# DEBT AND EARNINGS AT DALLAS COLLEGE

## A REVIEW OF ACADEMIC PROGRAMS IN STATE AND NATIONAL CONTEXT

# Table of Contents

# Executive Summary

**In this report, the Research Institute uses student loan debt and post-college earnings data from the College Scorecard and Texas Higher Education Coordinating Board to study program-level differences at Dallas College, in Texas, and nationwide.**

Overall, debt and earnings outcomes at Dallas College are healthy whether the Gainful Employment Rule or *Building a Talent Strong Texas* is used to assess program performance. In addition, due to low and affordable costs, student loan debt has a minimal impact on long-run estimates of student return on investment from a Dallas College education. This report is accompanied by a new Debt-to-Earnings Dashboard which allows for further exploration of debt and earnings outcomes by field of study, credential level, geographic region, and postsecondary institution. The national data set featured in this dashboard places debt and earnings outcomes at Dallas College in context relative to peer institutions. This new tool allows users to compare relative debt and earnings by program, view a breakdown of the share of healthy programs in a given field of study, analyze how debt and earnings vary by sector, search for specific programs, and calculate debt payments based on user input, among other features.

## Debt-to-Earnings Dashboard: Program Explorer

**THE RESEARCH INSTITUTE DALLAS COLLEGE**

| Select a Credential Level and Field of Study | Credential Level Associate Degree | Area or Field of Study (CIP) Business Administration, Management and Operations (CIP = 52.. |
|---|---|---|

Across 390 programs, students who completed an **Associate Degree** in **Business Administration, Management and Operations (CIP = 5202)** and were not enrolled in further study had average median first-year earnings of **$30,066**. Using the average median debt value of **$16,367**, the total debt-to-earnings ratio was **57.7%** and monthly debt payments on a standard ten-year plan were **$174**, or **7.3%** of potential earnings. Within this field of study, at this credential level, and using average median debt, **73.7%** of programs had healthy debt-to-earnings outcomes using criteria from **Building a Talent Strong Texas**.
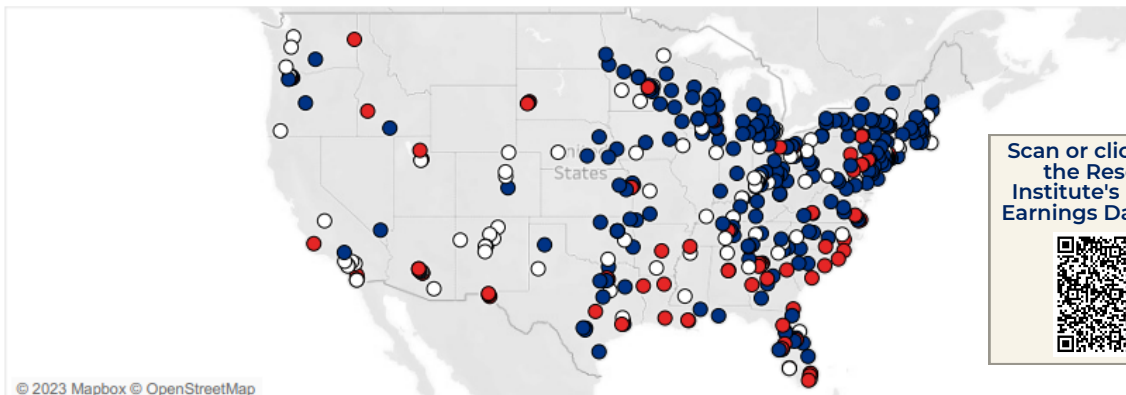
Scan or click to visit the Research Institute's Debt-to-Earnings Dashboard.

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# Key Findings

- The median Dallas College student who receives federal financial aid incurs $5,620 in student debt. Monthly payments on a standard ten-year repayment plan are estimated at $58 per month at the median and up to $145 per month for students who fully finance college through loans.

- How much of a Dallas College graduate's paycheck is spent on student loan payments varies by field of study, ranging from 3-11% per month for associate degrees and 2-6% for certificates.

- Almost all programs at Dallas College leave graduates with no or manageable debt in relation to their potential earnings under both the Gainful Employment Rule and *Building a Talent Strong Texas* criteria for healthy debt and earnings.

- Dallas College meets the *Building a Talent Strong Texas* goal for 95% of all students to graduate with no or manageable debt, but not all programs meet this threshold by student population.

- At the state and national levels, associate and certificate programs at public institutions – primarily community colleges—yield the lowest debt levels relative to potential earnings. Private institutions, particularly for-profit ones, post higher average debt-to-earnings ratios.

- Nationwide, at the bachelor's and master's levels, the typical program in many areas of study leaves students with moderate to high debt relative to low expected earnings after college. Wage disparities across subjects or majors, rather than differences in debt, underlie this finding.

# Debt and Earnings at Dallas College: A Review of Academic Programs in State and National Context

Understanding the value that colleges generate for their students is central to the mission of the Research Institute at Dallas College, and its findings to date strongly suggest that college—including community college—is economically worthwhile for prospective students, with the monetary benefits over a lifetime far exceeding the costs. One limitation to the Research Institute's previous studies, however, is that they use an average net price to account for the costs of college, without factoring in the extra burden of student loan debt. In this report, the Research Institute revisits return on investment (ROI), earnings, and debt to further explore how they are interrelated by field of study at Dallas College, in Texas, and nationwide. The purpose of this analysis is to gauge whether student loan debt is manageable in relation to potential earnings after college, with the ultimate goal of ensuring students leave college in a position of economic wellbeing with the capacity to pay down loans.

Student loan debt is directly tied to college-going and long-term outcomes, and it is one of the most commonly cited concerns about higher education in surveys of public opinion. Some students and families may avoid college altogether due to an aversion to debt, missing out on the upside of greater earnings potential with a degree. Others may pursue college and borrow extensively but face unmanageable payments depending on their college pathway, employment status, or overall financial situation. For students considering higher education, forecasting one's outlook with and without college is challenging, and student loan debt is yet another variable to add to the ROI equation, with different financing sources, federal repayment plans, and policy changes adding to the uncertainty.

In this report, the Research Institute examines the economic prospects of college graduates by the fields they studied or majored in. Overall, the effects of debt on ROI are relatively small at Dallas College, although these effects can be large at more expensive institutions. In addition, program-level data reveal that community colleges typically leave graduates with low to manageable levels of debt relative to earnings across most fields. Compared to four-year institutions and private colleges and universities, community colleges tend to yield the lowest levels of median debt, with debt-to-earnings (DTE) ratios that pass benchmarks in policy discussions. Throughout Texas and the country, this report also identifies which fields of study almost universally yield healthy DTE ratios for graduates and which fields of study have lower percentages of economically viable programs. A new Debt-to-Earnings Dashboard using College Scorecard data accompanies the release of this report.

# Effects of Debt on ROI

## The Research Institute's Previous Findings on ROI

Prior work by the Research Institute has placed the returns of Dallas College students at $893,000 over 40 years, or $203,000 above high school graduate earnings. In these estimates of ROI for Dallas College, it was assumed that college was financed annually and paid for completely during the years when a student was enrolled, with no additional costs in interest or loan payments made once students left after three years in college. Since Dallas College awards more associate degrees than any other credential type, three years was chosen to represent the typical time students spend at Dallas College, allowing for costs to reflect that not all students complete an associate degree in two years. The cost paid each year was assumed to equal the average net price for an institution—a value that sums tuition, fees, books, supplies, and living expenses, and subtracts scholarships and grants. Earnings data were used up to ten years after college entry, and no further wage growth was assumed thereafter. An annual 2% discount rate was also applied to costs and earnings following high school graduation in order to produce a net present value estimate of ROI.[1]

All in all, a relatively conservative set of assumptions was chosen in prior work as to not overstate the value of college, with customizable ROI calculations offered in an ROI Dashboard and explored in an accompanying ROI research report. However, student loan debt was a notable omission. Assuming no debt is unrealistic, as many students borrow to help pay for their college pursuits.

For example, using data from the College Scorecard's September 2022 release, which covers federal aid recipients and federal loans only, the median amount of debt that students hold at the time they leave Dallas College is $5,620 overall, or $9,750 for credential completers and $5,500 for those who withdraw from college with no credential. The average net price of Dallas College using the same source—used in prior ROI calculations—is $4,739 per year. While net price encompasses more than just tuition or sticker price, it still may understate the amount students actually pay for college over time since it does not factor in the loan interest that comes with debt.

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1. The net present value assigns a dollar value to what a series of future cashflows are worth at the time a decision is being made based on a discount rate which measures the time value of money. Using a discount rate to estimate the net present value of college, paying costs up front may be a more stringent condition than allowing students to smooth costs over time with loans, partially offsetting costs due to interest.

## Incorporating Student Loan Debt into Previous ROI Findings

Figure 1 compares the costs of Dallas College with and without debt, assuming students borrow at the ten-year average interest rate for federal student loans of 4.21%. Both median debt and full debt financing scenarios, in which the student pays for college entirely via loans, are shown. A standard ten-year repayment plan is used for cost estimates with debt, although results are similar for an income-driven repayment (IDR) plan.[2] Costs are shown up to thirteen years after college entry to allow for full repayment of debt, and it is assumed that students spend three years at Dallas College. Students with no debt pay $14,217 during college, those with median debt pay $8,597 during college and $57.50 monthly for ten years after college (or $15,492 in total), and those with full debt financing pay nothing during college and $145.43 per month for ten years after college (or $17,444 in total), before discounting.[3] A moderate amount of debt allows students to smooth costs over time, but at the cost of added interest.

**Figure 1: Costs of Dallas College in Different Debt Financing Scenarios**
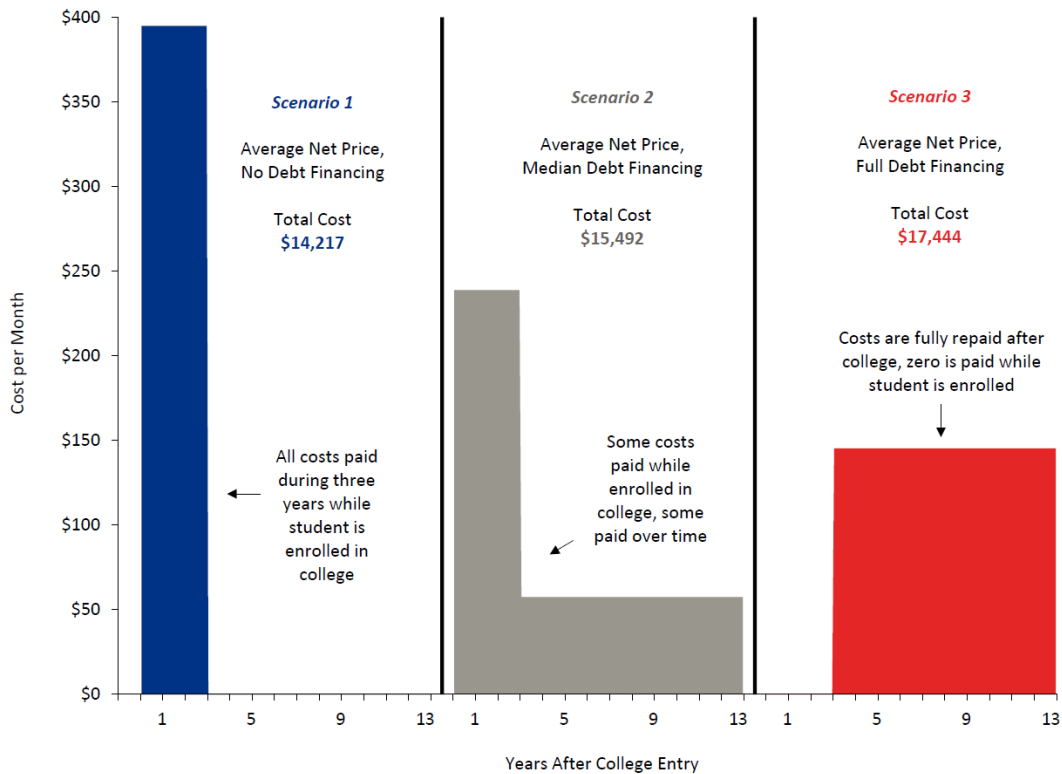


Notes: Scenarios assume students are enrolled at Dallas College for three years and incur the average net price per year. Students are assumed to borrow on a standard ten-year repayment plan at an interest rate of 4.21%. Sources: College Scorecard; Research Institute calculations.

After discounting, the loss in ROI for those who take out loans to pay for Dallas College rather than paying out of pocket is around $432 for the median loan amount or $1,093 if the costs of college are fully paid via loans, assuming on-time payments and no delinquency or default.

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2. Calculating monthly payments for an income-driven repayment plan requires extra assumptions about family size and annual earnings, since payments are based on discretionary income. In testing the Pay as You Earn (PAYE) income-driven repayment plan, the earnings curve used for ROI estimates and a two-person household was used.

3. For a monthly cost comparison, a 2% discount rate was divided by 12 and applied per month over the loan term.

While student loans incur a slight loss in ROI compared to paying up front, the benefits of college still ultimately far outweigh the costs at Dallas College, where the net price and loan amounts tend to be relatively low. This result offers reassurance that college can pay off even if students draw upon loans to pay for it. However, not all postsecondary institutions are as affordable as community colleges, not all students complete a credential in the same amount of time, and not all students have similar workforce outcomes. While the median data for Dallas College suggest that the impact of debt is minimal, a closer look at outcomes by program or field of study is needed to better understand variation in student loan debt and post-college earnings.

# Debt-to-Earnings Ratios

## Background on Debt-to-Earnings Ratios

Besides a net present value approach to ROI, another common measurement of the costs and benefits of college is a debt-to-earnings (DTE) ratio--a fraction or percentage that divides student loan debt by early-career earnings.[4] The lower this ratio, the less total debt students take on relative to their potential post-college wages. DTE ratios offer a pragmatic, short-term barometer of student financial outcomes when only a few points of data are available, as is the case with the College Scorecard's field-specific earnings data. Sometimes DTE ratios are expressed in terms of debt payments divided by income, or how much of one's paycheck goes to paying off student loan debt per month or year, after factoring in interest. Table 1 distinguishes between two types of DTE ratios, one that uses cumulative debt and one that uses debt payments. An underline appendix in the Debt-to-Earnings Dashboard allows users to examine debt calculations for an even larger variety of student scenarios.

**Table 1: Two Common Methods of Calculating Debt-to-Earnings Ratios**

| Student Scenario | |
|---|---|
| A student borrowed $5,000 per year for 3 years during college, for a total of $15,000 before interest, and went on to earn $40,000 per year after college. | |
| **Cumulative Debt-to-Earnings Ratio** | **Debt Payment-to-Earnings-Ratio** |
| Total debt accumulated at an institution divided by post-college annual earnings, excluding interest. | Debt payment amount divided by post-college earnings per month or year, including interest. |
| The student's cumulative debt-to-earnings ratio equals $15,000 / $40,000, or 37.5%. | The student's monthly loan payment is $159 under a standard ten-year repayment plan with a 5% interest rate. Their earnings per month are $3,333. The student's debt payment-to-earnings ratio equals $159 / $3,333, or 4.8%. |

Note: Student scenario described is used only to illustrate the difference in calculations between cumulative debt-to-earnings ratios and debt payment-to-earnings ratios, which factor in interest.

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4. Compared to using net present value ROI estimates, using debt-to-earnings ratios to judge the economic merits of college programs is simpler and requires fewer assumptions. However, debt-to-earnings ratios may also fail to capture the long-term benefits of a college credential in fields where substantial earnings growth occurs over time.

DTE ratios also have implications in public policy through outcomes-based funding for institutions. The Gainful Employment Rule, for example, used a DTE ratio based on payments to set guidelines for eligibility for federal financial aid: ratios less than 8% were passing, those greater than 12% were failing, and those in between received a warning. Programs that failed in two of three years or were warned for four consecutive years lost eligibility for federal aid. In a more recent example, *Building a Talent Strong Texas*, Texas's current strategic plan for higher education, recommends a 10% or lower monthly DTE ratio in its guidance for manageable levels of debt. The previous plan, *60x30TX*, established a goal of cumulative undergraduate student loan debt being no more than 60% of first-year wages for graduates of Texas public institutions. While exact thresholds and targets vary, other entities like the Texas Public Policy Foundation and the Urban Institute have also proposed evaluating postsecondary programs and institutions based on graduates' DTE ratios.

**Attainment Goals of**
***Building a Talent Strong Texas***

60% of Texans aged 25-64 will receive a degree, certificate, or other postsecondary credential of value by the year 2030.

550,000 students will complete a postsecondary credential of value each year, and 95% of students will graduate with either no undergraduate debt or manageable levels of debt with relation to their potential earnings.

Texas will be a leader in research and economic development with $1 billion in annual private and federal research and development expenditures by 2030 and with 7,500 research doctorates awarded annually.

## Debt-to-Earnings Ratios at Dallas College

Figure 2 shows DTE ratios by field of study for associate degree programs at Dallas College, compared to the thresholds used by the Gainful Employment Rule. These ratios are calculated using field-specific College Scorecard data, which are organized by 4-digit CIP (Classification of Instructional Programs) code. Where median debt data are unavailable, mean debt is used instead. Payments on debt are calculated assuming a standard ten-year repayment plan and a 5% interest rate, and debt values only include debt incurred at Dallas College, not from other institutions. Overall, no Dallas College associate degree programs with available data fail the Gainful Employment Rule, although the programs Culinary Arts and Related Services, as well as Design and Applied Arts receive a warning. It is worth noting that both of these programs only had mean, not median debt data available, which may skew their DTE ratios higher, even if just a handful of students hold large amounts of debt. The sample sizes for these two programs are small, with the debt cohort for the culinary arts program consisting of 13 graduates and the cohort for the design program consisting of 12 graduates.

## Figure 2: Debt Payment-to-Earnings Ratios of Dallas College Associate Degree Programs
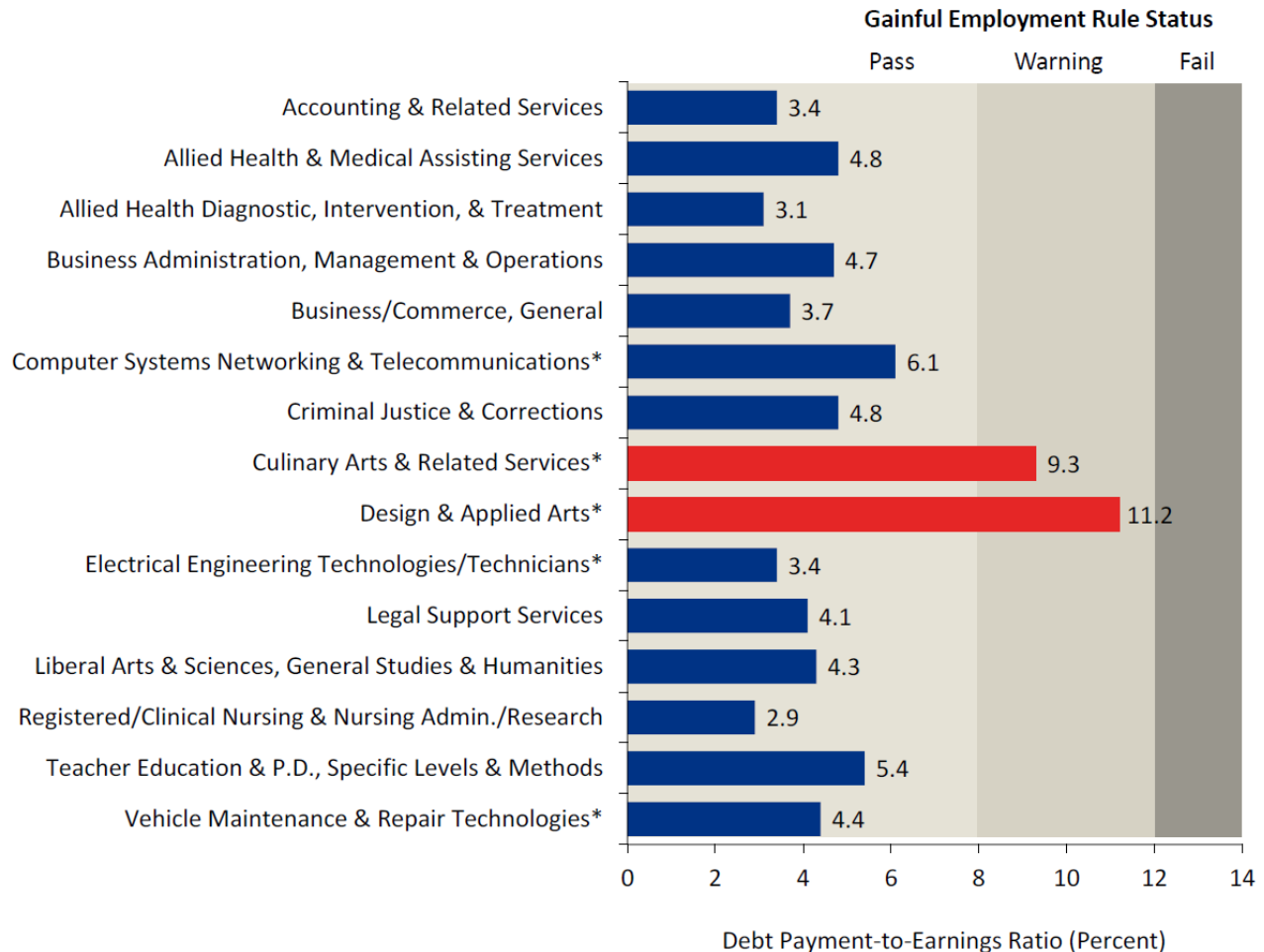


Notes: Rows marked with an asterisk (*) substitute mean debt for median debt. Payments are calculated for a standard ten-year repayment plan with a 5% interest rate. Debt payment-to-earnings ratios less than 8% pass the 2014 Gainful Employment Rule, those above 12% fail, and ratios in between 8% and 12% receive a warning. Sources: College Scorecard; Research Institute calculations.

## Program Health Rules

### Gainful Employment Rule

Monthly debt payments less than 8% of monthly earnings pass, greater than 12% fail, and those in between receive a warning, assuming a standard ten-year repayment plan and 5.0% interest rate.

### Building a Talent Strong Texas

Monthly debt payment is less than 10% of monthly earnings, assuming a standard ten-year repayment plan and 5.0% interest rate.

### 60x30TX

Total debt is less than 60% of annual earnings.

### Texas Public Policy Foundation

Reward programs with total debt at or below 75% of annual earnings, monitor programs between 75% and 100%, sanction those between 100% and 125%, and sunset those above 125%.

### Urban Institute

Programs with total debt below 50% of annual earnings have low DTE, those at or above 50% and less than 100% have moderate DTE, those at or above 100% and less than 150% have high DTE, and those at or above 150% have very high DTE.

Table 2 shows DTE ratios by field and credential level for Dallas College, indicating how programs perform based on _60x30TX_ and _Building a Talent Strong Texas_ in addition to the Gainful Employment Rule. All certificate programs at Dallas College with available data achieve healthy DTE ratios regardless of which of these rules is used to assess program health, and no matter whether median or mean debt is used. Overall, out of 28 Dallas College associate and certificate programs represented in the College Scorecard, 92.9%, or 26 programs, yield healthy DTE ratios, leaving graduates with manageable debt relative to potential first-year earnings, no matter which rules are used. Under _Building a Talent Strong Texas_, a state target is for 95% of postsecondary students to graduate with no undergraduate debt or manageable levels of debt in relation to their potential earnings. By this plan's criteria, using College Scorecard to weight each program by number of graduates with earnings data, Dallas College achieves this target, with fewer than 1% of students graduating from programs with unmanageable debt. Full program results for Dallas College and other institutions are available via an underline appendix in the Debt-to-Earnings Dashboard. That interactive table also displays how DTE ratios perform according to Texas Public Policy Foundation and Urban Institute criteria.

## Table 2: Earnings, Debt, and Debt-to-Earnings Ratios for Dallas College Programs

| | Field of Study (CIP) | First-Year Earnings | Total Median or Mean* Debt | Monthly Debt Payment | Cumulative Debt-to-Earnings Ratio | Debt Payment-to-Earnings Ratio | *Building a Talent Strong Texas* | *60x30TX* | 2014 Gainful Emp. Rule |
|---|---|---|---|---|---|---|---|---|---|
| **Certificate** | Accounting and Related Services (5203) | $37,478 | $9,628 | $102.12 | 25.7% | 3.3% | ✓ | ✓ | Pass |
| | Allied Health and Medical Assisting Services (5108) | $26,423 | $8,856 | $93.93 | 33.5% | 4.3% | ✓ | ✓ | Pass |
| | Allied Health Diagnostic, Intervention, and Treatment Professions (5109)* | $72,895 | $13,728 | $145.61 | 18.8% | 2.4% | ✓ | ✓ | Pass |
| | Business Administration, Management and Operations (5202) | $35,855 | $14,956 | $158.63 | 41.7% | 5.3% | ✓ | ✓ | Pass |
| | Computer Systems Networking and Telecommunications (1109) | $38,920 | $9,101 | $96.53 | 23.4% | 3.0% | ✓ | ✓ | Pass |
| | Criminal Justice and Corrections (4301) | $30,005 | $14,044 | $148.96 | 46.8% | 6.0% | ✓ | ✓ | Pass |
| | Culinary Arts and Related Services (1205) | $28,379 | $12,185 | $129.24 | 42.9% | 5.5% | ✓ | ✓ | Pass |
| | Data Processing (1103) | $30,429 | $9,623 | $102.07 | 31.6% | 4.0% | ✓ | ✓ | Pass |
| | Drafting/Design Engineering Technologies/ Technicians (1513)* | $41,234 | $13,519 | $143.39 | 32.8% | 4.2% | ✓ | ✓ | Pass |
| | Electrical Engineering Technologies/Technicians (1503) | $55,999 | $15,151 | $160.70 | 27.1% | 3.4% | ✓ | ✓ | Pass |
| | Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician (HVAC) (4702) | $35,983 | $9,500 | $100.76 | 26.4% | 3.4% | ✓ | ✓ | Pass |
| | Real Estate (5215) | $32,083 | $12,122 | $128.57 | 37.8% | 4.8% | ✓ | ✓ | Pass |
| | Vehicle Maintenance and Repair Technologies (4706) | $32,833 | $9,500 | $100.76 | 28.9% | 3.7% | ✓ | ✓ | Pass |

## Table 2, Continued: Earnings, Debt, and Debt-to-Earnings Ratios for Dallas College Programs

| | Field of Study (CIP) | First-Year Earnings | Total Median or Mean* Debt | Monthly Debt Payment | Cumulative Debt-to-Earnings Ratio | Debt Payment-to-Earnings Ratio | Building a Talent Strong Texas | 60x30TX | 2014 Gainful Emp. Rule |
|---|---|---|---|---|---|---|---|---|---|
| **Associate Degree** | Accounting and Related Services (5203) | $39,246 | $10,613 | $112.57 | 27.0% | 3.4% | ✓ | ✓ | Pass |
| | Allied Health and Medical Assisting Services (5108) | $35,472 | $13,500 | $143.19 | 38.1% | 4.8% | ✓ | ✓ | Pass |
| | Allied Health Diagnostic, Intervention, and Treatment Professions (5109) | $60,486 | $14,684 | $155.75 | 24.3% | 3.1% | ✓ | ✓ | Pass |
| | Business Administration, Management and Operations (5202) | $38,923 | $14,384 | $152.56 | 37.0% | 4.7% | ✓ | ✓ | Pass |
| | Business/ Commerce, General (5201) | $32,515 | $9,500 | $100.76 | 29.2% | 3.7% | ✓ | ✓ | Pass |
| | Computer Systems Networking and Telecommunications (1109)* | $35,867 | $17,109 | $181.47 | 47.7% | 6.1% | ✓ | ✓ | Pass |
| | Criminal Justice and Corrections (4301) | $33,859 | $12,822 | $136.00 | 37.9% | 4.8% | ✓ | ✓ | Pass |
| | Culinary Arts and Related Services (1205)* | $27,690 | $20,229 | $214.56 | 73.1% | 9.3% | ✓ | X | Warning |
| | Design and Applied Arts (5004)* | $19,732 | $17,351 | $184.03 | 87.9% | 11.2% | X | X | Warning |
| | Electrical Engineering Technologies/ Technicians (1503)* | $38,110 | $10,039 | $106.48 | 26.3% | 3.4% | ✓ | ✓ | Pass |
| | Legal Support Services (2203) | $42,571 | $13,584 | $144.08 | 31.9% | 4.1% | ✓ | ✓ | Pass |

## Table 2, Continued: Earnings, Debt, and Debt-to-Earnings Ratios for Dallas College Programs

| | Field of Study (CIP) | First-Year Earnings | Total Median or Mean* Debt | Monthly Debt Payment | Cumulative Debt-to-Earnings Ratio | Debt Payment-to-Earnings Ratio | *Building a Talent Strong Texas* | *60x30TX* | 2014 Gainful Emp. Rule |
|---|---|---|---|---|---|---|---|---|---|
| **Associate Degree** | Liberal Arts and Sciences, General Studies and Humanities (2401) | $28,082 | $9,500 | $100.76 | 33.8% | 4.3% | ✓ | ✓ | Pass |
| | Registered Nursing, Nursing Administration, Nursing Research and Clinical Nursing (5138) | $59,159 | $13,483 | $143.01 | 22.8% | 2.9% | ✓ | ✓ | Pass |
| | Teacher Education and Professional Development, Specific Levels and Methods (1312) | $21,425 | $9,101 | $96.53 | 42.5% | 5.4% | ✓ | ✓ | Pass |
| | Vehicle Maintenance and Repair Technologies (4706)* | $40,898 | $14,067 | $149.20 | 34.4% | 4.4% | ✓ | ✓ | Pass |

Notes: Rows marked with an asterisk (*) substitute mean debt for median debt. Monthly payments are calculated for a standard ten-year repayment plan with a 5% interest rate. Cumulative debt-to-earnings ratios less than 60% pass the *60x30TX* threshold. Debt payment-to-earnings ratios less than or equal to 10% pass the *Building a Talent Strong Texas* threshold. Debt payment-to-earnings ratios less than 8% pass the 2014 Gainful Employment Rule, those above 12% fail, and ratios in between 8% and 12% receive a warning. Sources: College Scorecard; Research Institute calculations.

# State and National Perspectives on Debt and Earnings

## Calculating Debt-to-Earnings Ratios with Texas Data

Zooming out from Dallas College is useful to contextualize its DTE results and determine whether these assessments are specific to programs at the College or part of a broader trend. At the state level, the Texas Higher Education Coordinating Board (THECB) offers another data source with different coverage and more granularity than what the College Scorecard alone can provide. THECB debt data come from the Texas Financial Aid Database System, can be disaggregated by race and ethnicity, and include all debt accumulated at Texas postsecondary institutions up to the time of receiving a degree, as opposed to only debt accumulated at the most recent institution. THECB earnings data come from the Texas Workforce Commission, via employer reporting to the state's unemployment insurance system, and while the data do not cover workers employed outside of Texas or those who are self-employed, they also are not limited to just covering federal financial aid recipients like College Scorecard data are.



Figure 3 shows the cumulative debt-to-median earnings ratios of Dallas College by race and ethnicity compared to the same ratios for all public two-year colleges in Texas, using data provided by the THECB. Most groups have slightly better (lower) DTE ratios at Dallas College than at the state level, although this is not the case for the "Other" race/ethnicity category, which here is defined by the THECB as including international students plus non-Black and non-Hispanic students who identify as two or more races, students who identify as American Indian or Alaskan Native, and/or students whose race and ethnicity information is unknown.

**Figure 3: Cumulative Debt-to-Earnings Ratios by Race and Ethnicity at Dallas College and in Texas**
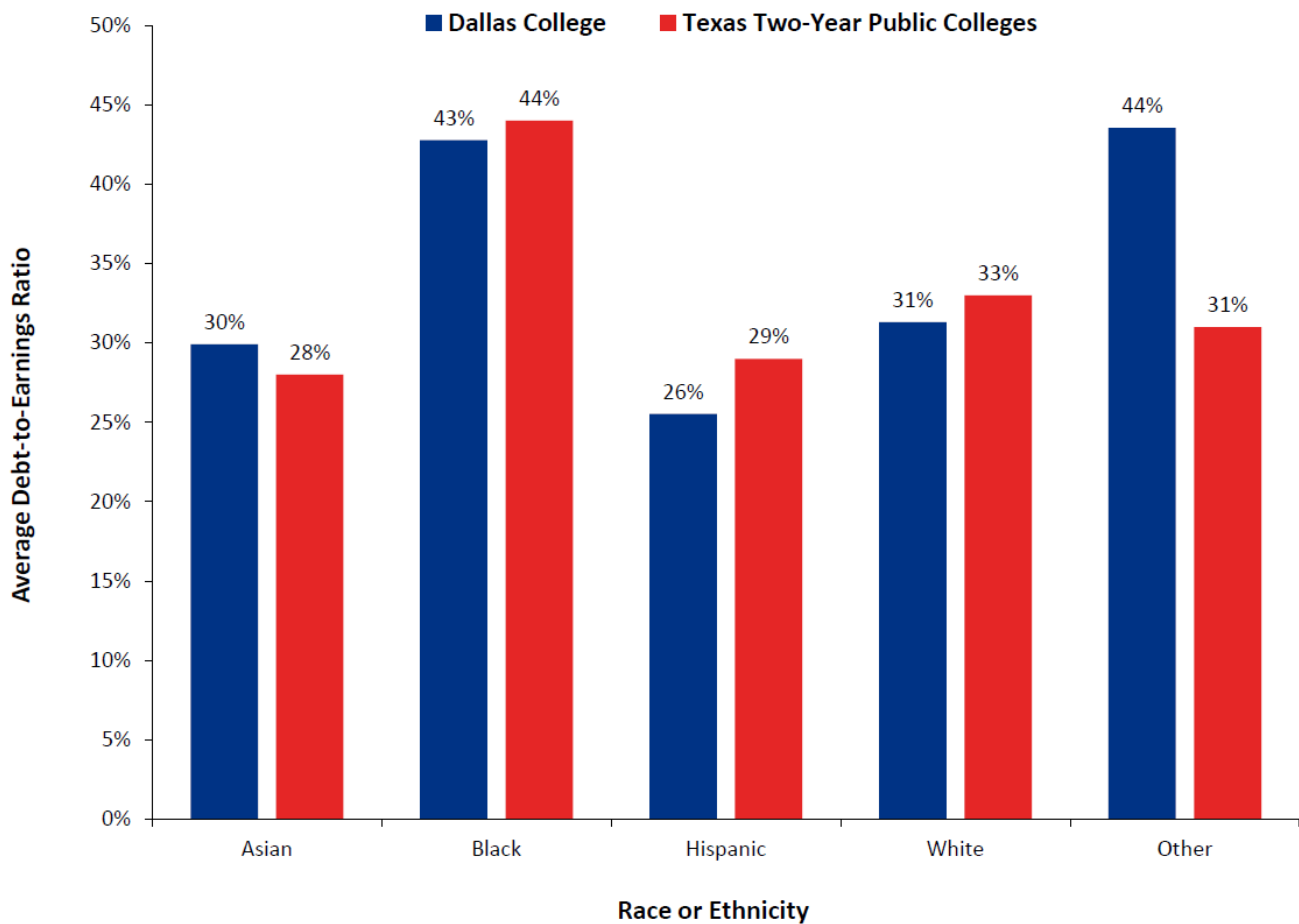


Notes: Data shown are for the 2020 graduation year. A weighted average by number of students with first-year wage data is used to aggregate data for Dallas College's seven campuses into values for the College as a whole. The red bars include Dallas College. Students who identify as Hispanic on a separate ethnicity question are counted as Hispanic and all other categories reflect non-Hispanic students. Students who are two or more races but identify as Black are counted as Black. The "Asian" category includes students who identify as Asian, Hawaiian, and Pacific Islander. To reduce the number of small cells, the "Other" race/ethnicity category includes international students plus non-Black and non-Hispanic students who identify as two or more races, who identify as American Indian or Alaskan Native, and/or whose race and ethnicity information is unknown. Sources: Texas Higher Education Coordinating Board; Research Institute calculations.

THECB data are also valuable from a state policy standpoint, given that *Building a Talent Strong Texas* is formulated around state, not national, data holdings. As Texas continues to develop its roadmap for this plan, the THECB has started the process of distributing to institutions data that contain the share of graduates with no or manageable debt by area of study and demographic group. Table 3 highlights these data for Dallas College associate and certificate programs. Overall, 98% of all Dallas College students graduate with no or manageable debt across all areas of study, albeit some student populations fall below *Building a Talent Strong Texas*'s 95% goal. For example, 9% of male students and 8% of Pell recipients who earn an associate degree in the (visual and performing) arts from Dallas College hold high debt relative to their potential earnings (a debt payment-to-earnings ratio greater than 10%). Later this year, the THECB plans to offer even more data to colleges and universities through secure data portals and dashboards as part of its broader efforts to strengthen the state's postsecondary data infrastructure and transparency.

## Table 3: Percentage of Dallas College Graduates with No Debt or Manageable Debt by Credential Level, Area of Study, and Demographic Group

| | Area of Study | All | Female | Male | Pell Recip. | Pell Non-Recip. | Black | Hispanic | White | Asian | Int'l | Other Race |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Certificate** | Architecture and Engineering | 100 | 100 | 100 | 100 | 100 | | | | | | |
| | Arts | 95 | 100 | 93 | 91 | 100 | | | | | | |
| | Business | 97 | 97 | 96 | 95 | 98 | 97 | 98 | 98 | 95 | 100 | 94 |
| | Communications and Journalism | 91 | 100 | 83 | | 100 | | | | | | |
| | Computers, Statistics, & Mathematics | 98 | 97 | 99 | 97 | 99 | 98 | 100 | 97 | 100 | | 100 |
| | Health | 97 | 94 | 99 | 93 | 99 | 97 | 98 | 97 | 88 | | 96 |
| | Industrial Arts, Consumer Services, & Recreation | 99 | 93 | 100 | 98 | 100 | 99 | 99 | 99 | 100 | 100 | 100 |
| | Legal Services, Public Policy, & Social Work | 98 | 96 | 99 | 98 | 99 | 100 | 93 | 100 | | | 100 |
| | Other | 100 | | 100 | 100 | 100 | | | | | | |
| **Associate Degree** | Architecture & Engineering | 100 | 100 | 100 | 100 | 100 | | | | | | |
| | Arts | 96 | 100 | 91 | 92 | 100 | | | | | | |
| | Business | 97 | 97 | 99 | 94 | 100 | 93 | 99 | 100 | 100 | 100 | 100 |
| | Communications & Journalism | 97 | 92 | 100 | 100 | 95 | | | | | | |
| | Computers, Statistics, & Mathematics | 96 | 94 | 97 | 93 | 100 | | | | | | |
| | Education | 94 | 97 | | 95 | 92 | | | | | | |
| | Health | 99 | 99 | 99 | 98 | 99 | 100 | 100 | 98 | 100 | | 100 |
| | Humanities and Liberal Arts | 97 | 97 | 98 | 95 | 99 | 95 | 99 | 97 | 99 | 100 | 100 |
| | Industrial Arts, Consumer Services, & Recreation | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | | 100 |
| | Legal Services, Public Policy, & Social Work | 98 | 98 | 98 | 96 | 100 | 98 | 100 | 94 | 100 | | 100 |
| | Other | 100 | | | | | | | | | | |

Notes: Data shown reflect 3,410 graduates who received an associate degree and 1,670 graduates who received a certificate from Dallas College in 2014. Values at or above 95%, the target for *Building a Talent Strong Texas*, are shaded green, while those below 95% are shaded red. Blanks indicate missing or redacted values, with categories having less than five students being redacted. Percentages by race/ethnicity are only shown for the top five areas of study by number of students. International students are grouped separately before data are further disaggregated by race/ethnicity. Among non-international students, students who identify as Hispanic on an ethnicity question are counted as Hispanic, and all other categories reflect non-Hispanic students. Students who are two or more races but identify as Black are counted as Black. The "Asian" category includes students who identify as Asian, Hawaiian, and Pacific Islander. The "Other" race/ethnicity category includes non-Black and non-Hispanic students who identify as two or more races, who identify as American Indian or Alaskan Native, and/or whose race and ethnicity information is unknown. Sources: Texas Higher Education Coordinating Board; Research Institute calculations.

## National Context on Debt-to-Earnings Ratios

Since THECB data are limited to Texas, national comparisons are beyond their scope. Despite these limitations, College Scorecard data do allow Texas and Dallas College DTE outcomes to be assessed relative to a wide variety of programs nationwide. Looking at a cross section of all programs that offer credentials in the same subject areas throughout the country helps to gauge whether high DTE ratios are institution- or program-specific or whether they are systematic to particular subjects or fields of study. A top-down view using College Scorecard data can also illuminate relative differences across state lines and postsecondary sectors. For example, Figure 4 shows how national average debt payment-to-earnings ratios vary by state, assuming a standard ten-year loan plan and 5% interest rate. In this figure, all fields of study, credential levels, and types of institutions (public and private) are included. Among all states, Texas ranks 12th in terms of having the lowest average DTE ratio across all its postsecondary institutions.
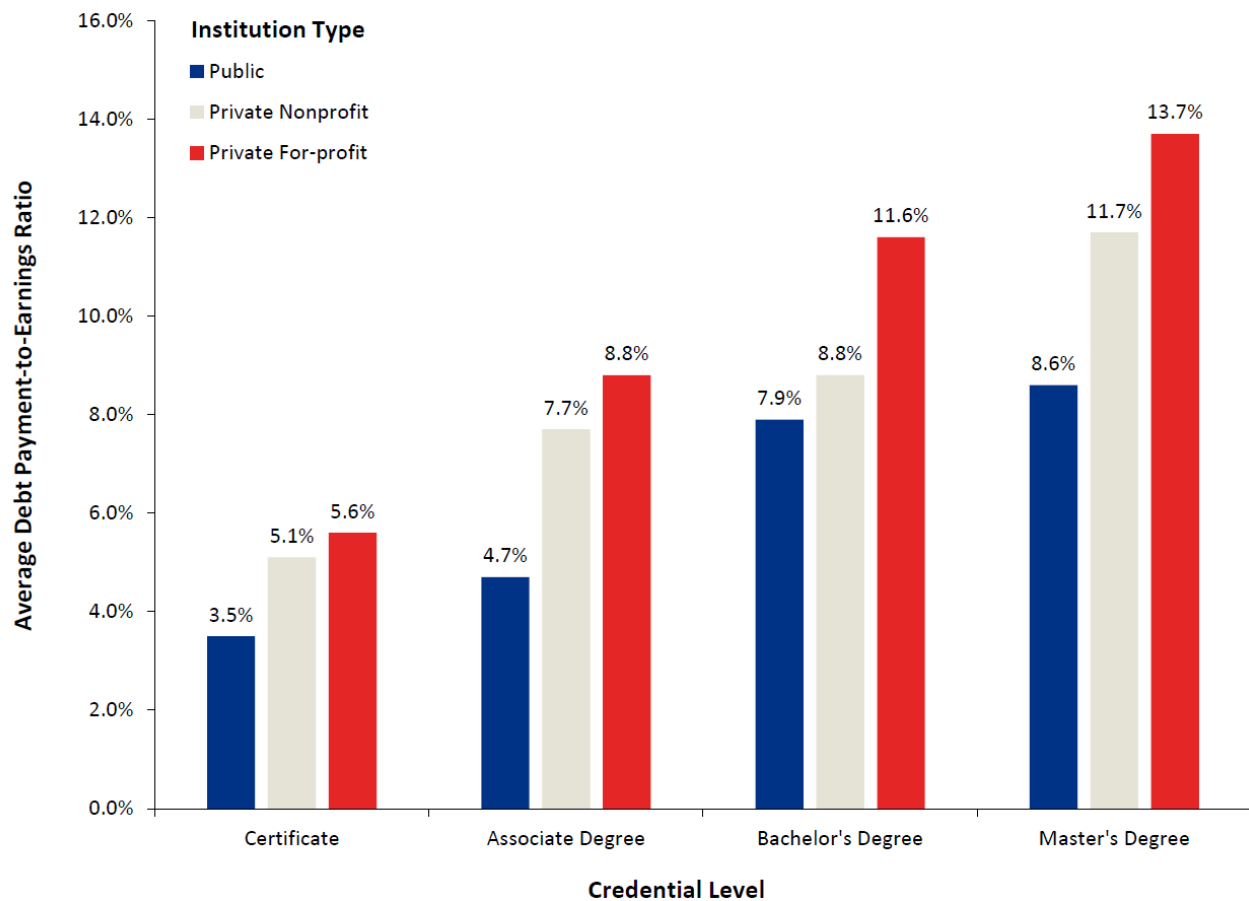
**Figure 4: Average Debt Payment-to-Earnings Ratios by State**
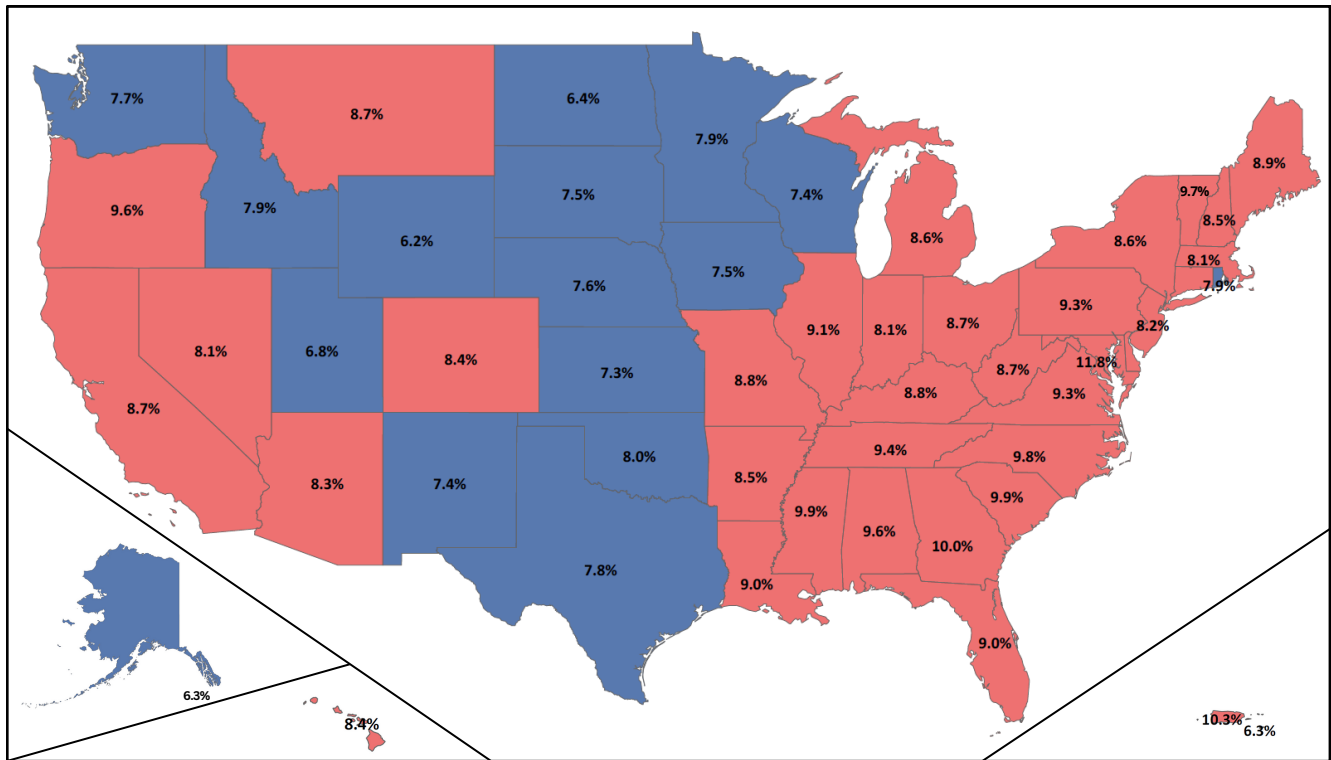


Notes: Debt payment-to-earnings ratios are calculated by program assuming a standard ten-year repayment plan and 5% interest rate. State-level aggregates are unweighted averages of all programs offered within each state, regardless of public or private status, credential level, or field of study. State-level averages below the 8% cutoff used by the Gainful Employment Rule are colored blue, while those above 8% are colored red. Sources: College Scorecard; Research Institute calculations.

State-level differences may be caused by a variety of factors, including cost of living and the mix of postsecondary institutions and programs offered within a given state. Figure 5 disaggregates national average DTE ratios by postsecondary sector, including public or private status and credential level. Two patterns are evident across sectors. First, higher credential levels produce higher DTE ratios because they take longer to earn and payoff is often not realized until longer after graduation. The amount of one's potential paycheck expensed on debt payments is higher for associate degrees than for certificates, higher for bachelor's degrees than for associate degrees, and higher still for master's degrees, on average. Second, public institutions produce lower DTE ratios than do private institutions at every credential level. In addition, for-profit private institutions produce higher average DTE ratios than do nonprofit private institutions at every credential level. Overall, certificate and associate programs at public institutions--the kinds of programs predominantly housed at community colleges--leave graduates with the lowest levels of median debt relative to their potential first-year earnings. A typical graduate of these programs has manageable debt according to both Gainful Employment and *Building a Talent Strong Texas* criteria.

**Figure 5: Average Debt Payment-to-Earnings Ratios by Credential Level and Sector, United States**



Notes: Debt payment-to-earnings ratios are calculated by program assuming a standard ten-year repayment plan and 5% interest rate. Aggregates by credential level and institution type are unweighted averages of all programs offered in each category with median debt and first-year earnings data available in the College Scorecard. Sources: College Scorecard; Research Institute calculations.

At Dallas College, debt and earnings outcomes vary by program. Such variation is also evident when examining average DTE ratios nationwide by credential level and area of study, as Table 4 shows. All areas of study at the certificate level post average DTE ratios below the 8% Gainful Employment Rule. Almost all areas of study pass the Gainful Employment Rule at the associate level, with the exception of the (visual and performing) arts, which places in the 8-12% warning zone--similar to the results for Dallas College. At the bachelor's level, architecture and engineering, computers, statistics, and mathematics, business, health, and physical sciences pass the Rule; the arts fail; and all other areas of study warrant a warning. At the master's level, only architecture and engineering, computers, statistics, and mathematics, and business pass the Gainful Employment Rule--all other areas earn a warning or fail.

## Table 4: Average Debt Payment-to-Earnings Ratios by Credential Level and Area of Study, United States

| Area of Study | Credential Level | | | |
| --- | --- | --- | --- | --- |
| | Certificate | Associate Degree | Bachelor's Degree | Master's Degree |
| Agriculture & Natural Resources | 4.5% | - | - | - |
| Architecture & Engineering | 4.2% | 4.4% | 4.8% | 5.1% |
| Arts | 7.3% | 9.3% | 12.1% | 23.7% |
| Biology & Life Sciences | - | 5.2% | 10.5% | 17.1% |
| Business | 4.7% | 7.2% | 7.0% | 7.5% |
| Communications & Journalism | 5.9% | 6.5% | 9.1% | 11.9% |
| Computers, Statistics, & Mathematics | 4.1% | 7.2% | 6.2% | 7.7% |
| Education | 5.0% | 7.3% | 8.6% | 8.6% |
| Health | 5.0% | 5.6% | 7.1% | 11.8% |
| Humanities & Liberal Arts | 5.9% | 5.5% | 9.6% | 12.9% |
| Industrial Arts, Consumer Services, & Recreation | 5.9% | 5.8% | 10.0% | 9.9% |
| Law, Public Policy, & Social Work | 3.5% | 7.7% | 9.5% | 10.9% |
| Physical Sciences | 3.4% | 3.3% | 7.6% | 11.9% |
| Psychology | 6.5% | 6.8% | 10.5% | 14.8% |
| Social Sciences | 4.6% | 5.9% | 8.4% | 10.8% |
| Other | 3.3% | 4.1% | 8.7% | 15.3% |

Notes: Debt payment-to-earnings ratios are calculated by program assuming a standard ten-year repayment plan and 5% interest rate. Aggregates by credential level and area of study are unweighted averages of all programs offered in each category with median debt and first-year earnings data available in the College Scorecard. Debt payment-to-earnings ratios less than 8% pass the 2014 Gainful Employment Rule, those above 12% fail, and ratios in between 8% and 12% receive a warning. Passing ratios are colored green, those in the warning zone are colored yellow, and failing ratios are colored red on this table. Sources: College Scorecard; Research Institute calculations.

# Conclusions

This analysis has explored how debt affects the ROI of college, how debt and earnings differ by program of study at Dallas College and more broadly, and which kinds of institutions often leave students with manageable levels of debt relative to their potential earnings. Overall, this report finds that the negative effects of federal student loan debt on the ROI of Dallas College are small, but this finding is at the median and is contingent upon students achieving employment and making their payments on time. With respect to fields of study at Dallas College, the overwhelming majority of programs leave students with manageable DTE ratios on average. However, a few programs do not yet meet *Building a Talent Strong Texas* goals for manageable debt, and not all student populations leave college with no or manageable debt at equal rates. At the national level, state and local economic conditions, postsecondary sector, and fields of study all appear to influence debt and earnings. When analyzing areas of study in particular, gaps in earnings have an outsized influence on DTE ratios relative to differences in debt. Even if the costs of college were fully subsidized or debts completely forgiven, these earnings disparities would remain.

For higher education practitioners, local and internal context is necessary to interpret DTE ratios thoughtfully. A program DTE ratio flagged as high should prompt a review of that program's underlying earnings and debt data. On the earnings side, differences in DTE ratios across programs may be caused by higher demand and salaries in related professions, rather than the specific practices of a program. Because DTE ratios do not factor in the non-monetary benefits of education, programs that place graduates into occupations with low wages, like teaching, are undervalued. How to measure societal contributions remains an active area of policy discussion, as does how to best support students who want to pursue fields that command lower wages, like the visual and performing arts.

On the debt side, there are more opportunities for local action. Program- and institution-specific factors, like tuition, aid, and other expenses, can affect debt and how long it takes students to graduate can affect their total cost of attendance. If debt is higher for one program than for others at a given institution, one must wonder what is different about the program or its students. Programs with higher debt than others at a college warrant a closer look to consider what steps could be taken to cut costs or support timely completion.

Debt can be a daunting part of the decision-making process for college-bound students, one which can greatly affect whether, where, and what type of higher education students pursue. While the burden of debt can be imposing, not all programs, fields of study, credential levels, or types of institutions commonly leave students in untenable financial situations. Overall, more than 90% of programs at Dallas College, and at community colleges across the country and in Texas, leave students with manageable levels of debt relative to their potential earnings. Across postsecondary sectors, community colleges exhibit the greatest shares of healthy programs from a debt and earnings standpoint. This result implies that community colleges are effectively generating immediate value for their graduates by keeping costs low and connecting graduates with the workforce. While a handful of community college programs with high debt may warrant further review, most programs are performing well—a promising finding for students which should allay at least some fears about the value of college.

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# Appendix

## Technical Notes

This report uses data from two primary sources, the College Scorecard and the Texas Higher Education Coordinating Board (THECB), to characterize post-college earnings and student loan debt. Notably, data from the College Scorecard only cover federal financial aid recipients. Earnings data published by the College Scorecard are gathered from matched Treasury records and only include students who are working and not enrolled in further study at the time earnings are measured. Institution-level Scorecard earnings are available 6, 8, and 10 years after college entry and reflect all students receiving federal financial aid, regardless of whether they complete a credential, withdraw, or even transfer. These data, along with College Scorecard data on the average net price of Dallas College (sourced from the Integrated Postsecondary Education Data System, IPEDS) and median federal student loan debt at the time of separation from Dallas College (sourced from the National Student Loan Data System, NSLDS), are used to estimate long-term ROI for Dallas College under different refinancing scenarios in this report. The College Scorecard also publishes program-specific earnings 1, 2, and 3 years after students complete their highest credential using matched Treasury records, and median and mean debt for credential completers by program from the NSLDS. These program-specific earnings and median/mean debt are used to calculate debt-to-earnings ratios throughout this report. College Scorecard data series like institution-level earnings and debt can be disaggregated by a student's income level and dependent status on their FAFSA, since all records reflect federal aid recipients only.

Data from the Texas Higher Education Coordinating Board come from state-specific sources: the Texas Workforce Commission (earnings) and the Financial Aid Database (debt). The THECB data used in this report were either requested from the THECB (state-level data) or provided from the THECB as part of the THECB's data sharing efforts with Texas postsecondary institutions (Dallas College-specific data). THECB earnings data come from the state's unemployment insurance system, meaning the data exclude those who are federally employed, self-employed, or work outside of Texas after college. The debt data reported by the THECB potentially include more sources, such as private loans, compared to the federal student loan debt covered by the College Scorecard. THECB data also allow for disaggregation of debt and earnings data by race and ethnicity, a feature not currently available using College Scorecard data.

When interpreting debt and earnings data, a few limitations are important to keep in mind. First, if a student withdraws from their program before earning a credential, their potential wages may be lower, making it more difficult to recoup the costs of their education and pay off debts they incurred. Second, unemployed graduates are typically not reflected in the data. Third, programs which perform well on average may still yield a wide range of results for students, some above average and some below. Using the median and mean may mask possible variation in outcomes. Fourth, the data cover past cohorts of students, so they may not be indicative of the future. For example, field-level debt data reported in the College Scorecard come from the National Student Loan Data System, and the most recent data available reflect pooled cohorts from the 2017-2018 and 2018-2019 academic years. Field-level earnings data come from the Treasury and reflect pooled cohorts from the 2016-2017 and 2017-2018 academic years, with earnings measured in 2018 and 2019 and adjusted to 2020 dollars. With these considerations in mind, DTE ratios can be thought of as only capturing typical outcomes for those who do graduate and find employment--already a subset of students with better outcomes than those who drop out of college or those who are seeking work but are unemployed.

## Areas of Study

Field-specific College Scorecard data are organized by 4-digit CIP (Classification of Instructional Programs) code. THECB data aggregates data by field into 16 areas of study based on 2-digit CIP codes. Throughout this report, the Research Institute uses the following groupings based on the THECB's 16 areas of study.

### Table 5: Definitions for Areas of Study

| Area of Study | Two-Digit CIP Code | Two-Digit CIP Description |
|---|---|---|
| Agriculture and Natural Resources | 01 | Agricultural/Animal/Plant/ Veterinary Science & Related Fields |
| | 03 | Natural Resources & Conservation |
| Architecture & Engineering | 04 | Architecture & Related Services |
| | 14 | Engineering |
| | 15 | Engineering/Engineering-Related Technologies/Technicians |
| Arts | 50 | Visual & Performing Arts |
| Biology & Life Sciences | 26 | Biological & Biomedical Sciences |
| Business | 52 | Business, Management, Marketing, & Related Support Services |
| Communications & Journalism | 09 | Communication, Journalism, & Related Programs |
| | 10 | Communications Technologies/Technicians & Support Services |
| Computers, Statistics, & Mathematics | 11 | Computer & Information Sciences & Support Services |
| | 27 | Mathematics & Statistics |
| Education | 13 | Education |
| | 25 | Library Science |
| Health | 51 | Health Professions & Related Programs |
| Humanities & Liberal Arts | 05 | Area, Ethnic, Cultural, Gender, & Group Studies |
| | 16 | Foreign Languages, Literatures, & Linguistics |
| | 23 | English Language & Literature/Letters |
| | 24 | Liberal Arts & Sciences, General Studies & Humanities |
| | 30 | Multi/Interdisciplinary Studies |
| | 38 | Philosophy & Religious Studies |
| | 39 | Theology & Religious Vocations |
| | 54 | History |
| Industrial Arts, Consumer Services, & Recreation | 12 | Culinary, Entertainment, & Personal Services |
| | 19 | Family & Consumer Sciences/Human Sciences |
| | 31 | Parks, Recreation, Leisure, Fitness, & Kinesiology |
| | 46 | Construction Trades |
| | 47 | Mechanic & Repair Technologies/Technicians |
| | 49 | Transportation & Materials Moving |

## Table 5, Continued: Definitions for Areas of Study

| Area of Study | Two-Digit CIP Code | Two-Digit CIP Description |
|---|---|---|
| Law, Public Policy, & Social Work | 22 | Legal Professions & Studies |
| | 43 | Homeland Security, Law Enforcement, Firefighting, & Related Protective Services |
| | 44 | Public Administration & Social Service Professions |
| Physical Sciences | 40 | Physical Sciences |
| | 41 | Science Technologies/Technicians |
| Psychology | 42 | Psychology |
| Social Sciences | 45 | Social Sciences |
| Other | 21 | Reserved |
| | 28 | Military Science, Leadership, & Operational Art |
| | 29 | Military Technologies & Applied Sciences |
| | 32 | Basic Skills & Developmental/Remedial Education |
| | 33 | Citizenship Activities |
| | 34 | Health-Related Knowledge & Skills |
| | 35 | Interpersonal & Social Skills |
| | 36 | Leisure & Recreational Activities |
| | 37 | Personal Awareness & Self-Improvement |
| | 48 | Precision Production |
| | 53 | High School/Secondary Diplomas & Certificates |
| | 55 | Reserved |
| | 60 | Health Professions Residency/Fellowship Programs |
| | 61 | Medical Residency/Fellowship Programs |

Notes: The original THECB mapping places the four-digit CIP code 30.99 into the Education area of study and all other fields with the two-digit CIP code of 30 into the Humanities and Liberal Arts area of study. This is because, until 2020, Texas four-year institutions were not allowed to offer undergraduate degrees under CIP code 13 (Education), so students pursuing a K-12 teaching career were put in the 30.99 group. Source: Texas Higher Education Coordinating Board; Research Institute modifications.

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Debt-to-Earnings Dashboard



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