</tr>
<tr>
<td>Rocky Mountains</td>
<td>1.6%</td>
<td>3.0%</td>
<td>1.1%</td>
<td>0.0%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Southeast</td>
<td>13.7%</td>
<td>13.5%</td>
<td>19.6%</td>
<td>5.9%</td>
<td>14.8%</td>
</tr>
<tr>
<td>Southwest</td>
<td>4.8%</td>
<td>5.3%</td>
<td>7.6%</td>
<td>5.9%</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.

*U.S. States by Region*
- Far West: AK, CA, HI, NV, OR, WA
- Great Lakes: IL, IN, MI, OH, WI
- Mid-East: DC, DE, MD, NJ, PA, NY
- New England: CT, MA, ME, NH, RI, VT
- Plains: IA, KS, MN, MO, ND, NE, SD
- Rocky Mountains: CO, ID, MT, UT, WY
- Southeast: AL, AR, FL, GA, KY, LA, MS, NC, SC, TN, VA, WV
- Southwest: AZ, NM, OK, TX
APPENDIX TABLE 6: PERCENTAGE OF FIRST-TIME UNDERGRADUATES WHO RECEIVED INSTITUTIONAL GRANTS AND THE AVERAGE STUDENT AID RATE FOR FIRST-TIME UNDERGRADUATES IN 2019-20,* BY CARNEGIE CLASSIFICATION

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>Percentage of First-Time Undergraduates who Received Institutional Grants</th>
<th>Average Institutional Grant as a Percentage of Tuition and Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td>89.0%</td>
<td>64.2%</td>
</tr>
<tr>
<td>Master’s</td>
<td>95.3%</td>
<td>56.9%</td>
</tr>
<tr>
<td>Doctoral/Research</td>
<td>82.7%</td>
<td>60.2%</td>
</tr>
<tr>
<td>Special Focus</td>
<td>74.0%</td>
<td>40.4%</td>
</tr>
<tr>
<td>All Institutions</td>
<td>89.1%</td>
<td>59.5%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year. *Preliminary estimates.

APPENDIX TABLE 7: PERCENTAGE OF ALL UNDERGRADUATES WHO RECEIVED INSTITUTIONAL GRANTS AND THE AVERAGE STUDENT AID RATE FOR ALL UNDERGRADUATES IN 2019-20,* BY CARNEGIE CLASSIFICATION

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>Percentage of All Undergraduates who Received Institutional Grants</th>
<th>Average Institutional Grant as a Percentage of Tuition and Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td>86.0%</td>
<td>60.5%</td>
</tr>
<tr>
<td>Master’s</td>
<td>83.4%</td>
<td>50.2%</td>
</tr>
<tr>
<td>Doctoral/Research</td>
<td>75.6%</td>
<td>56.3%</td>
</tr>
<tr>
<td>Special Focus</td>
<td>68.8%</td>
<td>38.3%</td>
</tr>
<tr>
<td>All Institutions</td>
<td>81.6%</td>
<td>54.7%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year. *Preliminary estimates.

APPENDIX TABLE 8: AVERAGE PERCENTAGE OF TOTAL UNDERGRADUATE INSTITUTIONAL GRANT DOLLARS AWARDED IN ACADEMIC YEAR 2018-19 BY AID CATEGORY AND CARNEGIE CLASSIFICATION

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>Need-based Aid</th>
<th>Merit Aid Used to Meet Need</th>
<th>Merit Aid Not Used to Meet Need</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td>53.9%</td>
<td>30.0%</td>
<td>16.2%</td>
</tr>
<tr>
<td>Master’s</td>
<td>26.2%</td>
<td>50.0%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Doctoral/Research</td>
<td>48.1%</td>
<td>29.3%</td>
<td>22.5%</td>
</tr>
<tr>
<td>Special Focus</td>
<td>48.4%</td>
<td>34.9%</td>
<td>16.7%</td>
</tr>
<tr>
<td>All Institutions</td>
<td>42.8%</td>
<td>36.8%</td>
<td>20.4%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.
### APPENDIX TABLE 9: TUITION AND FEES AS SHARE OF ALL INSTITUTIONAL REVENUE, BY CARNEGIE CLASSIFICATION, FISCAL YEARS 2009 TO 2018

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>FY09</th>
<th>FY10</th>
<th>FY11</th>
<th>FY12</th>
<th>FY13</th>
<th>FY14</th>
<th>FY15</th>
<th>FY16</th>
<th>FY17</th>
<th>FY18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td>71.0%</td>
<td>70.3%</td>
<td>69.0%</td>
<td>70.3%</td>
<td>68.9%</td>
<td>68.9%</td>
<td>67.8%</td>
<td>68.5%</td>
<td>66.7%</td>
<td>65.7%</td>
</tr>
<tr>
<td>Master’s</td>
<td>79.4%</td>
<td>79.3%</td>
<td>78.4%</td>
<td>80.7%</td>
<td>80.1%</td>
<td>78.9%</td>
<td>79.1%</td>
<td>79.4%</td>
<td>78.8%</td>
<td>78.2%</td>
</tr>
<tr>
<td>Doctoral/Research</td>
<td>68.1%</td>
<td>68.6%</td>
<td>67.3%</td>
<td>68.1%</td>
<td>68.4%</td>
<td>68.2%</td>
<td>68.9%</td>
<td>69.0%</td>
<td>69.4%</td>
<td>68.8%</td>
</tr>
<tr>
<td>Special Focus</td>
<td>73.7%</td>
<td>74.8%</td>
<td>76.2%</td>
<td>75.1%</td>
<td>77.2%</td>
<td>77.2%</td>
<td>74.0%</td>
<td>76.0%</td>
<td>77.9%</td>
<td>78.4%</td>
</tr>
<tr>
<td>All Institutions</td>
<td>73.5%</td>
<td>73.4%</td>
<td>72.3%</td>
<td>73.7%</td>
<td>73.2%</td>
<td>72.8%</td>
<td>72.5%</td>
<td>73.0%</td>
<td>72.3%</td>
<td>71.6%</td>
</tr>
</tbody>
</table>


### APPENDIX TABLE 10: AVERAGE ENROLLMENT BY STUDENT TYPE AND CARNEGIE CLASSIFICATION, AY 2011-12 TO AY 2019-20*

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Baccalaureate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduate</td>
<td>409</td>
<td>416</td>
<td>413</td>
<td>410</td>
<td>420</td>
<td>438</td>
<td>461</td>
<td>437</td>
<td>-5.0%</td>
</tr>
<tr>
<td>All Undergraduate</td>
<td>1,635</td>
<td>1,670</td>
<td>1,635</td>
<td>1,633</td>
<td>1,671</td>
<td>1,697</td>
<td>1,710</td>
<td>1,684</td>
<td>-1.5%</td>
</tr>
<tr>
<td>Master’s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduate</td>
<td>597</td>
<td>604</td>
<td>619</td>
<td>602</td>
<td>638</td>
<td>596</td>
<td>559</td>
<td>548</td>
<td>-2.0%</td>
</tr>
<tr>
<td>All Undergraduate</td>
<td>2,866</td>
<td>2,850</td>
<td>2,914</td>
<td>2,792</td>
<td>2,952</td>
<td>2,742</td>
<td>2,475</td>
<td>2,467</td>
<td>-0.3%</td>
</tr>
<tr>
<td>Doctoral/Research</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduate</td>
<td>1,400</td>
<td>1,336</td>
<td>1,399</td>
<td>1,389</td>
<td>1,464</td>
<td>1,563</td>
<td>1,339</td>
<td>1,289</td>
<td>-3.7%</td>
</tr>
<tr>
<td>All Undergraduate</td>
<td>6,287</td>
<td>5,940</td>
<td>6,344</td>
<td>6,147</td>
<td>6,591</td>
<td>6,851</td>
<td>5,794</td>
<td>5,788</td>
<td>-0.1%</td>
</tr>
<tr>
<td>Special Focus</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduate</td>
<td>212</td>
<td>236</td>
<td>189</td>
<td>202</td>
<td>282</td>
<td>289</td>
<td>320</td>
<td>246</td>
<td>-23.1%</td>
</tr>
<tr>
<td>All Undergraduate</td>
<td>1,317</td>
<td>1,562</td>
<td>1,157</td>
<td>1,241</td>
<td>1,606</td>
<td>1,398</td>
<td>1,563</td>
<td>1,507</td>
<td>-3.6%</td>
</tr>
<tr>
<td>All institutions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduate</td>
<td>616</td>
<td>607</td>
<td>635</td>
<td>611</td>
<td>643</td>
<td>663</td>
<td>710</td>
<td>688</td>
<td>-3.2%</td>
</tr>
<tr>
<td>All Undergraduate</td>
<td>2,769</td>
<td>2,708</td>
<td>2,833</td>
<td>2,686</td>
<td>2,589</td>
<td>2,884</td>
<td>3,008</td>
<td>3,006</td>
<td>-0.1%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year. *Preliminary estimates.
### APPENDIX TABLE 11: AVERAGE TUITION DISCOUNTING RATES BY STUDENT TYPE AND CARNEGIE CLASSIFICATION, AY 2010-11 TO AY 2019-20*

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baccalaureate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduates</td>
<td>43.9%</td>
<td>48.0%</td>
<td>47.8%</td>
<td>48.3%</td>
<td>50.3%</td>
<td>50.8%</td>
<td>51.4%</td>
<td>53.5%</td>
<td>55.1%</td>
<td>57.0%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>39.2%</td>
<td>43.4%</td>
<td>44.0%</td>
<td>43.4%</td>
<td>46.7%</td>
<td>47.0%</td>
<td>47.9%</td>
<td>49.0%</td>
<td>51.1%</td>
<td>52.8%</td>
</tr>
<tr>
<td><strong>Master’s</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduates</td>
<td>42.4%</td>
<td>44.5%</td>
<td>44.8%</td>
<td>46.4%</td>
<td>47.1%</td>
<td>49.0%</td>
<td>48.8%</td>
<td>51.2%</td>
<td>52.4%</td>
<td>54.1%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>34.7%</td>
<td>37.3%</td>
<td>38.9%</td>
<td>38.0%</td>
<td>39.5%</td>
<td>42.2%</td>
<td>42.5%</td>
<td>43.9%</td>
<td>45.5%</td>
<td>47.3%</td>
</tr>
<tr>
<td><strong>Doctoral/Research</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduates</td>
<td>39.7%</td>
<td>39.9%</td>
<td>42.0%</td>
<td>44.9%</td>
<td>44.7%</td>
<td>44.5%</td>
<td>45.0%</td>
<td>46.7%</td>
<td>48.0%</td>
<td>48.1%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>35.2%</td>
<td>35.7%</td>
<td>38.8%</td>
<td>39.0%</td>
<td>38.8%</td>
<td>40.0%</td>
<td>40.0%</td>
<td>41.7%</td>
<td>43.3%</td>
<td>44.3%</td>
</tr>
<tr>
<td><strong>Special Focus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduates</td>
<td>31.0%</td>
<td>28.1%</td>
<td>31.2%</td>
<td>36.1%</td>
<td>32.6%</td>
<td>33.7%</td>
<td>32.9%</td>
<td>35.1%</td>
<td>32.8%</td>
<td>31.7%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>27.2%</td>
<td>22.1%</td>
<td>25.7%</td>
<td>27.5%</td>
<td>25.4%</td>
<td>29.2%</td>
<td>27.7%</td>
<td>28.9%</td>
<td>29.2%</td>
<td>30.5%</td>
</tr>
<tr>
<td><strong>All institutions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First-Time Undergraduates</td>
<td>42.0%</td>
<td>44.3%</td>
<td>44.8%</td>
<td>46.4%</td>
<td>47.1%</td>
<td>48.0%</td>
<td>48.2%</td>
<td>50.5%</td>
<td>51.2%</td>
<td>52.6%</td>
</tr>
<tr>
<td>All Undergraduates</td>
<td>36.4%</td>
<td>38.6%</td>
<td>40.2%</td>
<td>39.8%</td>
<td>41.3%</td>
<td>43.0%</td>
<td>44.6%</td>
<td>46.0%</td>
<td>46.0%</td>
<td>47.6%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. *Preliminary estimates.

### APPENDIX TABLE 12: AVERAGE PERCENTAGE OF TOTAL UNDERGRADUATE INSTITUTIONAL GRANT AID FUNDED BY ENDOWMENT FUNDS AT BACCALAUREATE INSTITUTIONS, BY ENDOWMENT LEVEL, AY2014-15 TO 2018-19

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Over $1 billion</td>
<td>93.4%</td>
<td>78.1%</td>
<td>78.4%</td>
<td>76.7%</td>
<td>84.2%</td>
</tr>
<tr>
<td>$500 million to $1 billion</td>
<td>72.8%</td>
<td>78.3%</td>
<td>83.4%</td>
<td>92.5%</td>
<td>89.1%</td>
</tr>
<tr>
<td>$100 million to $500 billion</td>
<td>79.3%</td>
<td>80.3%</td>
<td>80.1%</td>
<td>77.6%</td>
<td>83.3%</td>
</tr>
<tr>
<td>$50 million to $100 million</td>
<td>81.2%</td>
<td>82.4%</td>
<td>74.4%</td>
<td>77.0%</td>
<td>75.4%</td>
</tr>
<tr>
<td>$25 million to $50 million</td>
<td>80.9%</td>
<td>77.0%</td>
<td>86.8%</td>
<td>85.0%</td>
<td>--</td>
</tr>
<tr>
<td>$25 million or less</td>
<td>81.7%</td>
<td>82.7%</td>
<td>88.7%</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>All Baccalaureate Institutions</td>
<td>80.4%</td>
<td>79.6%</td>
<td>79.8%</td>
<td>79.4%</td>
<td>83.9%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year.

Note: Endowment level data for 2018-19 come from the 2019 NACUBO-TIAA Study of Endowments and only includes analysis of institutions that participated in both the 2019 Tuition Discounting Study and the 2019 NACUBO-TIAA Study of Endowments.
### APPENDIX TABLE 13: AVERAGE PERCENTAGE OF TOTAL UNDERGRADUATE INSTITUTIONAL GRANT AID FUNDED BY ENDOWMENT FUNDS AT MASTER’S INSTITUTIONS, BY ENDOWMENT LEVEL, AY2014-15 TO 2018-19

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Over $1 billion</td>
<td>53.0%</td>
<td>81.8%</td>
<td>73.9%</td>
<td>79.8%</td>
<td>75.1%</td>
</tr>
<tr>
<td>$500 million to $1 billion</td>
<td>92.5%</td>
<td>87.8%</td>
<td>0.0%</td>
<td>71.0%</td>
<td>--</td>
</tr>
<tr>
<td>$100 million to $500 billion</td>
<td>74.8%</td>
<td>74.1%</td>
<td>73.6%</td>
<td>76.4%</td>
<td>74.0%</td>
</tr>
<tr>
<td>$50 million to $100 million</td>
<td>77.4%</td>
<td>74.5%</td>
<td>84.3%</td>
<td>75.9%</td>
<td>82.5%</td>
</tr>
<tr>
<td>$25 million to $50 million</td>
<td>72.0%</td>
<td>61.7%</td>
<td>85.1%</td>
<td>83.0%</td>
<td>73.0%</td>
</tr>
<tr>
<td>$25 million or less</td>
<td>74.3%</td>
<td>71.0%</td>
<td>84.7%</td>
<td>82.0%</td>
<td>100%</td>
</tr>
<tr>
<td>All Master’s Institutions</td>
<td>75.1%</td>
<td>76.3%</td>
<td>76.5%</td>
<td>77.9%</td>
<td>76.3%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year.

Note: Endowment level data for 2018-19 come from the 2019 NACUBO-TIAA Study of Endowments and only includes analysis of institutions that participated in both the 2019 Tuition Discounting Study and the 2019 NACUBO-TIAA Study of Endowments.

### APPENDIX TABLE 14: AVERAGE PERCENTAGE OF TOTAL UNDERGRADUATE INSTITUTIONAL GRANT AID FUNDED BY ENDOWMENT FUNDS AT RESEARCH/DOCTORAL INSTITUTIONS, BY ENDOWMENT LEVEL, AY2014-15 TO 2018-19

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Over $1 billion</td>
<td>85.9%</td>
<td>86.7%</td>
<td>84.9%</td>
<td>81.9%</td>
<td>81.4%</td>
</tr>
<tr>
<td>$500 million to $1 billion</td>
<td>74.3%</td>
<td>74.9%</td>
<td>74.4%</td>
<td>65.6%</td>
<td>69.1%</td>
</tr>
<tr>
<td>$100 million to $500 billion</td>
<td>71.7%</td>
<td>76.0%</td>
<td>73.3%</td>
<td>--</td>
<td>75.4%</td>
</tr>
<tr>
<td>$50 million to $100 million</td>
<td>74.8%</td>
<td>--</td>
<td>78.0%</td>
<td>100%</td>
<td>65.0%</td>
</tr>
<tr>
<td>$25 million to $50 million</td>
<td>77.0%</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>95.5%</td>
</tr>
<tr>
<td>$25 million or less</td>
<td>96.0%</td>
<td>--</td>
<td>--</td>
<td>--</td>
<td>82.0%</td>
</tr>
<tr>
<td>All Doctoral/Research Institutions</td>
<td>80.3%</td>
<td>82.2%</td>
<td>80.1%</td>
<td>76.6%</td>
<td>77.5%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study. Data are as of the fall of each academic year.

Note: Endowment level data for 2018-19 come from the 2019 NACUBO-TIAA Study of Endowments and only includes analysis of institutions that participated in both the 2019 Tuition Discounting Study and the 2019 NACUBO-TIAA Study of Endowments.
**APPENDIX TABLE 15: ANNUAL CHANGES IN NET TUITION REVENUE PER FTE STUDENT FOR ALL UNDERGRADUATES, ADJUSTED AND UNADJUSTED FOR INFLATION**

<table>
<thead>
<tr>
<th>Carnegie Classification</th>
<th>2018-19</th>
<th>2019-20*</th>
<th>Percent Change between 2018-19 and 2019-20*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baccalaureate</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Dollars</td>
<td>$21,062</td>
<td>$21,211</td>
<td>0.7%</td>
</tr>
<tr>
<td>Constant 2019 Dollars</td>
<td>$21,593</td>
<td>$21,211</td>
<td>-1.8%</td>
</tr>
<tr>
<td><strong>Master’s</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Dollars</td>
<td>$19,917</td>
<td>$20,177</td>
<td>1.3%</td>
</tr>
<tr>
<td>Constant 2019 Dollars</td>
<td>$20,419</td>
<td>$20,177</td>
<td>-1.2%</td>
</tr>
<tr>
<td><strong>Doctoral/Research</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Dollars</td>
<td>$26,047</td>
<td>$26,587</td>
<td>2.1%</td>
</tr>
<tr>
<td>Constant 2019 Dollars</td>
<td>$26,703</td>
<td>$26,587</td>
<td>-0.4%</td>
</tr>
<tr>
<td><strong>Special Focus</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Dollars</td>
<td>$23,314</td>
<td>$22,397</td>
<td>-3.9%</td>
</tr>
<tr>
<td>Constant 2019 Dollars</td>
<td>$23,901</td>
<td>$22,397</td>
<td>-6.3%</td>
</tr>
<tr>
<td><strong>All institutions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current Dollars</td>
<td>$21,998</td>
<td>$22,260</td>
<td>1.2%</td>
</tr>
<tr>
<td>Constant 2019 Dollars</td>
<td>$22,552</td>
<td>$22,260</td>
<td>-1.3%</td>
</tr>
</tbody>
</table>

### APPENDIX TABLE 16: PERCEIVED REASONS FOR ENROLLMENT GROWTH AT INSTITUTIONS THAT HAVE INCREASED FIRST-TIME UNDERGRADUATE ENROLLMENT FROM FALL 2016 TO FALL 2019, BY CARNEGIE CLASSIFICATION

<table>
<thead>
<tr>
<th>Reasons</th>
<th>All Institutions</th>
<th>Baccalaureate</th>
<th>Master’s</th>
<th>Doctoral/Research</th>
<th>Special Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Improved Recruitment and/or Marketing Strategies</td>
<td>74.2%</td>
<td>76.7%</td>
<td>73.4%</td>
<td>71.8%</td>
<td>77.8%</td>
</tr>
<tr>
<td>Improved Admissions Processing Systems/Procedures</td>
<td>51.0%</td>
<td>46.5%</td>
<td>48.4%</td>
<td>61.5%</td>
<td>44.4%</td>
</tr>
<tr>
<td>Increase in Institutional Financial Aid</td>
<td>43.9%</td>
<td>44.2%</td>
<td>34.4%</td>
<td>56.4%</td>
<td>55.6%</td>
</tr>
<tr>
<td>Increase in Overall Demand for Your Institution</td>
<td>43.9%</td>
<td>41.9%</td>
<td>48.4%</td>
<td>38.5%</td>
<td>44.4%</td>
</tr>
<tr>
<td>New Academic Programs</td>
<td>42.6%</td>
<td>34.9%</td>
<td>57.8%</td>
<td>25.6%</td>
<td>44.4%</td>
</tr>
<tr>
<td>Updated or New Facilities</td>
<td>35.5%</td>
<td>27.9%</td>
<td>43.8%</td>
<td>30.8%</td>
<td>33.3%</td>
</tr>
<tr>
<td>Increase in Yield Rate of Accepted Students</td>
<td>27.7%</td>
<td>32.6%</td>
<td>23.4%</td>
<td>28.2%</td>
<td>33.3%</td>
</tr>
<tr>
<td>New Athletic Programs</td>
<td>23.2%</td>
<td>20.9%</td>
<td>31.3%</td>
<td>15.4%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Changing Demographics</td>
<td>16.1%</td>
<td>16.3%</td>
<td>17.3%</td>
<td>12.8%</td>
<td>22.2%</td>
</tr>
<tr>
<td>Other</td>
<td>6.5%</td>
<td>9.3%</td>
<td>4.7%</td>
<td>7.7%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Decreasing Selectivity</td>
<td>3.9%</td>
<td>4.7%</td>
<td>0.0%</td>
<td>5.1%</td>
<td>22.2%</td>
</tr>
<tr>
<td>State Budget Cuts to Public Institutions</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.

### APPENDIX TABLE 17: PERCENTAGE OF BACCALAUREATE INSTITUTIONS THAT IMPLEMENTED OR CHANGED STRATEGIES TO INCREASE NET TUITION REVENUE IN FY 2019, BY STRATEGY TYPE AND DIRECTION OF CHANGE IN ENROLLMENT

<table>
<thead>
<tr>
<th>Strategy</th>
<th>All Baccalaureate Institutions</th>
<th>Baccalaureates with Declining Enrollment</th>
<th>Baccalaureates with Rising Enrollment</th>
<th>Baccalaureates with No Change in Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Retention Strategies</td>
<td>77.0%</td>
<td>82.4%</td>
<td>76.2%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Student Recruitment Strategies</td>
<td>71.7%</td>
<td>72.5%</td>
<td>66.7%</td>
<td>85.7%</td>
</tr>
<tr>
<td>Financial Aid Strategies</td>
<td>67.3%</td>
<td>72.5%</td>
<td>64.3%</td>
<td>57.1%</td>
</tr>
<tr>
<td>Changed/Added Academic Programs</td>
<td>36.3%</td>
<td>45.1%</td>
<td>31.0%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Changed/Added Facilities</td>
<td>30.1%</td>
<td>31.4%</td>
<td>21.4%</td>
<td>28.6%</td>
</tr>
<tr>
<td>Tuition Pricing Strategies</td>
<td>14.2%</td>
<td>13.7%</td>
<td>14.3%</td>
<td>14.3%</td>
</tr>
<tr>
<td>No New Strategies</td>
<td>10.6%</td>
<td>7.8%</td>
<td>9.5%</td>
<td>14.3%</td>
</tr>
<tr>
<td>Other</td>
<td>4.4%</td>
<td>7.8%</td>
<td>2.4%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study
### APPENDIX TABLE 18: PERCENTAGE OF MASTER’S INSTITUTIONS THAT IMPLEMENTED OR CHANGED STRATEGIES TO INCREASE NET TUITION REVENUE IN FY 2019, BY STRATEGY TYPE AND DIRECTION OF CHANGE IN ENROLLMENT

<table>
<thead>
<tr>
<th>Strategy</th>
<th>All Master’s Institutions</th>
<th>Master’s with Declining Enrollment</th>
<th>Master’s with Rising Enrollment</th>
<th>Master’s with No Change in Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Recruitment Strategies</td>
<td>86.4%</td>
<td>87.7%</td>
<td>85.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Student Retention Strategies</td>
<td>84.8%</td>
<td>89.5%</td>
<td>80.0%</td>
<td>100%</td>
</tr>
<tr>
<td>Financial Aid Strategies</td>
<td>74.4%</td>
<td>82.5%</td>
<td>66.7%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Changed/Added Academic Programs</td>
<td>53.6%</td>
<td>43.9%</td>
<td>58.3%</td>
<td>75.0%</td>
</tr>
<tr>
<td>Changed/Added Facilities</td>
<td>26.4%</td>
<td>31.6%</td>
<td>21.7%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Tuition Pricing Strategies</td>
<td>12.8%</td>
<td>12.3%</td>
<td>15.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>4.0%</td>
<td>0.0%</td>
<td>3.3%</td>
<td>50.0%</td>
</tr>
<tr>
<td>No New Strategies</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.

### APPENDIX TABLE 19: PERCENTAGE OF DOCTORAL/RESEARCH INSTITUTIONS THAT IMPLEMENTED OR CHANGED STRATEGIES TO INCREASE NET TUITION REVENUE IN FY 2019, BY STRATEGY TYPE AND DIRECTION OF CHANGE IN ENROLLMENT

<table>
<thead>
<tr>
<th>Strategy</th>
<th>All Doctoral/Research Institutions</th>
<th>Doctoral/Research Institutions with Declining Enrollment</th>
<th>Doctoral/Research Institutions with Rising Enrollment</th>
<th>Doctoral/Research Institutions with No Change in Enrollment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial Aid Strategies</td>
<td>40.8%</td>
<td>63.3%</td>
<td>45.0%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Student Recruitment Strategies</td>
<td>40.0%</td>
<td>83.3%</td>
<td>38.3%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Student Retention Strategies</td>
<td>39.2%</td>
<td>76.7%</td>
<td>36.7%</td>
<td>50.0%</td>
</tr>
<tr>
<td>Changed/Added Academic Programs</td>
<td>23.2%</td>
<td>56.7%</td>
<td>16.7%</td>
<td>25.0%</td>
</tr>
<tr>
<td>Changed/Added Facilities</td>
<td>16.0%</td>
<td>33.3%</td>
<td>15.0%</td>
<td>0.0%</td>
</tr>
<tr>
<td>No New Strategies</td>
<td>12.0%</td>
<td>10.0%</td>
<td>6.7%</td>
<td>100%</td>
</tr>
<tr>
<td>Tuition Pricing Strategies</td>
<td>11.2%</td>
<td>16.7%</td>
<td>13.3%</td>
<td>0.0%</td>
</tr>
<tr>
<td>Other</td>
<td>4.0%</td>
<td>6.7%</td>
<td>1.7%</td>
<td>25.0%</td>
</tr>
</tbody>
</table>

Source: NACUBO Tuition Discounting Study.
## APPENDIX TABLE 20: TUITION AND FEE REVENUE VERSUS NON-TUITION AND FEE REVENUE PER FTE STUDENT BY CARNEGIE CLASSIFICATION (IN CURRENT DOLLARS), FISCAL YEARS 2009 TO 2018

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Baccalaureate</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fee Revenue</td>
<td>$17,795</td>
<td>$18,001</td>
<td>$18,176</td>
<td>$18,698</td>
<td>$19,402</td>
<td>$20,001</td>
<td>$20,261</td>
<td>$20,426</td>
<td>$20,596</td>
<td>$20,673</td>
</tr>
<tr>
<td>Non-Tuition &amp; Fee Revenue</td>
<td>$8,076</td>
<td>$8,907</td>
<td>$9,508</td>
<td>$8,784</td>
<td>$9,806</td>
<td>$10,142</td>
<td>$10,825</td>
<td>$10,922</td>
<td>$12,012</td>
<td>$12,961</td>
</tr>
<tr>
<td><strong>Master's</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fee Revenue</td>
<td>$15,422</td>
<td>$15,771</td>
<td>$16,225</td>
<td>$16,724</td>
<td>$17,182</td>
<td>$17,326</td>
<td>$17,589</td>
<td>$17,948</td>
<td>$18,123</td>
<td>$18,204</td>
</tr>
<tr>
<td>Non-Tuition &amp; Fee Revenue</td>
<td>$4,265</td>
<td>$4,363</td>
<td>$4,801</td>
<td>$4,058</td>
<td>$4,316</td>
<td>$4,845</td>
<td>$4,791</td>
<td>$4,973</td>
<td>$5,130</td>
<td>$5,232</td>
</tr>
<tr>
<td><strong>Doctoral/Research - General</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fee Revenue</td>
<td>$19,154</td>
<td>$19,999</td>
<td>$20,269</td>
<td>$21,101</td>
<td>$21,907</td>
<td>$22,532</td>
<td>$23,088</td>
<td>$23,593</td>
<td>$24,011</td>
<td>$24,444</td>
</tr>
<tr>
<td>Non-Tuition &amp; Fee Revenue</td>
<td>$10,505</td>
<td>$10,311</td>
<td>$11,279</td>
<td>$11,491</td>
<td>$11,290</td>
<td>$11,990</td>
<td>$12,151</td>
<td>$11,865</td>
<td>$11,806</td>
<td>$12,586</td>
</tr>
<tr>
<td><strong>Doctoral/Research Institutions with More Than $1 Billion in Non-Tuition &amp; Fee Revenue</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fee Revenue</td>
<td>$25,548</td>
<td>$26,020</td>
<td>$26,933</td>
<td>$28,102</td>
<td>$29,092</td>
<td>$30,473</td>
<td>$31,139</td>
<td>$32,567</td>
<td>$33,528</td>
<td>$34,700</td>
</tr>
<tr>
<td>Non-Tuition &amp; Fee Revenue</td>
<td>$157,959</td>
<td>$153,135</td>
<td>$155,755</td>
<td>$150,021</td>
<td>$147,510</td>
<td>$159,696</td>
<td>$169,863</td>
<td>$181,520</td>
<td>$200,590</td>
<td>$215,006</td>
</tr>
<tr>
<td><strong>Special Focus</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fee Revenue</td>
<td>$20,352</td>
<td>$21,300</td>
<td>$23,460</td>
<td>$24,322</td>
<td>$25,262</td>
<td>$26,123</td>
<td>$26,584</td>
<td>$27,122</td>
<td>$27,980</td>
<td>$27,906</td>
</tr>
<tr>
<td>Non-Tuition &amp; Fee Revenue</td>
<td>$20,395</td>
<td>$18,291</td>
<td>$26,991</td>
<td>$13,979</td>
<td>$12,169</td>
<td>$12,373</td>
<td>$12,747</td>
<td>$11,819</td>
<td>$11,219</td>
<td>$9,821</td>
</tr>
<tr>
<td><strong>All institutions</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition &amp; Fee Revenue</td>
<td>$17,591</td>
<td>$18,033</td>
<td>$18,446</td>
<td>$19,064</td>
<td>$19,721</td>
<td>$20,197</td>
<td>$20,545</td>
<td>$20,902</td>
<td>$21,185</td>
<td>$21,368</td>
</tr>
<tr>
<td>Non-Tuition &amp; Fee Revenue</td>
<td>$12,339</td>
<td>$12,369</td>
<td>$13,431</td>
<td>$12,183</td>
<td>$12,417</td>
<td>$13,256</td>
<td>$13,828</td>
<td>$14,138</td>
<td>$15,096</td>
<td>$15,996</td>
</tr>
</tbody>
</table>

Appendix C: Participating Institutions

Institutions in bold have participated for five or more consecutive years in the TDS survey.

Baccalaureate Institutions

Agnes Scott College
Albion College
American Jewish University
Amherst College
Augustana College
Averett University
Bard College
Beloit College
Benedictine College
Bridgewater College
Carleton College
Carroll College
Carthage College
Cazenovia College
Central College
Coe College
Colby-Sawyer College
Colgate University
College of Saint Benedict
College of the Holy Cross
Colorado College
Concordia College, Moorhead
Connecticut College
Davidson College
Denison University
DePauw University
Dickinson College
Doane University
Dordt University
Earlham College and Earlham School of Religion
East Texas Baptist University
Elizabethtown College
Embry-Riddle Aeronautical University
Emmanuel College
Eureka College
Flagler College
Franklin and Marshall College
Franklin College of Indiana
Furman University
Gettysburg College
Goshen College
Goucher College
Grinnell College
Grove City College
Gustavus Adolphus College
Hampden Sydney College
Hanover College
Hartwick College
Hastings College
Haverford College
Heidelberg University
Hendrix College
Hillsdale College
Hobart and William Smith Colleges
Hollins University
Hope College
Howard Payne University
Illinois College
Illinois Wesleyan University
Juniata College
Kenyon College
Knox College
Lackawanna College
Lafayette College
Lewis and Clark College
Loras College
Lycoming College
Macalester College
Manchester University
Marietta College
Marymount Manhattan College
<table>
<thead>
<tr>
<th>College Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meredith College</td>
</tr>
<tr>
<td>Middlebury College</td>
</tr>
<tr>
<td>Morehouse College</td>
</tr>
<tr>
<td>Muhlenberg College</td>
</tr>
<tr>
<td>Oberlin College</td>
</tr>
<tr>
<td>Occidental College</td>
</tr>
<tr>
<td>Ohio Northern University</td>
</tr>
<tr>
<td>Ohio Wesleyan University</td>
</tr>
<tr>
<td>Oklahoma Baptist University</td>
</tr>
<tr>
<td>Pacific Union College</td>
</tr>
<tr>
<td>Paul Smiths College of Arts and Sciences</td>
</tr>
<tr>
<td>Pitzer College</td>
</tr>
<tr>
<td>Quincy University</td>
</tr>
<tr>
<td>Randolph-Macon College</td>
</tr>
<tr>
<td>Reed College</td>
</tr>
<tr>
<td>Roanoke College</td>
</tr>
<tr>
<td>Saint Anselm College</td>
</tr>
<tr>
<td>Saint John’s University</td>
</tr>
<tr>
<td>Saint Mary’s College</td>
</tr>
<tr>
<td>Saint Michaels College</td>
</tr>
<tr>
<td>Saint Norbert College</td>
</tr>
<tr>
<td>Saint Vincent College</td>
</tr>
<tr>
<td>Sarah Lawrence College</td>
</tr>
<tr>
<td>Schreiner University</td>
</tr>
<tr>
<td>Sewanee: The University of the South</td>
</tr>
<tr>
<td>Skidmore College</td>
</tr>
<tr>
<td>Smith College</td>
</tr>
<tr>
<td>Southwestern University</td>
</tr>
<tr>
<td>Spartanburg Methodist College</td>
</tr>
<tr>
<td>St. John’s College</td>
</tr>
<tr>
<td>St. Lawrence University</td>
</tr>
<tr>
<td>St. Olaf College</td>
</tr>
<tr>
<td>Stonehill College</td>
</tr>
<tr>
<td>Susquehanna University</td>
</tr>
<tr>
<td>Swarthmore College</td>
</tr>
<tr>
<td>The College of Wooster</td>
</tr>
<tr>
<td>Union College in Lincoln, Nebraska</td>
</tr>
<tr>
<td>Union College in Schenectady, New York</td>
</tr>
<tr>
<td>University of Mount Union</td>
</tr>
<tr>
<td>University of Puget Sound</td>
</tr>
<tr>
<td>University of Richmond</td>
</tr>
<tr>
<td>University of the Ozarks</td>
</tr>
<tr>
<td>Ursinus College</td>
</tr>
<tr>
<td>Wabash College</td>
</tr>
<tr>
<td>Warner Pacific University</td>
</tr>
<tr>
<td>Washington and Jefferson College</td>
</tr>
<tr>
<td>Wellesley College</td>
</tr>
<tr>
<td>Westmont College</td>
</tr>
<tr>
<td>Wheaton College</td>
</tr>
<tr>
<td>Wheaton College (MA)</td>
</tr>
<tr>
<td>Whitman College</td>
</tr>
<tr>
<td>William Jessup University</td>
</tr>
<tr>
<td>Wilmington College</td>
</tr>
</tbody>
</table>
Master’s Institutions

Abilene Christian University
Albertus Magnus College
Alfred University
Alvernia University
Arcadia University
Asbury University
Ashland University
Assumption College
Baldwin-Wallace University
Bentley University
Bradley University
Buena Vista University
Butler University
Cairn University
Caldwell University
California Baptist University
California Lutheran University
Calvin College
Capital University
Carlow University
Cedar Crest College
Chaminade University of Honolulu
College of Mount Saint Vincent
College of Saint Elizabeth
College of Saint Mary
Colorado Christian University
Columbia College
Concordia University
Converse College
Cornerstone University
Cumberland University
Curry College
Delaware Valley University
DeSales University
Dominican College of Blauvelt
Embry-Riddle Aeronautical University, Daytona Beach
Emerson College
Endicott College
Fairfield University
Faulkner University
Florida Southern College
Freed-Hardeman University
Georgian Court University
Graceland University
Gwynedd-Mercy University
Hardin-Simmons University
Holy Names University
Hood College
Huntington University
Indiana Institute of Technology
Iona College
Ithaca College
Jacksonville University
John Carroll University
Kettering University
La Roche College
La Salle University
Lakeland University
Lancaster Bible College
Lasell College
Le Moyne College
Lebanon Valley College
Lee University
Lewis University
Loyola University Maryland
Lubbock Christian University
Manhattan College
Marian University
Marist College
Marymount University
Medaille College
Mercy College
Merrimack College
Messiah College
Methodist University
Milligan College
Mills College
Molloy College
Monmouth University
Mount Saint Mary College
Mount Saint Mary’s University
Mount Vernon Nazarene University
Muskingum University
Naropa University
Nazareth College of Rochester
North Central College
North Park University
Northwest Christian University
Northwest University
Ohio Dominican University
Ohio Christian University
Olivet Nazarene University
Otterbein University
Point Loma Nazarene University
Point Park University
Queens University of Charlotte
Reinhardt University
Rider University
Rockhurst University
Rocky Mountain College
Roger Williams University
Rollins College
Saint Francis University
Saint Joseph’s University
Saint Mary’s College of California
Saint Mary’s University of Minnesota
Saint Xavier University
Salve Regina University
Seton Hill University
Siena Heights University
Springfield College
St. Ambrose University
St. Bonaventure University
St. Edwards University
St. Mary’s University
Stetson University
Suffolk University
The Masters University and Seminary
The University of Scranton
Thomas College
Thomas More University
Trinity University
University of Lynchburg
University of New Haven
University of Portland
University of Saint Francis
University of Saint Mary
Utica College
Wentworth Institute of Technology
Westminster College
Whitworth University
Wilson College
Xavier University
Doctoral/Research Institutions

American University
Baker University
Barry University
Baylor University
Bellarmine University
Belmont University
Benedictine University
Bethel University
Biola University
Boston College
Boston University
Brandeis University
Brown University
California Institute of Technology
Campbell University
Carnegie Mellon University
Case Western Reserve University
Chapman University
Chatham University
Clark Atlanta University
Clark University
Clarke University
Columbia University in the City of New York
Cornell University
Daemen College
Dartmouth College
DePaul University
Duquesne University
Emory University
Florida Institute of Technology
Fordham University
George Fox University
Hampton University
Harvard University
Hofstra University
Loyola Marymount University
Loyola University Chicago
Loyola University New Orleans
Mary Baldwin University
Maryville University
Mercer University
Misericordia University
New York University
Northwestern University
Our Lady of the Lake University
Pacific University
Palm Beach Atlantic University
Pepperdine University
Princeton University
Quinnipiac University
Rensselaer Polytechnic Institute
Rice University
Roosevelt University
Sacred Heart University
Samford University
Seattle Pacific University
Seattle University
Seton Hall University
Shenandoah University
Southern Methodist University
St. Catherine University
St. John’s University
Stevens Institute of Technology
Syracuse University Main Campus
Texas Christian University
The Catholic University of America
The College of Saint Scholastica
The New School
The Sage Colleges
Tulane University
University of Dayton
University of Denver
University of Detroit Mercy
University of Hartford
University of Indianapolis
University of La Verne
University of Miami
University of New England
University of Notre Dame
University of Pennsylvania
University of San Diego
University of San Francisco
University of Southern California
University of St. Francis
University of the Incarnate Word
University of Tulsa
Valparaiso University
Vanderbilt University
Wake Forest University
Western New England University
Widener University
Wilkes University
Special Focus Institutions

ArtCenter College of Design
California Institute of the Arts
Charles R. Drew University of Medicine & Science
**Cleveland Institute of Music**
Culinary Institute of America
**Franklin University**
Kettering College
Maria College
**Minneapolis College of Art Design**
Nichols College
Northwood University Michigan Campus
Olin College of Engineering
Parker University
Pratt Institute
**Rhode Island School of Design**
**Ringling College of Art and Design**
Rose-Hulman Institute of Technology