Data Trends and Briefings

Dec. 15, 2005

North Carolina Community College System
Planning, Accountability, Research & Evaluation

Profile of Curriculum Students by Race/Ethnicity and Gender, from 2001-02 to 2003-04

1. Curriculum student enrollment by degree type and race/ethnicity

Between 2001-02 and 2003-04, the total number of students who pursued associate degree increased at a rate of 7.5% from 2001-02 to 2002-03, 6.3% from 2002-03 to 2003-04 and 14%, 2.3% for diploma degree; while the numbers for the certificate and transitional degree type were decreasing yearly at a rate of -4.3%, -8.1% for certificate degree and -3.1%, -3.9% for transitional degree type. (Please refer to Table 1.) Since transitional degrees include Dual Enrollment and Huskins Bill students, which represent high school students enrolling community colleges, an analysis of transitional degree type is beyond the scope of current study. (We need to further analyze this specific type regarding its own demographic set, subsequent enrollment patterns, so forth, as a subject for later study.) For the current analysis, we are mainly interested in the profile of curriculum students based on gender and ethnicity, excluding high school students.

When unduplicated headcounts for curriculum students are broken down by degree type and by race/ethnicity, it is clear that the Black/African American and White/Non-Hispanic groups comprise more than 90% of student enrollment. (Please refer to Table 1.) Although the total number of White/Non-Hispanic students increased from 2001-02 through 2003-04, the proportion of this group, relative to other groups enrolled within curriculum programs, decreased slightly over the year, making up 67.2%, 66.5%, and 65.8% of curriculum enrollment for 2001-02, 2002-03, and 2003-04, respectively, an 0.7% average decrease for each year. On the other hand, the number of African American students enrolled and the proportion of them increased by a constant 4% for the same period of time. African American students comprised 25.4%, 25.8% and 26.2% of all curriculum students for three consecutive years. By comparison, the population demographics for the adult population in North Carolina were 21.42% African American, and 71.53% White, according to the 2003 American Community Survey Summary Tables (US Census Bureau). Compared to the adult population and the proportions of these two ethnic groups in Table 1, White students were less represented than African Americans were.

As seen in Appendices 1, 2, 3, as well as in Table 1, the percentage of African American students pursuing associate degrees was increasing over the years analyzed, with 26.1%, 27.2%, and 28.0% of all associate degree students (45,659 students on average for the three year period); whereas the percentage of white students pursuing an associate degree was decreasing over the same time period (66.5%, 65.0% and 64.1% respectively), even though the number of enrollees was increasing (104,313, 109,706, and 114,719 respectively). The proportions of white students who pursued transitional degrees among all ethnic groups was steadily increasing for the same time period (70.4%, 71.0% and 71.3%), although the numbers were decreasing.

Table 1. Number of Curriculum Students by Race and Degree Type from 2001-02 to 2003-04

2001-02	Am. Indian	Asian	Black	Hispanic	Other	White/Non-Hispanic	Row Total
Associate	2,650	3,144	40,988	3,558	2,256	104,313	156,909
Certificate	297	240	5,964	438	280	12,342	19,561
Diploma	255	171	4,993	252	174	10,444	16,289
Transitional	720	1,654	15,930	2,210	1,618	52,709	74,841
Column Total	3,922 (1.5%)	5,209 (1.9%)	67,875 (25.4%)	6,458 (2.4%)	4,328 (1.6%)	179,808 (67.2%)	267,600 (100%)
2002-03	Am. Indian	Asian	Black	Hispanic	Other	White/Non-Hispanic	Row Total
Associate	2,909	3,311	45,860	4,013	2,884	109,706	168,683
Certificate	246	266	5,417	402	300	11,547	18,718
Diploma	290	207	5,481	288	229	12,076	18,571
Transitional	684	1,638	14,999	2,071	1,655	51,488	72,535
Column Total	4,129 (1.5%)	5,422 (2.0%)	71,757 (25.8%)	6,774 (2.4%)	5,068 (1.8%)	184,817 (66.5%)	277,967 (100%)
2003-04	Am. Indian	Asian	Black	Hispanic	Other	White/Non-Hispanic	Row Total
Associate	3,078	3,531	50,130	4,599	3,215	114,719	179,272
Certificate	250	260	5,069	434	292	10,890	17,195
Diploma	289	220	5,526	312	238	12,413	18,998
Transitional	692	1,457	14,081	2,135	1,657	49,718	69,740
Column Total	4,309 (1.4%)	5,468 (1.9%)	74,806 (26.2%)	7,480 (2.6%)	5,402 (1.9%)	187,740 (65.8%)	285,205 (100%)

Table 2. Enrollment by Curriculum Types from 2001-02 to 2003-04

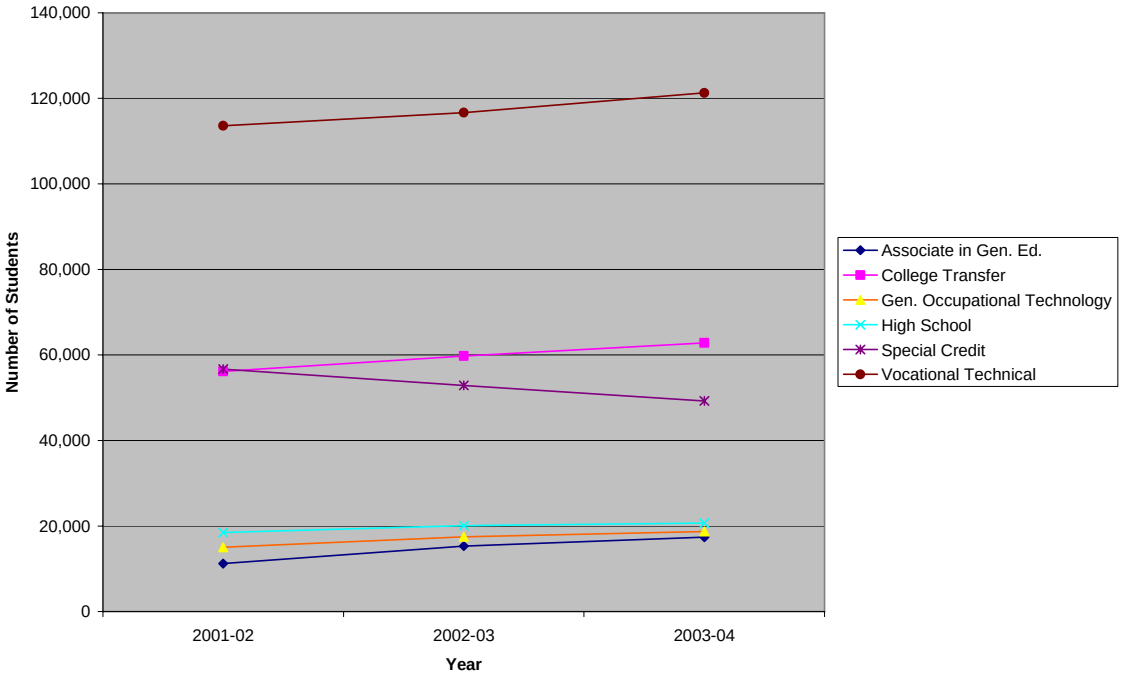
	2001-02	*%*	*2002-03*	*%*	*2003-04*	*%*
Associate in Gen. Ed.	11,213	4.13%	15,348	5.44 %	17,417	6.00 %
College Transfer	56,165	20.71 %	59,774	21.18 %	62,838	21.6 5%
Gen. Occupational Technology	15,049	5.55%	17,521	6.21 %	18,746	6.46 %
High School	18,499	6.82%	20,087	7.12 %	20,706	7.13 %
Special Credit	56,698	20.90 %	52,900	18.74 %	49,255	16.9 7%
Vocational Technical	113,607	41.89 %	116,639	41.32 %	121,252	41.7 8%
Total	271,231	100.0 0%	282,269	100.0 0%	290,214	100. 00%

2. Three year enrollment trend by curriculum types

Enrollment for Associate in General Education grew by 36.9% (4,135) from 2001-02 to 2002-03 and then 13.5% (2,069) the next year, even though it comprised the smallest proportion of curriculum types. The enrollment figure for College Transfer, which comprised the second largest percentage of curriculum enrollment, grew steadily by 6.4% (3,609) and 4.9% (3,064) respectively. The number of students enrolled in Vocational Technical programs comprised the largest number of students, a three-year-average of 41.7% of curriculum students. Rates of increase for the Vocational Technical programs were rather modest compared to other curriculum types, though: 2.7% (3,032) and 3.96% (4,613) respectively.

Enrollment in General Occupational Technology grew by 2,472 (16.4%) from 2001-02 to 2002-03 and 1,225 (6.99%) from 2002-03 to 2003-04. Enrollment for Special Credit type decreased over the years analyzed, although it comprised 16.97% to 20.9% of all curriculum students (-6.7% and -6.9% growth during the period). About 7% of curriculum students were in some form of High School curriculum type; and this group grew by 1,588 (8.6%) from 2001-02 to 2002-2003, stabilizing (only 0.3% growth) from 2002-03 to 2003-04. (Please refer to Table 2 and Figure 1.)

Figure 1. Three Year Enrollment Trend by Curriculum Types



3. Curriculum student enrollment by gender and program area

As seen in Table 3, enrollment in Agricultural and Natural Resources Technologies, Construction Technologies, Engineering Technologies, Industrial Technologies, and Transport Systems Technologies for the years analyzed was predominantly male, whereas enrollment in Health Sciences and Public Service Technologies for the same period was primarily female. In the Health Sciences programs, for example, 89%, 88.3% and 87.4% of all the students were females; however, it is worth noting that male enrollment in the Health Science programs grew significantly by 16.8% from 2001-02 to 2002-03 and 20.1% for the subsequent year period, even though the number of male students was relatively small compared to female enrollment. Of the students in the Health Science programs, 11%, 11.7%, and 12.6% for each year period were male.

In Business Technology programs, almost twice as many females were enrolled as were males for the years analyzed: 64.7%, 65.7%, and 66.6%, respectively. Male enrollment in the Business Technology programs decreased across the given time in both ratio and number. Total enrollment in Biological and Chemical Technology programs grew noticeably over the same time period, although the numbers were relatively small compared to other program areas: a 15.1% increase from 2001-02 to 2002-03, and 33% increase from 2002-03 to 2003-04. During the time, female enrollment grew by 14.7% and 48.3%, while male enrollment grew by 15.1% and 33%. (Refer to Table 3.)

Table 3. Three Year Enrollment by Gender and Program Area

	2001-02		*2002-03*		*2003-04*	
	Female	*Male*	*Female*	*Male*	*Female*	*Male*
Agricultural & Natural Resources Technologies	567 (27.2%)	1,515 (72.8%)	581 (27.7%)	1,515 (72.3%)	569 (27.5%)	1,497 (72.5%)
Arts & Sciences	41,314 (61.7%)	25,641 (38.3%)	47,332 (63.5%)	27,257 (36.5%)	50,609 (63.9%)	28,507 (36.1%)
Biological & Chemical Technologies	177 (49.4%)	181 (50.6%)	203 (49.3%)	209 (50.7%)	301 (54.9%)	247 (45.1%)
Business Technologies	29,232 (64.7%)	15,931 (35.3%)	28,917 (65.7%)	15,069 (34.3%)	28,965 (66.6%)	14,552 (33.4%)
Commercial & Artistic Production Technologies	1,547 (55.3%)	1,252 (44.7)	1,614 (56.2%)	1,258 (43.8%)	1,619 (53.9%)	1,386 (46.1%)
Construction Technologies	211 (3.3%)	6,094 (96.7%)	218 (3.6%)	5,800 (96.4%)	197 (3.2%)	5,999 (96.8%)
Engineering Technologies	1,002 (15.5%)	5,478 (84.5%)	932 (14.9%)	5,341 (85.1%)	819 (13.9%)	5,080 (86.1%)
Health Sciences	14,760 (89.0%)	1,826 (11.0%)	16,025 (88.3%)	2,133 (11.7%)	17,757 (87.4%)	2,562 (12.6%)
Industrial Technologies	473 (8.3%)	5,254 (91.7%)	478 (8.5%)	5,114 (91.5%)	418 (7.7%)	4,986 (92.3%)
Public Service Technologies	31,998 (80.1%)	7,965 (19.9%)	36,540 (80.8%)	8,682 (19.2%)	40,138 (81.5%)	9,118 (18.5%)
Special Categories	43,200 (57.8%)	31,602 (42.2%)	42,498 (58.6%)	29,983 (41.4%)	40,677 (58.4%)	29,014 (41.6%)
Transport Systems Technologies	303 (5.4%)	4,352 (94.6%)	301 (6.0%)	4,714 (94.0%)	383 (7.1%)	4,998 (92.9%)
Total (*Duplicated Headcount*)	164,784	107,091	175,639	107,075	182,452	107,946

4. Curriculum student enrollment by race/ethnicity and program area

When curriculum student enrollment is broken down by program area and race/ethnicity, it is clear that the proportions of American Indian and Asian/Pacific Islander are the most consistent across the 12 program areas for the three year period under analysis: 5,306 (1.95% of the total enrollment of 2001-02), 5,571 (1.97% in 2002-03), and 5,608 (1.9% in 2003-04) for Asian/Pacific Islander. American Indians made up a constant 1.5% of the total enrollment for the same period (4,009, 4,205, and 4,412, consecutively), even though total enrollment of all race/ethnicity across the program areas grew modestly by 4% from 2001-02 to 2002-03 and 2.7% from 2002-03 to 2003-04. (Please refer to Table 4.)

Comparatively, the proportions of African American students increased gradually across the years analyzed: 69,044 (25.4% of the total enrollment), 73,202 (25.9%) and then 76,326 (26.3%). The percentage of Hispanic students did not change significantly, but their numbers had a slight increase for the three year time frame: 6,564 (2.4% of all) for 2001-02, 6,911 (2.4%) for 2002-03 and 7,625 (2.6%) for 2003-04. The number of students in the 'other/unknown' category slowly increased from year to year: 4,403 (1.6% of all) for 2001-02, 5,144 (1.8%) for 2002-03 and 5,527 (1.9%) for 2003-04.

The percentage of White, Non-Hispanic students in the total curriculum student population declined from 2001-02 to 2003-04, although there was an increase in actual number of students enrolling: 182,640 (67.2% of the total enrollment), 187,830 (66.4%), and 191,036 (65.8%). The average percentage of White, Non-Hispanic students in the total population of curriculum students for the three year period was 66.5%. (See Table 4.)

Comparing the proportion of each ethnic group to its respective percentage in each program area, the following findings were observed:

- American Indians enrolled in Construction Technology programs were slightly disproportionate compared to their ethnic composition of a constant 1.5% of the curriculum student enrollment; enrollment ranges from a high of 3.1% in 2001-02 to a low of 2.6% in 2002-03.
- Asians or Pacific Islanders comprise 1.94% of all (three year average). Although the total number of students in Biological and Chemical Technology programs was minuscule compared to the total curriculum student enrollment, the percentage of Asian or Pacific Islander in this category averaged 3.75% across the three years observed.
- In the Agricultural and Natural Resources Technology programs, Asian/Pacific Islander, Black/Non-Hispanic, and Hispanics were relatively under-represented. The three year averages for each ethnic group in the Agricultural and Natural Resources Technology programs was 0.198% for Asians, 11.5% for Blacks, and 0.84% for Hispanics. (Their ethnic

representation was 1.94%, 25.9%, and 2.47%, respectively, for the three year average.)

- The Black/Non-Hispanic group was slightly over-represented in Business Technology, Construction Technology, and Public Service Technology programs at 31.8%, 34.2%, and 33.7% for the three year average. The ethnic representation of the Blacks in the curriculum student body was 25.9% on three year average. African Americans were slightly under-represented in the Commercial and Artistic Production Technology programs at 15.7% on average for the same time period.
- The number of students in the White/Non-Hispanic category increased by 8,396 (4.6% growth) from 2001-02 to 2002-03 and 3,206 (1.7% growth) from 2002-03 to 2003-04. However, the percentage of White students decreased each year for the same period of time, making up 67.2%, 66.4% and 65.8% of all curriculum students. (The three year average percentage of white students enrolled in curriculum programs was 66.5 %.) During the same period under observation, White students were disproportionately over-represented in Agricultural and Natural Resources Technology and Commercial and Artistic production Technology programs in particular: 84.5% and 77.3% for the three year average, respectively. Also, there were a slightly greater number of White students compared to other ethnic groups in Engineering Technology, Special Category and Transport Systems Technology programs. (70.6%, 70.9% and 70.5% on average, respectively). (Please refer to Table 4.)

Table 4. Curriculum Student Enrollment by Program Area and Race/Ethnicity

2001-2002	Am. Indian (1.5%)	Asian (1.95%)	Black (25.4%)	Hispanic (2.4%)	Other (1.6%)	White (67.2%)	Total (100.05%)*
Agricultural & natural Resources Technologies	29	2	260	19	35	1,738	2,083
Arts & Sciences	1,048	1,671	14,665	1,964	1,149	46,476	66,973
Biological & Chemical Technologies	3	11	80	7	3	255	359
Business Technologies	708	980	13,885	907	598	28,086	45,164
Commercial & Artistic Production Technologies	13	59	421	54	37	2,215	2,799
Construction Technologies	195	50	2,132	109	135	3,693	6,314
Engineering Technologies	81	220	1,311	173	96	4,600	6,481
Health Sciences	332	187	4,415	233	163	11,261	16,591
Industrial Technologies	81	92	1,353	121	83	3,999	5,729
Public Service Technologies	757	294	13,579	623	423	24,301	39,977
Special Categories	720	1,654	15,930	2,210	1,618	52,709	74,841
Transport Systems Technologies	42	86	1,013	144	63	3,307	4,655
Total	4,009	5,306	69,044	6,564	4,403	182,640	271,966

2002-2003	Am. Indian (1.5%)	Asian (1.97%)	Black (25.9%)	Hispanic (2.4%)	Other (1.8%)	White (66.4%)	Total (100%)
Agricultural & natural Resources Technologies	31	4	229	18	29	1,785	2,096
Arts & Sciences	1,256	1,853	17,503	2,251	1,485	50,286	74,634
Biological & Chemical Technologies	3	16	105	6	7	276	413
Business Technologies	632	903	14,096	986	657	26,724	43,998
Commercial & Artistic Production Technologies	28	58	455	59	64	2,209	2,873
Construction Technologies	159	74	2,090	112	119	3,468	6,022
Engineering Technologies	77	203	1,273	184	121	4,418	6,276
Health Sciences	356	241	4,917	260	220	12,169	18,163
Industrial Technologies	90	109	1,268	121	105	3,901	5,594
Public Service Technologies	845	372	15,123	718	602	27,583	45,243
Special Categories	684	1,638	14,999	2,071	1,655	51,488	72,535
Transport Systems Technologies	44	100	1,144	125	80	3,523	5,016
Total	4,205	5,571	73,202	6,911	5,144	187,830	282,863
2003-2004	**Am. Indian (1.5%)**	**Asian (1.9%)**	**Black (26.3%)**	**Hispanic (2.6%)**	**Other (1.9%)**	**White (65.8%)**	**Total (100%)**
Agricultural & natural Resources Technologies	25	5	230	15	36	1,756	2,067
Arts & Sciences	1,409	1,970	19,188	2,513	1,688	52,388	79,156
Biological & Chemical Technologies	5	21	146	15	11	350	548
Business Technologies	609	916	14,225	1,049	685	26,046	43,530
Commercial & Artistic Production Technologies	29	66	483	79	63	2,285	3,005
Construction Technologies	182	73	2,110	138	107	3,591	6,201
Engineering Technologies	65	169	1,204	198	110	4,154	5,900
Health Sciences	366	295	5,548	306	283	13,529	20,327
Industrial Technologies	85	75	1,336	113	86	3,711	5,406
Public Service Technologies	888	442	16,605	902	708	29,728	49,273
Special Categories	692	1,457	14,081	2,135	1,657	49,718	69,740
Transport Systems Technologies	57	119	1,170	162	93	3,780	5,381
Total**	4,412	5,608	76,326	7,625	5,527	191,036	290,534

* Total percentage of all ethnic groups exceeds 100% due to rounding.
**Duplicated headcounts

5. Curriculum student enrollment by gender and degree type

Enrollment for female students in Associate degree programs grew by 6.5% and 3.8% respectively. On the other hand, the number of male students in Associate degree programs slightly decreased by 0.12% and 0.72% for the same time period. Certificate degree enrollment declined for both male and female students, by -7.1%, -6.8% for male and -7%, -4.1% for female. However, the number of students enrolled in Diploma programs increased over the year for both male and female, with growth rates for female students higher than those for male students. For female students, a growth rate of 19.7%

from 2001-02 to 2002-03, and 2.6% from 2002-03 to 2003-04 occurred, while male growth rates were 5.4% and 1.8% for the same time period.

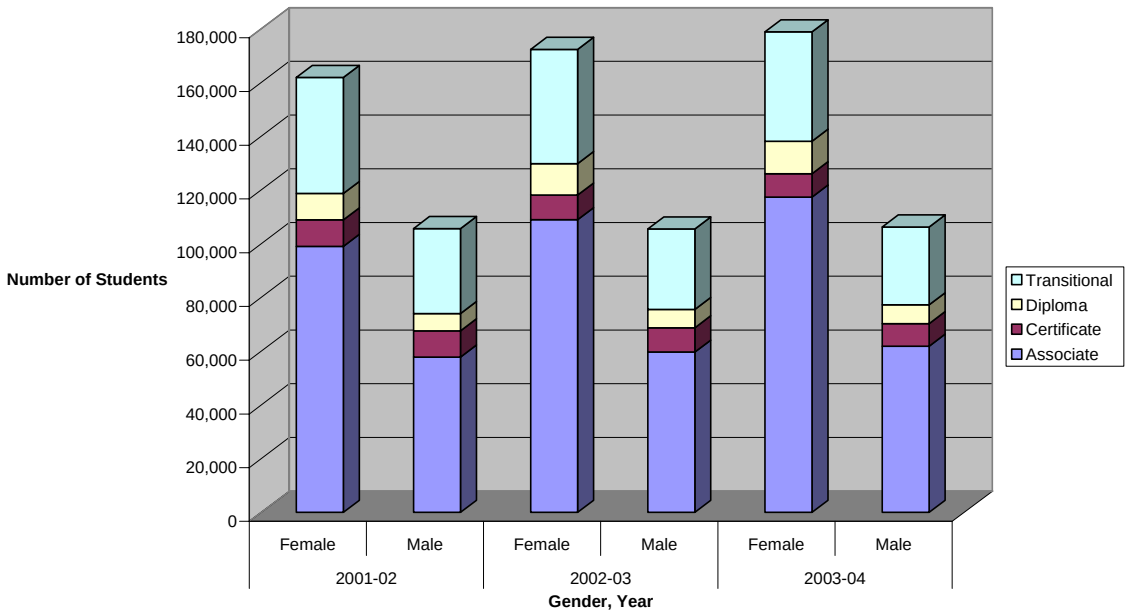
Although Transitional degree students make up roughly one quarter of the total curriculum enrollment, the number of students in this category steadily decreased over the years analyzed: 74,802 (28% of the total enrollment), 72,481 (26.1%), and 69,691 (24.5%) respectively. As shown in Figure 2, the decreasing rate of male enrollment in the Transitional degree programs was slightly more noticeable than that of female students. Broken down by gender for transitional degree type, male enrollment decreased by 5.1% and 3.2%, while that of females decreased by 1.6% and 4.3% during the same three year period. (Please refer to Table 5 and Figure 2.)

Table 5. Number of Curriculum Students by Gender and Degree Type

	2001-02			2002-03			2003-04		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Associate	99,040	57,800	156,840	108,934	59,627	168,561	117,320	61,841	179,161
Certificate	9,814	9,736	19,550	9,127	9,046	18,173	8,751	8,435	17,186
Diploma	9,819	6,469	16,288	11,751	6,820	18,571	12,055	6,940	18,995
Transitional	43,200	31,602	74,802	42,498	29,983	72,481	40,677	29,014	69,691
Total*	161,873	105,607	267,480	172,310	105,476	277,786	178,803	106,230	285,033

*Totals are not unduplicated.

Figure 2. Curriculum Student Unduplicated Headcount by Gender & Degree Type



Summary

- The number of students enrolled in associate and diploma degrees increased from 2001-02 to 2003-04 at a three year average of 6.9% and 8.15% respectively, while that of certificate and transitional degree programs decreased at a rate of 6.25% and 3.25%.
- Increase of proportions for African American students pursuing associate degrees were greater than White students over the years studied: 26.1%, 27.2%, and 28.0% of all associate degree students were Blacks (45,659 students on average for three year period). The percentage of white students in associate degree programs was on the decline, even though their enrollment numbers were increasing at a three year average of 109,579 curriculum students.
- Enrollment in College Transfer grew steadily by 6.4% (3,609) from 2001-02 to 2002-03 and 4.9% (3,064) from 2002-03 to 2003-04. Enrollment in General Occupational Technology also grew by 2,472 (16.4%) and 1,225 (6.99%) respectively.
- Agricultural and Natural Resources Technologies, Construction Technologies, Engineering Technologies, Industrial Technologies, and Transport Systems Technologies enrollment consisted of predominantly male students, whereas Health Sciences, Public Service Technologies, and Business Technologies programs consisted mainly of female students.
- The three year average percentage of White students in the curriculum population was 66.5%. During the three year period, White students were disproportionately over-represented in Agricultural and Natural Resources Technology, and Commercial and Artistic Production Technology (84.5%, and 77.3% respectively).
- Enrollment for female students in Associate degree programs grew by 6.5% from 2001-02 to 2002-03, 3.8% from 2002-03 to 2003-04, whereas the number of male students enrolled in Associate degree programs declined by 0.12% and 0.72% for the same period of time.

For more information, please contact Dr. Soyoung Yim at
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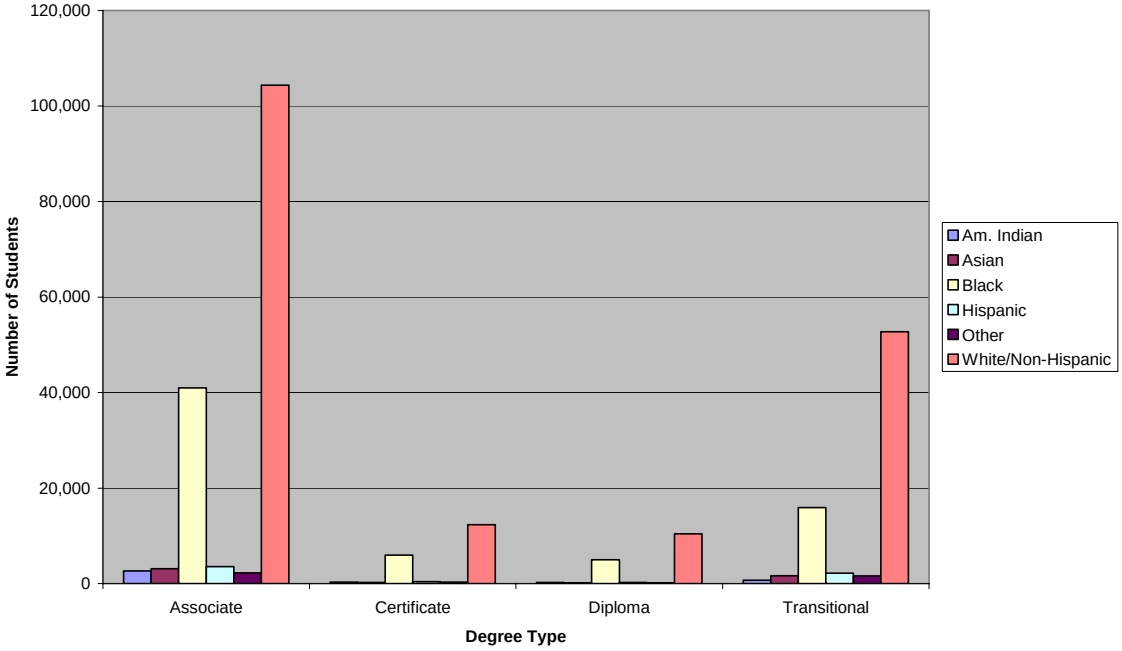
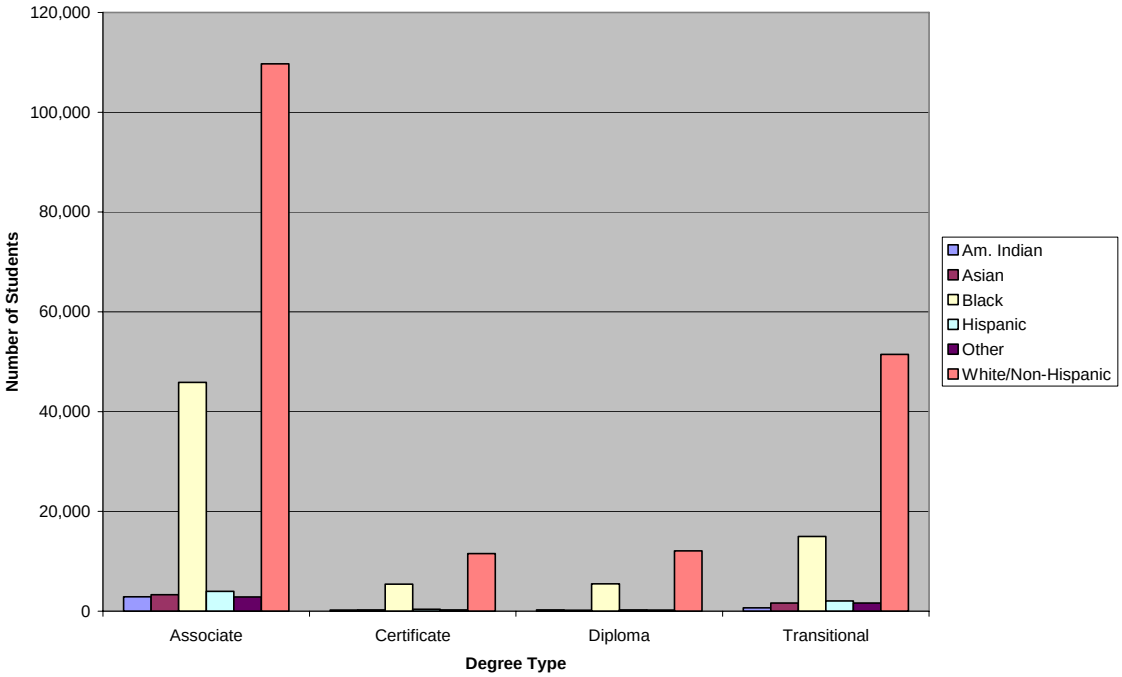
Appendix 1. Curriculum Student Unduplicated Headcounts by Race and Degree Type, 2001-02



Appendix 2: Curriculum Student Unduplicated Headcounts by Race and Degree Type, 2002-03



Appendix 3. Curriculum Student Unduplicated Headcounts by Race and Degree Type, 2003-04