RESEARCH REPORT

MAY 4, 2018 | 18-3

THE ROLE OF TRANSFER IN THE ATTAINMENT OF BACCALAUREATE DEGREES AT WASHINGTON PUBLIC BACHELOR'S DEGREE INSTITUTIONS—CLASS OF 2016

Background

The *Role of Transfer* study is an update to three previous studies on the graduating classes of 2001, 2006 and 2011. The report focuses exclusively on Washington's public baccalaureate graduates including Community and Technical College Bachelor's degree programs.

About the Data

The source of data for the system is the SBCTC Data Warehouse for community and technical college (CTC) enrollments and Public Centralized Higher Education Enrollment System (PCHEES) for the university records as provided by the Education Research and Data Center (ERDC) housed within the Office of Financial Management. The CTC and PCHEES data is processed into a research database housed at SBCTC called the Mutual Research Transcript Exchange (MRTE+). MRTE+ is created through the use of an identity-matched crosswalk provided to SBCTC from the ERDC. The crosswalk links student unit records from the CTCs and the public four year institutions in Washington. Overall data quality allowed for deep and rich analyses for student enrollments, transcripts, and completions.

The CTC data includes completion records from 2004-05 through to 2015-16. The university data begins in 2007-08.

MRTE+ reports both previous credits transferred and credits earned for bachelor's degree completion. It identifies whether these credits were earned at the degree granting or another institution. This allows for accurate analysis on how to identify transfer students at entry point and how to determine total credits earned in completion of the bachelor's degree. The methodology was first used with the Class of 2011 report and was maintained for this report.

Study Definitions

Type of Student/Transfer Status

All 2016 bachelor's degree graduates were classified as being "direct entry," "CTC transfer," or "other transfer" based on the credits and credentials they brought with them when they first entered a public bachelor's degree institution. In addition, due to their growing importance as a pathway to a baccalaureate for professional technical students, we include CTC Applied Bachelor's degrees (BAS) in a separate classification. The criteria used for classifying the graduates are described more completely in Appendix A.

COMMUNITY AND TECHNICAL COLLEGES
Washington State Board

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Majors

Student majors were grouped to simplify the analysis into one of seven categories. In cases where students earned more than one major, both majors were reported in the analysis, which provided some duplication. See Appendix B for a complete listing of the CIP codes within each major grouping.

Study Population

This report is based on the records of 23,470 students who earned a bachelor's degree as graduates of the Class of 2016. The study population includes all students who earned a degree from one of the six public baccalaureate institutions or from one of the 16 community and technical colleges that offer an applied bachelor's degree for whom transcript, demographic, and degree attainment data were available.

The study excludes international students, students without enough identifiable data in their record to create a match to the CTC system, and students not found in MRTE+ who earned a degree.

The Study – Key Questions

The study examines the graduating class of the public bachelor's degrees in 2015-16 (by gender, ethnicity, age, degree major, and institution type). Specifically, the study examines graduates in five parts:

1. By Campus Type – What was the make-up of graduates at main campuses, additional research university campuses (additional RU Campuses), university centers and community and technical colleges?
2. By Transfer Status – How many bachelor's degree graduates entered four-year colleges directly? How many transferred from a Washington CTC? How many came through other paths?
3. By Pre-college Enrollments – What was the role of CTC pre-college English and math in preparing transfers and direct entry students to graduate with the bachelor's degree in 2016?
4. By Running Start Status – What was the role of CTC Running Start in preparing transfers and direct entry students to graduate with the bachelor's degree in 2016?
5. By Transfer Paths – What were the different transfer pathways delineated by the type of two-year degree CTC students received? How do these different pathways contribute to different bachelor's degree majors? How well do CTC transfer students perform compared to direct entry students on total credits earned to complete their bachelor's degree and senior year GPAs?

Selected Findings

1. **Transfer graduates are the majority of the baccalaureate graduating class of 2016. CTC transfers are the majority of those.**
    - Over half (52 percent) of all bachelor's degree graduates in the class of 2016 were transfer students.
    - This includes 39 percent who were CTC transfers. The definition of transfer is based upon previous credits transferred, previous credits earned at a CTC and/or a two-year degree earned.
    - Another two percent were awarded a CTC Applied Bachelor from a two-year college.
    - Among the 46 percent counted as direct entry, nearly half had transferred in credits from other institutions (less than 40 college credits) at entry, describing even a broader role for CTCs in

the 2016 baccalaureate graduating class.

2. **CTC transfer is a substantial share of graduates in all majors, although the percent varies by campus type.**
    - Overall, CTC transfers were 39 percent of the 2016 graduating class. The percent of CTC transfers varied by campus type – 28 percent of research universities graduating classes, 40 percent of comprehensive and the state's public liberal arts college classes, and 64 and 73 percent respectively at additional research university campuses and university centers.
    - CTC transfers graduated in all bachelor's degree majors in significant numbers. Of these graduates, CTC transfers comprised 45 percent of all education majors, 44 percent of health field majors, 42 percent of social sciences majors, 39 percent of business majors, 37 percent of Science, Technology, Engineering and Mathematics (STEM) majors and 36 percent of liberal arts majors.
3. **CTC Running Start dual enrollment courses and two-year degrees had a significant role preparing students to graduate in the 2016 class.**
    - 4,908 graduates (21 percent) in the class of 2016 had CTC Running Start. Nearly half (48 percent) of these graduates transferred with a two-year degree.
    - Forty-three (43) percent of Running Start students graduated from research universities. Another 35 percent graduated from comprehensive universities and the state's public liberal arts college.
    - 33 percent of bachelor's degree graduates majored in STEM fields, 21 percent had social science majors, 19 percent were liberal arts majors and 12 percent were business majors.
4. **Pre-college courses had a significant role preparing students to graduate in the 2011 class.**
    - Fifty-seven (57) percent of CTC transfer students completed remedial coursework at a CTC in English or math prior to progressing to a bachelor's degree (22 percent of all graduates).
    - Forty-two (42) percent of CTC transfer STEM graduates and 54 percent of business graduates took pre-college math.
    - Students identifying as Hispanic, African American, and Native American had the highest rates of pre-college enrollments. Students as a whole from these groups were equally likely to start as direct entry or CTC transfer. However, the high participation in pre-college among CTC transfer students indicates that the availability of pre-college courses provided significant access for a segment of students identifying as Hispanic, African American, and Native American who were less prepared and less likely to earn bachelor's degrees without this additional support.
    - Pre-college preparation was also important for older students (those over age 25); another segment that CTC transfers significantly contributed to access and bachelor's degree completion.
5. **Two-year degree paths proved efficient for CTC transfer graduates.**
    - The Direct Transfer Agreement (DTA) associate degree was chosen by 73 percent of CTC transfers with a degree. This degree can transfer to any public university in Washington State as a junior, with virtually all general education credits fulfilled. Other DTAs are directed at

specific major ready pathways. The Major Related Pathways (MRP) in Business was chosen by 8 percent of students who transferred with a degree. Statewide agreement for transfer to engineering, chemistry, and physics – the Associate of Science-Technology (AS-T) – was completed by six percent of transfers. Seven percent of CTC transfers completed a technical degree.

- Overall, 80 percent of CTC transfers completed an associate degree.
- Graduates who completed associate degrees aligned with specific majors were very likely to complete a bachelor's degree in a related field:
- Over eight in ten (83 percent) CTC transfers completing the Business DTA/MRP earned a bachelor's degree in business.
- More than nine in ten (93 percent) CTC transfers completing an Associate in Science Track 1 or 2 completed a bachelor's degree in a STEM or health related major.
- Students earning AS-T Track 1 and Track 2 degrees were most likely to enroll at research universities (67 percent and 57 percent, respectively) than students earning other degrees.
- Median credits earned for degree completion were comparable across all majors for CTC transfer and direct entry bachelor's degree graduates.
- Senior year GPAs across all major degree fields were equivalent for CTC transfer and direct entry students.

Part One: All 2015-16 Graduates by Campus Type

All institutions were grouped into five categories: research universities, additional research university campuses, regional comprehensive universities and the state's public liberal arts college, university centers, and CTC applied bachelor's degree programs.

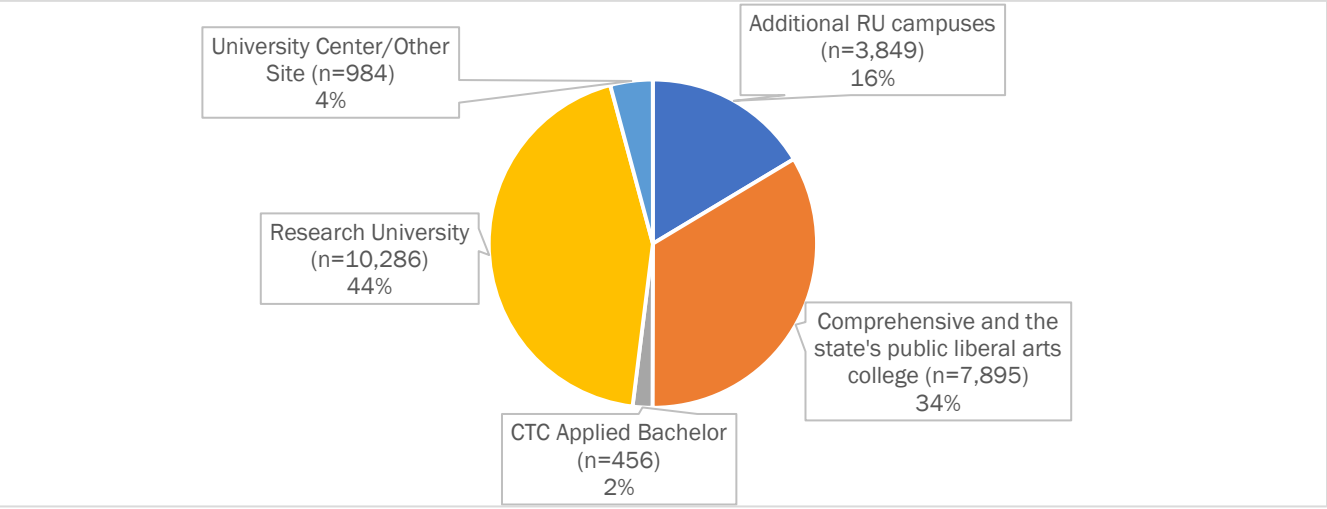
Figure 1
Categorization of College Campuses

Baccalaureate Awarding Institution	Research Universities	Comprehensive Universities and State Public Liberal Arts College	Additional RU Campuses	University Centers *	CTC Applied Bachelor's
University of Washington	Seattle		Tacoma, Bothell	Other sites	
Washington State University	Pullman		Spokane, Tri-Cities, Vancouver	Distance and other sites	
Central Washington University		Ellensburg		Other sites	
Eastern Washington University		Cheney		Other sites	
The Evergreen State College		Olympia		Other sites	
Western Washington University		Bellingham		Other sites	
Community and Technical Colleges					Bellevue, Centralia, Clark, Clover Park, Columbia Basin, Green River, Highline, Lake Washington, North Seattle, Olympic, Peninsula, Seattle Central, Skagit Valley, South Seattle, Yakima

* See Appendix C

This report is based on the records of 23,470 students who earned a bachelor's degree as graduates of the Class of 2016. Forty-four (44) percent of these students graduated from the main campus of a research university and about one third (34 percent) were from a comprehensive university or the state's public liberal arts college. Sixteen (16) percent of the graduates were from the additional research university campuses; another four percent graduated from university centers. Two percent graduated from CTC applied bachelor's degree programs.

Figure 2
Baccalaureate Graduates by Campus Type



Graduates by Major

Degrees were grouped into seven categories. All degrees awarded were counted. The total number of degrees awarded was 24,066. Six hundred and sixty-three (663) students earned double major degrees. The largest category was arts and letters, followed by social science and STEM. The highest percentage of research university degrees was in STEM (36 percent) followed by social science (23 percent) and arts and letters (18 percent). Comprehensive universities and the state's public liberal arts college awarded one-fourth (26 percent) of their degrees in arts and letters and another fourth (25 percent) in STEM. Additional research university campuses awarded 27 percent of their degrees in STEM and 22 percent in social sciences. University Centers awarded 27 percent of their degrees in education and 21 percent in social sciences. CTC applied bachelor's degrees focused on business (35 percent), business, health fields (34 percent) and STEM (21 percent).

Figure 3
Graduates by Major
Class of 2016

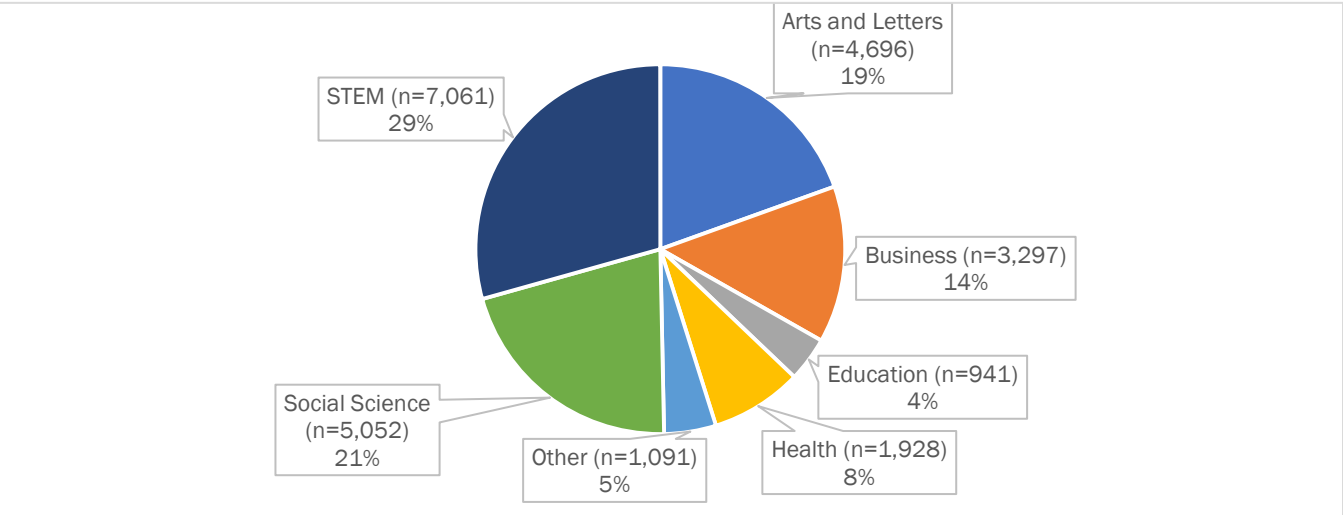
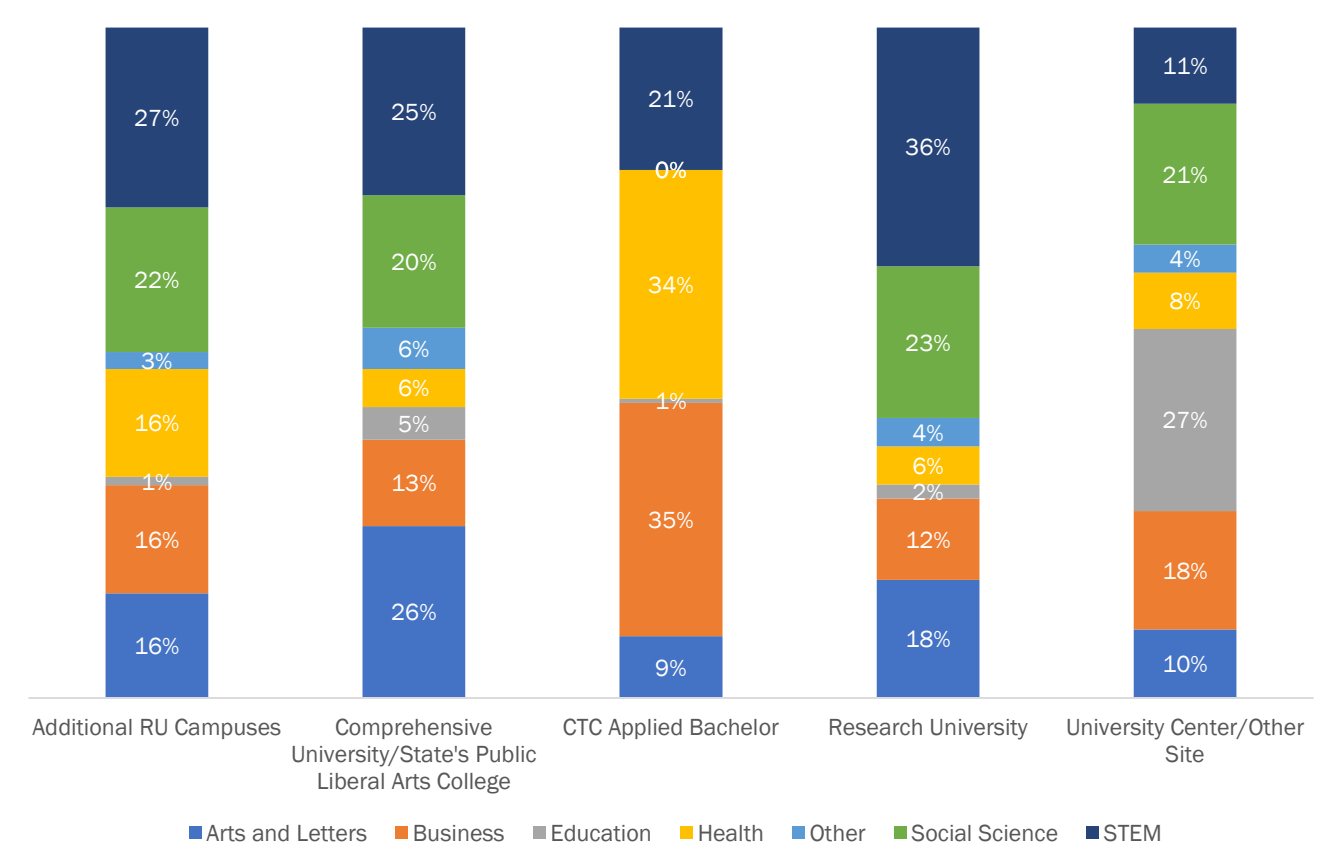


Figure 3.a
Degree Majors by Campus Type

Major	Additional RU Campuses	Comprehensive University/State's Public Liberal Arts College	CTC Applied Bachelor	Research University	University Center/Other Site	Total
Arts and Letters (n=4,696)	13%	44%	1%	40%	2%	100%
Business (n=3,297)	19%	32%	5%	39%	5%	100%
Education (n=941)	5%	42%	0%	24%	29%	100%
Health (n=1,928)	32%	24%	8%	31%	4%	100%
Other (n=1,091)	9%	46%	0%	41%	4%	100%
Social Science (n=5,052)	17%	32%	0%	48%	4%	100%
STEM (n=7,061)	15%	29%	1%	54%	2%	100%
Total (n=24,066)	16%	34%	2%	44%	4%	100%

Figure 3.b
Campus Type by Major



Graduates by Race/Ethnicity, Gender, Age and Campus Type

This section describes the race/ethnicity, gender, and age of bachelor's degree graduates. Data are presented first in Figure 4 by campus type to show the percent of degrees earned by a group by campus type. Then in figure 4.a, the second view, the chart presents race/ethnicity by campus type. This chart shows the self-reported race/ethnicity of graduates disaggregated by the type of campus where they earned their degree. Each graduate is counted for each race and ethnic group reported and may be counted more than once.

Figure 4 shows that research universities have the highest percentage of students of color. This is largely due to the substantial share (20 percent) of students identifying as Asian at these campuses. CTC applied bachelor degree programs have the highest proportion of students identifying as Hispanic.

Figure 4
Campus Type by Student Reported Race/Ethnicity

Campus Type	African American	Asian/Pacific Islander (including Hawaiian)	Hispanic	Native American (American Indian or Alaskan Native)	Other, Multiracial	White	Unknown	Total
Additional RU Campuses (n=3,842)	5%	15%	8%	1%	4%	51%	16%	100%
Comprehensive University/State's Public Liberal Arts College (n=7,895)	3%	6%	8%	1%	2%	65%	15%	100%
CTC Applied Bachelor (n=455)	3%	9%	11%	0%	3%	55%	18%	100%
Research University (n=10,280)	3%	20%	7%	1%	2%	50%	16%	100%
University Center/Other Site (n=983)	7%	10%	7%	1%	5%	55%	15%	100%

The distribution of race/ethnicity by campus type (Figure 4.a) shows that 64 percent of graduates identifying as Asian received their degrees from a research university. Thirty-four (34) to 42 percent of students identifying as white, Hispanic, and African American earned degrees from research universities and 27 to 33 percent earned degrees from comprehensive universities and the state's public liberal arts college. Students identifying as Native American were the only group to have a higher percentage of graduates from comprehensive and the state's public liberal arts college (40 percent) than from research universities (39 percent).

Figure 4.a
Student Reported Race/Ethnicity by Campus Type

Description	Additional RU Campuses	Comprehensive University/State's Public Liberal Arts College	CTC Applied Bachelor	Research University	University Center/Other Site
African American (n=781)	23%	27%	2%	40%	8%
Asian/Pacific Islander (including Hawaiian) (n=3,244)	17%	14%	1%	64%	3%
Hispanic (n=1,783)	18%	33%	3%	42%	4%
Native American (American Indian or Alaskan Native) (n=276)	15%	40%	1%	39%	4%
Other, Multiracial (n=645)	26%	30%	2%	34%	8%
White (n=13,046)	15%	39%	2%	40%	4%

Graduates by Gender

Females comprised over half (55 percent) of graduates at every campus type.

Figure 5
Gender Status Baccalaureate Graduates Class of 2016

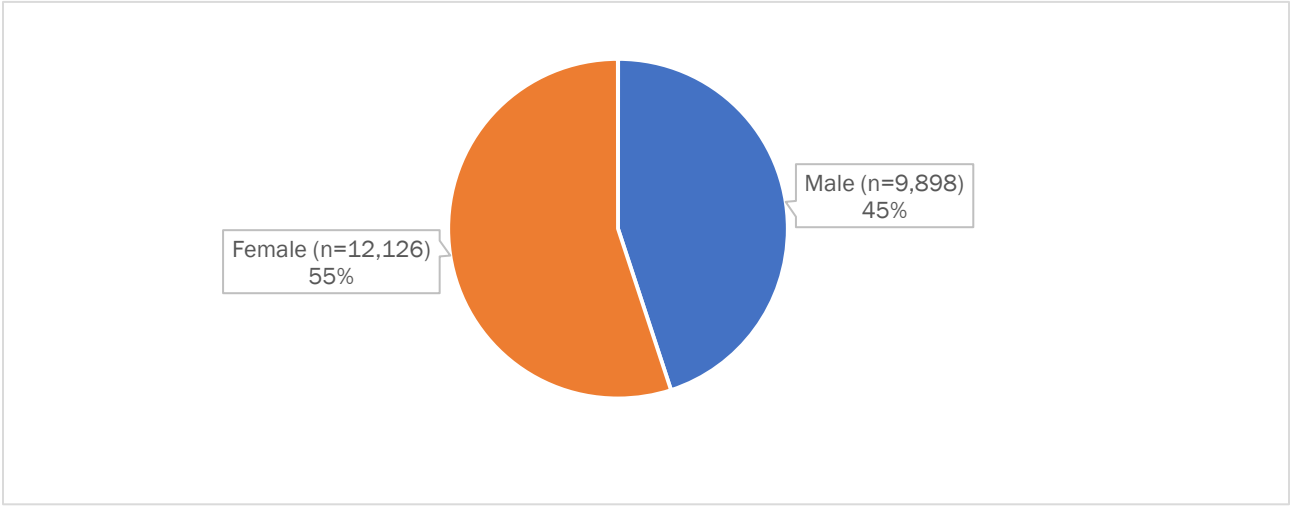
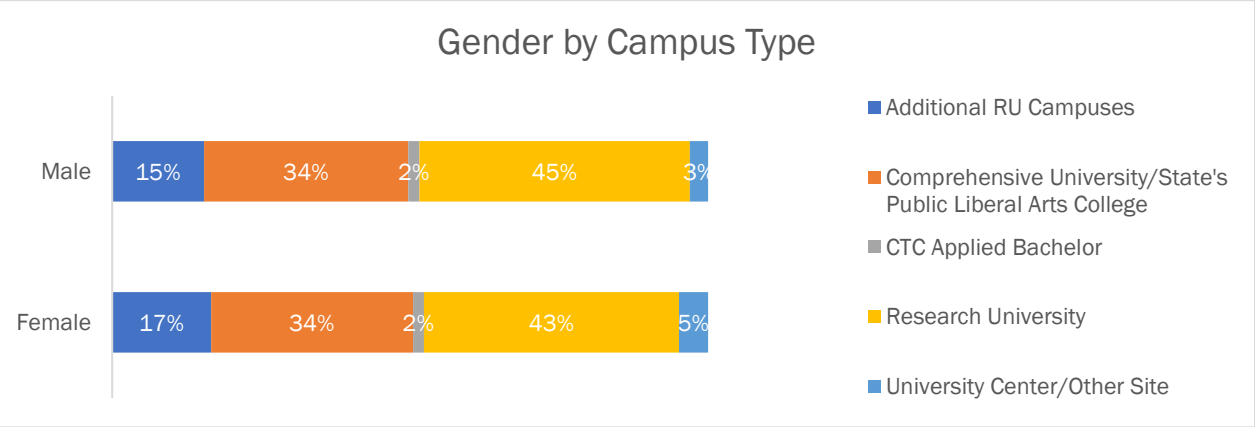


Figure 5.a
Campus Type by Gender

Campus Type	Female	Male
Additional RU Campuses	57%	43%
Comprehensive University/ State's Public Liberal Arts College	55%	45%
CTC Applied Bachelor	55%	45%
Research University	54%	46%
University Center/Other Site	66%	34%

Figure 5.b
Gender by Campus Type



Graduates by Age

The majority (72 percent) of graduates were under 25 years. Younger students made up more than three-fourths of graduates at comprehensive universities, the state's public liberal arts college and research universities. Older graduates were more heavily concentrated at CTC baccalaureates and branches, university centers.

Figure 6
Graduates by Age

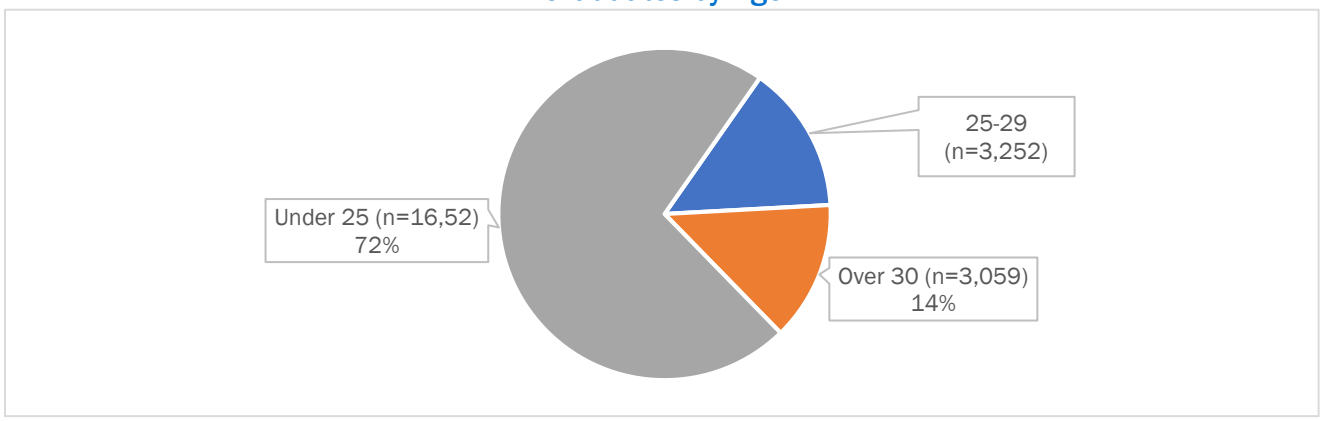
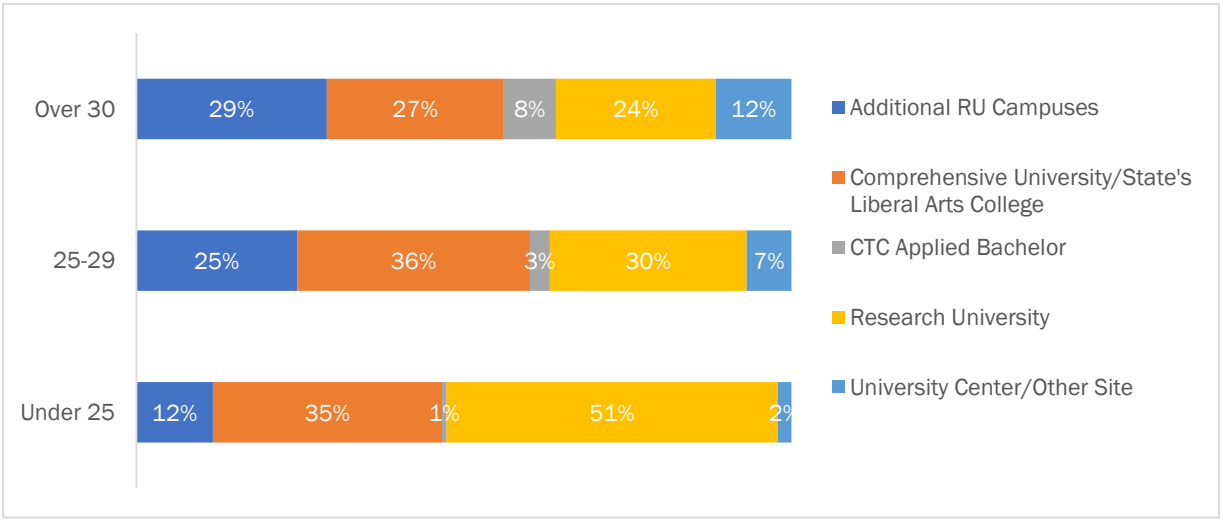


Figure 6.a
Campus Type by Age at Graduation

Campus Type	Under 25	25-29	Over 30
Additional RU Campuses (n=3,550)	53%	22%	25%
Comprehensive University/State's Liberal Arts College (n=7,619)	74%	15%	11%
CTC Applied Bachelor (n=452)	25%	22%	53%
Research University (n=9,869)	83%	10%	8%
University Center/Other Site (n=912)	37%	24%	38%

Figure 6.b
Graduate Age by Campus Type



Part Two: Baccalaureate Graduates Entry Status

All graduates were classified as being a "direct entry," "CTC transfer," or "other transfer" based on the credits and credentials they brought with them when they first entered either a public baccalaureate institution or a community or technical college applied bachelor's degree program. The criteria used for classifying the graduates are described more completely in Appendix D.

Over half (52 percent) of graduates in the class of 2016 were classified as transfer students (Figure 7). Transfer students included CTC transfers (39 percent) and other transfers (13 percent). Forty-six (46) percent of bachelor's degrees were direct entry. Almost half of this group had previously transferred credits, however, less than the 40 credit threshold used to define a transfer student (Figure 8).

Figure 7
Type of Student

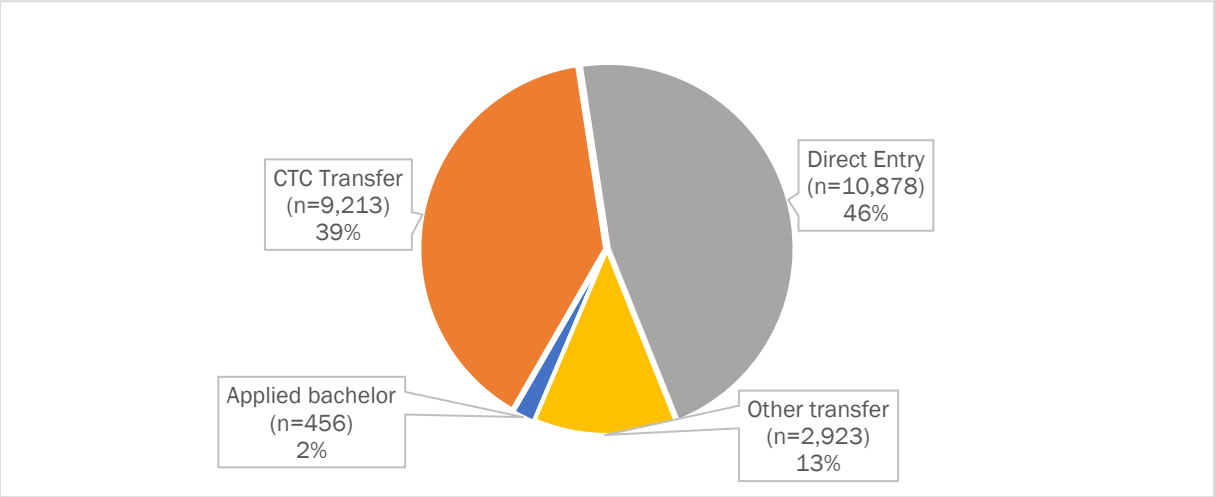
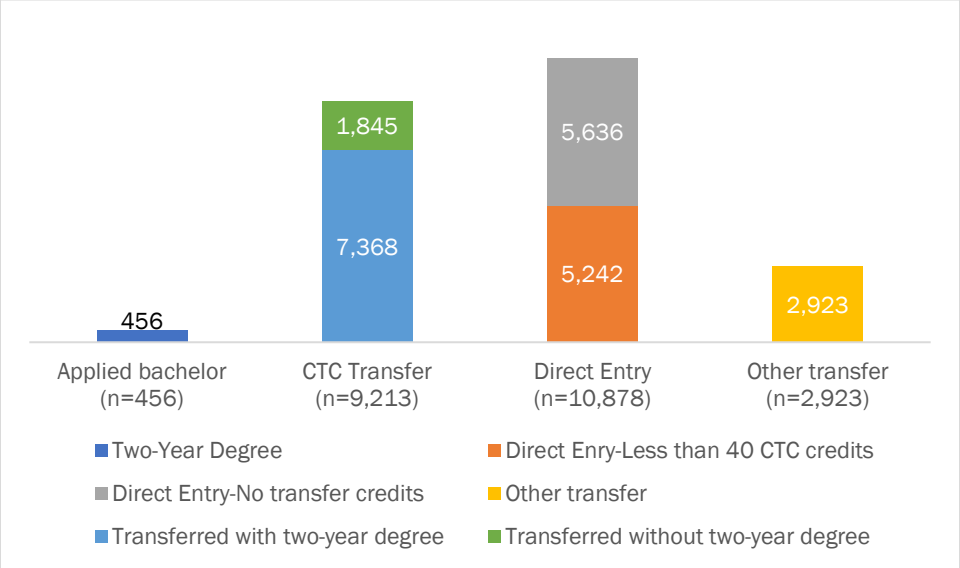


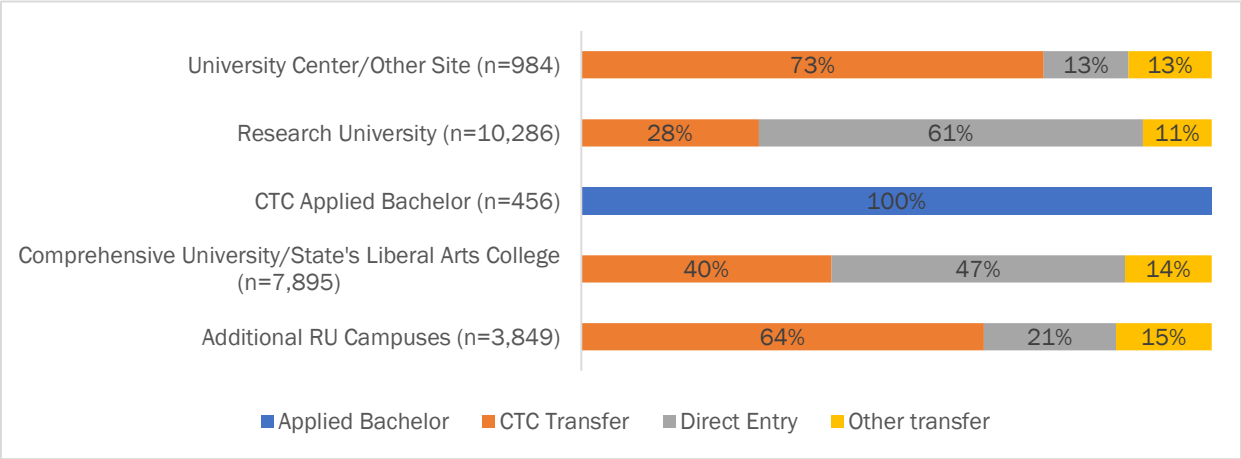
Figure 8
Graduates' Distribution by Entry Status



Entry Status by Campus type

Figure 9 below describes entry status by campus type. CTC transfers as a percent of graduates ranges from 28 percent of graduates at the research universities to 100 percent of graduates at the CTC applied bachelor's degree program.

Figure 9
Entry Status by Campus Type



Entry Status by Major

In Figure 10, CTC transfer students comprised more than one third of the graduates in each of the seven major categories (Figure 10). They comprised the largest share of graduates in education (45 percent), health (44 percent), and social sciences (42 percent). They comprised 39 percent of business graduates, 37 percent of STEM and 36 percent of arts and letters graduates.

Figure 10
Entry Status by Major

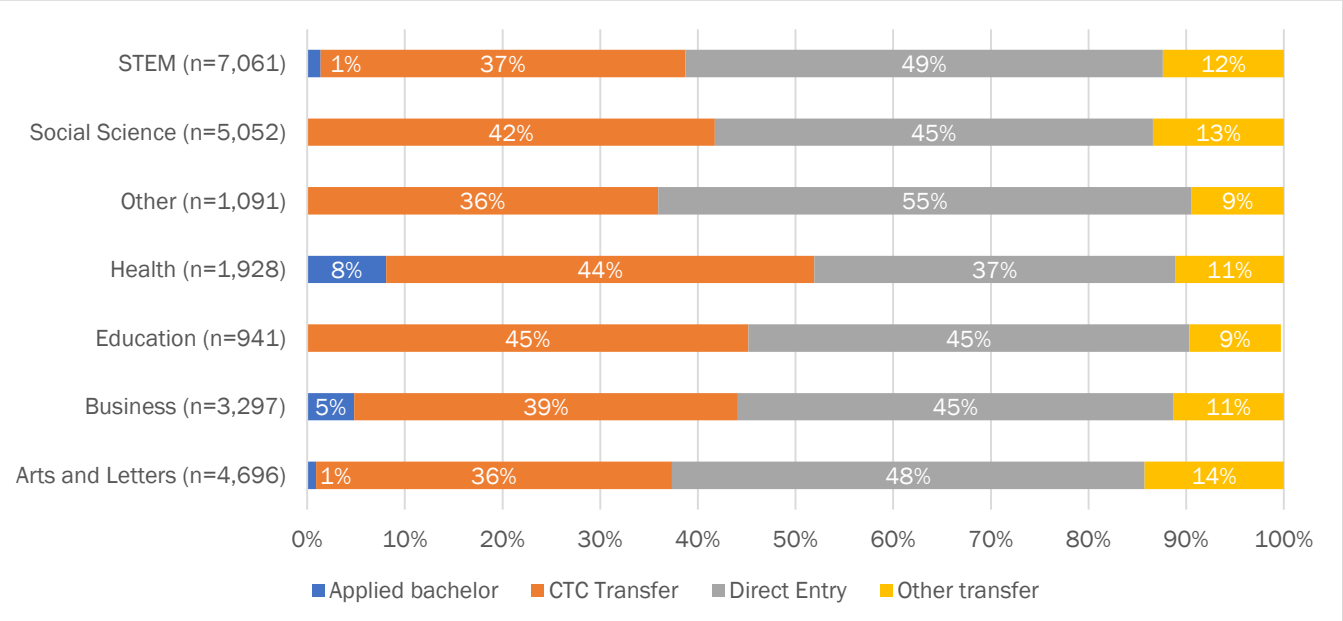
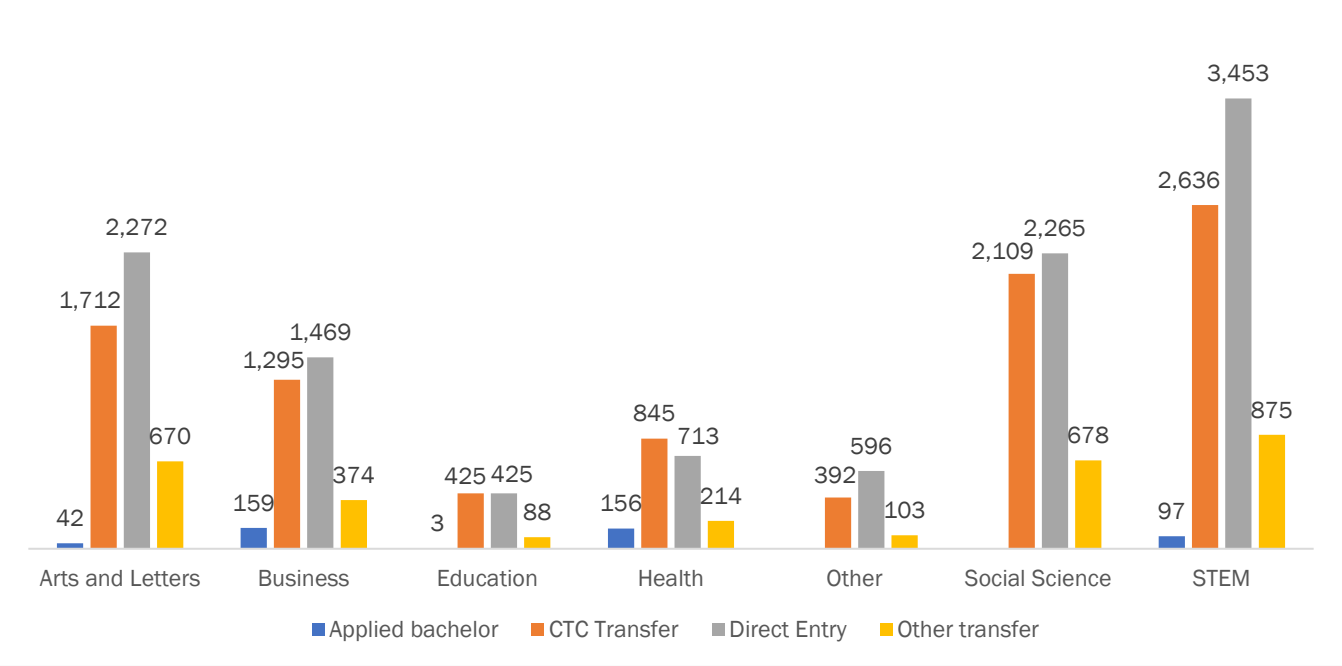


Figure 10.a
Entry Status by Major Student Counts

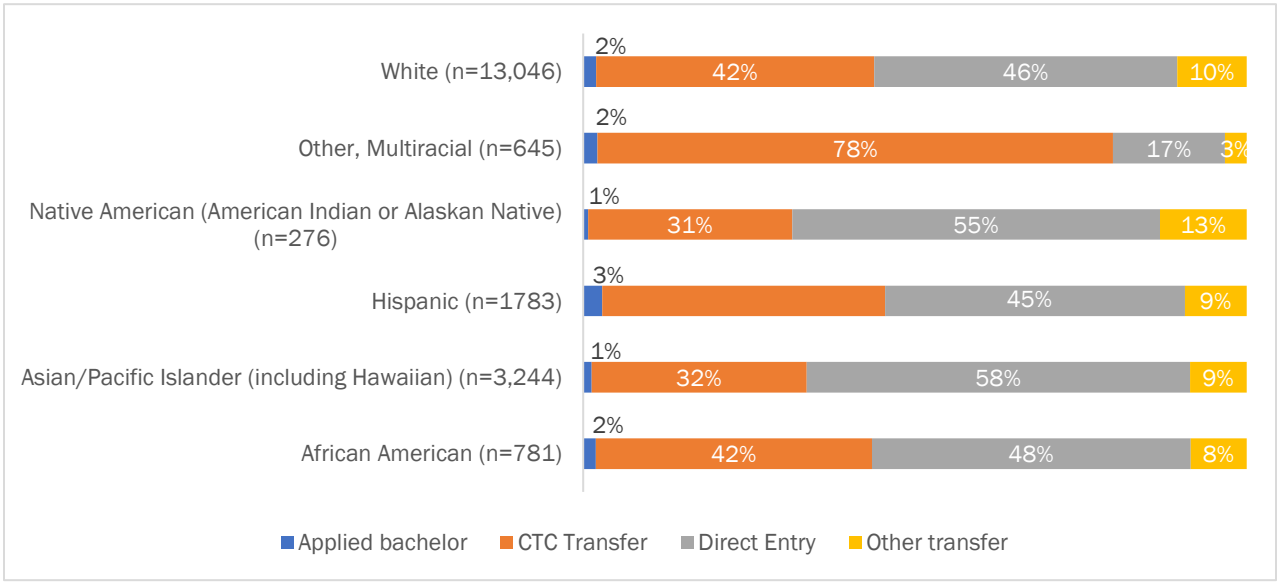


Entry Status by Student Characteristics

Race/Ethnicity

Compared to their overall percentage of Bachelor's degree graduates (39 percent), CTC transfers had larger shares of graduates for white, Hispanic, and African American students.

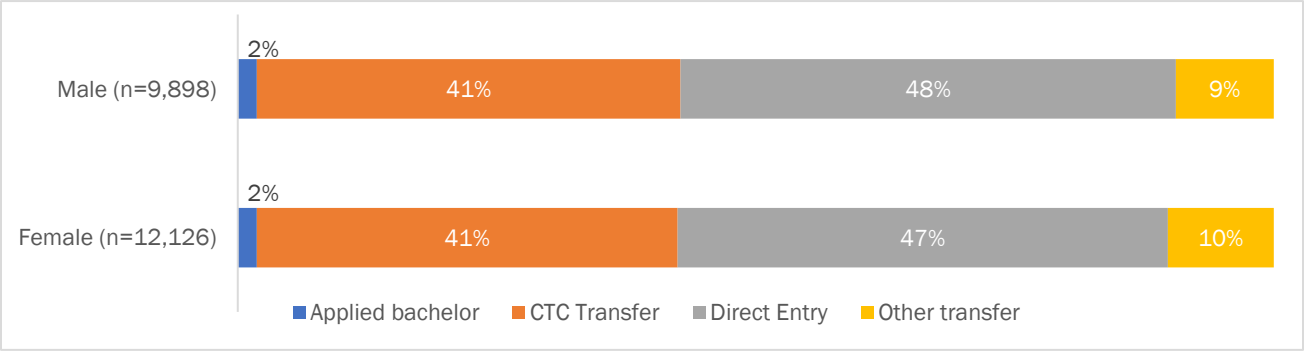
Figure 11
Student Reported Race/Ethnicity by Entry Status



Gender

There is little difference in entry status by gender between males and females.

Figure 12
Gender by Entry Status



Entry Status by Age

CTC transfer students at entry are typically older than other graduates as shown in figure 13.

Figure 13
Age at Graduation by Entry Status

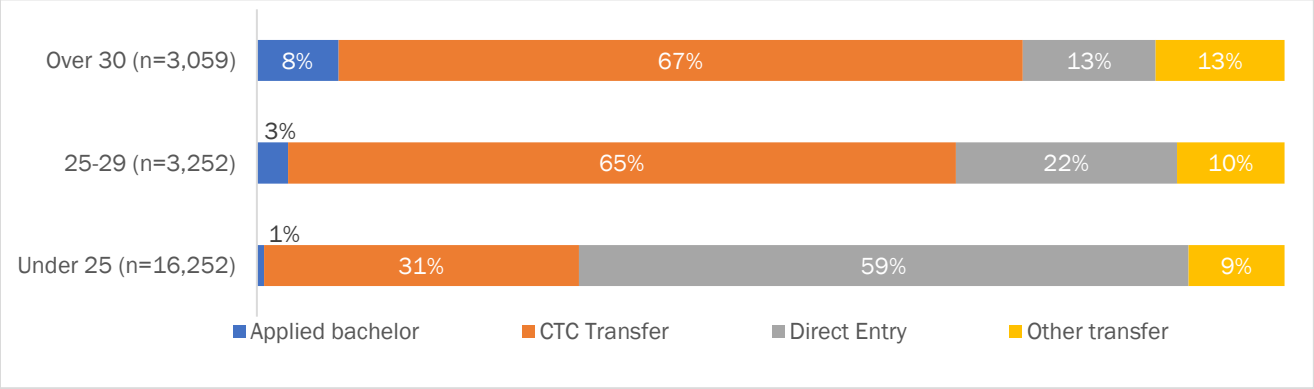
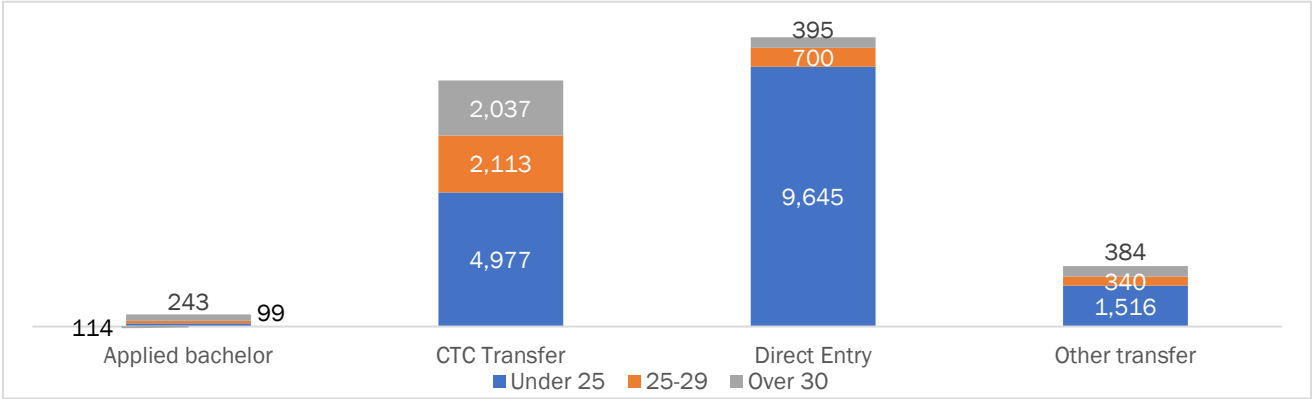


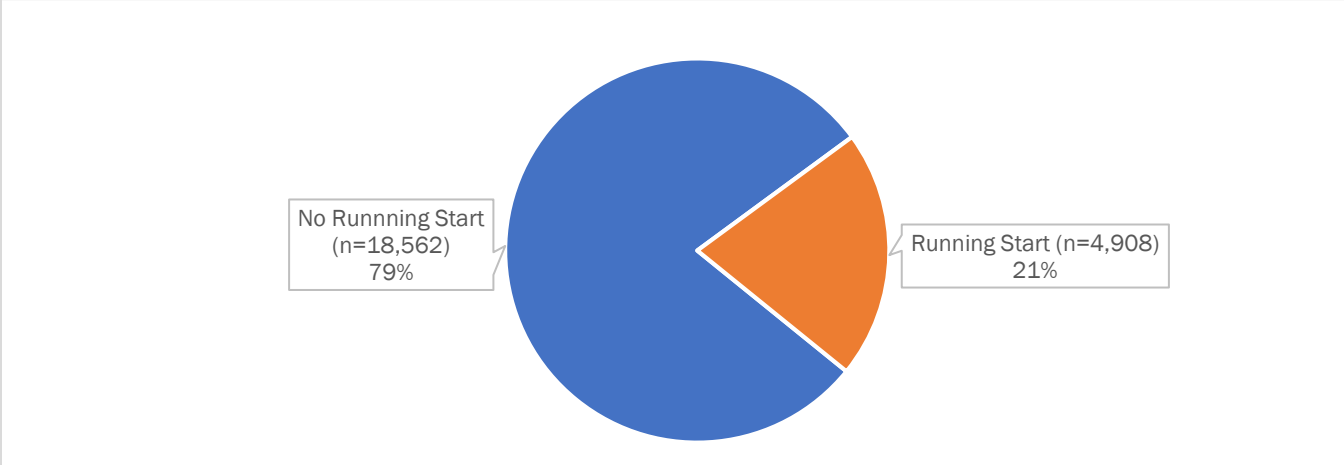
Figure 13.a
Entry Status by Age at Graduation Student Counts



Part Three: Contribution of Community and Technical College Dual Enrollments Running Start to 2016 CTC Transfer Baccalaureate Graduates

This section examines the role of CTC Running Start in the 2016 Baccalaureate graduation class. Four thousand nine hundred and eight (4,908) CTC transfers[1] (21 percent) participated in dual enrollment Running Start at their CTC as part of their preparation for post-secondary education.

Figure 14
% of 2016 Baccalaureate Graduates with Prior Running Start



Running Start Enrollments by Entry Status and Type of Campus

Running Start students entry status for this report is classified the same as other baccalaureate graduates. About half transferred with a two-year degree that was started or fully completed in Running Start. Another 17 percent transferred with at least 40 college credits. Twenty-eight percent were classified as direct entry after Running Start (figure 15).

Forty-three (43) percent of Running Start students graduated from research universities; 35 percent graduated from comprehensive universities and the state's public liberal arts college (figure 16).

One-third (33 percent) graduated in STEM majors. Another 21 percent graduated in social sciences majors. Nineteen (19) percent graduated in arts and letters (figure 17).

[1] CTC transfers in this section refers to transfers that earned their Bachelor's degree plus CTC Applied Bachelor's degree graduates.

Figure 15
CTC Transfers Who Participated in Dual Enrollment Running Start by 4-Year Entry Status

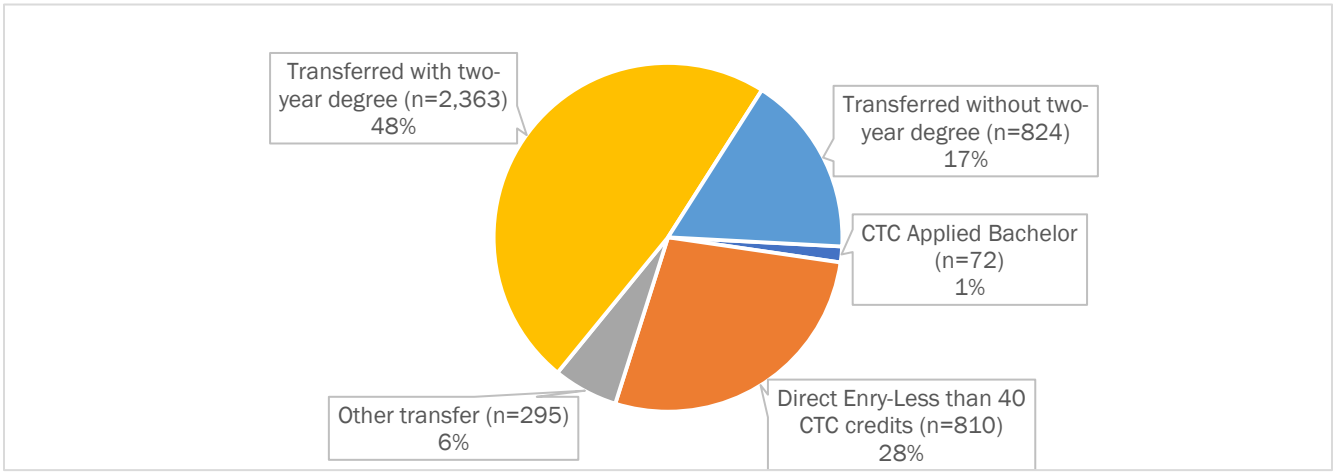


Figure 16
CTC Transfers Who Participated in Dual Enrollment Running Start by 4-Year Campus Type

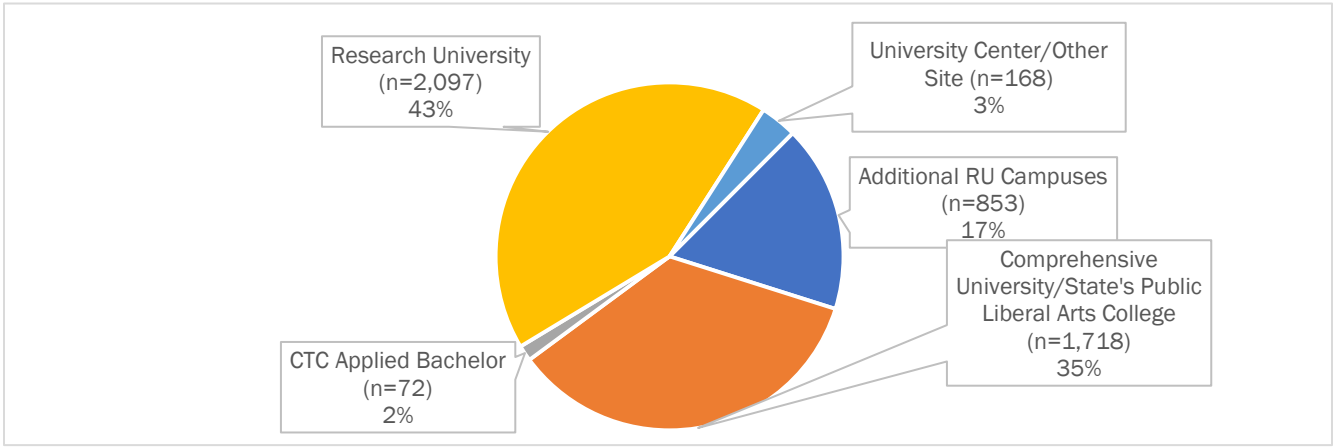
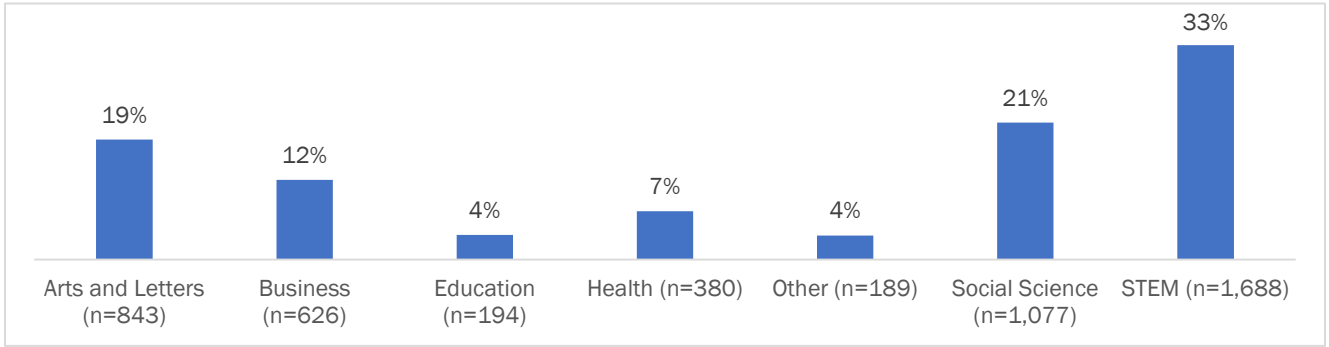


Figure 17
CTC Transfers Who Participated in Dual Enrollment Running Start by Degree Major

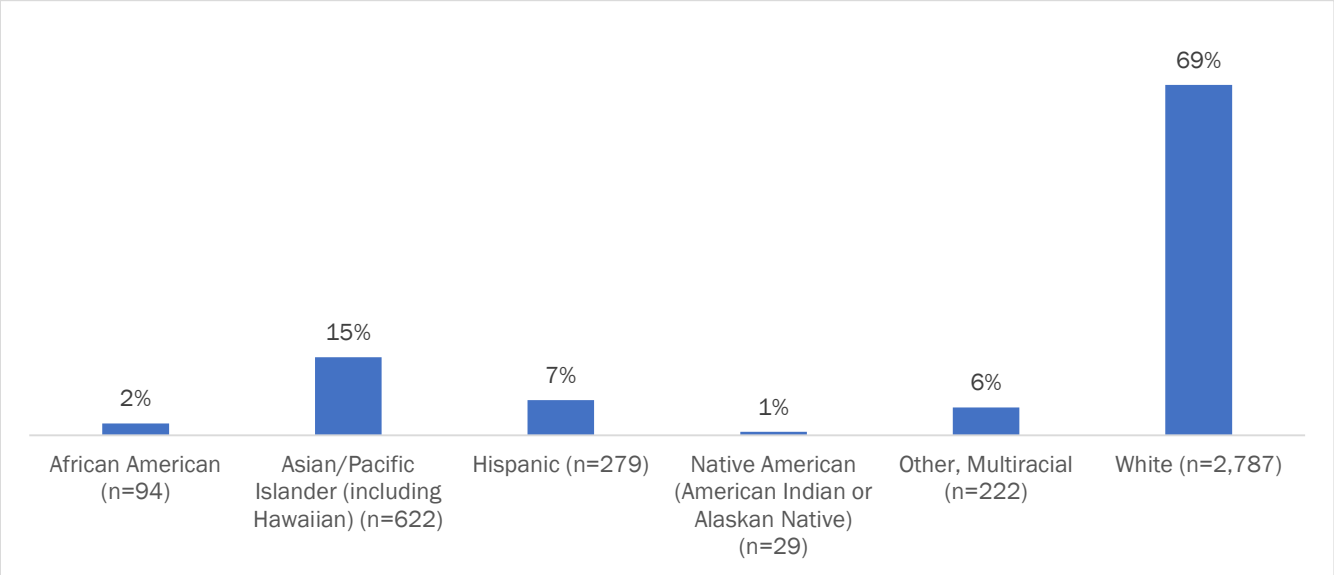


Characteristics of Pre-College CTC Transfer Students

Race/Ethnicity

Students identifying as white and Asian comprised 84 percent of Running Start enrollments.

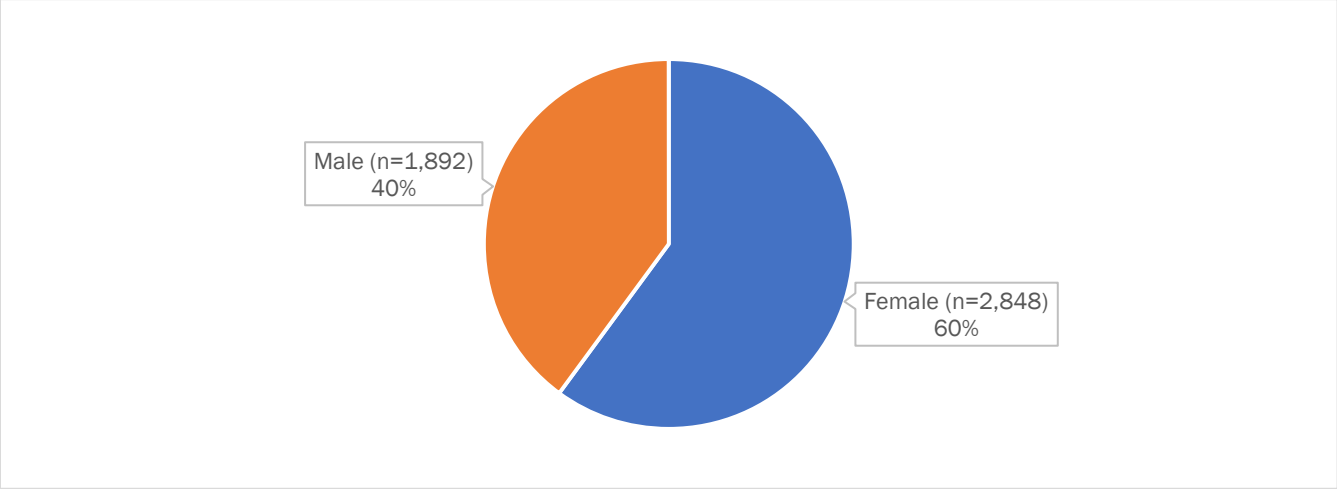
Figure 18
CTC Transfers Who Participated in
Dual Enrollment Running Start by Self-Reported Race/Ethnicity



Gender

Running Start participation was higher for females.

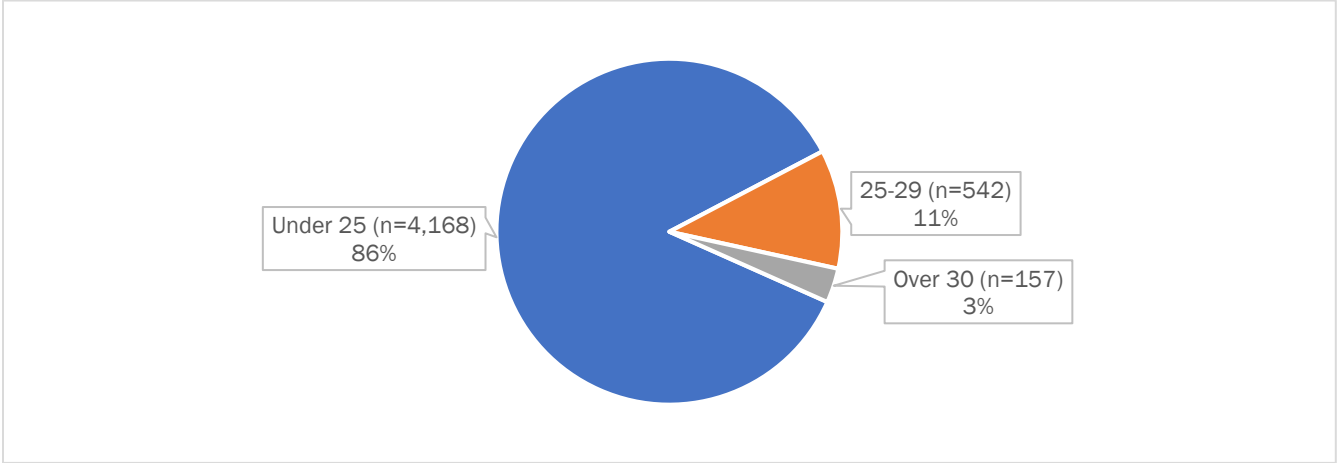
Figure 19
CTC Transfers Who Participated in
Dual Enrollment Running Start by Gender



Age

Running Start students are generally younger than other graduates.

Figure 20
CTC Transfers Who Participated in
Dual Enrollment Running Start by Age at Bachelor's Degree Graduation

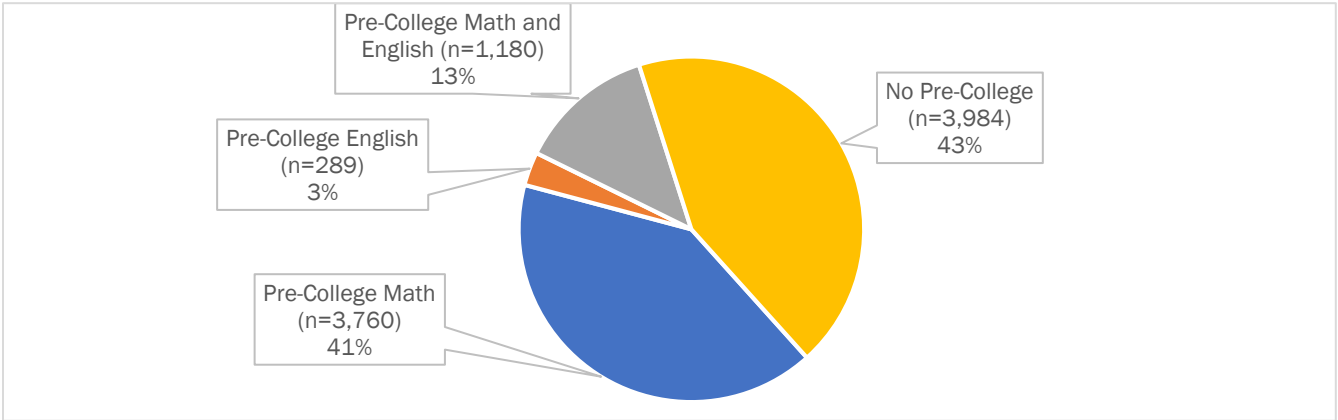


Part Four: Contribution of Community and Technical College Pre-College Preparation to 2016 Baccalaureate Graduates

Four thousand nine hundred forty (4,940) CTC transfers (54 percent) enrolled in pre-college coursework at their CTC as part of their preparation to transfer.

In addition to the CTC transfer students reported above, there were nearly 1,077 students classified as "direct entry", "CTC baccalaureate" and "other transfer" who also took pre-college courses at the CTCs. Forty-nine (49) students took English, 868 took math, and 160 took math and English. This demonstrates the strong role played by the CTCs in supporting bachelor's degree students particularly with their math requirements.

Figure 21
% of CTC Transfers Enrolled in Pre-College Math and English
(N=9,213)



Pre-College Enrollments by Baccalaureate Graduation Major and Campus Type

Pre-college course taking prior to transfer contributed substantially to graduates in all major fields (figure 22) and all campus types (figure 23).

Figure 22
% of CTC Transfers by Baccalaureate Major Enrolled in Pre-College Math and English

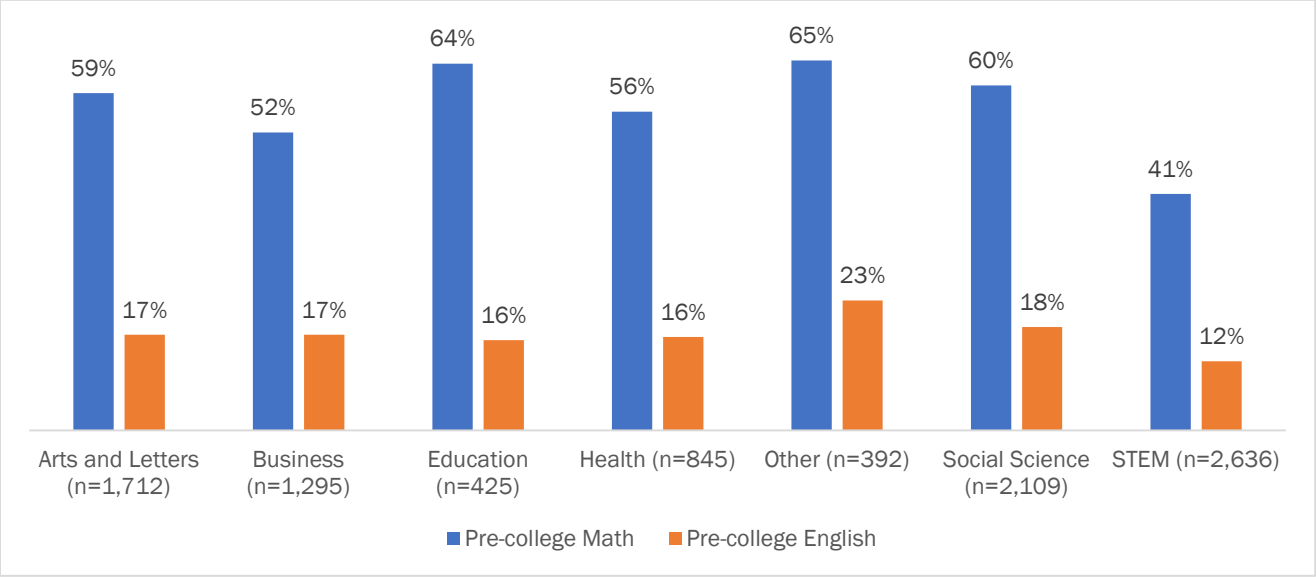
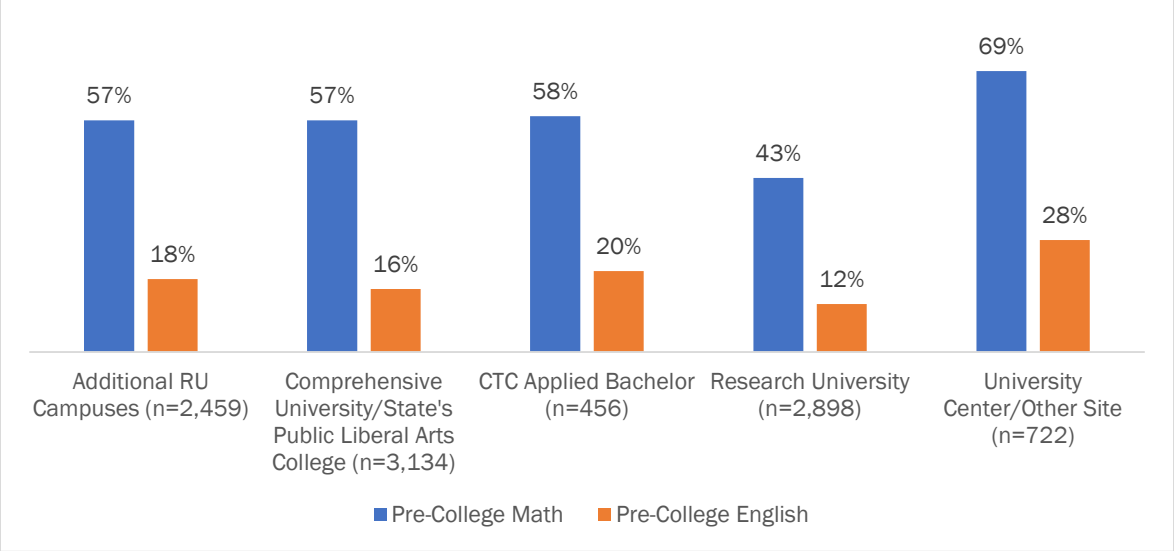


Figure 23
% of CTC Transfers Enrolled in Pre-College Math and English by Baccalaureate Campus Type



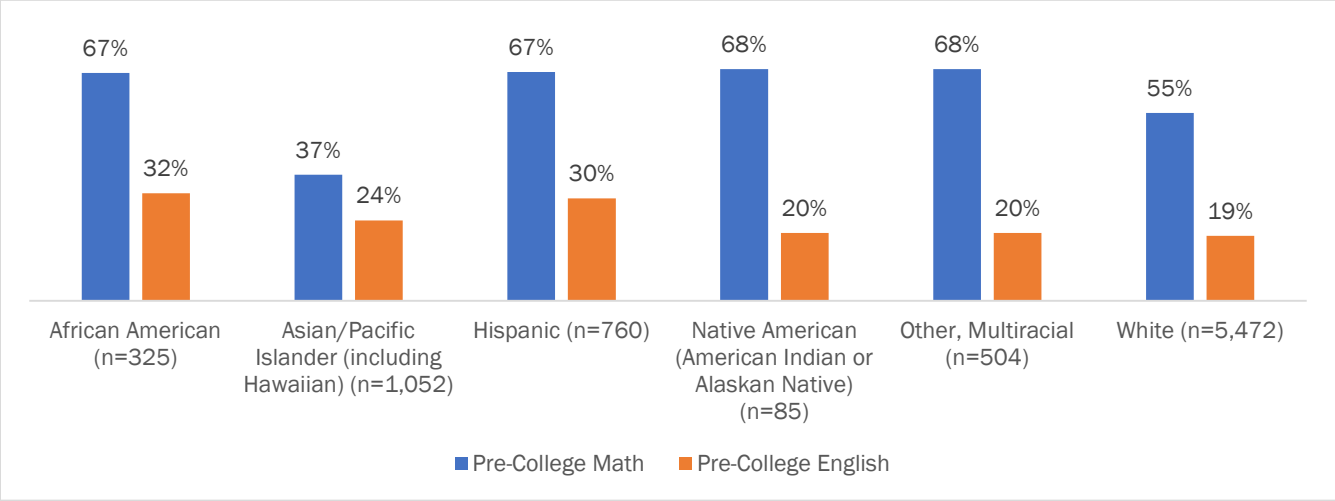
Characteristics of CTC Transfers Who Participated in Pre-College

Race/Ethnicity

Participation in pre-college courses was critical to preparing transfer students in all race/ethnic groups.

Students identifying as Hispanic, African American and Native American had the highest rates of pre-college enrollments. The high participation in pre-college among CTC transfer students indicates that the availability of pre-college courses provided significant access for a segment of students who identified as Hispanic, African American, and Native American who were less prepared and less likely to earn bachelor's degrees without this additional support.

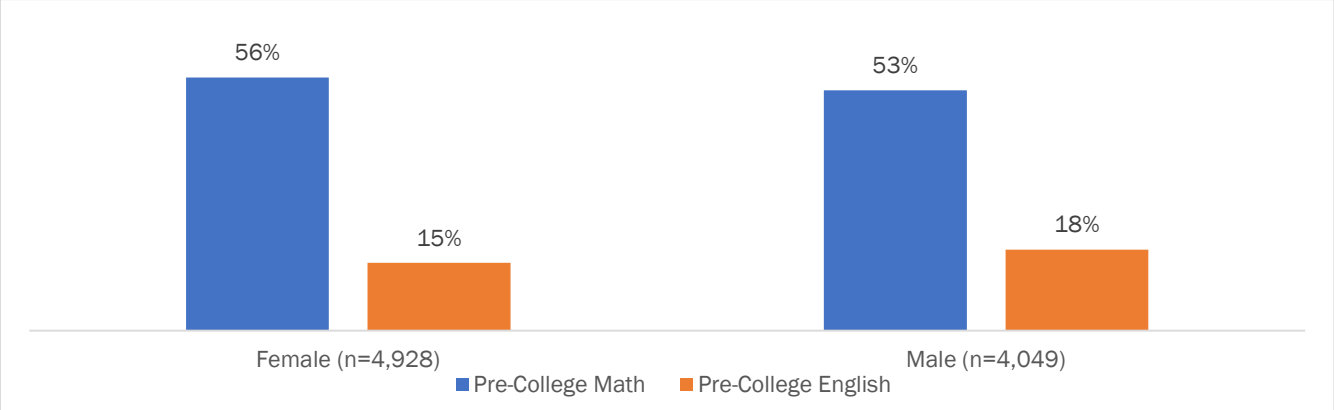
Figure 24
% of CTC Transfers Enrolled in Pre-College Math and English by Student Reported Race/Ethnicity



Gender

Males and females participated in pre-college math and English in about the same proportions.

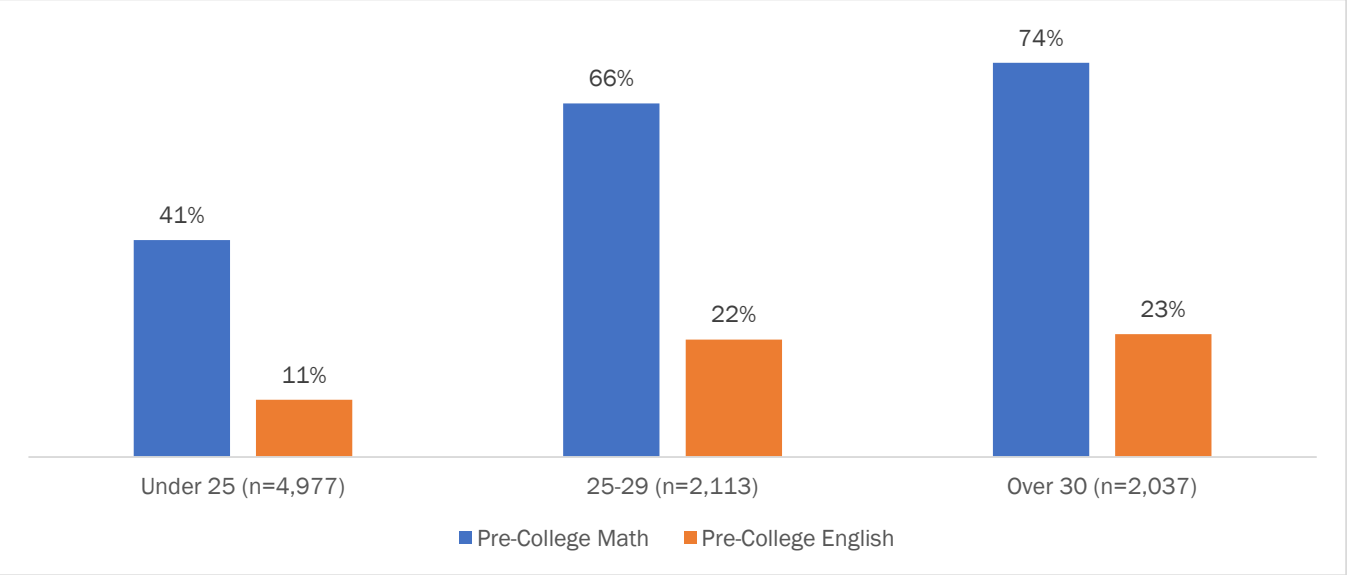
Figure 25
% CTC Transfers Enrolled in Pre-College Math and English by Gender



Age

Older graduates were more likely to have needed pre-college preparation prior to transfer than students under 25. However, there was substantial need in all age groupings.

Figure 26
% of CTC Transfers Enrolled in Pre-College Math and English by Age at Graduation



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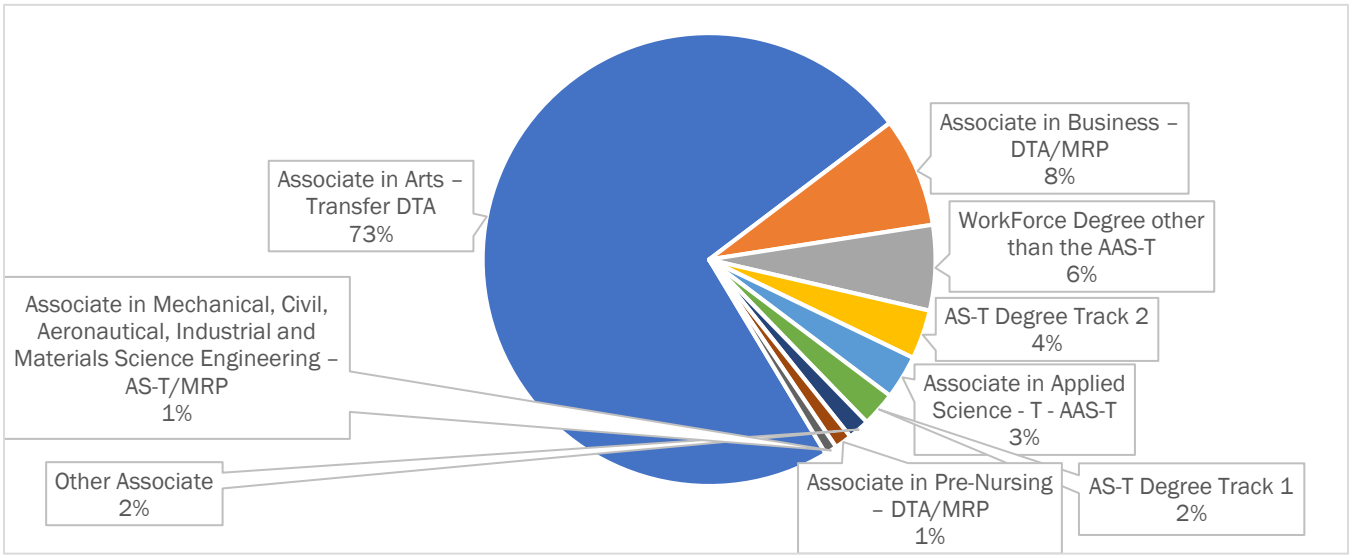
Part Five: CTC Transfer Pathways and How Transfer Graduates Perform Compared to Direct Entry Graduates

CTC Transfers by Two-Year Degree Type

Eight in ten (80 percent) of CTC transfers earned their two year degree prior to transfer. The Direct Transfer Agreement (DTA) Associate degree (sometimes called the Associate in Arts, Associate in Arts and Sciences), was by far the most common degree transferred (73 percent). Another 13 percent earned specialized degrees. These degrees focus on specific transfer pathways for business, engineering, and sciences. Nine (9) percent transferred with a professional technical degree. Finally, another 3 percent had transfer degrees in major ready pathways for pre-nursing and other associate degrees.

Figure 27

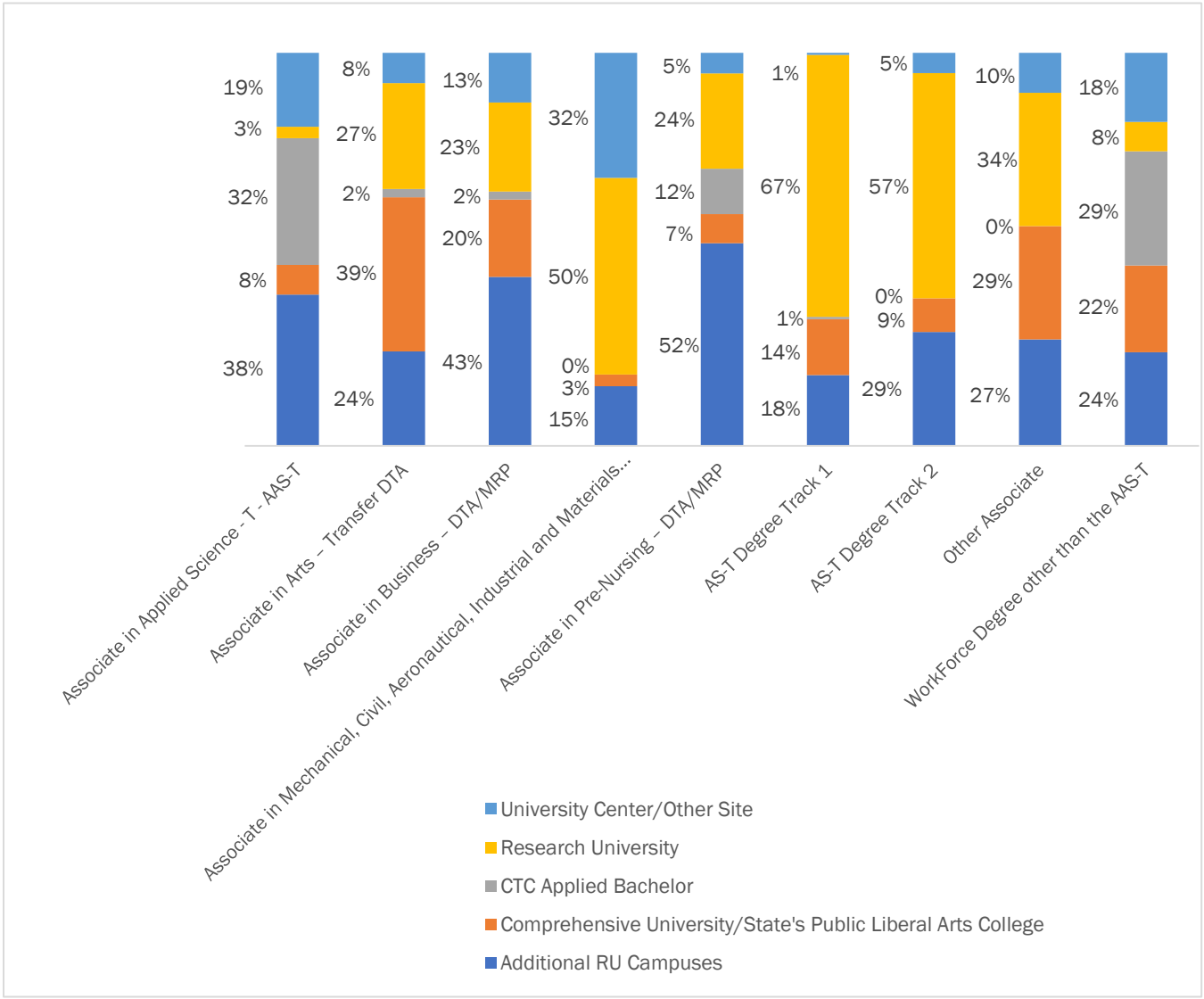
Two-Year Degree Earned by Baccalaureate Graduates Students (N=7,650)



Two-Year Degree by Four-Year Campus Type

The DTA was successfully used by transfer students to all campus types. Associate in Science degrees were particularly significant for transfer to research universities. The largest portion of Associate in Applied Science and other workforce degrees were used to transfer to branch campuses and CTC baccalaureates.

Figure 28
Two-Year Degree by Campus Type



Two-Year Degree by Baccalaureate Major

The Associate in Arts - DTA degree was distributed across bachelor's degree majors. Specialized degrees were well targeted towards the articulated bachelor's degree major associated with it. Professional technical and transfer professional technical degrees were both focused on STEM, business and health.

Figure 29
Two-Year Degree by Bachelor's Degree Major

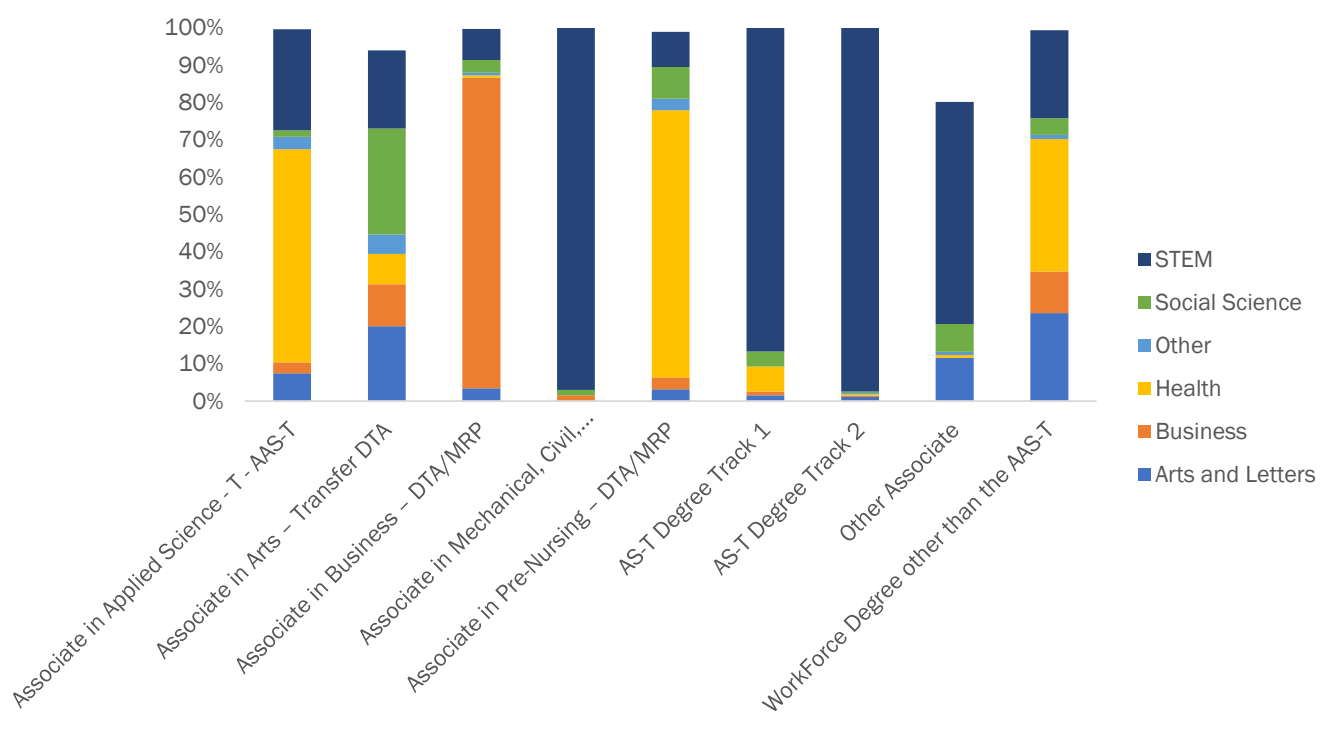


Figure 29.a
Two-Year Degree by Bachelor's Degree Major- Detailed Table

Two-Year Degree	Arts and Letters	Business	Education	Health	Other	Social Science	STEM
Associate in Applied Science - T - AAS-T	8%	3%	0%	57%	3%	2%	27%
Associate in Arts – Transfer DTA	20%	11%	6%	8%	5%	28%	21%
Associate in Business – DTA/MRP	3%	83%	0%	1%	1%	3%	8%
Associate in Mechanical, Civil, Aeronautical, Industrial and Materials Science Engineering – AS-T/MRP	0%	2%	0%	0%	0%	2%	97%
Associate in Pre-Nursing – DTA/MRP	3%	3%	1%	72%	3%	8%	9%
AS-T Degree Track 1	2%	1%	0%	7%	0%	4%	87%
AS-T Degree Track 2	1%	0%	0%	0%	0%	0%	97%
Other Associate	12%	0%	20%	1%	1%	7%	60%
WorkForce Degree other than the AAS-T	24%	11%	1%	36%	1%	4%	24%

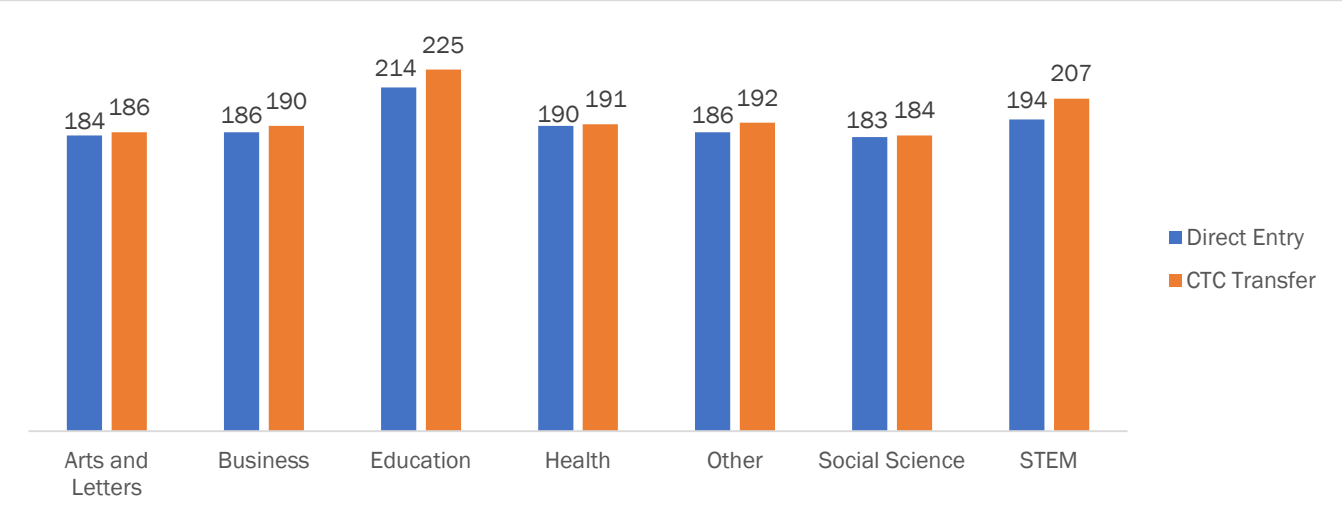
CTC Transfer Performance: Credits Earned for Bachelor's Degree Completion and Senior Year GP

This section describes CTC transfer and direct entry graduate performance along two dimensions: credits earned for the bachelor's degree and senior year GPA. Credits earned include "institutional credits earned" and "non-institutional credits earned" from PCHEES to create a "total credits to degree" field. An adjustment was made to the credits earned for all Washington State University campuses to normalize the semester credits to quarter credits. Graduates with more than one degree awarded were excluded from the analysis due to inconsistent application of credits to each completion record. Graduates from a CTC applied bachelor's degree program were not included in the analysis of major pathways. Average senior GPA was compiled by averaging the term GPA of all terms where "bachelor's degree class standing" = senior.

All Graduates Median Quarterly Credits Earned

Median credits earned for graduation was approximately the same for CTC transfer and direct entry graduates. The CTC transfer pathway judged by this dimension is equally efficient to direct entry for degree completion across degree majors, with the exception of Education and STEM. In the latter cases, CTC transfer students had at least 10 more credits than direct entry at graduation.

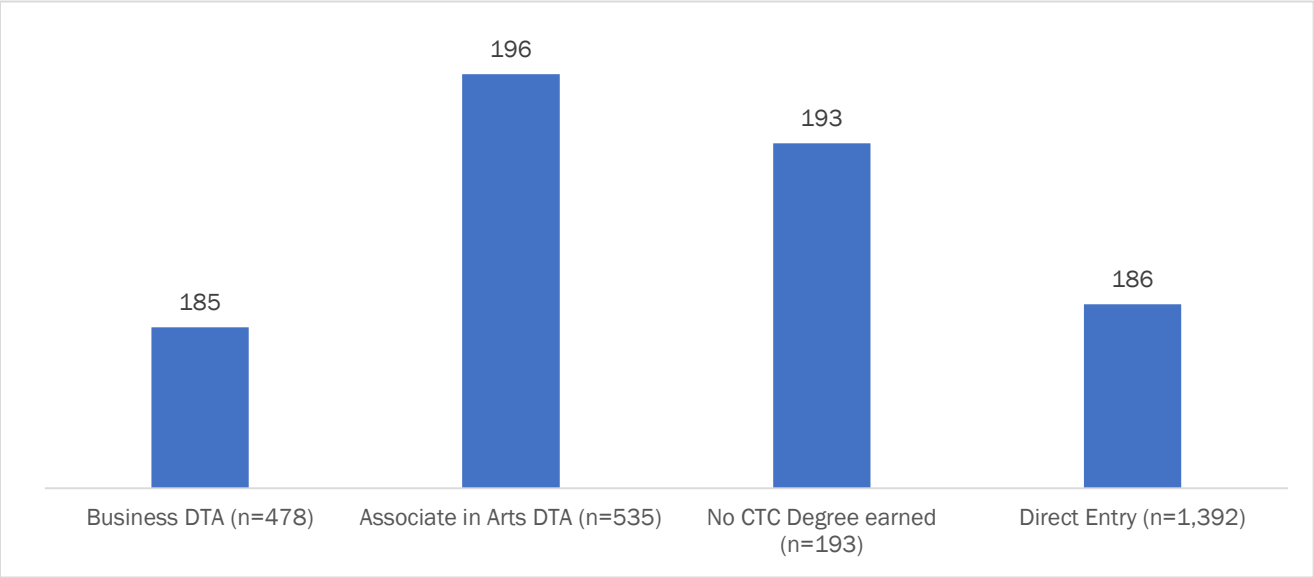
Figure 30
Median Quarter Credits to Degree by Entry Status



Baccalaureate Business Degree Median Quarterly Credits Earned

For baccalaureate business majors, the specialized Business DTA/MRP degree was more efficient than other CTC degrees, or transferring without a degree. It was comparable to direct entry in terms of credits earned for degree completion.

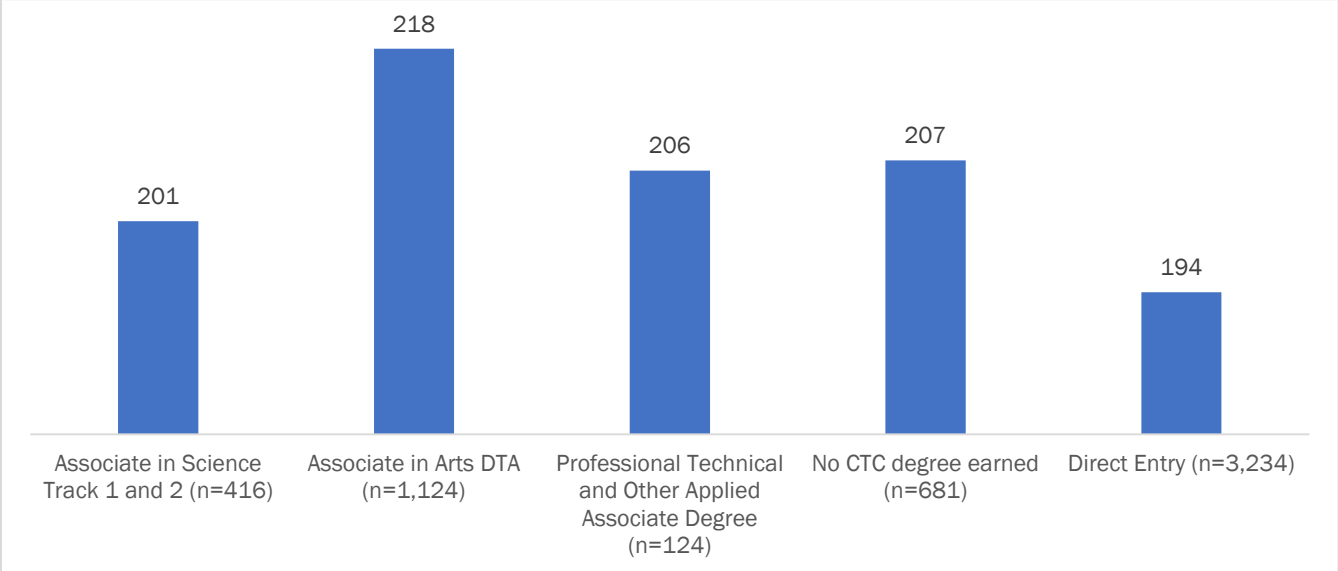
Figure 31
Median Quarterly Credits Earned Toward Business Bachelor's Degree



Baccalaureate STEM Graduates - Median Quarterly Credits Earned

Associate in Science transfer degrees were the most efficient pathway to bachelor's degree completion based upon credits earned.

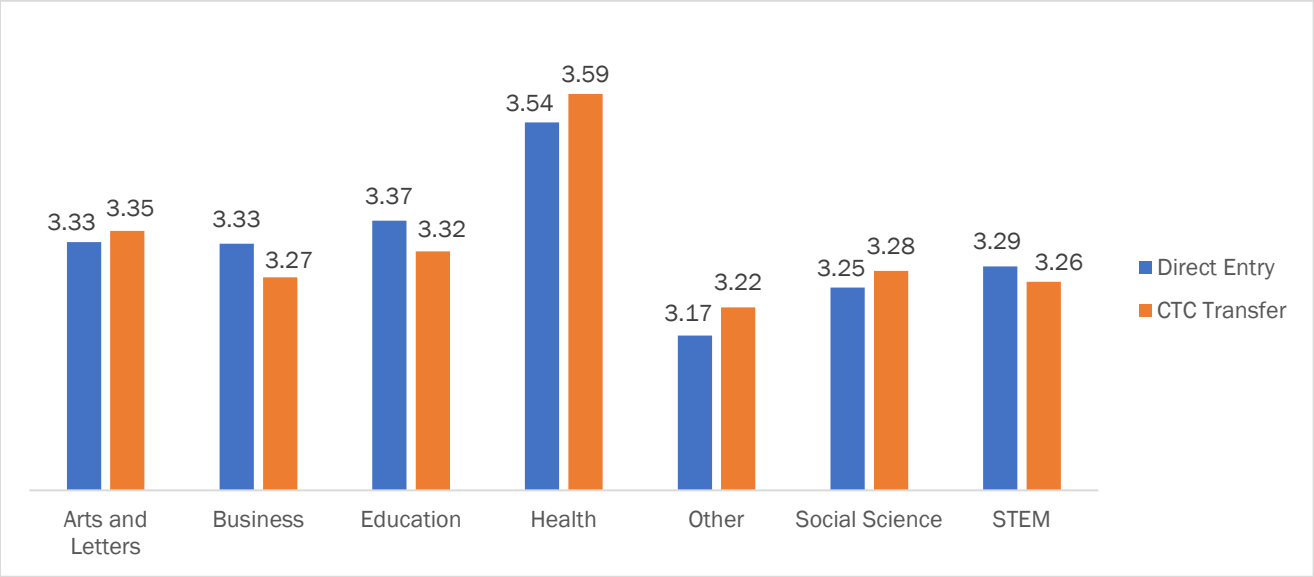
Figure 32
Median Quarterly Credits Earned Toward Bachelor's STEM Degree



Senior Year GPA by Major

Senior year GPAs were similar for CTC transfer and direct entry students across majors.

Figure 33
Average Senior Year GPA by Major and Entry Status



Appendix A: Entry Status Definition

Code	Criteria
Direct Entry- no Transfer Credits	Previous Credits=0, no degree
Direct Entry< less than 40 Credits Transferred	Previous Credits <40, no degree
CTC Transfer with Two Year Degree	Has CTC Degree
CTC Transfer, no Degree	Previous Credits>=40, CTC credits>=20 , no degree
Other Transfer	Previous Credits>=40, CTC Credits <20, no degree
CTC Applied Baccalaureate	CTC Completion Code=U

Appendix B: Majors Defined and Grouped

Each degree was associated with a Classification of Instructional Program (CIP) six digit code, which was used to identify a graduate's major. With the exception of some CIP codes for the STEM areas, most two-digit CIP's could be classified into a single major category. These categories were further grouped into clusters for the purposes of this report.

All bachelor's degree degrees earned were reported in the sections that counted total number of majors, even if a student earned two or sometimes three degrees. The first criteria for grouping majors came from the 2009 Role of Transfer study, Appendix 2. The criteria was applied first to all CIP codes, then the criteria for STEM degrees established in the dashboard reports from the Education Research and Data Center was applied. See below for all CIP codes earned by 2016 graduates and the major grouping assigned:

2 or 6-digit CIP code	Major Grouping for Report	CIP Title
01.	Other	Ag. & Natural Conservation
01.090.1	STEM	
01.10.01	STEM	
01.11.02	STEM	
01.11.03	STEM	
01.12.01	STEM	
03.	STEM	Ag. & Natural Conservation
04.	STEM	Engineering, CIS, & Architecture
05.	Arts and Letters	Humanities
09.	Arts and Letters	Communications
10.	Arts and Letters	Communications
11.	STEM	Engineering, CIS, & Architecture
13.	Education	Education & Teaching
14.	STEM	Engineering, CIS, & Architecture
15.	STEM	Engineering, CIS, & Architecture
16.	Arts and Letters	Arts & Letters
19.	Other	Ag. & Natural Conservation
19.05.01	STEM	
19.05.05	STEM	
22.	Other	Law
23.	Arts and Letters	Arts & Letters
24.	Arts and Letters	Humanities
26.	STEM	Science & Math
27.	STEM	Science & Math
30.01.01	STEM	Science & Math
30.08.01	STEM	Science & Math
30.11.01	Other	
30.15.01	STEM	
30.19.01	STEM	
30.20.01	Arts and Letters	Humanities
30.24.01	STEM	Science & Math
30.99.99	Arts and Letters	Humanities
31.	Other	Ag. & Natural Conservation
38.	Arts and Letters	Humanities
40.	STEM	Science & Math
42.	Social Science	Psychology
43.	Social Science	Social Sciences- Applied

2 or 6-digit CIP code	Major Grouping for Report	CIP Title
44.	Social Science	Social Sciences- Applied
45.	Social Science	Social Sciences- General
49.	Other	Trades
50.	Arts and Letters	Arts & Letters
51.	Health	Health
52.	Business	Business
54.	Social Science	Social Sciences- General
99.	Other	Unknown

Appendix C: List of All Centers and the Related University Sites

Central Washington University	Big Bend Community College
	Edmonds Community College
	Edmonds Community College Partnership
	Everett Community College
	Green River College
	Highline College
	Pierce College Partnership
	Pierce College -- Fort Steilacoom
	Skagit Valley College
	U Center of N Puget Sound Partnership
	Wenatchee Valley College
	Yakima Valley College
Eastern Washington University	Bellevue College
	Clark College
	Clark College Partnership
	North Seattle College
	Pierce College -- Fort Steilacoom
	South Seattle College
	Spokane Community Colleges
	Spokane Falls Community College
The Evergreen State College	Grays Harbor College
	Muckleshoot Reservation
	Nisqually Reservation
	Northwest Indian College-Tulalip
	Port Gamble S'klallam Reservation
	The Evergreen State College-Tacoma
	U Center of N Puget Sound Partnership
University of Washington – Seattle and Bothell	U Center of N Puget Sound Partnership
Washington State University - Tri-Cities Campus	Walla Walla Community College
Washington State University - Vancouver Campus	Grays Harbor College
Western Washington University	Everett Community College
	North Seattle College
	Olympic College
	Peninsula College
	U Center of N Puget Sound Partnership