



ARTICULATION & TRANSFER IN TENNESSEE HIGHER EDUCATION 2023 REPORT

Tennessee Higher Education Commission

2023-24 Commission Members

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CONTENTS

Executive Summary	4
Legislative Overview	6
Articulation and Transfer Initiatives.....	8
Articulation and Transfer Council	8
Transfer Behavior of the Fall 2016 Cohort	14
Tennessee Transfer Pathways.....	29
Conclusion.....	37
Appendix A: Tennessee Code Annotated § 49-7-202(r).....	38
Appendix B: Articulation and Transfer Council 2020-2025 Membership	40
Appendix C: “24” Students by Sending and Receiving Institutions, Fall 2016 Cohort	41
Appendix D: “42” Students by Sending and Receiving Institutions, Fall 2016 Cohort.....	42
Appendix E: TTP Enrollment by Concentration, Fall 2016 Cohort	43
Appendix F: TTP Awards by Concentration, Fall 2016 Cohort.....	45

TABLES

Table 1: Tennessee Transfer Pathways Review Cycle by Focus Area	9
Table 2: Demographics of Fall 2016 Cohort	16
Table 3: Demographics of TTP Students in Fall 2016 Cohort.....	30

FIGURES

Figure 1: Overall Transfer Status of Fall 2016 Cohort.....	16
Figure 2: Overall Transfer Status of the Fall 2016 Cohort by Gender	16
Figure 3: Overall Transfer Rates of the Fall 2016 Cohort by Race/Ethnicity	17
Figure 4: Median 2016-17 AGI of the Fall 2016 Cohort, by Race/Ethnicity and Transfer Status	18
Figure 5: Number of Unique Institutions Attended, Fall 2016 Cohort	18
Figure 6: Tennessee Transfers to Out-of-State Institutions, Fall 2016 Cohort	20
Figure 7: Highest Degree Earned by Transfer and Non-Transfer Students and Initial Enrollment Sector, Fall 2016 Cohort	19
Figure 8: First Two Institutions Attended by Fall 2016 Cohort.....	22
Figure 9: Concurrent Enrollment by Transfer Status, Fall 2016 Cohort.....	23
Figure 10: Total Number of Institutions Attended, Fall 2016 Cohort Transfer Students.....	23
Figure 11: Race/Ethnicity of Fall 2016 Cohort by First Two Transfer Pattern	24
Figure 12: First-Generation and Pell Eligibility Statuses by First Two Transfer Pattern, Fall 2016 Cohort ...	25
Figure 13: Degrees Earned by First Two Transfer Pattern, Fall 2016 Cohort.....	26
Figure 14: TTP Participation, Number of Terms Enrolled, Fall 2016 Cohort.....	31
Figure 15: Overall Transfer in Fall 2016 Cohort TTP Students	31
Figure 16: Fall 2016 Cohort TTP Transfer by Gender.....	31
Figure 17: Fall 2016 Cohort TTP Transfer by Race/Ethnicity	32
Figure 18: Median 2016-17 AGI of the Fall 2016 Two-Year Cohort by Race/Ethnicity and TTP Status	33
Figure 19: First Two Institutions Attended by TTP Students in the Fall 2016 Cohort.....	34
Figure 20: First-Generation and Pell Eligibility Statuses of Fall 2016 Cohort TTP by First Two Transfer Pattern.....	35
Figure 21: Degrees Earned, Fall 2016 Cohort TTP Students by First Two Transfer Pattern	36

Executive Summary

The 2023 Articulation and Transfer Report provides an update on the progress made toward full articulation between public institutions in Tennessee. This report uses data from National Student Clearinghouse Student Tracker (NSC), the Tennessee Higher Education Commission's Student Information System (THECSIS), and the Tennessee Board of Regents (TBR) to analyze transfer patterns and demographics of the fall 2016 first-time freshmen cohort.¹

During the Keynote Session of the 2023 Transfer Initiatives Convening, hosted by the Tennessee Higher Education Commission, speaker Dr. John Gardner of the John N. Gardner Institute for Excellence in Undergraduate Education challenged attendees: *"If you had an excellent system of state transfer, what would it look like?"* Dr. Gardner emphasized that transfer is not a one-time event for students; it is the sum of student experiences at both the sending and the receiving institution. Most students who enter higher education at a community college intend to ultimately earn a bachelor's degree. Further, transfer students are an increasingly necessary population for higher education institutions to enroll. In December 2020, the Western Interstate Commission on Higher Education (WICHE) reported that the number of Tennessee public and private high school graduates would peak by 2026 due to shifting demographics and birth rates in the state and country.² As we anticipate the number of high school graduates in the enrollment pipeline to decrease then stabilize, recruiting students who have previously earned higher education credits (i.e., transfer students) will be a key part of realizing Tennessee's attainment needs to fulfill workforce demand.

Additionally, transfer has recently come into federal focus, with the U.S. Department of Education releasing data showing transfer-out rates for students who receive federal aid and start at two-year institutions and bachelor's degree completion rates for transfer students who receive federal aid at four-year institutions.³ This data shows that roughly 40% of students nationwide transfer, and average credit loss means only 60% of their previously earned credits transfer with them.

For the purposes of this report, **transfer students** are defined as **any student who attended more than one institution during the six years following first enrollment**, which covers fall 2016 through summer 2022 for the fall 2016 cohort. Highlights of the report's findings include:

- In the fall 2016 cohort, **32.4% of students attended more than one institution in six years (Figure 1)**. A vertical transfer from a two-year institution to a four-year institution, categorized here as a "24" transfer, remains the most common transfer pattern for those students who do transfer in the fall 2016 cohort, representing over 40% of all transfers (**Figure 8**).
- **Transfer students have higher six-year graduation rates (64.0%)** than non-transfer students (45.1%) in the cohort. This gap is driven by many students who begin enrollment at a two-year institution, do not transfer, and do not graduate (**Figure 7**).

¹ For more information about specific features of the data and limitations, see pages 14-15.

² For more information on the Western Interstate Commission on Higher Education's graduate count projections, see <https://www.wiche.edu/resources/knocking-at-the-college-door-10th-edition/>.

³ For more information on U.S. Department of Education Transfer Data, see <https://www.ed.gov/news/press-releases/biden-harris-administration-convenes-higher-education-leaders-improve-student-transfer-increase-completion-college-degrees>.

- Students who complete a **“24” transfer** are more likely than all other transfer patterns in the fall 2016 cohort to earn any type of award within six years. These students also earn a wide variety of awards. Of students in this transfer pattern, **75.0% graduated in six years, including 33.9% of students who earned both an associate and a bachelor’s degree (Figure 13)**. For more on “24” transfer success, see page 25.
- The Complete College Tennessee Act (2010) created Tennessee Transfer Pathways (TTPs) to facilitate seamless transfer between Tennessee’s community colleges and universities. See **Appendix E** for a complete list of TTPs. **Of the students in the fall 2016 cohort who ever enrolled in a TTP, 50.2% transferred (Figure 15)**.
- Of the 7,925 cohort students who enrolled in a TTP, **21.0% obtained an associate degree in a TTP major (Appendix F)**. Additionally, 43.0% of TTP participants earned any award in the six years following initial enrollment (**Figure 21**).

Tennessee’s students take many paths to and through higher education. For those encountering higher education for the first time with aspirations to earn a bachelor’s degree, efforts like Tennessee Promise and Tennessee Transfer Pathways encourage these students to start their education at a community college, then transfer to a university. The data show that this pattern is most common – for students who successfully transfer – and most successful of all transfer patterns. However, many students begin their enrollment at a community college and do not progress to a university. The Tennessee Board of Regents reports that 61% of first-time freshmen students entering in fall 2016 were enrolled in programs designed for transfer.⁴ Yet only 36.7% of students who started at a community college did transfer anywhere within 6 years, including those who transferred to another two-year institution. To improve these transfer rates and help all students reach their goals, THEC/TSAC should:

- Continue to utilize convenings like the Transfer Initiatives Convening and the Articulation & Transfer Council and Sub-councils to invigorate cross-sector collaboration on issues facing transfer students, including a focus on minimizing TTP exceptions to increase credit articulation across the state.
- Promote ease of transfer and full articulation of credits by helping institutions to fully implement common course numbering.
- Support the promising practices in initiatives like TCAT to Community College Articulation (pg. 11) and the tnAchieves Transfer Pilot Program (pg. 27).
- Research the financial aid needs of transfer students, specifically those transferring from community colleges to universities, who have accessed higher education through the support of Tennessee Promise.

⁴ See the Tennessee Board of Regents “Pathway to Transfer” data dashboard at <https://app.powerbi.com/view?r=eyJrIjojOWIzYTk0Y2YtMGNiZS00N2I1LWl3ZjMtZjI1NGUyZDhlYjQwliwidCI6jc4ZTkwNWl3LTE4ZWEtNGE5MS04YjlmLTMzZTRmZTNjYTQ4YSIsimMiOjN9.>

Legislative Overview

The annual Articulation and Transfer Report is prepared pursuant to Tennessee Code Annotated § 49-7-202 (r)(5), which directs the Tennessee Higher Education Commission (THEC) to: "...report to the chairs of the education and finance, ways and means committees of the senate and the chairs of the education administration and planning and finance, ways and means committees of the house of representatives no later than October 1 of each year on the progress made toward full articulation between all public institutions." See **Appendix A** for full text of T.C.A. § 49-7-202 (r)(1-5).

The 2023 Articulation and Transfer Report presents an update on the implementation of the articulation and transfer mandate through three primary sections:

- 1) The first section provides information on the composition and charge of the Articulation and Transfer Council, as well as an update on the current activities of the Council.
- 2) The second section examines the demographics, transfer behavior, and degree outcomes for the fall 2016 first-time freshmen cohort who enrolled at Tennessee public community colleges or universities. This section follows these students in the six years after their initial enrollment to provide a full, longitudinal view of their transfer behavior and resulting degree outcomes.
- 3) The third section examines the demographics, transfer behavior, and degree outcomes of those students in the fall 2016 cohort who ever enrolled in a Tennessee Transfer Pathway (TTP) associate degree program. TTPs are designed to facilitate a seamless transfer between Tennessee's public community colleges and four-year colleges and universities. For more information about TTPs, see page 29.



SECTION ONE

ARTICULATION & TRANSFER INITIATIVES & COUNCIL

Articulation and Transfer Initiatives

In 2023, the Tennessee Higher Education Commission and Tennessee Student Assistance Corporation (THEC/TSAC) welcomed its first Director of Articulation and Transfer to coordinate outreach efforts with Tennessee higher education institutions to support and enhance transfer and articulation throughout the state. Specifically, this role supports THEC/TSAC's statewide initiatives related to articulation and transfer such as Reverse Transfer, Tennessee Transfer Pathways, and activities associated with the Articulation and Transfer Council and sub-councils.

Other initiatives currently in development include the creation of a statewide dual admission policy for Tennessee Transfer Pathway students, development of statewide Technical Tennessee Transfer Pathways to align technical coursework to community colleges and universities, creation of a statewide definition for Quality Non-Degree Credentials, and a Common Course Numbering initiative.

In September 2023, THEC welcomed around 100 attendees to the 2023 Transfer Initiatives Convening. Colleagues from across Tennessee higher education, representing public and private institutions in all sectors, gathered to discuss challenges and opportunities related to transfer student success. Keynote speaker, Dr. John Gardner of the John N. Gardner Institute for Excellence in Undergraduate Education, was instrumental in laying a foundation for a shared responsibility to support transfer students. THEC intends to continue the work started through these conversations by hosting Grand Division meetings in spring 2024, as well as working with the Articulation and Transfer Council and sub-councils to further enhance the success of transfer students in Tennessee.

Articulation and Transfer Council

The Articulation and Transfer (A&T) Council is necessary to fulfill the requirements in Tennessee Code Annotated § 49-7-202 (r)(1-5), including collaboration on the development and maintenance of Tennessee Transfer Pathways and of common course numbering. In 2020, the A&T Council was restructured by THEC to focus on a five-year period (2020-2025) with an emphasis on aligning the work of the Council with the various requirements of T.C.A. § 49-7-202 (r)(1-5). See **Appendix A** for the full text of this section.

Current composition of the A&T Council consists of the chief academic officers from the Tennessee Higher Education Commission, Tennessee Board of Regents, University of Tennessee System Office and campuses, Tennessee Independent Colleges and Universities Association, and Locally Governed Institutions. See **Appendix B** for complete membership.

The four primary focus areas for the 2020–2025 council are:

- Streamlining Tennessee Transfer Pathways (TTPs) to minimize exceptions;
- Expanding data collection and dissemination on TTP utilization, completion, and transferability for the annual THEC Articulation and Transfer Report;
- Implementing common course numbering; and
- Including Reverse Transfer in the Council.

The 2020-2025 Articulation and Transfer Council has developed four sub-councils to support this work: (1) Tennessee Transfer Pathways; (2) Technical Tennessee Transfer Pathways; (3) Common Course Numbering; and (4) Reverse Transfer. Sub-council membership is made up of various roles from the entities represented on the Council. A brief overview of each sub-council and their work is presented below.

In the 2023-2024 academic year, the full A&T Council will meet to approve the Arts & Humanities Tennessee Transfer Pathways. Part of this review will include approving any suggested exceptions, including justifications for the exceptions, proposed during the TTP curriculum reviews. Currently, every TTP has at least one exception. Over the next year, THEC will be hosting several transfer-focused convenings which will include discussions aimed at finding strategies to eliminate exceptions.

Tennessee Transfer Pathways Sub-council

This sub-council is charged with reviewing, updating, and developing transfer policies, principles, and systemwide expectations to ensure legislative compliance. The sub-council will use multiple taskforce groups to develop a continuous improvement plan, ensuring the credits students earn through a Tennessee Transfer Pathway (TTP) program will apply to degree pathways at Tennessee’s public universities and participating private universities.

The Tennessee Transfer Pathways sub-council will meet in the 2023-2024 academic year to discuss the curriculum review process. Annual curriculum reviews occur on the five-year review cycle presented in **Table 1**.

- *Membership:* Campus representatives in various roles including, but not limited to, admissions, records, advising, faculty, transfer centers, adult services, and veteran services.
- *Outcomes:* Present the annual TTP curriculum reviews to the A&T Council, provide updates to the A&T Council, review pathway categories and possible expansions.

Table 1: Tennessee Transfer Pathways Review Cycle by Focus Area

Focus Area	Review Cycle
Arts & Humanities	2023-24
Health Sciences	2024-25
Business	2025-26
STEM & Applied Technology	2026-27

Technical Tennessee Transfer Pathways Sub-council

This sub-council is working to create a systematic approach to the development, tracking, and stacking of technical pathways similar in structure to the existing Tennessee Transfer Pathways. This work focuses on the transferability of Tennessee College of Applied Technology (TCAT) diplomas and certificates and Associate of Applied Science (AAS) degrees to both community colleges and universities.

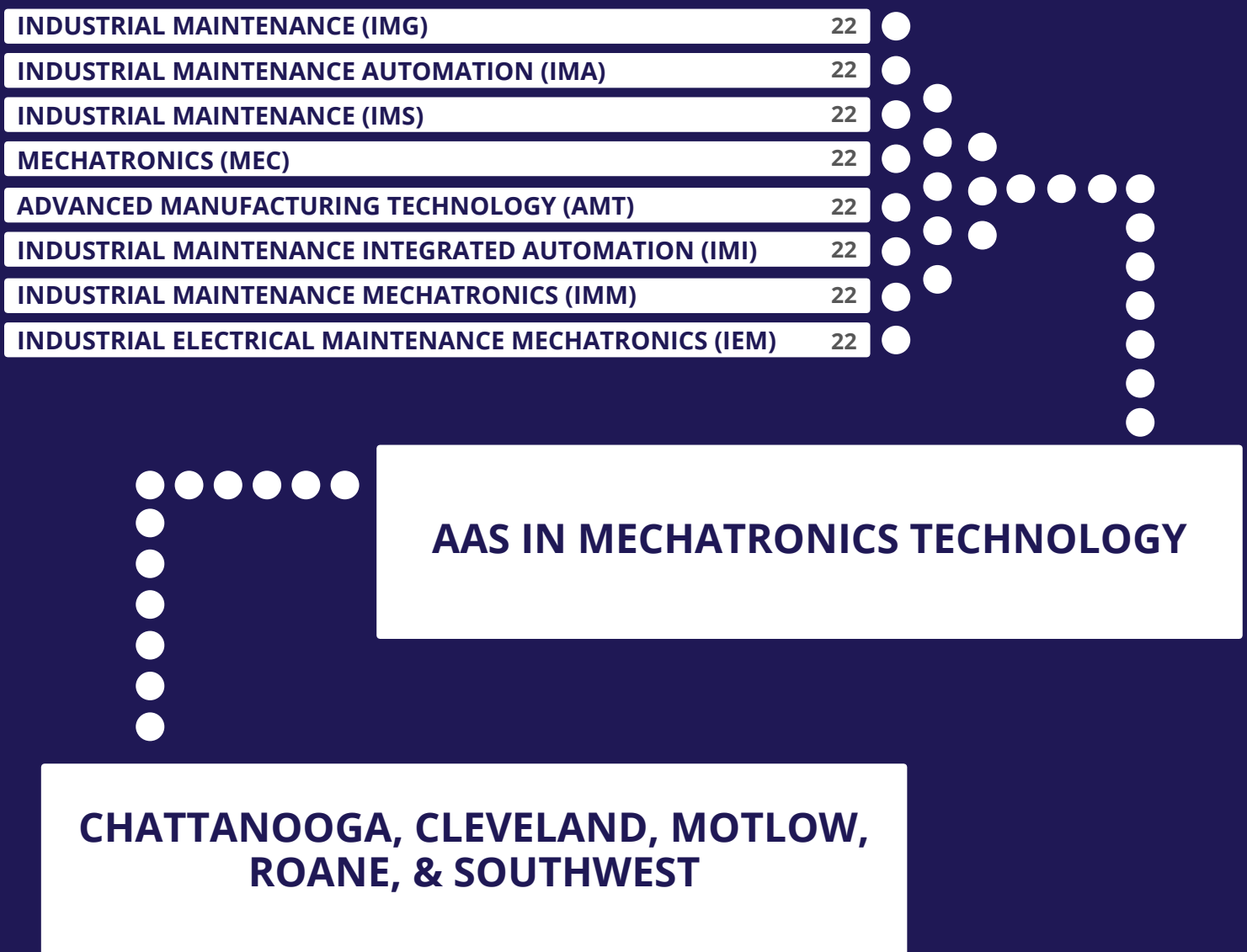
The Technical Tennessee Transfer Pathways sub-council will meet in the 2023-2024 academic year to further determine goals for the sub-council. The sub-council will be charged with researching other existing or proposed articulation agreements within technical education across the state.

- *Membership:* Campus representatives from the Tennessee Colleges of Applied Technology, community colleges, and universities in various roles including presidents, student services, workforce development, and records.
- *Outcome:* Create a process for implementation and maintenance of statewide technical pathways.

TCAT to Community College Articulation

The Tennessee Board of Regents Office of Academic Affairs has developed an innovative set of pathways for students who have gained technical skills through training at the state's Tennessee Colleges of Applied Technology (TCATs) to continue their education in an Associate of Applied Science degree at the state's community colleges. Currently, statewide articulation agreements are in place that allow students who earn a credential in one of 30 TCAT programs to articulate credit into an AAS program at any community college in the state that offers the aligned program. These articulated pathways fall into four career clusters and are reviewed by community college faculty every three years. Students who complete the TCAT credential can earn between 6 and 45 credit hours toward their AAS degree, depending on the program. The figure below shows just one example of an AAS program, Mechatronics Technology, that students from a variety of TCAT programs can begin with 22 credit hours toward the degree.

For more information, please see <https://www.tbr.edu/academics/tcattocc>.



Common Course Numbering Sub-council

This sub-council will facilitate the ease of transfer for community college students from one community college to another and from community colleges to universities, improve program planning, and increase communication among all colleges. Per T.C.A. § 49-7-202 (r)(3), courses with common content will carry the same prefix, number, title, credits, description, and competencies.

The Common Course Numbering sub-council will meet in the 2023-2024 academic year to review work that had already been done concerning common course numbering and discuss ways to expand that work. The sub-council will identify other state systems that had developed common course numbering and to have them share their practices.

- *Membership:* Campus representatives from various roles including, but not limited to, faculty, advising, records, and information technology.
- *Outcome:* Create a process and database for a uniform set of course designations for students to use in determining course equivalency and to facilitate transfer.

Reverse Transfer Sub-council

This sub-council will advance the effectiveness of the Tennessee Reverse Transfer Program. The sub-council will have oversight of the Reverse Transfer process and will review the policies and their impact annually.

The Reverse Transfer sub-council will meet in the 2023-2024 academic year to review program requirements, deadlines, and communication. In February 2023, THEC began coordination of the Reverse Transfer Program, transitioning management of the Reverse Transfer system to THEC from the University of Tennessee System. To date, over 6,450 associate degrees have been awarded through the program.

- *Membership:* Representation from diverse campus roles including, but not limited to, records, information technology, admissions, advising, and academic affairs.
- *Outcomes:* Provide expertise and guidance in an advisory capacity to improve Reverse Transfer processes in Tennessee, establish Reverse Transfer best practices to facilitate effective collaboration among state partners and to aid in degree completion, provide recommendations for Reverse Transfer Policy, and provide updates to the A&T Council.



SECTION TWO

**TRANSFER BEHAVIOR OF THE
CLASS OF 2016 COHORT**

Transfer Behavior of the Fall 2016 Cohort

This year's report continues the work of previous reports by tracking the transfer behavior of a cohort of students across six years. The report examines transfer behavior and degree outcomes for the cohort of first-time freshmen who enrolled at a Tennessee public university or community college in fall of 2016.⁵ By using a cohort view and data from the National Student Clearinghouse Student Tracker (NSC), we can track students at most public and private, two-year and four-year, in-state and out-of-state institutions across the United States to see their transfers and degree attainment.⁶ The resulting dataset is a robust picture of the transfer behavior and degree outcomes of the students who began in Tennessee public community colleges and universities in fall 2016.

Our dataset consists of **37,372** Tennessee students in the fall 2016 cohort who are captured in NSC enrollment and graduation records. Of these students, **12,113 (32.4 percent)** attended more than one institution in six years; throughout this section, these students are identified as "transfer students," while the remaining **25,259** are identified as "non-transfer students."

When tracking students across institutions, we captured every instance of a student's enrollment at an institution as well as a count of the unique institutions a student attended. This allows us to examine the enrollment patterns of students who enroll at one institution, transfer to another, and subsequently return to the first institution. In instances where students were simultaneously enrolled at multiple institutions, we used previous enrollments, enrollment intensity (i.e., part-time, full-time, etc.), and length of enrollment at both institutions to determine whether a student changed institutions. For example, a student who first enrolls at University of Tennessee, Knoxville, subsequently enrolls at Pellissippi State Community College, and then returns to take courses at UT Knoxville would be shown in the data as enrolled at UTK (a four-year institution), PSCC (two-year), then UTK (four-year), translating to a "424" transfer pattern. However, a student taking a full-time course load at University of Tennessee, Knoxville and a part-time course load at Pellissippi State Community College in the same term would be shown as enrolled at UTK with a concurrent enrollment and as a non-transfer student. Thus, "concurrent enrollment" represents a student who is enrolled at more than one institution for overlapping dates in the same term. Concurrently enrolled students may or may not be transfer students. For more on transfer patterns and concurrent enrollment, see pages 21-23.

Data Sources

All data in this report are provided by the Tennessee Higher Education Commission and Student Assistance Corporation (THEC/TSAC), the National Student Clearinghouse Student Tracker (NSC), and the Tennessee Board of Regents (TBR). The data used in each section are as follows:

⁵ The fall 2016 cohort includes first-time freshmen (FTF) who initially enrolled in fall 2016 or who initially enrolled in summer 2016 and returned in fall 2016 across TN public community colleges and universities. The completion data provide degree outcomes through summer 2022 (within six years of initial enrollment). This represents all FTF identified by THECSIS and found in Student Tracker, National Student Clearinghouse records.

⁶ In the enrollment years included in this section of the report (2016-2022), between 96.1% and 97.4% of all Title IV, degree-granting institutions reported enrollment and graduation data to the Student Tracker, National Student Clearinghouse. Additional information about National Student Clearinghouse data is available on their website at <https://www.nscresearchcenter.org/>.

Transfer Behavior of the Fall 2016 Cohort: This section examines enrollment and degree outcomes of the fall 2016 first-time freshmen cohort. In addition to the NSC data, demographic and academic details are sourced from THEC Student Information System (THECSIS) and financial aid information is available through the Financial Aid System of Tennessee (FAST), managed by TSAC. Financial aid information is missing for students who did not file a Free Application for Federal Student Aid (FAFSA) or for whom we do not have a FAFSA record (e.g., non-residents) in the six years of enrollment. Missing FAFSA information impacts 7.9% of records; subsequent figures and notes clarify how missing data are handled. Using NSC data provides a broad picture of a student's enrollment history, including at institutions outside of Tennessee. However, the Tennessee Colleges of Applied Technology (TCATs)⁷ are not a part of the NSC data.

Tennessee Transfer Pathways (TTP): This section examines enrollment and degree outcomes of a subset of the fall 2016 cohort who ever enrolled in a TTP at one of Tennessee's public community colleges. This section matches the NSC and THECSIS data with additional data on TTP enrollment and completions from TBR. This section also includes financial aid information from TSAC's FAST database.

Privacy Notice

Throughout this report, THEC complies with the federal Family Educational Rights and Privacy Act (FERPA) requirements to protect students' personally identifiable information. Therefore, when tables are presented, individual observations containing fewer than ten observations are suppressed. The suppressed counts are included in table totals.

Transfer and Non-Transfer Students in the Fall 2016 Cohort

This section summarizes differences between transfer and non-transfer students in gender, race/ethnicity, economic status, and first-generation status. **Table 2** provides demographic data for the overall fall 2016 cohort. Notably, the fall 2016 cohort shrank slightly, by about 150 students, compared to the fall 2015 cohort. The fall 2015 cohort represented the statewide implementation of Tennessee Promise and saw a spike in enrollments, particularly at community colleges. Fall 2016 represents a cohort that began to level out following that spike. However, a higher proportion of the fall 2016 cohort participated in Tennessee Promise relative to the fall 2015 cohort – 36.3% of students in fall 2016 participated, relative to 34.5% of students in fall 2015. The fall 2016 cohort may not be as comparable to cohorts before fall 2015 due to the changed policy environment brought about by Tennessee Promise.

The fall 2016 cohort is relatively similar to the fall 2015 cohort in terms of demographics. Students in the fall 2016 cohort are slightly more likely to be female and slightly less likely to be White compared to the fall 2015 cohort. In particular, students whose race/ethnicity is unknown or categorized as "Other" grew their share in the fall 2016 cohort. Students in the fall 2016 cohort were slightly less likely than students in the fall 2015 cohort to be Pell eligible or first-generation.

⁷ TCAT Chattanooga is considered an academic division within Chattanooga State Community College. As a result, several diplomas conferred by TCAT Chattanooga are captured as awards in this analysis.

Table 2: Demographics of Fall 2016 Cohort

	Count	Percent
Gender		
Female	20,868	55.8%
Male	16,502	44.2%
Race/Ethnicity		
Black, not Hispanic	7,105	19.0%
Hispanic	1,699	4.5%
Other	2,165	5.8%
Unknown	1,052	2.8%
White, not Hispanic	25,351	67.8%
Pell Eligible	22,317	59.7%
First-Generation	14,230	38.1%
Fall 2016 Promise Participant	13,551	36.3%
Overall	37,372	100%

Notes: The “Other” race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are categorized as not eligible for the Pell grant and not first-generation in this report.

Figure 1 displays the overall percent of students in the 2016 cohort who transferred at any point in the six-year period following their initial enrollment. In the 2016 cohort, 67.6% of students attended only one institution during this time and are “Non-Transfer”. Transfer students in the cohort attended as few as two unique institutions and as many as six.

Figure 1: Overall Transfer Status of Fall 2016 Cohort

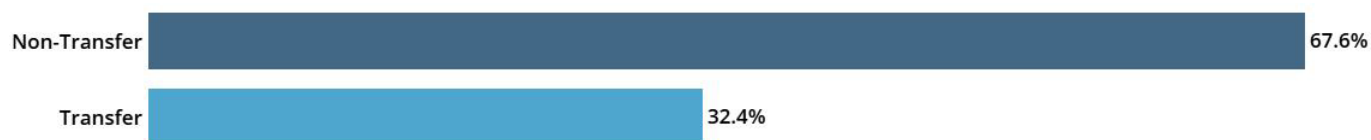


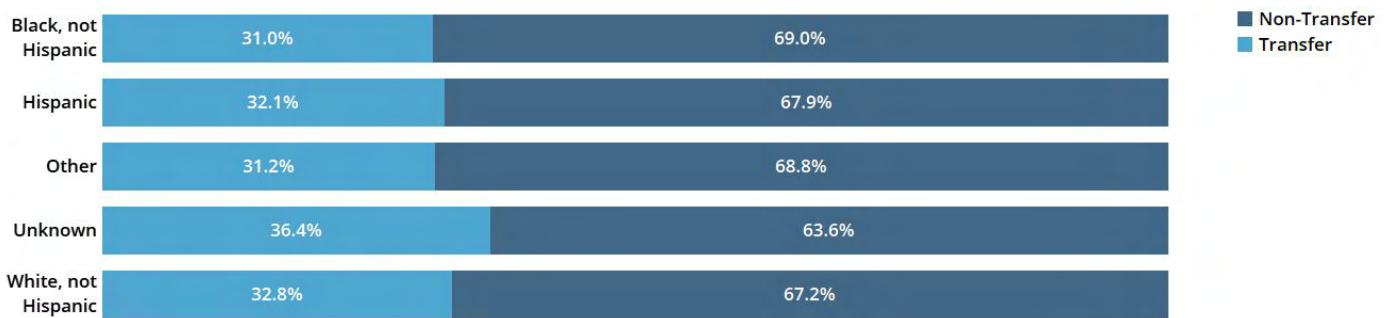
Figure 2 displays the proportion of transfer students by gender. Women comprised a majority of the fall 2016 first-time freshmen cohort (55.8%). Women were also more likely to transfer than men.

Figure 2: Overall Transfer Status of the Fall 2016 Cohort by Gender



Figure 3 disaggregates transfer behavior by race/ethnicity. The chart shows the percent of each racial or ethnic subgroup that transferred at any point in the six-year period following their initial enrollment. Black, not Hispanic students and students who fall into the “Other” race/ethnicity category were slightly less likely to transfer than students in other groups, and students whose race/ethnicity is unknown were more likely to transfer. However, students whose race is unknown is a small group in the cohort (n=1,052).

Figure 3: Overall Transfer Rates of the Fall 2016 Cohort by Race/Ethnicity



Note: The “Other” race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial.

Figure 4 shows the median adjusted gross income (AGI) for the 2016-17 academic year, the first year of enrollment for the cohort, disaggregated by race/ethnicity and transfer status. Transfer students come from higher income backgrounds than their non-transfer peers, on average. Across all racial groups, the median AGI for 2016-17 is \$65,298 for transfer students and \$54,100 for non-transfer students. Income gaps are widest for students whose race/ethnicity is unknown, and the income gap between transfer and non-transfer students is only about \$1,500 for Black, not Hispanic students. In line with other trends in Tennessee higher education⁸, AGI appears to increase over time, comparing each cohort to previous cohorts. While the data shown here represents FAFSA filings for the 2016-17 academic year, this trend bears out in more recent data as well.

⁸ For example, see the Tennessee Education Lottery Scholarship Program 2023 Annual Report at <https://www.tn.gov/content/tn/thec/research/tn-hope-scholarship-program.html>.

Figure 4: Median 2016-17 AGI of the Fall 2016 Cohort, by Race/Ethnicity and Transfer Status



Note: The "Other" race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. AGI is sourced from the FAFSA, so students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are not included in this figure.

Figure 5 displays the breakdown of the unique number of institutions attended for the 2016 cohort within six years of initial enrollment. Most students, 67.6%, attended only one institution during the six years immediately following enrollment (i.e., did not transfer). Students who transferred usually attended only two (81.4% of transfer students) or three (15.6% of transfer students) unique institutions during this period. A small number of students attended four or more unique institutions.

Figure 5: Number of Unique Institutions Attended, Fall 2016 Cohort

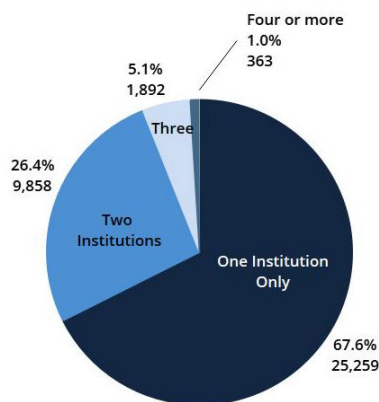
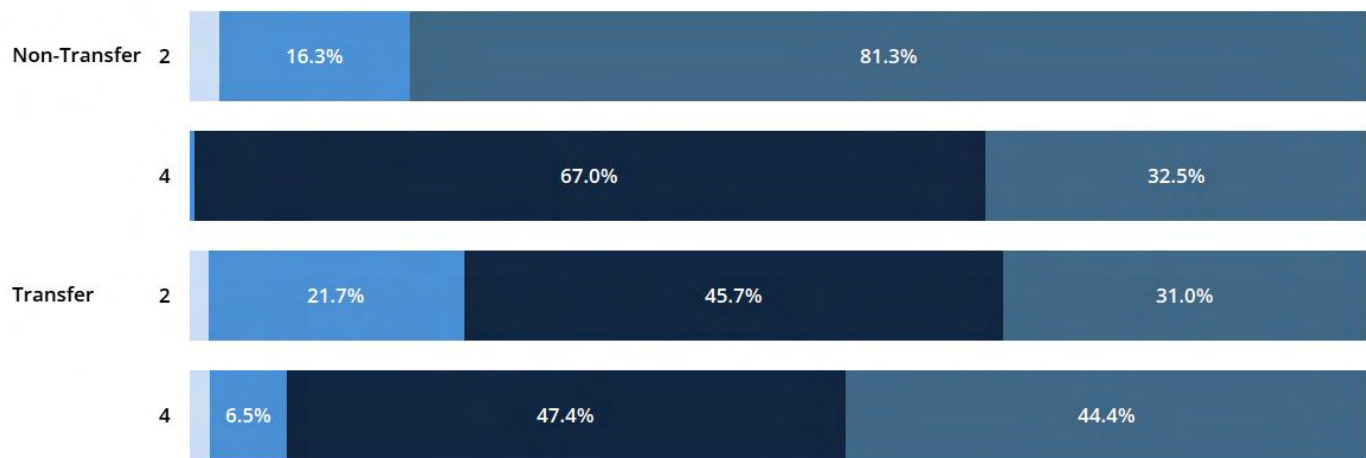


Figure 6 (next page) shows the outmigration of fall 2016 cohort students by the first state these students transferred to. This map includes all students who began at a Tennessee institution in fall 2016 and ever transferred to an out-of-state institution. Overall, 9.5% of all students in the cohort who began at a Tennessee institution transferred to an out of state institution at some point during the six years following initial enrollment (representing 29.4% of all transfer students). Out-of-state transfer was slightly lower in the fall 2016 cohort (9.5%) than in the fall 2015 cohort (9.7%).⁹ These data also show students who enrolled in online programs headquartered elsewhere (e.g. University of Phoenix in Arizona (n=61)). In these cases, it is likely that the student did not move to the state where the primarily or exclusively online institution is headquartered.

Overall, 64.0% of transfer students earned a credential within six years of initial enrollment, while only 45.1% of non-transfer students earned a credential in the same time frame. This disparity is largely driven by the low attainment rates (18.7%) of non-transfer students in the two-year sector, including students who drop out after the first semester or first year. **Figure 7** shows the highest degree earned for students from the fall 2016 cohort, disaggregated by transfer status and sector (two-year or four-year) of initial enrollment.

Figure 7: Highest Degree Earned by Transfer and Non-Transfer Students and Initial Enrollment Sector, Fall 2016 Cohort

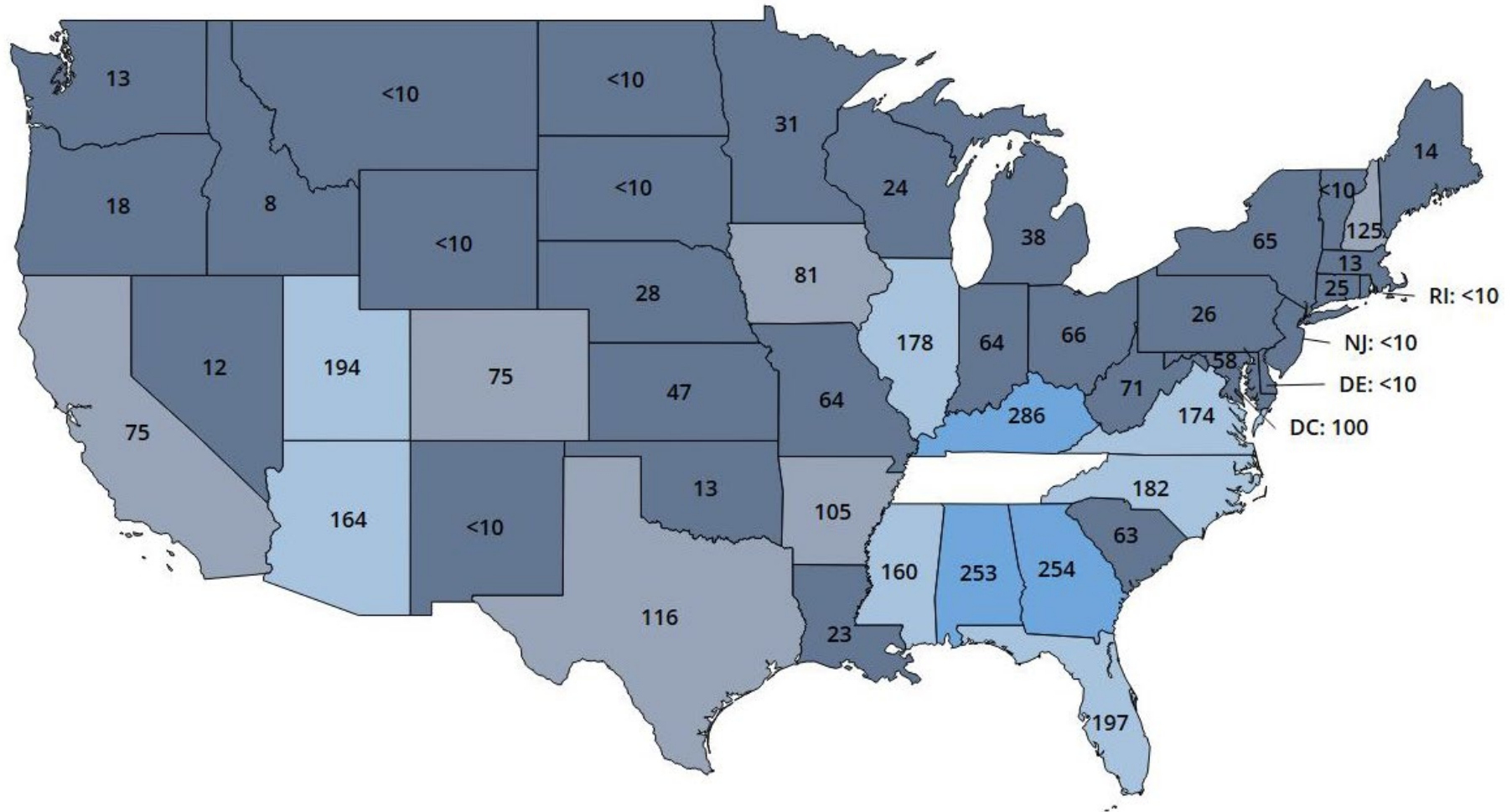


- No award
- Bachelor's
- Associate
- Certificate/Diploma

Note: Diplomas are a small portion of awards; in the fall 2016 cohort, 0.2% (n=68) of students obtained a diploma within six years of initial enrollment. Diplomas are presented here with certificates. A very small number of students (n=29) obtained both a diploma and a certificate; these students are counted only once in the "certificate/diploma" category. Additionally, NSC data shows students who have obtained an award with no additional details. Where possible, these students were matched with THECSIS data to fill in award information. The remaining students whose award details were unknown (n=124) were considered as "no award" in this figure and graduation rate calculations.

⁵ For additional details on out-of-state transfer in fall 2015 cohort, see 2022 Articulation & Transfer report at <https://www.tn.gov/content/tn/thec/research/at.html>.

Figure 6: Tennessee Transfers to Out-of-State Institutions, Fall 2016 Cohort



Note: Colors in the map represent four quartiles of the range of values, with dark navy blue as the lowest quartile values and bright blue as the highest quartile values. Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements; missing values do not indicate zero students. Alaska, Guam, Hawaii, and Puerto Rico are not shown, but each did receive students, though counts are not shown in accordance with FERPA requirements.

Transfer Patterns of the Fall 2016 Cohort

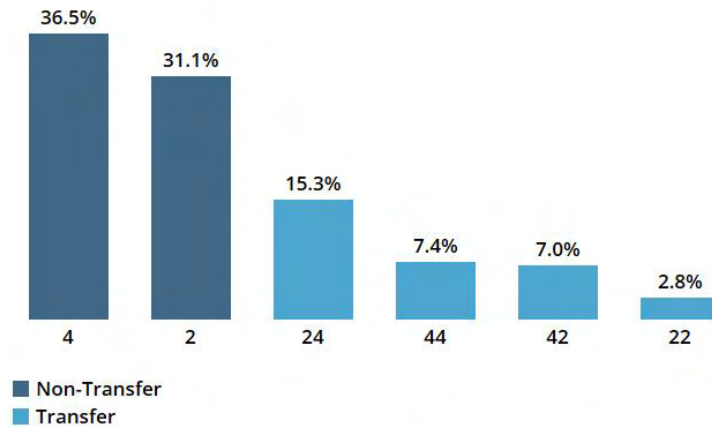
To further examine transfer behavior of the students in the fall 2016 cohort, this section provides data disaggregated by transfer pattern. A transfer pattern codes each sector (two-year or four-year) in which a student was enrolled, chronologically. For example, a student who began at a two-year institution then enrolled in a four-year institution student is coded as “24” transfer in this section; similarly, a student who began at a four-year institution then enrolled in a different four-year institution is coded as “44” transfer.

Returns to a previously attended institution are included in the full transfer pattern. The transfer pattern does not include information about when a student transferred, only the order of institutions attended. Using NSC data, these transfer patterns include non-public and out-of-state institutions in addition to Tennessee public institutions, allowing us to determine the full transfer pattern of a student. For example, “2424” is used for a student who began at a two-year community college, transferred to a four-year university, returned to the community college, then transferred to another four-year college or university.

There were 109 different transfer patterns within the fall 2016 cohort, which demonstrates the many pathways of transfer students. See **Appendix C** for a matrix of sending and receiving institutions for students who make a “24” transfer between Tennessee public institutions and **Appendix D** for students who make a “42” transfer between Tennessee public institutions. These appendices show common transfer patterns for students moving between in-state public institutions.

Figure 8 provides a look at the first two institutions attended by transfer and non-transfer students. Most students (67.6%) attended only one institution in the six years following initial enrollment and are considered non-transfer students. Transfer students generally performed a vertical transfer, moving either from a two-year institution to a four-year (“24”) or vice versa (“42”). More common among vertical transfer students were those students who started at a two-year institution and transferred to a four-year institution (“24”); this pattern is slightly less common in the fall 2016 cohort (15.3%) than it was in the fall 2015 cohort (15.8%). A smaller number of students took advantage of horizontal transfer or transfer from one institution to another institution in the same sector (“44” and “22”). Given that 91.1% of students in the cohort attended either one or two total institutions, examining transfer patterns by first two institutions captures most of the variation in transfer behavior. Students who attended more than two total institutions are categorized in this section according to the sectors of the first two institutions they attended.

Figure 8: First Two Institutions Attended by Fall 2016 Cohort

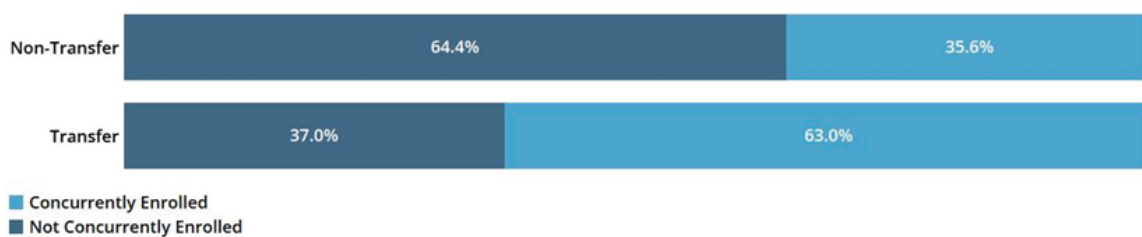


Summer Swirl and Concurrent Enrollment

Students transfer between institutions for a variety of reasons. In addition to vertical transfers, from a two-year institution to a four-year institution, or transfers due to institutional fit or change of educational plans, students may also use transfer strategically. Students may transfer between institutions to maximize their success in particular courses, to leverage winter or summer breaks to complete credits, or to take advantages of opportunities not offered at other institutions. When students take coursework at a different institution over a summer term, then continue enrollment at their original institution in the following fall, this behavior is known as “summer swirl”. Liu and Fay (2020) found that four-year students who enrolled in limited numbers of credits at community colleges had higher numbers of credits earned, both overall and in STEM courses; higher bachelor’s degree attainment; and better employment outcomes than four-year students who never earned credits from a two-year college.

Utilizing the Student Tracker, National Student Clearinghouse (NSC) data allows us to track when a student leaves and later returns to the same institution, including instances of summer swirl. Additionally, we can see when a student enrolls concurrently at multiple institutions. This year’s report utilizes a series of rules to capture concurrent enrollment in the same term, so that this behavior is not categorized as transfer. Where a student was enrolled at multiple institutions in the same term, we used previous enrollments, enrollment intensity (i.e., part-time, full-time, etc.), and length of enrollment at both institutions to determine whether a student changed institutions. These improvements reduced the number of total institutions a student attended. With this improvement, all students with multiple enrollments at different institutions over the same dates were flagged as concurrently enrolled. Overall, 44.5% of students in the fall 2016 cohort were concurrently enrolled at some point in six years. Concurrent enrollment is much more common for transfer students, as seen in **Figure 9** below, with 63.0% of transfer students concurrently enrolling at least one term; by contrast, just over a third of non-transfer students concurrently enroll.

Figure 9: Concurrent Enrollment by Transfer Status, Fall 2016 Cohort



Note: For more information on summer swirl and additional trends in nationwide transfer, see Bobbitt, R., Causey, J., Kim, H., Lang, R., Ryu, M., and Shapiro, D. (Aug 2021), COVID-19 Transfer, Mobility, and Progress, Academic Year 2020-2021 Report, Herndon, VA: National Student Clearinghouse Research Center or <https://nscresearchcenter.org/transfer-mobility-and-progress/>. For research on strategic course taking, see Lui, V. and Fay, P. (June 2020), Does Taking a Few Courses at a Community College Improve the Baccalaureate, STEM, and Labor Market Outcomes of Four-Year College Students?, New York, NY: Columbia University Community College Research Center.

For transfer students in the fall 2016 cohort, the total number of institutions attended accounts for cases where a student returned to a previously attended institution (as opposed to the unique institutions counts shown in **Figure 5**).

The distribution of total number of institutions attended for transfer students only is shown in **Figure 10**. Students attended as many as nine non-unique institutions. Students who returned to an institution are students whose total number of institutions attended is higher than their unique number of institutions attended. In the cohort, student “swirlers” represent 4.3% of students, or 13.2% of students who ever transfer.

Figure 10: Total Number of Institutions Attended, Fall 2016 Cohort Transfer Students

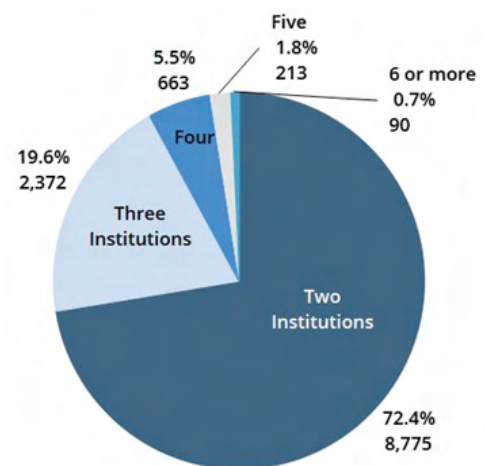
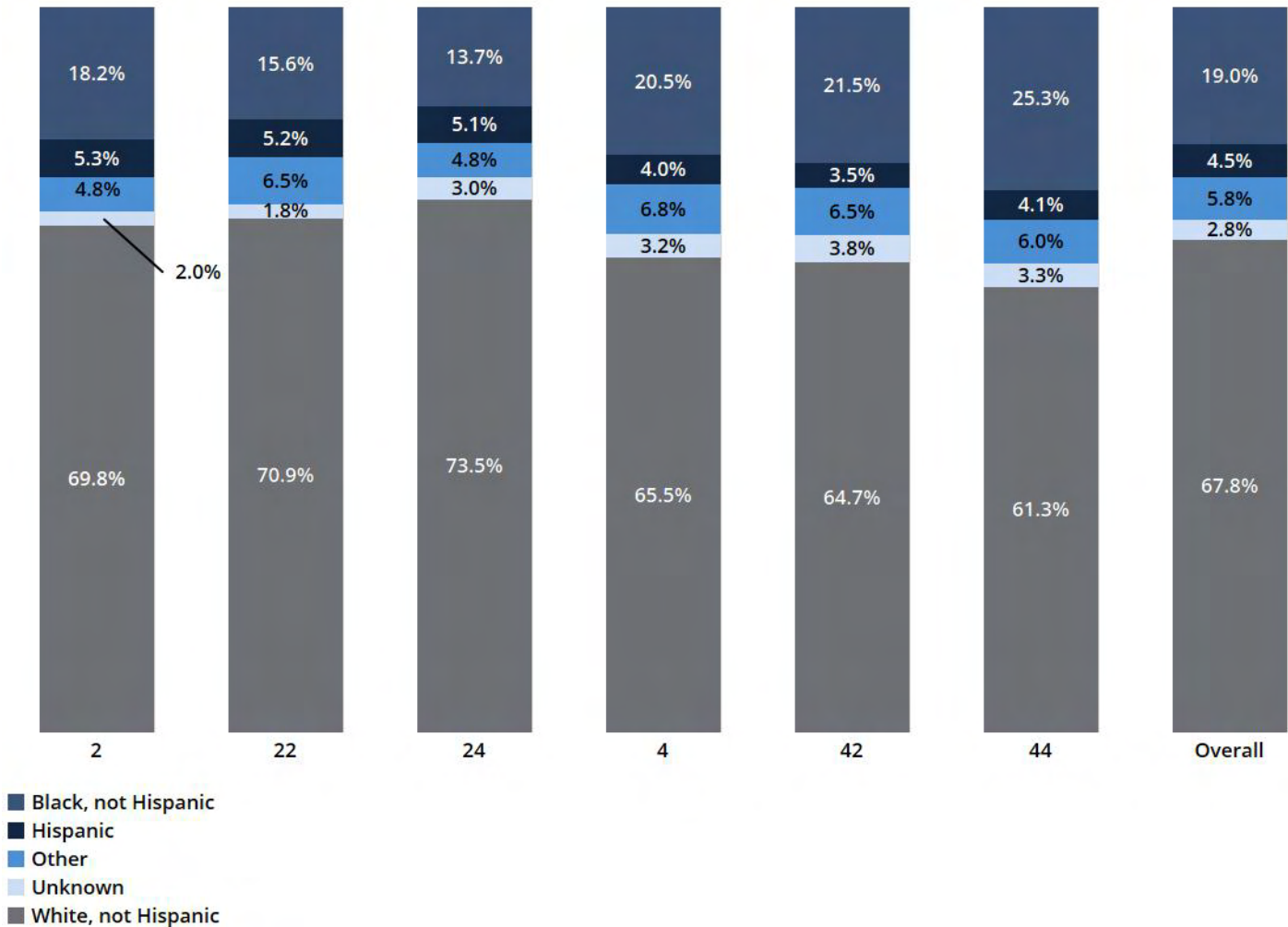


Figure 11 disaggregates the transfer patterns of the fall 2016 cohort by race/ethnicity. The distribution of racial and ethnic demographics varies across transfer patterns. For example, students identified as Black, non-Hispanic comprise 19.0% of the overall cohort, as shown in the “Overall” column on the right, but only 13.7% of students who completed a “24” transfer; they are over-represented among students who complete a “42” or “44” transfer.

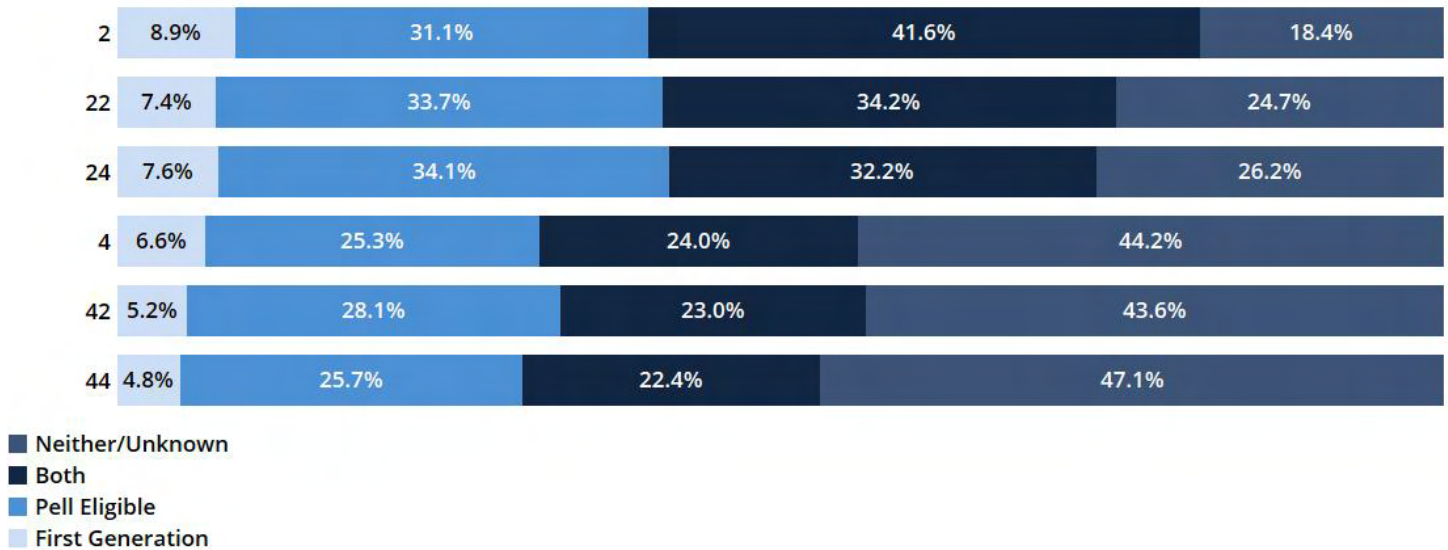
Figure 11: Race/Ethnicity of Fall 2016 Cohort by First Two Transfer Pattern



Note: The “Other” race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial.

Figure 12 illustrates the proportion of students in each transfer pattern who are Pell eligible, first-generation, or both. Students who attended a two-year institution as their first enrollment are more likely to be Pell eligible, first-generation, or both than their four-year counterparts. Students who start at a community college and do not transfer are more likely to be Pell eligible, first-generation, or both than students who start in the same sector and do transfer. This same pattern does not hold for students who start at a four-year institution.

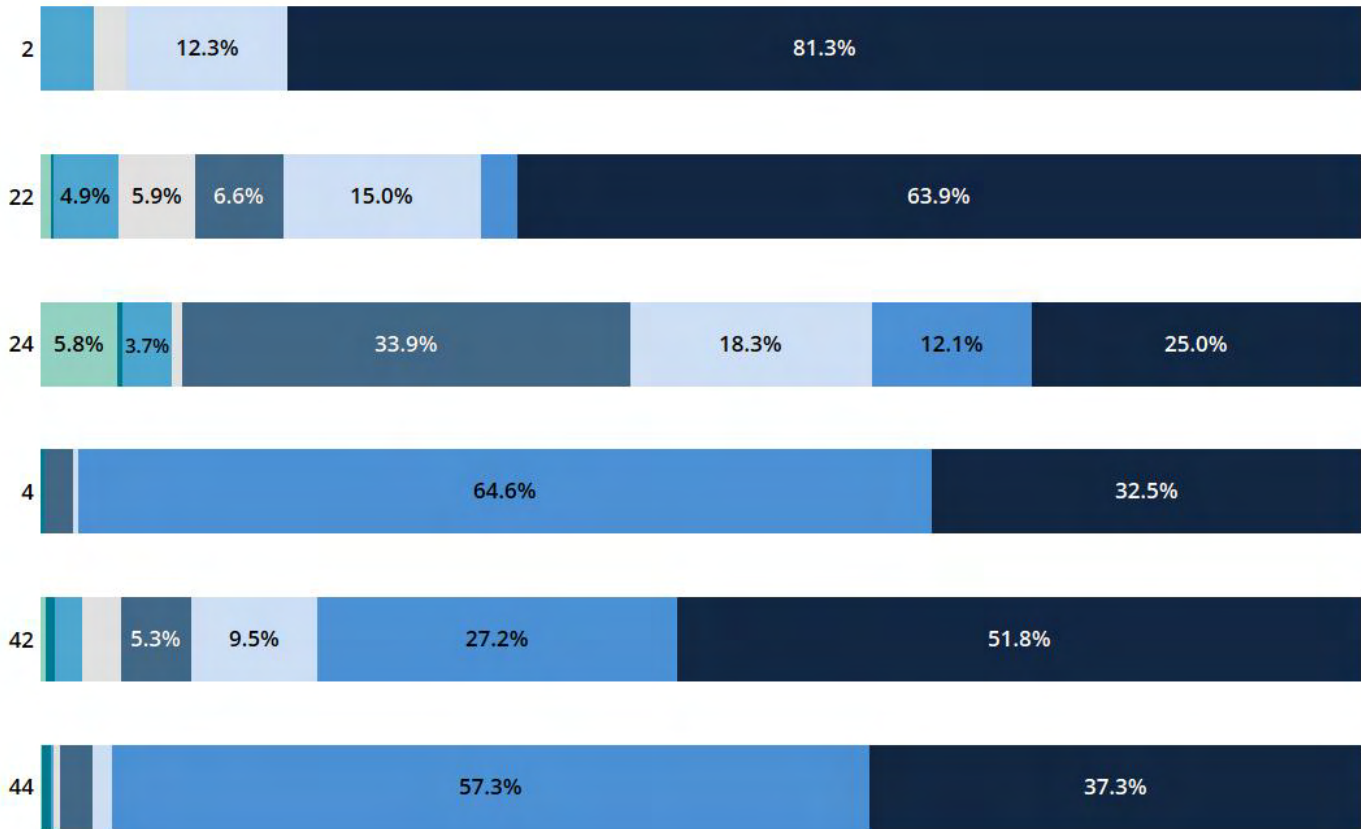
Figure 12: First-Generation and Pell Eligibility Statuses by First Two Transfer Pattern, Fall 2016 Cohort



Note: Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Neither/Unknown describes a student who filed a FAFSA and did not meet either criteria or a student who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) at any point in the six-year period following initial enrollment. Students who did not file a FAFSA are classified as ineligible for the Pell grant and are not categorized as first-generation in this figure.

Figure 13 displays the percentage of students within each transfer pattern who earned a certificate/diploma, associate, or bachelor’s degree. Degree outcomes vary widely across transfer patterns. Only 18.7% of non-transfer students who began at a two-year institution earned a credential in the six years following enrollment, but 36.1% of students who transferred from one two-year institution to another (“22”) obtained an award. Students who transferred from one four-year institution to another (“44”) saw similar overall outcomes to non-transfer four-year students. Nearly half (48.2%) of students whose first two institutions were a four-year and then a two-year (“42”) earned a credential, lower than counterparts who started at a four-year and did not transfer, who have a 67.5% graduation rate. Students who utilized a “24” transfer had a diverse set of credentials within six years and were most likely of all transfer patterns to have obtained at least one award. Overall, completion is slightly higher in the fall 2016 cohort (50.9%) than in the fall 2015 cohort (50.0%).

Figure 13: Degrees Earned by First Two Transfer Pattern, Fall 2016 Cohort



- No award
- Bachelor's
- Associate
- Associate and Bachelor's
- Certificate/Diploma
- Certificate/Diploma and Associate
- Certificate/Diploma and Bachelor's
- Certificate/Diploma, Associate, and Bachelor's

Note: Diplomas are a small portion of awards; in the fall 2016 cohort, 0.2% (n=68) of students obtained a diploma within six years of initial enrollment. Diplomas are presented here with certificates. A very small number of students (n=29) obtained both a diploma and a certificate; these students are counted only once in the "certificate/diploma" category. Additionally, NSC data shows students who have obtained an award with no additional details. Where possible, these students were matched with THECSIS data to fill in award information. The remaining students whose award details were unknown (n=124) were considered as "no award" in this figure and graduation rate calculations.

tnAchieves Transfer Pilot Program

The mission of tnAchieves is to provide the opportunity for any Tennessee high school graduate to complete a postsecondary degree. In 2021, tnAchieves, in partnership with the Tennessee Higher Education Commission (THEC) and the State Collaborative on Reforming Education (SCORE), launched a three-year Transfer Pilot Program. The goal of the tnAchieves Transfer Pilot Program is to work with students who have expressed intent to transfer to determine and eliminate barriers.

More than 65% of tnAchieves students report they intend to transfer to a four-year institution after completing their associate degree; however, the actual transfer rate within three years for these students is only 24%. As part of the Transfer Pilot, coaches work with a cohort of 3500 community college students, annually, focusing on transfer milestones during the students' sophomore year, and developing programming to address student needs. The coach connects with each student at least twice a semester to check in and complete tasks together, hosts application workshops on the community college campuses, and partners with four-year institutions for campus visits. tnAchieves Transfer Pilot coaches also provide detailed information on transfer processes specific to each target university.

After two years, the tnAchieves Pilot program has served 2,651 students. With a benchmark of 24% of TN Promise students transferring in 3 years, the transfer rate for the first cohort of Transfer Pilot students is up to 46%. As of fall 2022, an additional 29% of Transfer Pilot students were still enrolled and completing their associate degrees. It is important to note that while transfer is the long-term goal, it is imperative that tnAchieves works to retain and graduate these students from community college. To accomplish this goal, the team of tnAchieves Transfer Pilot coaches connect individually with students to ensure students meet both graduation and transfer milestones. During this pilot, this team has intervened with students a total of 23,635 times; 12,971 of these interventions have resulted in a successful connection – an in-person meeting or meaningful conversation in which the coach learns about the student's needs and addresses them.

In addition to student metrics, the Transfer Pilot has also allowed tnAchieves to strengthen relationships with the organization's partner institutions. Traditionally, the primary partner schools for tnAchieves are the system of community colleges and Tennessee Colleges of Applied Technology. This transfer work has allowed tnAchieves staff to bridge the gap between the existing work at the two-year institutions and new potential partnerships at universities across the state. Each year, the Transfer Pilot team has hosted meetings with the top ten universities for transfer students in Tennessee, exploring how to best support incoming transfer students and prepare them for their continued education. In addition, the team hosted on-campus workshops and visits at seven of these institutions and developed ongoing partnerships with transfer advisors at the colleges to continue serving students together.

All data in this section is reported by tnAchieves; for more information, please find contact information at <https://tnachieves.org/about-us/contact/>.



SECTION THREE

TRANSFER BEHAVIOR OF TENNESSEE TRANSFER PATHWAY STUDENTS

Tennessee Transfer Pathways

This section explores the transfer and success of students within the fall 2016 cohort who utilized a Tennessee Transfer Pathway (TTP) at any point during the six-year period following initial enrollment. Of the **37,372** students identified in the Student Tracker, National Student Clearinghouse (NSC) data, **7,996** students enrolled in a TTP at some point during the six-year period following initial enrollment. Throughout this section, these students are identified as “TTP Students” while the remaining **29,376** students are referred to as “Non-TTP Students”. By definition, all students who never enrolled at a Tennessee two-year public institution are “Non-TTP” students; TTPs are only offered at TBR community colleges and designed to transfer to all public and participating private four-year colleges in Tennessee.¹⁰

Tennessee Transfer Pathways are a creation of the Complete College Tennessee Act (2010) and are provided for in T.C.A. § 49-7-202 (r)(1-2), which states that THEC will “require all state institutions of higher education to collaborate and develop a transfer pathway for at least the fifty (50) undergraduate majors for which the demand from students is the highest and in those fields of study for which the development of a transfer pathway is feasible based on the nature of the field of study.” For a complete listing of Tennessee Transfer Pathways, see **Appendix E**.

What is a Tennessee Transfer Pathway?

According to the Tennessee Board of Regents, TTPs are advising tools. For community college students who plan to transfer to a Tennessee public university, or to select non-profit private colleges and universities in Tennessee, the TTP provides a guarantee that courses will transfer. TTPs are also an agreement between community colleges and four-year colleges and universities that the community college courses transferred satisfy major preparation requirements.¹¹

How Do the Pathways Work?

Students who complete all courses on a Tennessee Transfer Pathway will earn an associate degree at the community college. Their transcript will show that the pathway has been followed, and the student will earn transfer credits accepted at the college or university toward completion of a particular major. If the student transfers to another Tennessee community college, courses taken on the pathway are also guaranteed to transfer.¹²

¹⁰ Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, a small number of students (n=71) were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These observations have been dropped from all subsequent figures.

¹¹ Tennessee Transfer Pathway. (2014, September 26). Retrieved September 8, 2022, from <https://www.tbr.edu/initiatives/tennessee-transfer-pathway>

¹² Tennessee Transfer Pathway. (2014, September 26). Retrieved September 8, 2022, from <https://www.tbr.edu/initiatives/tennessee-transfer-pathway>

Table 3 exhibits the demographic characteristics of students in the fall 2016 cohort who participated in a TTP at any point in the six years following initial enrollment (not just in fall 2016) compared to students in the cohort who ever enrolled at a two-year institution but did not enroll in a TTP (n=13,258). TTP students are nearly equally likely to be male or female, while two-year non-TTP students show a greater gender disparity, which could be related to the non-TTP program types, namely AAS degrees, offered at two-year institutions. TTP students were less likely to be Black, not Hispanic, but slightly more likely to be in the Hispanic or Other race/ethnicity categories compared to their non-TTP counterparts. TTP students were nearly equally likely to be Pell eligible or identified as first-generation compared to two-year students who did not enroll in a TTP.

Table 3: Demographics of TTP Students in Fall 2016 Cohort

	Two-Year, TTP Students		Two-Year, Non-TTP Students		All Two-Year Students	
	Count	Percent	Count	Percent	Count	Percent
Gender						
<i>Female</i>	4,105	51.8%	7,879	59.4%	11,984	56.6%
<i>Male</i>	3,820	48.2%	5,379	40.6%	9,199	43.4%
Race/Ethnicity						
<i>Black, not Hispanic</i>	1,196	15.1%	2,489	18.8%	3,685	17.4%
<i>Hispanic</i>	464	5.9%	588	4.4%	1,052	5.0%
<i>Other</i>	448	5.7%	633	4.8%	1,081	5.1%
<i>Unknown</i>	200	2.5%	322	2.4%	522	2.5%
<i>White, not Hispanic</i>	5,617	70.9%	9,226	69.6%	14,843	70.1%
Pell Eligible	5,442	68.7%	8,941	67.4%	14,383	67.9%
First-Generation	3,419	43.1%	5,942	44.8%	9,361	44.2%
Overall	7,925	100%	13,258	100%	21,183	100%

Notes: The "Other" race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are categorized as not eligible for the Pell grant and not first-generation in this report. This table is limited to students who ever enrolled at a two-year institution, but that two-year institution was not necessarily in Tennessee.

Students are categorized as TTP participants if they have any record of enrollment in a TTP at any point in the six-year period examined here. However, the number of terms enrolled in a TTP varies widely. **Figure 14** shows the distribution of the number of terms that students are found enrolled in a TTP within six years. Most students (27.9%) are only enrolled in a TTP for one term. Nearly one-fifth, 19.1%, remain enrolled in a TTP for five or more terms, longer than 100% of time to an associate degree, which is four terms. Prolonged TTP enrollment may indicate enrollment in summer terms or additional time taken to earn a degree.

Figure 14: TTP Participation, Number of Terms Enrolled, Fall 2016 Cohort

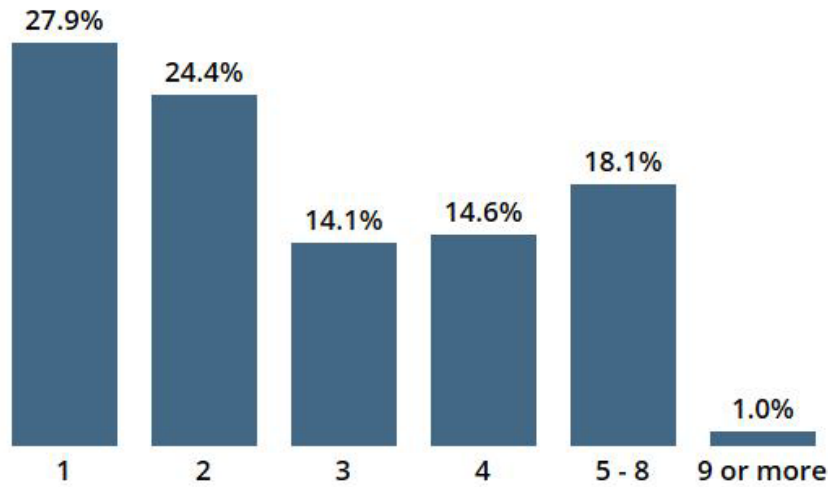


Figure 15 displays the overall transfer rates of students in the fall 2016 cohort who ever participated in a TTP (n=7,925). Half of TTP students (50.1%) transferred during the six-year period following initial enrollment. Additionally, TTP students were also more likely than the overall cohort to complete a transfer (see **Figure 1**).

Figure 15: Overall Transfer in Fall 2016 Cohort TTP Students



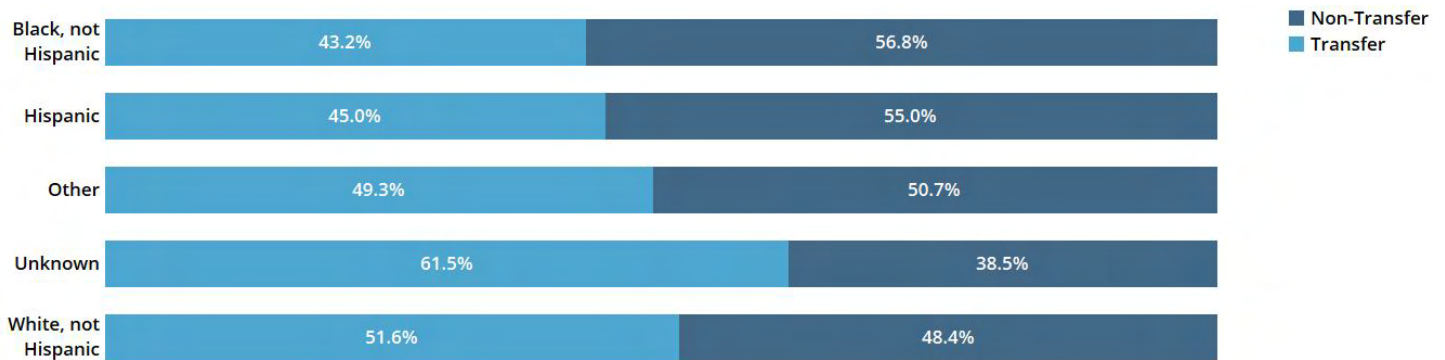
Figure 16 breaks down transfer of TTP students by gender. As in the overall cohort (see **Figure 2**), females are more likely to transfer than males.

Figure 16: Fall 2016 Cohort TTP Transfer by Gender



Figure 17 compares the transfer rates of TTP students by race/ethnicity. Similar to the trends seen in the overall cohort (see **Figure 3**), students whose race/ethnicity is unknown are more likely to transfer than other students, though this is a small group (n=200).

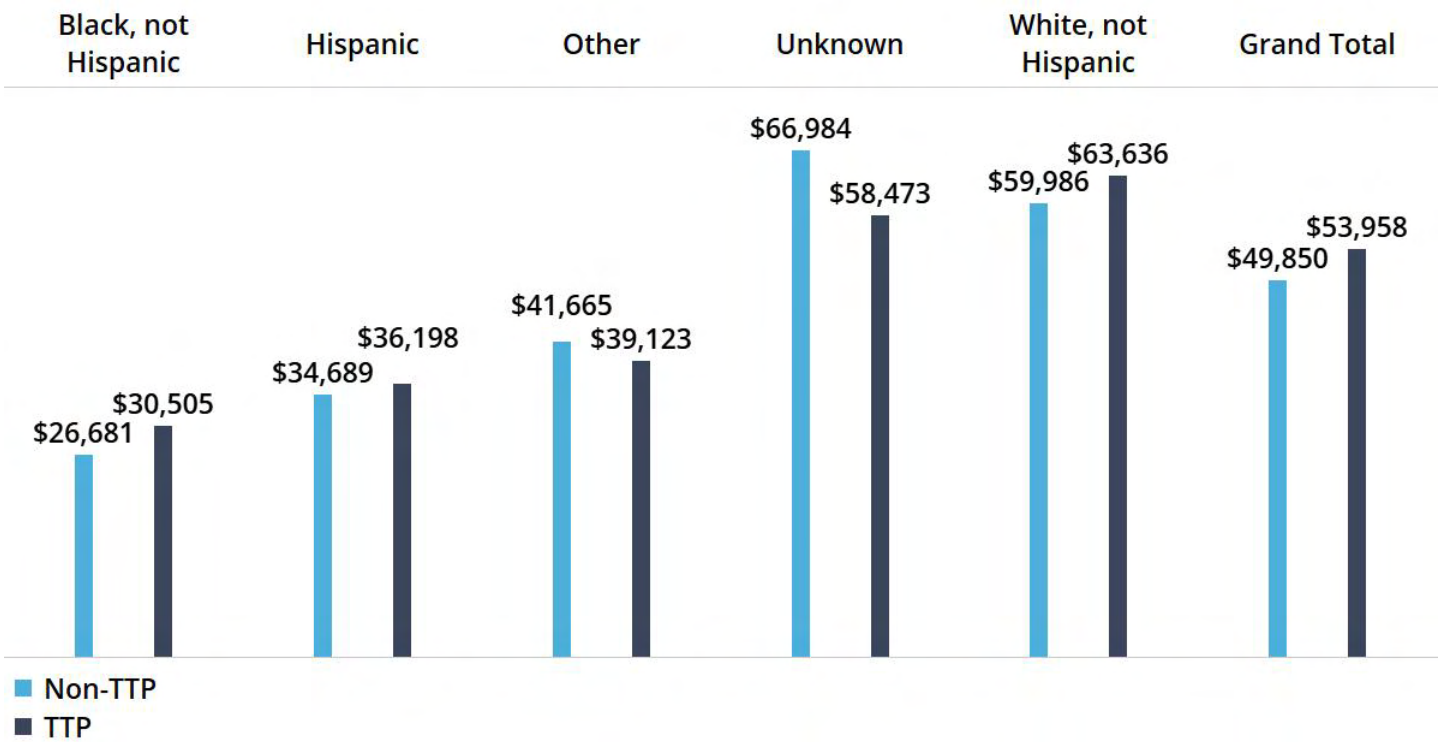
Figure 17: Fall 2016 Cohort TTP Transfer by Race/Ethnicity



Note: The “Other” race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial.

Figure 18 disaggregates the median Adjusted Gross Income (AGI) in the students’ first academic year (2016-17) by race/ethnicity and TTP enrollment. TTP students’ economic backgrounds vary by race/ethnicity; however, the income gaps between TTP and non-TTP students are generally small, with TTP students from three groups (Black, not Hispanic; Hispanic; and White, not Hispanic students) having slightly higher AGIs than their non-TTP counterparts, while this pattern is reversed for TTP students in the “Other” race/ethnicity group and whose race/ethnicity is unknown.

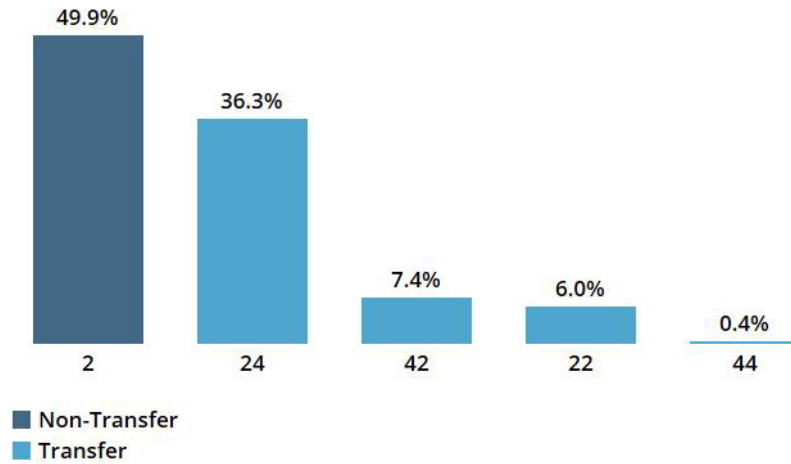
Figure 18: Median 2016-17 AGI of the Fall 2016 Two-Year Cohort by Race/Ethnicity and TTP Status



Note: The “Other” race/ethnicity category includes Alaskan Native, American Indian, Asian or Pacific Islander, and Multiracial. By definition all students who never enrolled at a two-year are “Non-TTP” students. To provide a reasonable comparison group, this figure shows only “Non-TTP” students who ever enrolled at a two-year institution (n=14,193). AGI is sourced from the FAFSA, so students who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) are dropped from this figure.

Figure 19 displays the first two institutions attended by TTP students. Half of TTP students enrolled at a two-year institution and did not transfer during the six-year period following initial enrollment. 36.3% of all TTP students completed a “24” transfer as their first two institutions, which is higher than the 34.9% of all TTP students in the fall 2015 cohort that completed a “24” transfer first.

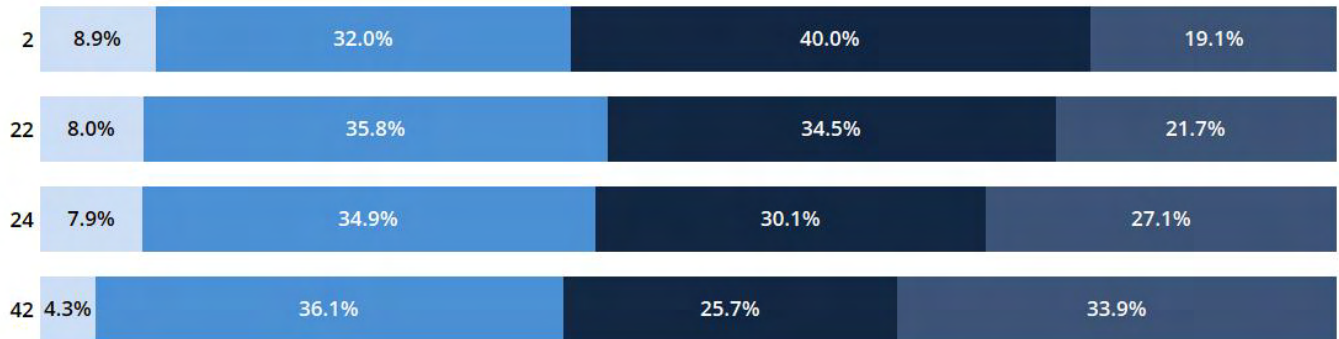
Figure 19: First Two Institutions Attended by TTP Students in the Fall 2016 Cohort



Note: Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, 71 students were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These students have been removed from the graphic above. The remaining students in the “44” group (n=29) ultimately did enroll at a two-year institution, just not as one of their first two enrollments.

Figure 20 demonstrates the first-generation and Pell eligibility statuses of TTP students in the fall 2016 cohort by transfer pattern. First-generation and/or Pell eligible students are generally represented at lower rates among transfer TTP students than non-transfer TTP students.

Figure 20: First-Generation and Pell Eligibility Statuses of Fall 2016 Cohort TTP by First Two Transfer Pattern

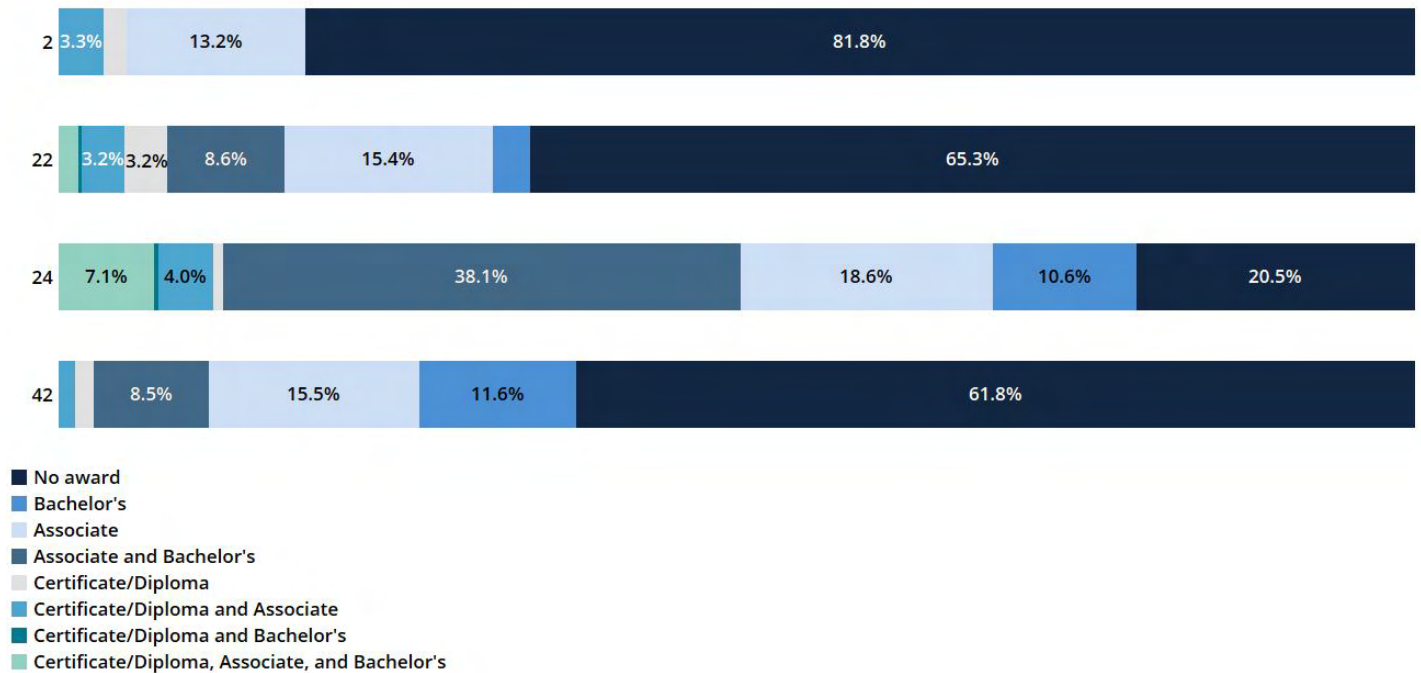


- Neither/Unknown
- Both
- Pell Eligible
- First Generation

Note: Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, 71 students were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These students have been removed from the graphic above. The “44” transfer group is suppressed here, in accordance with FERPA regulations. Pell eligibility describes any student who was eligible for the Pell grant at any point during the six-year period following initial enrollment. First-generation status is self-reported on the FAFSA by reported parent education level and describes any student who was categorized as first-generation at any point in the six-year period. Neither/Unknown describes a student who filed a FAFSA and did not meet either criteria or a student who did not file a FAFSA or for whom we do not have a FAFSA record (e.g., non-residents) at any point in the six-year period following initial enrollment. Students who did not file a FAFSA are classified as ineligible for the Pell grant and are not categorized as first-generation in this figure.

Figure 21 shows the degrees earned within six years for TTP students within the fall 2016 first-time freshman cohort. TTP students in the fall 2016 cohort were more likely than the overall cohort to have earned both an associate and a bachelor’s degree six years after initial enrollment, with 17.7% of TTP participants obtaining both degrees compared to 6.7% of the full cohort. Students completing a “24” transfer were most likely of all transfer patterns to have an award after six years. For a complete listing of Tennessee Transfer Pathways and participation of fall 2016 cohort students in each, see **Appendix E**. See **Appendix F** for a list of TTP degrees awarded to the fall 2016 cohort.

Figure 21: Degrees Earned, Fall 2016 Cohort TTP Students by First Two Transfer Pattern



Note: Diplomas are a small portion of awards; in the fall 2015 cohort of TTP participants, 20 students obtained a diploma within six years of initial enrollment. Diplomas are presented here with certificates. A very small number of students (n=11) obtained both a diploma and a certificate; these students are counted only once in the “certificate/diploma” category. Additionally, NSC data shows students who have obtained an award with no additional details. Where possible, these students were matched with THECSIS data to fill in award information. The remaining students whose award details were unknown (n=19) were considered as “no award” in this figure and graduation rate calculations. Associate degrees earned **are not** necessarily Tennessee Transfer Pathways degrees (See **Appendix F** for TTP Awards). The “44” transfer group is suppressed here, in accordance with FERPA regulations.

Conclusion

This report continues the work of previous Articulation and Transfer reports by examining the demographics, transfer patterns, and degree outcomes of the fall 2016 first-time freshman cohort and presenting an update on the work of the Articulation and Transfer Council. Roughly one-third of students in the fall 2016 cohort attended more than one institution in the six years following their initial enrollment, making them transfer students for purposes of this report (**Figure 1**). For students who do transfer, most attend a two-year institution, then a four-year institution as their first two institutions (**Figure 8**). Over 90% of the students in the cohort attended only one or two institutions.

Transfer students have higher six-year graduation rates (64.0%) than non-transfer students (45.1%) in the cohort. This gap is driven by many students who begin enrollment at a two-year institution, do not transfer, and do not graduate (**Figure 7**). Students who complete a vertical transfer from a two-year institution to a four-year institution are more likely than all other transfer patterns in the fall 2016 cohort to earn any type of award within six years. These students also earn a wide variety of awards. Of students in this transfer pattern, 75.0% graduated in six years, including a third of students who earned both an associate and a bachelor's degree (**Figure 13**).

Of the 7,925 cohort students who enrolled in a Tennessee Transfer Pathway (TTP), 50.2% transferred. Of all TTP participants, 21.0% obtained an associate degree in a TTP major (**Appendix F**), and 43.0% of TTP participants earned any award in the six years following initial enrollment (**Figure 21**).

The time has come for all institutions across Tennessee, whether community colleges, TCATs, or universities, to contribute to transfer student success. Current success rates, as highlighted in this report, are not sufficient to meet Tennessee's workforce needs, nor to meet the aspirations of the many students in Tennessee who aim to earn a bachelor's degree. While efforts like [Tennessee Promise](#) and [Tennessee Transfer Pathways](#) intend to support students who start at a community college to transfer, students are not successfully transferring at expected rates. Tennessee higher education needs to do more to deliver on the promises of these policy efforts. To improve transfer student success statewide, THEC/TSAC should:

- Continue to utilize convenings like the Transfer Initiatives Convening and the Articulation & Transfer Council and Sub-councils to invigorate cross-sector collaboration on issues facing transfer students, including a focus on minimizing TTP exceptions to increase credit articulation across the state.
- Promote ease of transfer and full articulation of credits by helping institutions to fully implement common course numbering.
- Support the promising practices in initiatives like TCAT to Community College Articulation (pg. 11) and the tnAchieves Transfer Pilot Program (pg. 27).
- Research the financial aid needs of transfer students, specifically those transferring from community colleges to universities, who have accessed higher education through the support of Tennessee Promise.

Appendix A: Tennessee Code Annotated § 49-7-202(r)

(1) The commission shall require all state institutions of higher education to collaborate and develop a transfer pathway for at least the fifty (50) undergraduate majors for which the demand from students is the highest and in those fields of study for which the development of a transfer pathway is feasible based on the nature of the field of study.

(2)

(A) A transfer pathway shall consist of sixty (60) hours of instruction that a student can transfer and apply toward the requirements for a bachelor's degree at a public institution that offers the transfer pathway. The sixty (60) hours of instruction in a transfer pathway shall consist of forty-one (41) hours of general education courses instruction and nineteen (19) hours of pre-major courses instruction, or elective courses instruction that count toward a major, as prescribed by the commission, which shall consider the views of chief academic officers and faculty senates of the respective campuses. Courses in a transfer pathway shall transfer and apply toward the requirements for graduation with a bachelor's degree at all public universities.

(B) An associate of science or associate of arts degree graduate from a Tennessee community college shall be deemed to have met all general education and university parallel core requirements for transfer to a Tennessee public university as a junior. Notwithstanding this subdivision (r)(2)(B), admission into a particular program, school, or college within a university, or into the University of Tennessee, Knoxville, shall remain competitive in accordance with generally applicable policies.

(C) The forty-one-hour lower division general education core common to all state colleges and universities shall be fully transferable as a block to, and satisfy the general education core of, any public community college or university. A completed subject category, for example, natural sciences or mathematics, within the forty-one-hour general education core shall also be fully transferable and satisfy that subject category of the general education core at any public community college or university.

(D) The nineteen-hour lower division AA/AS area of emphasis articulated to a baccalaureate major shall be universally transferable as a block satisfying lower division major requirements to any public university offering that degree program major.

(3) It is the legislative intent that community college students who wish to earn baccalaureate degrees in the state's public higher education system be provided with clear and effective information and directions that specify curricular paths to a degree. To meet the intent of this section, the commission, in consultation with the governing boards of all state institutions of higher education, shall develop, and the governing boards of all state institutions of higher education shall implement, the following:

(A) A common course numbering system, taking into consideration efforts already undertaken, within the community colleges to address the requirements of subdivision (r)(1);

(B) Listings of course offerings that clearly identify courses that are not university parallel courses and therefore not designed to be transferable under subdivision (r)(1); and

(C) A dual admissions policy in which a person who satisfies the admissions requirements of a two-year institution governed by the board of regents and a public university while pursuing a degree program within a transfer pathway program of study is authorized to be admitted to both such institutions.

(4) This subsection (r) shall be fully implemented no later than the fall 2024 semester. Until this subsection (r) is fully implemented, prior to the beginning of each semester, the commission shall report to the chairs of the education and finance, ways and means committees of the senate and the chairs of the education administration and planning and finance, ways and means committees of the house of representatives on the progress made toward completion of the nineteen (19) pre-major course blocks provided in subdivision (r)(2)(D).

(5) The commission shall have ongoing responsibility to update and revise the plans implemented pursuant to this subsection (r) and report to the chairs of the education and finance, ways and means committees of the senate and the chairs of the education administration and finance, ways and means committees of the house of representatives no later than October 1 of each year on the progress made toward full articulation between all public institutions.

For full text of Tennessee Code Annotated, see <https://www.tncourts.gov/Tennessee%20Code>.

Appendix B: Articulation and Transfer Council 2020-2025 Membership

Name	Title	Affiliation
Tucker Brown	Senior Vice Provost & Associate Vice President	Austin Peay State University
William Flora	Associate Provost for Curriculum	East Tennessee State University
Amy Aldrige Sanford	Academic Support Service Provost & Vice Provost	Middle Tennessee State University
Cheryl Seay	Assistant Vice President for Academic Affairs & Global Online	Tennessee State University
Brandi Fletcher	Registrar	Tennessee Technological University
Carol Danehower	Assistant Provost for Academic Affairs	University of Memphis
Leigh Morales	Director of Student Success	University of Tennessee System
Lauren Ingraham	Vice Provost & Professor	University of Tennessee, Chattanooga
Allen Dupont	Associate Vice Chancellor for Institutional Effectiveness & Decision Support, SACSCOC Accreditation Liaison	University of Tennessee, Health Science Center
Ozlem Kilic	Interim Vice Provost for Academic Affairs & Dean of College of Emerging & Collaborative Studies	University of Tennessee, Knoxville
Philip Acree Cavalier	Provost & Vice Chancellor for Academic Affairs	University of Tennessee, Martin
Judy Cheatham	Provost & Vice President for Academic Affairs	University of Tennessee, Southern
Jothany Reed	Vice Chancellor for Academic Affairs	Tennessee Board of Regents
Laura Cornick	Vice President	Tennessee Independent Colleges and Universities Association
Julie A. Roberts	Chief Academic Officer	Tennessee Higher Education Commission

Appendix C: "24" Students by Sending and Receiving Institutions, Fall 2016 Cohort

Sending Institution	APSU	ETSU	MTSU	TSU	TTU	UM	UTC	UTK	UTM	Total
Chattanooga State	<10	10	26	<10	14	<10	224	18	<10	297
Cleveland State	-	14	<10	<10	12	-	67	27	<10	130
Columbia State	18	<10	161	<10	23	<10	29	36	27	306
Dyersburg State	<10	<10	<10	-	<10	33	<10	<10	68	114
Jackson State	<10	<10	19	<10	<10	72	11	<10	70	195
Motlow State	<10	<10	316	<10	85	<10	15	15	<10	457
Nashville State	68	<10	91	48	13	<10	13	13	16	269
Northeast State	<10	315	<10	-	<10	-	<10	<10	-	340
Pellissippi State	<10	42	29	<10	40	<10	17	371	<10	511
Roane State	<10	32	16	-	116	-	11	43	<10	221
Southwest	12	-	29	15	-	276	<10	>10	12	360
Volunteer State	34	<10	88	25	108	<10	26	19	<10	314
Walters State	<10	177	16	-	13	<10	<10	72	<10	296
Total	168	610	805	108	437	399	429	642	212	3,810

Note: Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. University of Tennessee Southern and University of Tennessee Health Science Center are not included here. Martin Methodist College merged with the University of Tennessee System as UT Southern on July 1, 2021. The most common receiving institution (columns) for each sending institution (rows) is shown in **bold**.

Appendix D: “42” Students by Sending and Receiving Institutions, Fall 2016 Cohort

Receiving Institution	APSU	ETSU	MTSU	TSU	TTU	UM	UTC	UTK	UTM	Total
Chattanooga State	<10	18	12	<10	<10	<10	145	25	-	217
Cleveland State	<10	<10	<10	-	<10	-	10	<10	-	26
Columbia State	12	<10	34	-	17	<10	87	155	22	335
Dyersburg State	<10	<10	<10	-	-	<10	<10	<10	18	41
Jackson State	15	-	<10	<10	<10	20	<10	<10	37	93
Motlow State	<10	<10	42	<10	18	-	14	13	<10	100
Nashville State	62	<10	37	27	12	15	20	14	<10	201
Northeast State	<10	76	<10	-	<10	<10	-	<10	-	91
Pellissippi State	<10	25	12	<10	14	<10	20	193	<10	275
Roane State	<10	18	<10	-	18	-	<10	30	<10	79
Southwest	21	<10	27	22	<10	156	21	29	10	289
Volunteer State	29	<10	28	<10	55	<10	36	23	11	192
Walters State	<10	45	<10	-	10	<10	<10	33	<10	99
Total	165	206	210	64	161	210	373	539	110	2,038

Note: Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. University of Tennessee Southern and University of Tennessee Health Science Center are not included here. Martin Methodist College merged with the University of Tennessee System as UT Southern on July 1, 2021. The most common receiving institution (rows) for each sending institution (columns) is shown in **bold**.

Appendix E: TTP Enrollment by Concentration, Fall 2016 Cohort

TTP Major Name	Count	Percent
Unknown	2,152	26.9%
Business Administration	942	11.8%
Psychology	471	5.9%
Criminal Justice	435	5.4%
Pre-Health Professions	380	4.8%
Biology	301	3.8%
Accounting	203	2.5%
Computer Science	192	2.4%
Social Work	191	2.4%
Pre-Physical Therapy	183	2.3%
Exercise Science	157	2.0%
Mechanical Engineering	143	1.8%
History	141	1.8%
Art (Studio)	137	1.7%
Mass Communication	135	1.7%
Early Childhood Education (PreK-3)	127	1.6%
Music	124	1.6%
Marketing	119	1.5%
English	99	1.2%
Management	96	1.2%
Pre-Dental Hygiene	87	1.1%
Information Systems	82	1.0%
Sociology	82	1.0%
Political Science	71	0.9%
Chemistry	66	0.8%
Finance	66	0.8%
Civil Engineering	64	0.8%
Theatre Arts	63	0.8%
Electrical Engineering	60	0.8%
Math	56	0.7%
Pre-Occupational Therapy	50	0.6%
Elementary Education (K-5)	47	0.6%
Foreign Language	45	0.6%
Economics*	42	0.5%
Sport and Leisure Management	42	0.5%
Special Education	41	0.5%
Physical Education	39	0.5%
Engineering Technology	34	0.4%
Communication Studies**	30	0.4%

TTP Major Name	Count	Percent
Nutrition and Food Science	28	0.4%
Agriculture - Agricultural Business	24	0.3%
Agriculture - Plant and Soil Science	20	0.3%
Anthropology	20	0.3%
Agriculture - Animal Science	19	0.2%
Physics	19	0.2%
Philosophy	17	0.2%
Imaging Sciences	<10	*
Geosciences	<10	*
Kinesiology	<10	*
Pre-Clinical Laboratory Sciences	<10	*
Family and Consumer Sciences	<10	*
Secondary Education - English	<10	*
International Affairs	<10	*
Secondary Education - Math	<10	*
Secondary Education - Social Studies	<10	*
Theatre Arts – Design/Tech	<10	*
Art	<10	*
Geography***	<10	*
Theatre Arts – Performance	0	0%
TOTAL	7,996	100%

Notes: All current TTPs (last updated May 2022) are listed here, including those with no enrollments by students in the fall 2016 cohort. "Unknown" is a high share of TTP majors due to historical issues in TTP data tracking. Some TBR institutions do not collect data on the specific TTP in which a student is enrolled; TBR and THEC are making efforts to improve collection of this data. Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. Due to discrepancies in student matching methodologies between THECSIS, TBR, and the Student Tracker, National Student Clearinghouse, 71 students were identified as having participated in a TTP despite no Student Tracker record of enrollment at a two-year institution. These students are included in the table above.

* Includes students enrolled in Economics concentrations for specific institutions, which were phased out in November 2017.

** Renamed "Communication Studies" effective Fall 2020; includes "Speech Communication" students prior to Fall 2020.

*** Phased out by August 2019.

Appendix F: TTP Awards by Concentration, Fall 2016 Cohort

TTP Award Name	Count	Percent
Business Administration	285	16.7%
Criminal Justice	171	10.0%
Psychology	148	8.7%
Accounting	126	7.4%
Mass Communication	81	4.7%
Social Work	68	4.0%
History	66	3.9%
Pre-Health Professions	63	3.7%
Unknown	44	2.6%
Art (Studio)	42	2.5%
Mechanical Engineering	40	2.3%
Biology	38	2.2%
Marketing	38	2.2%
Computer Science	37	2.2%
Music	32	1.9%
Exercise Science	31	1.8%
Political Science	31	1.8%
Information Systems	30	1.8%
Management	27	1.6%
Pre-Physical Therapy	26	1.5%
Sociology	26	1.5%
Finance	20	1.2%
English	18	1.1%
Math	18	1.1%
Theatre Arts	17	1.0%
Foreign Language	16	0.9%
Early Childhood Education (PreK-3)	14	0.8%
Chemistry	13	0.8%
Communication Studies*	13	0.8%
Sport and Leisure Management	12	0.7%
Elementary Education (K-5)	11	0.6%
Civil Engineering	10	0.6%
Agriculture - Plant and Soil Science	<10	*
Nutrition and Food Science	<10	*
Physical Education	<10	*
Pre-Dental Hygiene	<10	*
Agriculture - Animal Science	<10	*
Anthropology	<10	*
Economics**	<10	*

TTP Major Name	Count	Percent
Pre-Occupational Therapy	<10	*
Philosophy	<10	*
Physics	<10	*
Special Education	<10	*
Agriculture - Agricultural Business	<10	*
Electrical Engineering	<10	*
Pre-Clinical Laboratory Sciences	<10	*
Theatre Arts - Design/Tech	<10	*
Art	<10	*
Geography***	<10	*
International Affairs	<10	*
Theatre Arts - Performance	<10	*
Total	1,708	100.0%

Notes: Only TTPs with awards in the fall 2016 cohort are shown here. Individual cells containing fewer than ten observations are suppressed, in accordance with FERPA requirements. For some students (n=34), we do not have a record of their TTP enrollment but do have record that they received a TTP award. Students identified as having earned a TTP award despite no Student Tracker record of enrollment at a two-year institution (n=13) are included in this table.

* Renamed "Communication Studies" effective Fall 2020; includes "Speech Communication" students prior to Fall 2020.

** Includes students enrolled in Economics concentrations for specific institutions, which were phased out in November 2017.

*** Phased out by August 2019.

Institutional and System Abbreviations

APSU:	Austin Peay State University
CHSCC:	Chattanooga State Community College
CLSCC:	Cleveland State Community College
COSCC:	Columbia State Community College
DSCC:	Dyersburg State Community College
ETSU:	East Tennessee State University
JSCC:	Jackson State Community College
LGI:	Locally Governed Institution
MSCC:	Motlow State Community College
MTSU:	Middle Tennessee State University
NASCC:	Nashville State Community College
NESCC:	Northeast State Community College
PSCC:	Pellissippi State Community College
RSCC:	Roane State Community College
STCC:	Southwest Tennessee Community College
TSU:	Tennessee State University
TTU:	Tennessee Technological University
UM:	University of Memphis
UTC:	The University of Tennessee at Chattanooga
UTHSC:	The University of Tennessee Health Science Center
UTK:	The University of Tennessee, Knoxville
UTM:	The University of Tennessee at Martin
UTS:	The University of Tennessee Southern
VSCC:	Volunteer State Community College
WSCC:	Walters State Community College
TBR:	Tennessee Board of Regents
TCAT:	Tennessee College of Applied Technology
THEC:	Tennessee Higher Education Commission
TICUA:	Tennessee Independent Colleges and Universities Association
UT:	The University of Tennessee