

Math Course Completion Equity Analysis (Fall 2015 and Fall 2016)



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Overall Math Completion by Course Number (From Fall 2015 to Fall 2016)

Overall Math Completion by Course Number

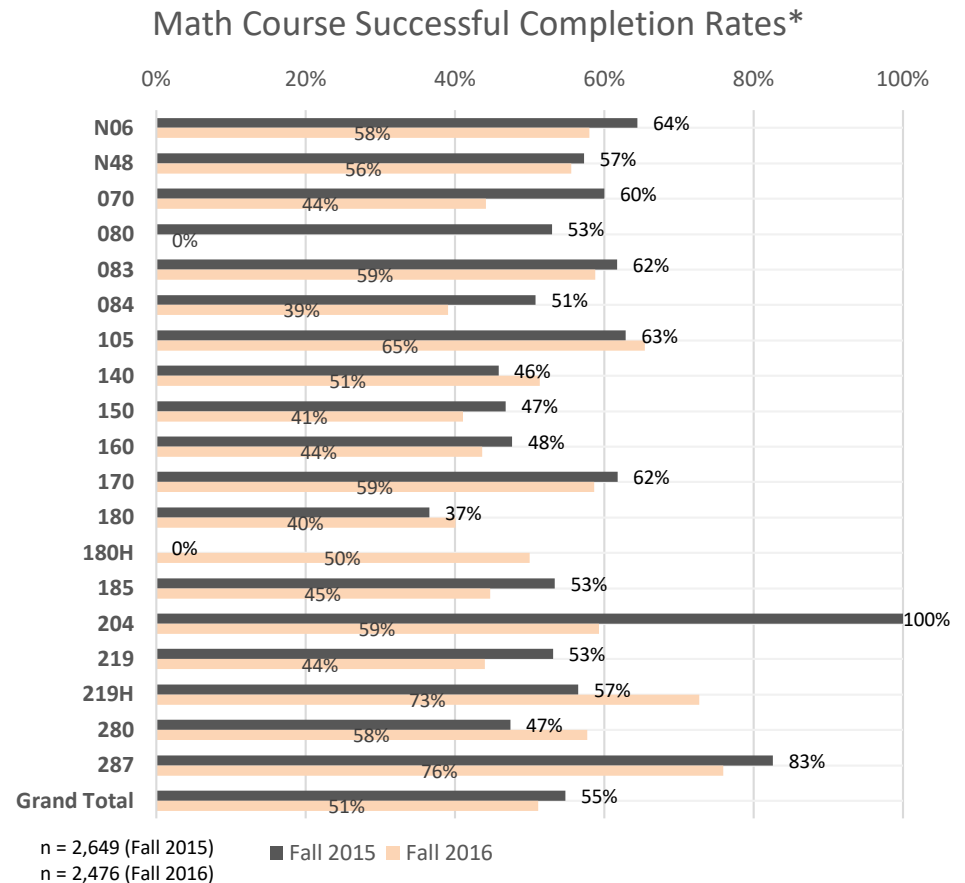
Course Number	Fall 2015				Fall 2016				Fall 2015 to Fall 2016 (Successful)
	Incomplete*	Successful*	Unsuccessful*	Total	Incomplete*	Successful*	Unsuccessful*	Total	
N06	11	116	53	180	39	130	55	224	14
N48	97	299	126	522	119	313	131	563	14
070	8	18	4	30	15	15	4	34	-3
080	91	228	111	430	0	0	0	0	-228
083	135	559	212	906	173	486	168	827	-73
084	110	245	127	482	127	163	127	417	-82
105	36	139	46	221	42	178	52	272	39
140	98	160	91	349	91	170	70	331	10
150	73	88	27	188	71	83	48	202	-5
160	100	134	47	281	104	147	86	337	13
170	31	105	34	170	30	119	54	203	14
180	111	83	33	227	85	93	54	232	10
180H	2	0	0	2	1	1	0	2	1
185	35	55	13	103	44	51	19	114	-4
204	0	46	0	46	32	67	14	113	21
219	184	305	85	574	280	362	181	823	57
219H	9	13	1	23	3	16	3	22	3
280	24	37	17	78	15	41	15	71	4
287	1	19	3	23	5	41	8	54	22
Total	1156	2649	1030	4835	1276	2476	1089	4841	-173

* Successful (Grade of A, B, C, P), Non-Successful (D, F, NP) and Incomplete (I, W).

Math Successful Completion Rates by Course Number (From Fall 2015 to Fall 2016)

Student completion rates for Math courses during the fall 2015 and 2016 sessions reveal:

- The overall successful completion rate decreased **-4%** from 2015 for all Math courses.
- Math course 204 had the highest successful completion rate in fall 2015 at **100%**.
- Math course 287 had the highest successful completion rate in Fall 2016 and the second highest in fall 2015, **76%** and **83%** respectively.
- Math course 084 saw a drop in the successful completion rate from **51%** to **39%**.
- Math course 180 had the lowest completion rate.



*Successful Completion Calculation = grades of A, B, C, P compared against all grades including W.

Math Successful Completion by Course Number (From Fall 2015 to Fall 2016)

- **185** more students in fall 2016 successfully completed college level math courses compared to fall 2015 results.
- Math courses 083 and 084 experienced a decrease in the number of students achieving successful completion in fall 2016.
- While the number of enrolled students remained relatively flat from fall 2015 to fall 2016, **173** fewer students overall successfully completed math courses during the fall 2016 session. The decrease is likely attributed to the drop in students enrolled in math course 080 for fall 2016.

	Course Number	Fall 2015		Fall 2016		
		Enrolled	Successful	Enrolled	Successful	
Basic without 083 & 084	N06	180	116	224	130	
	N48	522	299	563	313	
	070	30	18	34	15	
	080	430	228	0	0	
Basic	083	906	559	827	486	
	084	482	245	417	163	
College	105	221	139	272	178	
	140	349	160	331	170	
	150	188	88	202	83	
	160	281	134	337	147	
	170	170	105	203	119	
	180	227	83	232	93	
	180H	2	0	2	1	
	185	103	55	114	51	
	204	46	46	113	67	
	219	574	305	823	362	
	219H	23	13	22	16	
	280	78	37	71	41	
	287	23	19	54	41	
		All	4835	2649	4841	2476

Total Successful Completion of Math Courses				
Course	Fall 2015		Fall 2016	
	Enrolled	Successful	Enrolled	Successful
Basic without 083 & 084	1162	661	821	458
Basic 083 & 084	1388	804	1244	649
College	2285	1184	2776	1369
Total	4835	2649	4841	2476

Math Course Successful Completion

Basic Math Excluding 083 and 084

(From Fall 2015 to Fall 2016)

- **203** fewer students in fall 2016 successfully completed basic math courses, excluding 083 and 084.
- Decreases were experienced within the following groups: female and male, all racial groups except Other, foster youth and non-foster youth, reservists, veterans and non-veterans, and all age groups.
- The heaviest concentration of students completing basic math, excluding courses 083 and 084, are under 26 years of age.

Total Successful Completion of Math Courses				
Course	Fall 2015		Fall 2016	
	Enrolled	Successful	Enrolled	Successful
Basic without 083 & 084	1162	661	821	458
Basic 083 & 084	1388	804	1244	649
College	2285	1184	2776	1369
Total	4835	2649	4841	2476

Successful Completion of Basic Math Without 083 and 084					
Characteristic	Fall 2015		Fall 2016		Fall 2015 to Fall 2016 (Successful)
	Enrolled	Successful	Enrolled	Successful	
Female	673	393	482	301	-92
Male	486	267	336	156	-111
Other/Unknown	3	1	3	1	0
American Indian, Native	4	4	3	2	-2
Asian	57	44	26	23	-21
Black/African-American	18	12	11	4	-8
Filipino	11	6	5	3	-3
Hispanic/Latino	937	514	687	377	-137
Decline to State	34	26	16	7	-19
Other	19	10	36	20	10
Pacific Islander	3	2	0	0	-2
White/Caucasian	79	43	37	22	-21
Foster Youth	23	10	10	8	-2
Non-Foster Youth	1139	651	811	450	-201
Dependent of Veteran	0	0	2	1	1
Reservist	1	1	0	0	-1
Veteran	22	10	10	6	-4
Non-Veteran	1139	650	809	451	-199
19 and under	377	174	376	171	-3
20 - 25	491	278	259	154	-124
26 - 29	112	82	63	49	-33
30 - 39	111	75	72	50	-25
40 - 49	42	30	31	21	-9
50 and older	29	22	20	13	-9

Math Course Successful Completion

Basic Math 083 and 084

(From Fall 2015 to Fall 2016)

- **155** fewer students successfully completed basic math courses 083 and 084 in fall 2016.
- Decreases were experienced within the following groups: female and male, all racial groups except Other, non-foster youth, reservists, veterans and non-veterans, and age groups 19 and under, 20-25, and 26-29.
- The heaviest concentrations of students successfully completing basic math courses 083 and 084 are younger than 26 years of age.

Total Successful Completion of Math Courses				
Course	Fall 2015		Fall 2016	
	Enrolled	Successful	Enrolled	Successful
Basic without 083 & 084	1162	661	821	458
Basic 083 & 084	1388	804	1244	649
College	2285	1184	2776	1369
Total	4835	2649	4841	2476

Successful Completion of Basic Math 083 and 084					
Characteristic	Fall 2015		Fall 2016		Fall 2015 to Fall 2016 (Successful)
	Enrolled	Successful	Enrolled	Successful	
Female	744	439	688	379	-60
Male	643	364	547	265	-99
Other/Unknown	1	1	9	5	4
American Indian, Native	6	1	1	0	-1
Asian	68	52	48	35	-17
Black/African-American	24	17	13	6	-11
Filipino	19	13	13	9	-4
Hispanic/Latino	1132	625	1034	519	-106
Decline to State	30	17	17	9	-8
Other	15	9	31	19	10
Pacific Islander	5	4	2	2	-2
White/Caucasian	89	66	85	50	-16
Foster Youth	13	7	26	14	7
Non-Foster Youth	1375	797	1218	635	-162
Dependent of Veteran	1	0	2	2	2
Reservist	2	2	1	0	-2
Veteran	23	16	13	8	-8
Non-Veteran	1362	786	1228	639	-147
19 and under	710	371	689	321	-50
20 - 25	455	284	324	184	-100
26 - 29	96	70	102	56	-14
30 - 39	88	54	87	58	4
40 - 49	19	16	29	21	5
50 and older	20	9	13	9	0

Math Course Successful Completion

College Math

(From Fall 2015 to Fall 2016)

- **185** more students successfully completed college math courses in fall 2016 than fall 2015.
- Increases in successful completion of college math were experienced by both female and male students, all racial groups except Asian, Decline to State and White/Caucasian, both foster youth and non-foster youth, veterans and non-veterans, and all age groups.
- All age groups saw increases in successful completion of college math, while students ages 40 – 49 were equally successful in both fall 2015 and fall 2016.
- The heaviest concentrations of students successfully completing college math under the age of 40.

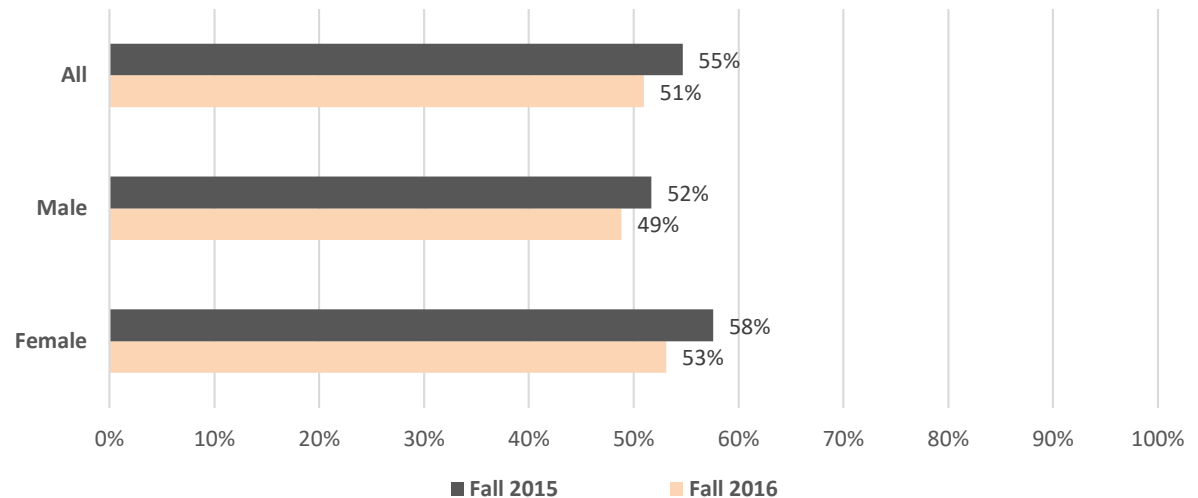
Total Successful Completion of Math Courses				
Course	Fall 2015		Fall 2016	
	Enrolled	Successful	Enrolled	Successful
Basic without 083 & 084	1162	661	821	458
Basic 083 & 084	1388	804	1244	649
College	2285	1184	2776	1369
Total	4835	2649	4841	2476

Successful Completion of College Math					
Characteristic	Fall 2015		Fall 2016		Fall 2015 to Fall 2016 (Successful)
	Enrolled	Successful	Enrolled	Successful	
Female	1105	620	1445	709	89
Male	1175	560	1326	658	98
Other/Unknown	5	4	5	2	-2
American Indian, Native	6	3	6	5	2
Asian	352	249	351	241	-8
Black/African-American	19	9	33	16	7
Filipino	34	11	29	16	5
Hispanic/Latino	1584	730	2011	895	165
Decline to State	76	45	62	31	-14
Other	43	28	92	54	26
Pacific Islander	3	1	12	4	3
White/Caucasian	168	108	180	107	-1
Foster Youth	15	7	17	9	2
Non-Foster Youth	2270	1177	2759	1360	183
Dependent of Veteran	2	0	1	0	0
Reservist	3	1	2	1	0
Veteran	38	17	37	19	2
Non-Veteran	2242	1166	2736	1349	183
19 and under	744	371	923	407	36
20 - 25	1127	574	1342	685	111
26 - 29	199	104	248	124	20
30 - 39	149	92	192	109	17
40 - 49	45	29	51	29	0
50 and older	21	14	20	15	1

Math Course Successful Completion Rates by Gender (From Fall 2015 to Fall 2016)

- Female students outperformed their male counterparts 58% vs 52% in fall 2015 and 53% vs 49% in fall 2016
- Fall 2016 success rates are down **-4%** over fall 2015 results, which may be attributed to a 10% increase in the number of students receiving a grade of incomplete.
- Disproportionately Impacted Population*: none

Successful Completion Rates by Gender

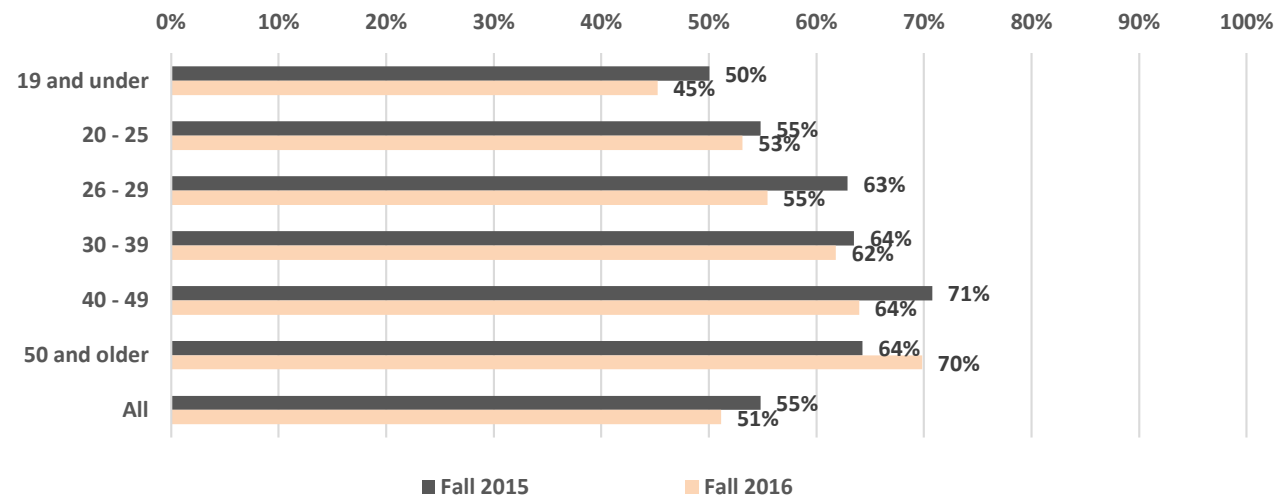


Successful Completion Rates by Gender								
Gender	Fall 2015			Fall 2016			Change in Successful Completion Rate	Fall 2016 Disproportionate Impact
	Enrolled	Successful	Success Rate	Enrolled	Successful	Success Rate		
Female	2,522	1,452	58%	2,615	1,389	53%	-4%	100%
Male	2,304	1,191	52%	2,209	1,079	49%	-3%	92%
Unknown	9	6	67%	17	8	47%	-20%	89%
Total	4,835	2,649	55%	4,841	2,476	51%	-4%	

* Disproportionately Impacted Population: the disaggregated subgroup whose percentage of successful completion rate is lower than 80% compared to the percentage of a reference subgroup with the highest rate.

Math Course Successful Completion Rates by Age (From Fall 2015 to Fall 2016)

Successful Completion Rates by Age Group



- The fall 2016 successful completion rates for all age groups decreased from fall 2015, down **-4%**.
- The successful completion rate for age range 40 – 49 was the highest in fall 2015, while the highest rate in fall 2016 was within the age range 50 and older, increasing **6%** over fall 2015.
- Age range 19 and under achieved the lowest successful completion rates in both fall 2015 and fall 2016.
- Disproportionately Impacted Population*: under 30 years of age

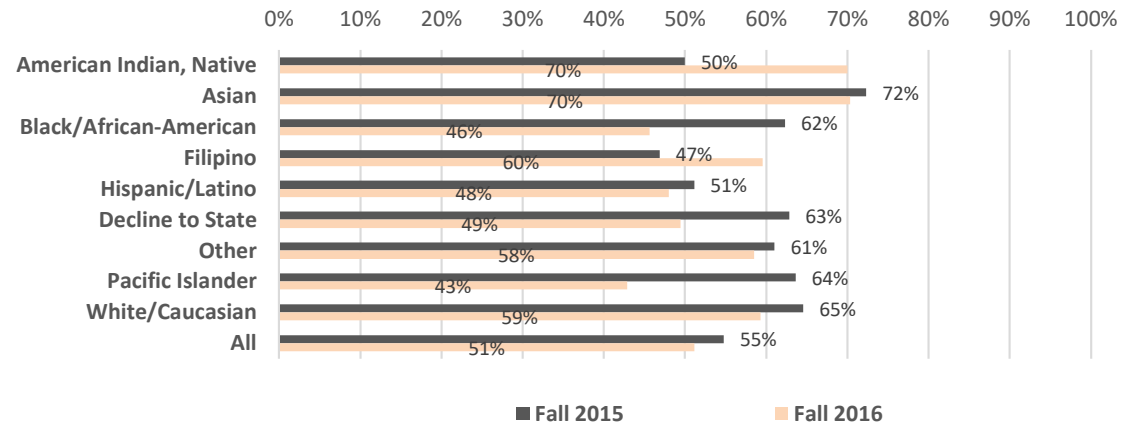
Successful Completion Rates by Age Group								
Age Group	Fall 2015			Fall 2016			Change in Successful Completion Rate	Fall 2016 Disproportionate Impact
	Enrolled	Successful	Success Rate	Enrolled	Successful	Success Rate		
19 and under	1,831	916	50%	1,988	899	45%	-5%	65%
20 - 25	2,073	1,136	55%	1,925	1,023	53%	-2%	76%
26 - 29	407	256	63%	413	229	55%	-7%	79%
30 - 39	348	221	64%	351	217	62%	-2%	89%
40 - 49	106	75	71%	111	71	64%	-7%	92%
50 and older	70	45	64%	53	37	70%	6%	100%
Total	4,835	2,649	55%	4,841	2,476	51%	-4%	

* Disproportionately Impacted Population: the disaggregated subgroup whose percentage of successful completion rate is lower than 80% compared to the percentage of a reference subgroup with the highest rate.

Math Course Successful Completion Rates by Racial Group (From Fall 2015 to Fall 2016)

- Asian students outperformed all racial groups in both fall semesters (72% and 70% respectively), followed by White/Caucasian (65% and 59%), and Other (61% and 58%).
- Disproportionately Impacted Population*: Black/African-American, Hispanic/Latino, Decline to State, and Pacific Islander.

Successful Completion Rates by Racial Group



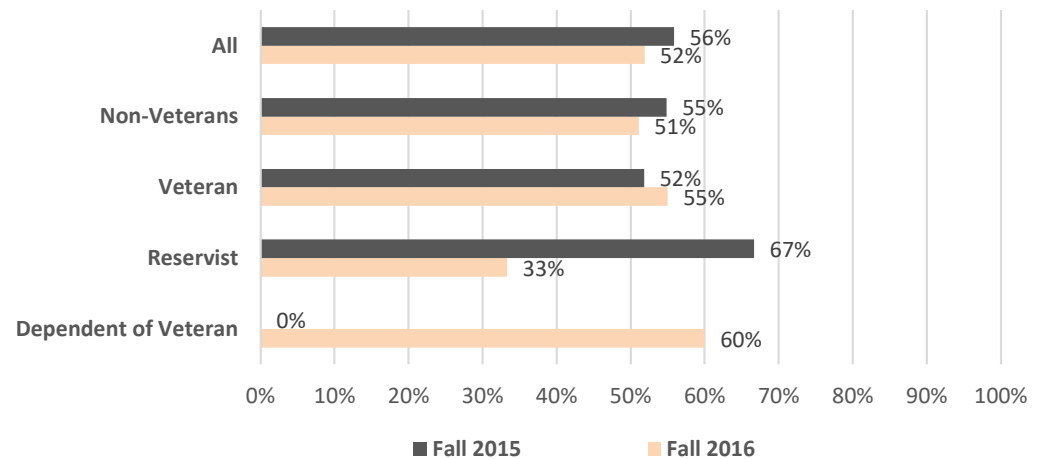
Successful Completion Rates by Racial Group								
Racial Group	Fall 2015			Fall 2016			Change in Successful Completion Rate	Fall 2016 Disproportionate Impact
	Enrolled	Successful	Success Rate	Enrolled	Successful	Success Rate		
American Indian, Native	16	8	50%	10	7	70%	20%	99%
Asian	477	345	72%	425	299	70%	-2%	100%
Black/African-American	61	38	62%	57	26	46%	-17%	65%
Filipino	64	30	47%	47	28	60%	13%	85%
Hispanic/Latino	3,653	1,869	51%	3,732	1,791	48%	-3%	68%
Decline to State	140	88	63%	95	47	49%	-13%	70%
Other	77	47	61%	159	93	58%	-3%	83%
Pacific Islander	11	7	64%	14	6	43%	-21%	61%
White/Caucasian	336	217	65%	302	179	59%	-5%	84%
All	4,835	2,649	55%	4,841	2,476	51%	-4%	

* Disproportionately Impacted Population: the disaggregated subgroup whose percentage of successful completion rate is lower than 80% compared to the percentage of a reference subgroup with the highest rate.

Math Course Successful Completion Rates by Veteran Status (From Fall 2015 to Fall 2016)

- Veterans, Reservists and Dependents of veterans account for 1% of the student population successfully completing math courses in fall 2016, and their combined completion rate increased **3%** from fall 2015.
- The successful completion rate in fall 2016 for Reservist decreased **-33%** from fall 2015.
- Disproportionately Impacted Population*: Reservists.

Successful Completion Rates by Veteran Status



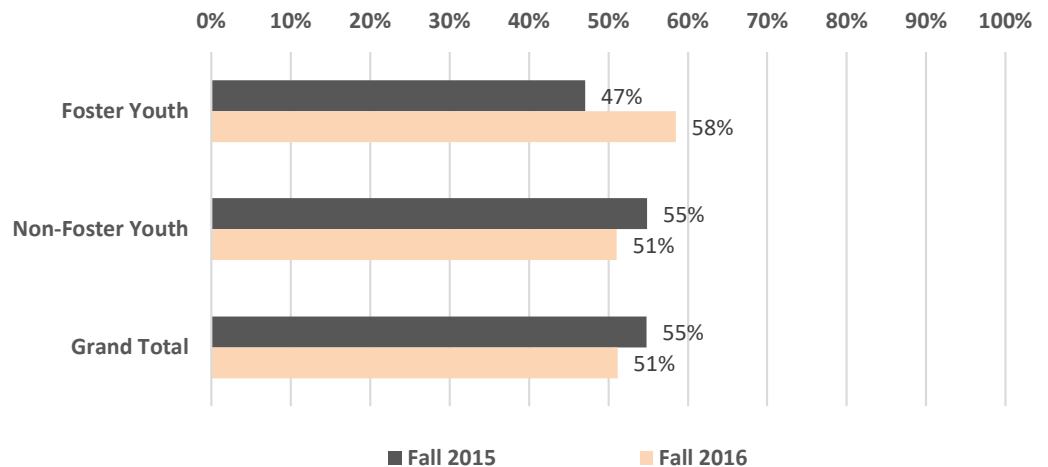
Successful Completion Rates by Veteran Status								
Veteran Status	Fall 2015			Fall 2016			Change in Successful Completion Rate	Fall 2016 Disproportionate Impact
	Enrolled	Successful	Success Rate	Enrolled	Successful	Success Rate		
Dependent of Veteran	3	0	0%	5	3	60%	60%	100%
Reservist	6	4	67%	3	1	33%	-33%	56%
Veteran	83	43	52%	60	33	55%	3%	92%
Total Veterans	92	47	51%	68	37	54%	3%	
Non-Veterans	4,743	2,602	55%	4,773	2,439	51%	-4%	85%
All	4,835	2,649	55%	4,841	2,476	51%	-4%	

* Disproportionately Impacted Population: the disaggregated subgroup whose percentage of successful completion rate is lower than 80% compared to the percentage of a reference subgroup with the highest rate.

Math Course Successful Completion Rates of Foster Youth (From Fall 2015 to Fall 2016)

- Foster youth account for 1% of the student population successfully completing math courses in fall 2016.
- Their successful completion rate for fall 2016 was **58%**, increasing **11%** from fall 2015.
- Disproportionately Impacted Population*: none

Successful Completion Rates of Foster Youth



Successful Completion Rates by Foster Youth Status								
Foster Youth	Fall 2015			Fall 2016			Change in Successful Completion Rate	Fall 2016 Disproportionate Impact
	Enrolled	Successful	Success Rate	Enrolled	Successful	Success Rate		
Foster Youth	51	24	47%	53	31	58%	11%	100%
Non-Foster Youth	4784	2625	55%	4788	2445	51%	-4%	87%
All	4,835	2,649	55%	4,841	2,476	51%	-4%	

* Disproportionately Impacted Population: the disaggregated subgroup whose percentage of successful completion rate is lower than 80% compared to the percentage of a reference subgroup with the highest rate.

Math Course Completion Equity Analysis Summary

(From Fall 2015 to Fall 2016)

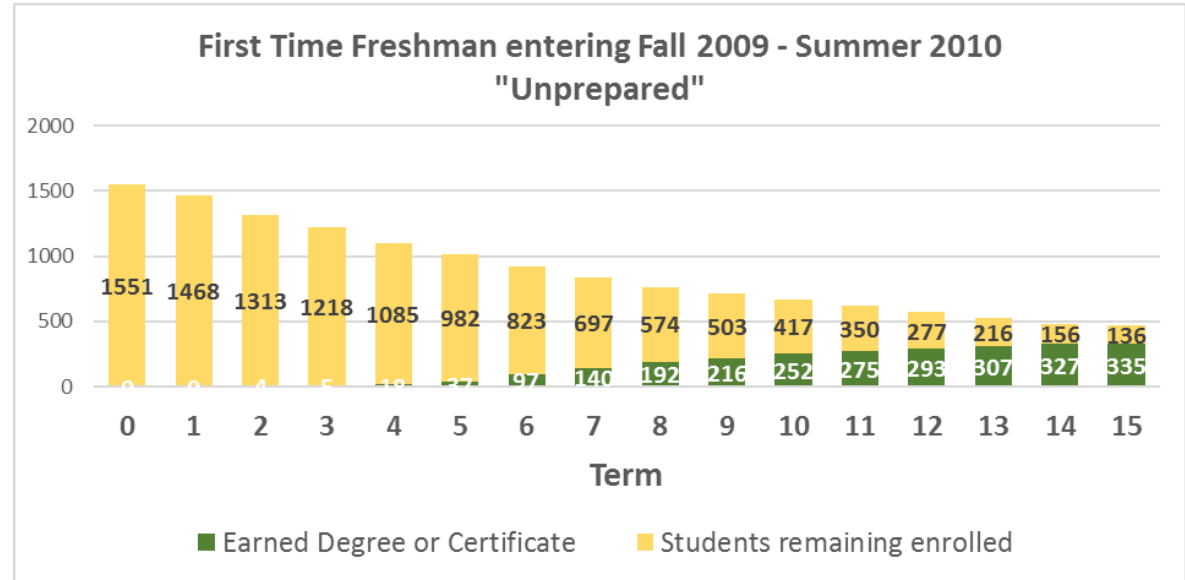
Summary

- The overall successful completion rate of Math courses decreased **-4%** from fall 2015.
- The total number of students successfully completing a Math course decreased by **173**, largely attributed to the drop in students enrolled in math course 080 for fall 2016.
- While the number of students completing college level courses increased by **185**, the number decreased by **203** for basic math excluding courses 083 and 084, and decreased by **155** for basic math courses 083 and 084.
- The completion of college level courses increased for the following groups: females, males, all age groups, American Indian, Black/African-American, Filipino, Hispanic/Latino, Other racial group, Pacific Islander, Foster Youth, non-Foster Youth, and both Veterans and non-Veterans.
- Increases in the overall successful completion rate were experienced within the following groups: American Indian, Native, Filipino, students age 50 and older, Dependents of Veterans, and Foster Youth.

Tracking First-time Freshmen* over 15 terms*** (7.5 years)

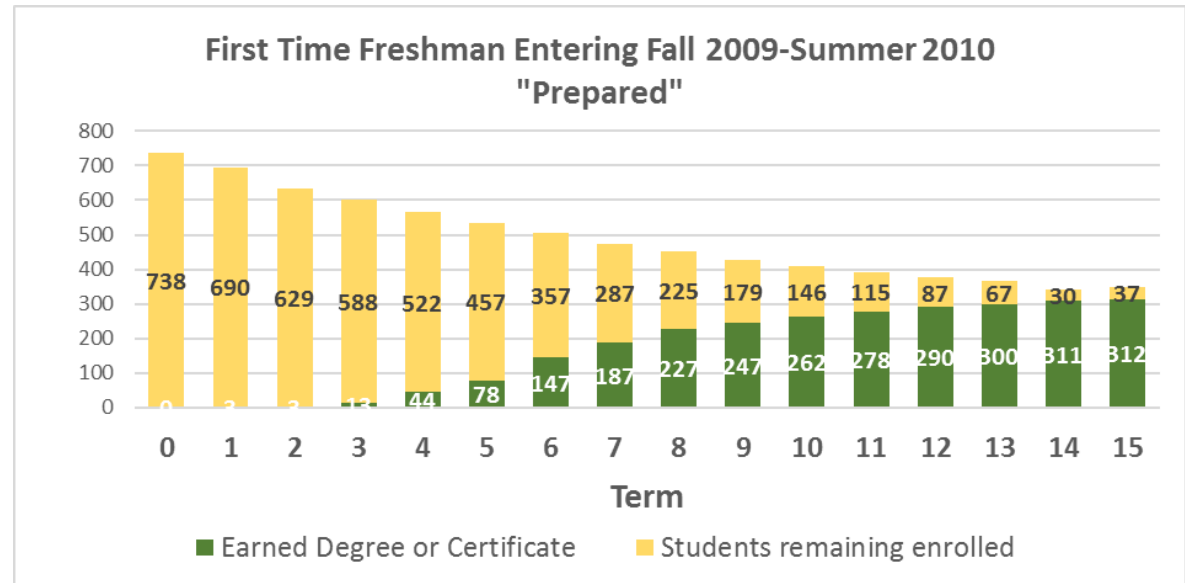
Unprepared** students:

- After the 7th term (equivalent to 3.5 years): 46% were gone without a degree or certificate and 9% had earned a degree or certificate.
- Of those persisting past the 7th term, 34% $[(335-140) \div 574]$ completed a degree or certificate by the 15th term.
- At the end of 15th term (equivalent to 7.5 years): 70% were gone without a degree or certificate and 22% had earned a degree or certificate.



Prepared** students:

- After the 7th term (equivalent to 3.5 years): 36% were gone without a degree or certificate and 25% had earned a degree or certificate.
- Of those persisting past the 7th term, 56% $[(312-187) \div 225]$ completed a degree or certificate by the 15th term.
- At the end of 15th term (equivalent to 7.5 years): 53% were gone without a degree or certificate and 42% had earned a degree or certificate.



*First-Time Freshmen who had earned at least 3 units.

**Unprepared = lowest attempted math or English was basic skills level, Prepared = lowest attempted math or English was college level.

***Students are counted as "gone" at the end of the term in which they earned a degree or certificate for this calculation. In reality, many students continue to enroll after this milestone.

Spring and intersession, summer and fall terms are grouped together for the purposes of this calculation.

A Study of Unproductive Units

Business Administration AS and AST Graduates, 2015-16

Report Prepared by Santa Ana College Research



Report Prepared by: Whitney Youngren, M.A.

Methodology

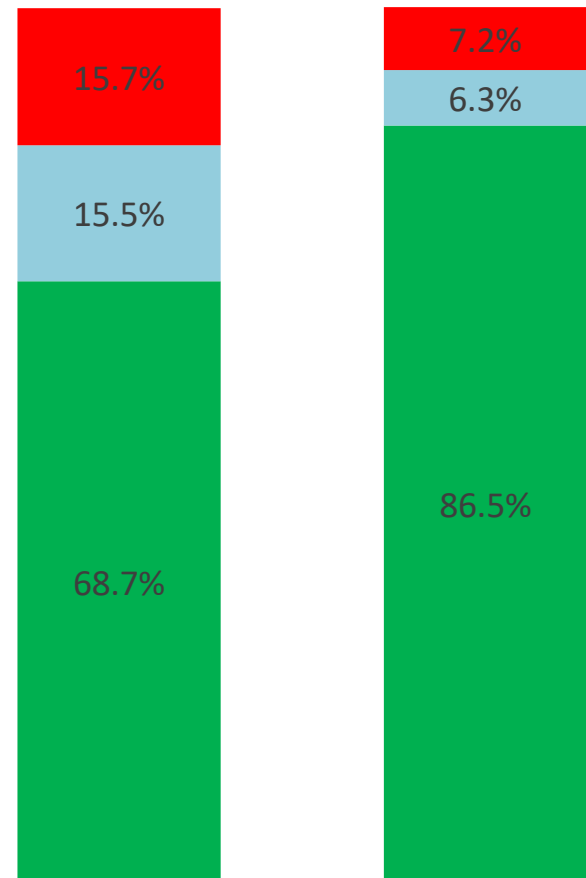
- In an effort to understand the number of "unproductive units" taken by students at Santa Ana College, the Santa Ana College Research Office has examined the course taking behavior of students who obtained an AS or AST in Business Administration in the 2015-2016 academic year.
- We have defined “unproductive units” as an coursework that does not fulfill a major or general education requirement.
- 105 Students were examined in the analysis

Degrees Earned	# of Students
AST in Business Administration with CSU Cert	62
AST in Business Administration (no CSU Cert)	33
AS in Business Administration (no CSU Cert)	6
AS and AST in Business Administration with CSU Cert	2
AS in Business Administration with CSU Cert	1
AS and AST in Business Administration (no CSU Cert)	1

Summary

- Higher successful completion rates for those in sample than the general SAC population exhibits in an average semester
- Average of 11.2 units attempted by these students were “unproductive”
- 32% of the successfully completed unproductive courses were EMLS course
- 21% of the successfully completed unproductive courses were in subjects related to the major
 - BUS
 - ACCT
 - SPCH
 - BANK
 - MGMT
 - MKTG
- The majority of the sample (79%) were not involved in a student services program while at SAC
- The majority of the sample (75%) received either a Pell grant or BOG waiver while at SAC

Academic Outcomes for Fall 2016 All Credit Students and for Study Sample



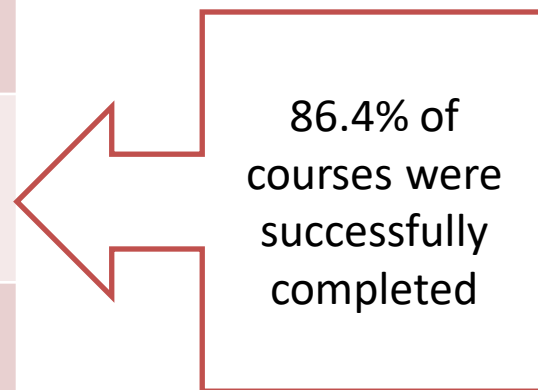
Fall 2016 All SAC Credit Students

Study Sample Academic Career

■ Successful Completion ■ Non-Successful Completion ■ Non-Complete

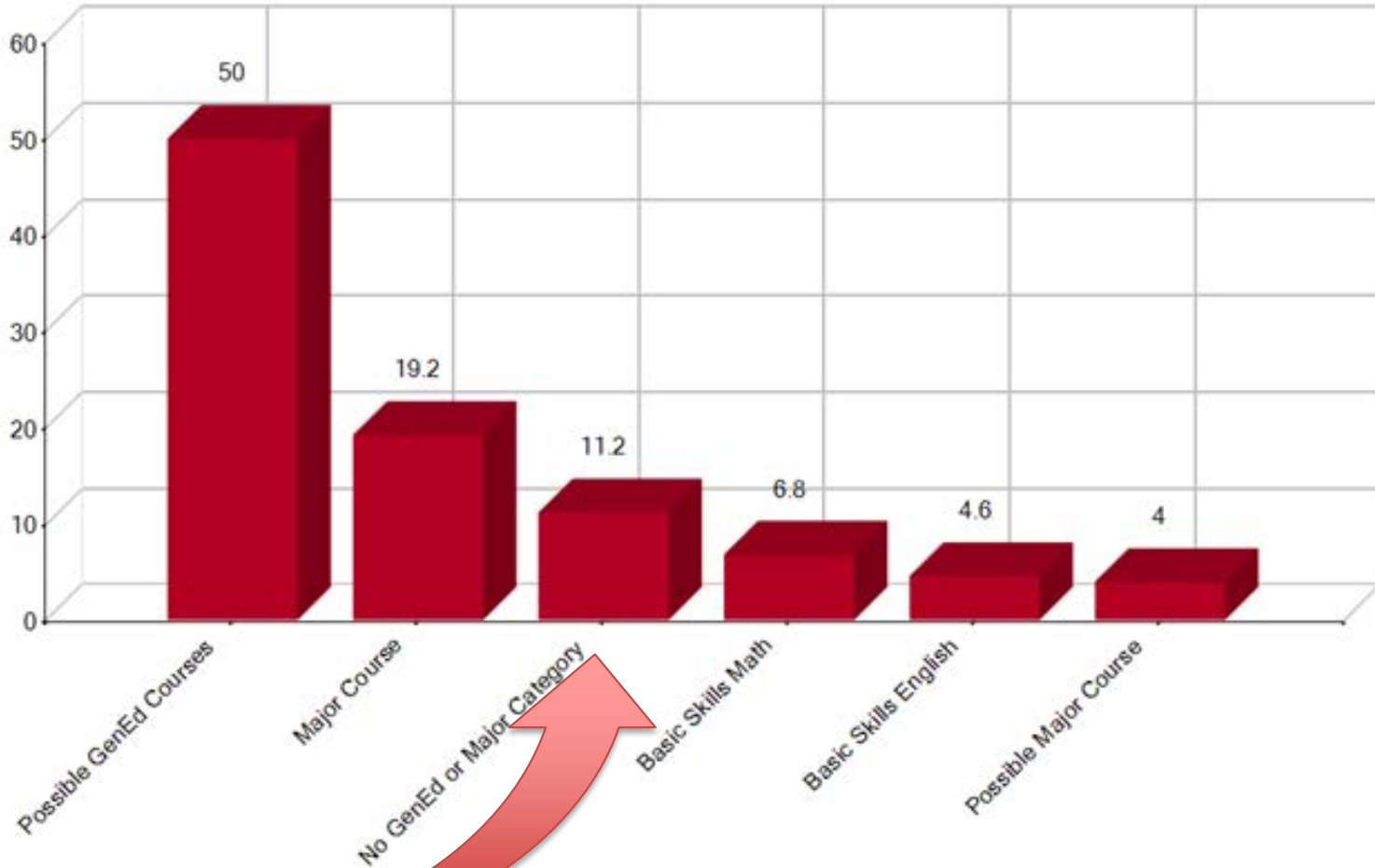
Number of Courses and Units Attempted and Academic Outcomes

	Classes	Units
All Courses	2686	8430.3
# of Courses Successfully Completed (earned grade of A, B, C, or P)	2322	7274.8
# of Courses Unsuccessfully Completed (earned grade of D, F, NP)	168	557.5
# of Courses Not Completed (earned grade of W, I, MW)	194	648.0



86.4% of courses were successfully completed

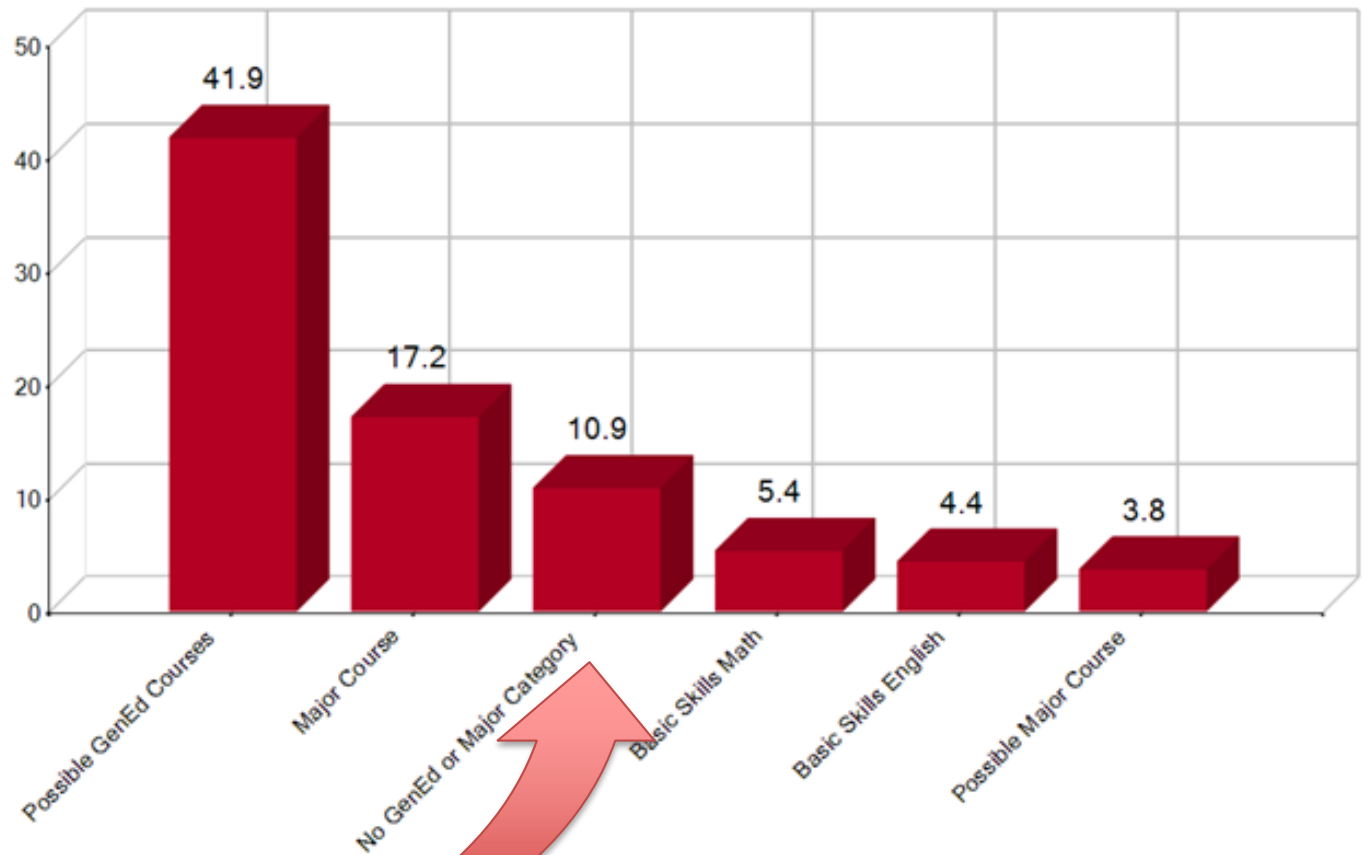
Average Number of Units Attempted by Category



Average of 11.2 units attempted by these students were “unproductive”

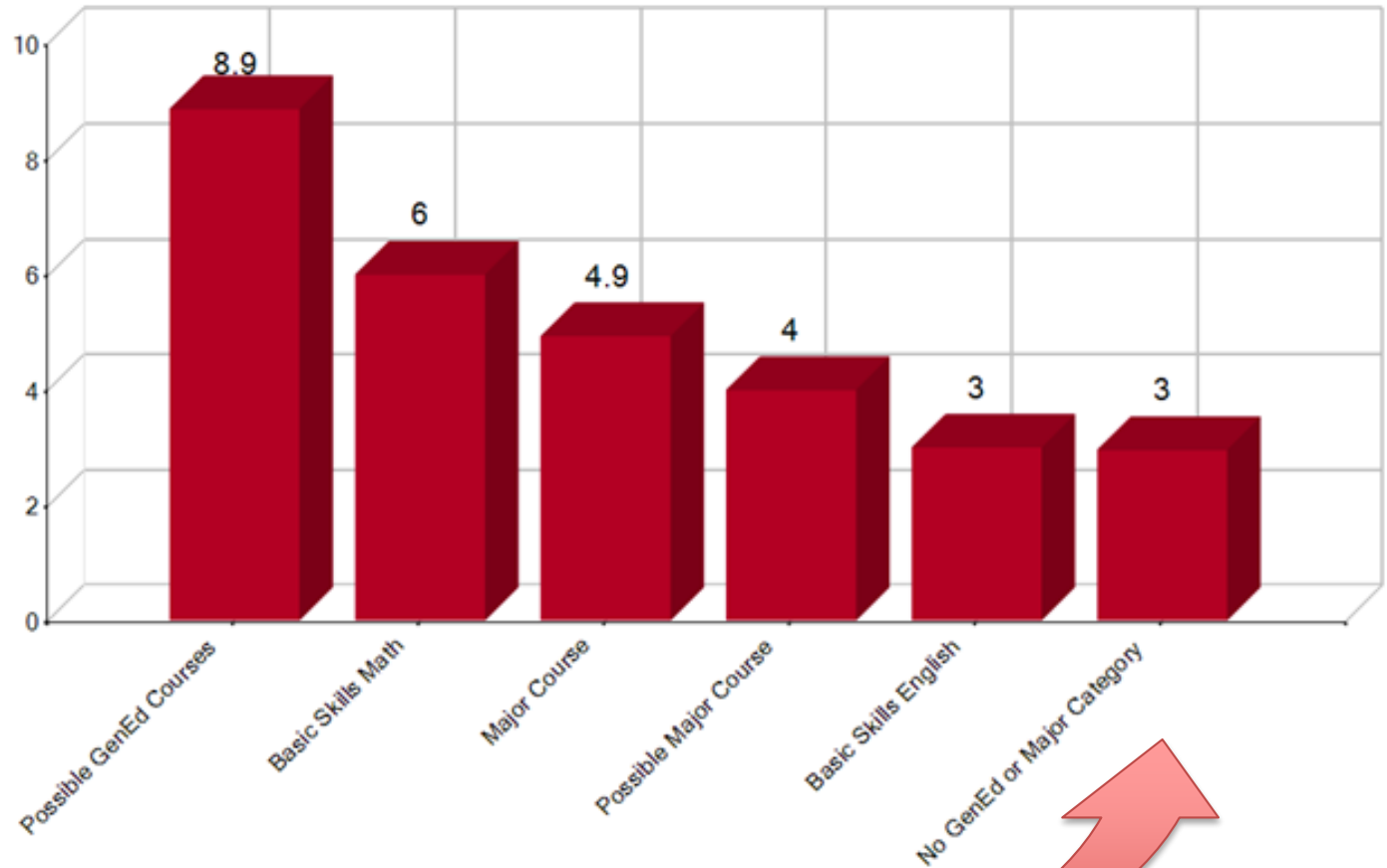
Average Number of Successfully Completed Units by Category

Average of 10.9 units successfully completed by these students were “unproductive”



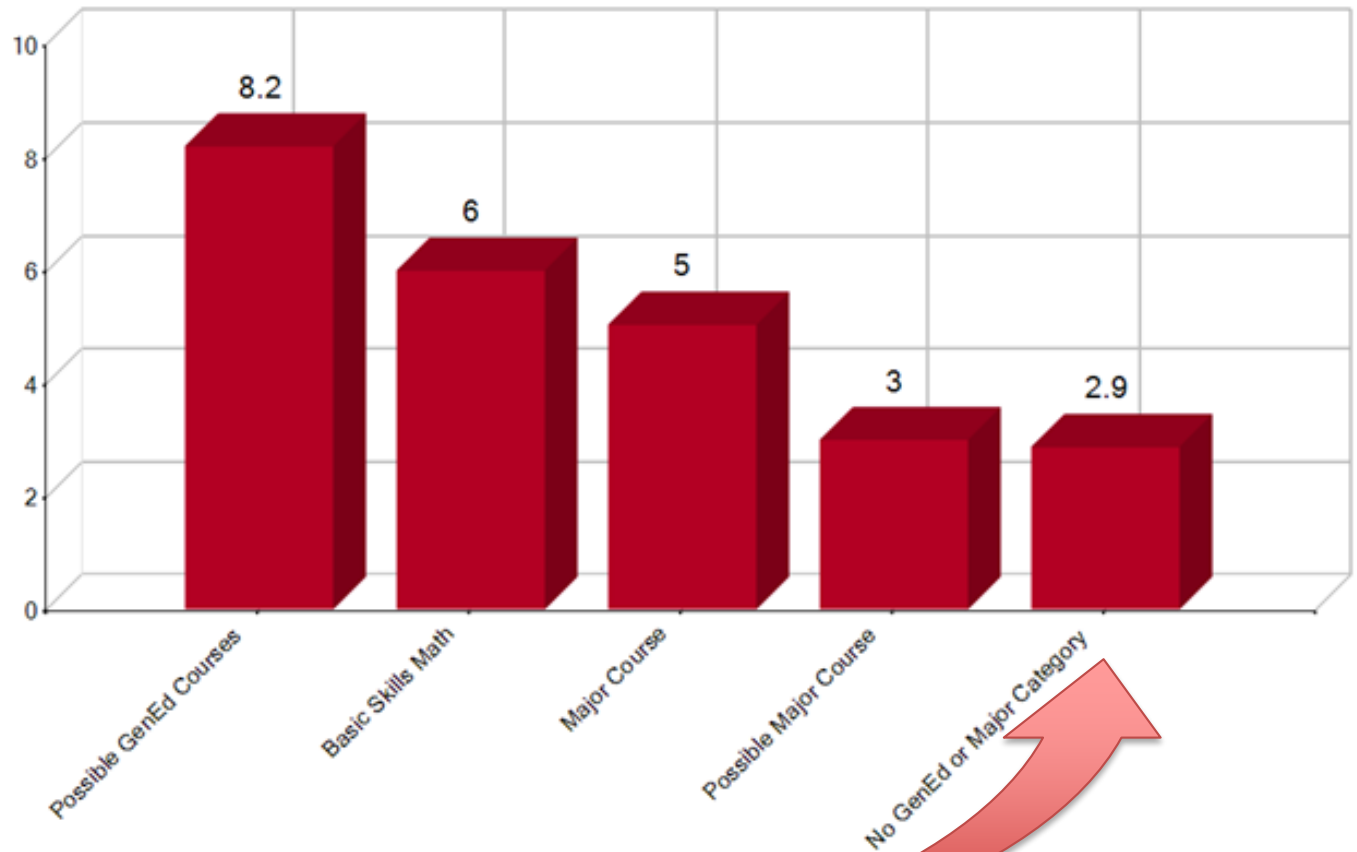
Average Number of Non-Successfully Completed Units by Category

Average of 3 units non-successfully completed by these students were “unproductive”



Average Number of Non-Completed Units by Category

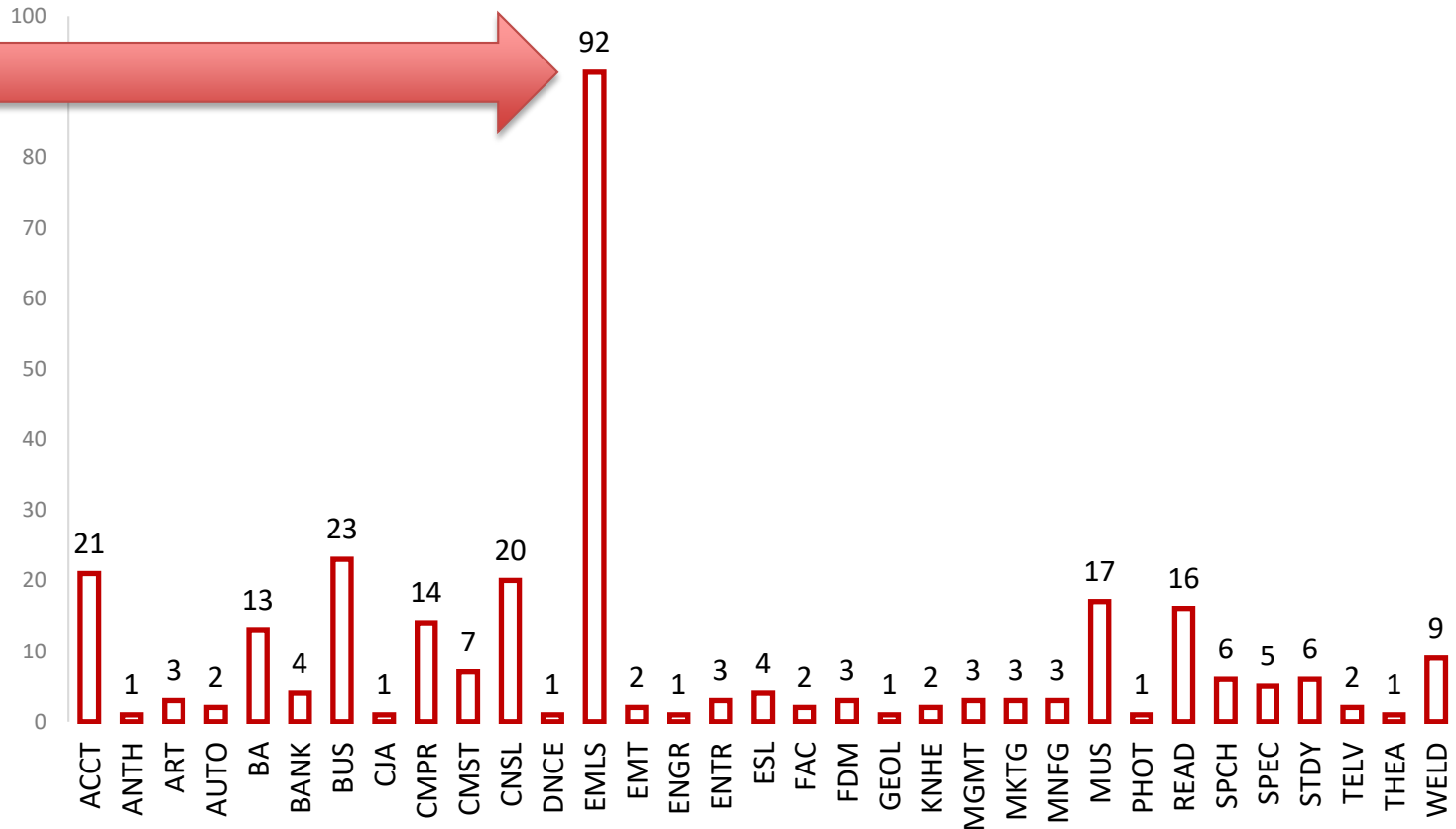
Average of 2.9
units non-
completed by
these students
were
“unproductive”



In What Subject Areas Are Business Administration Students Taking Classes That Do Not Fulfill General Education Or Major Requirements?

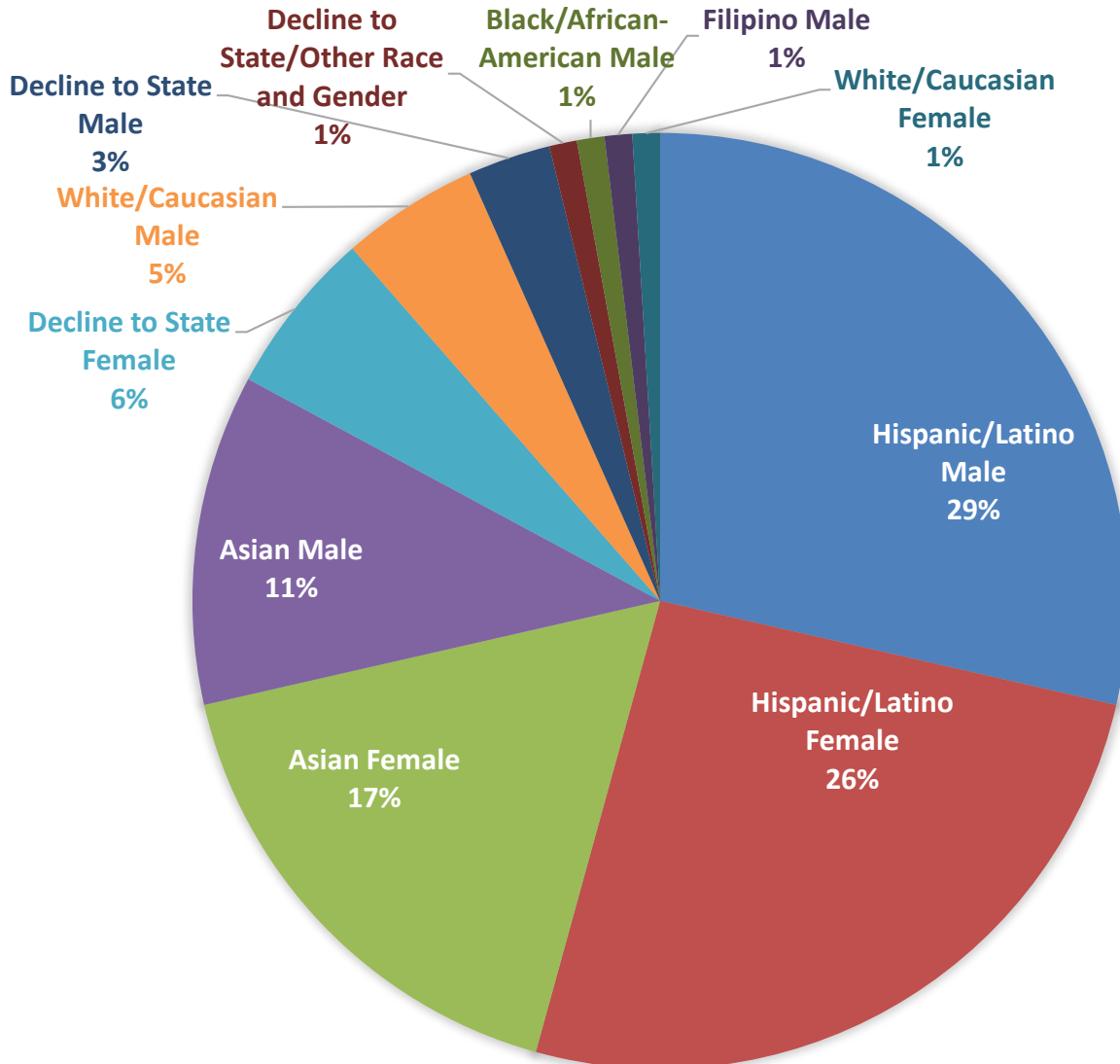
Many of the “unproductive units” were EMLS courses

Successfully completed (A,B,C,P) Courses that do not fulfill a General Education or Major Criteria # of Enrollments in Subject



Demographics and Program Involvement of Study Subjects

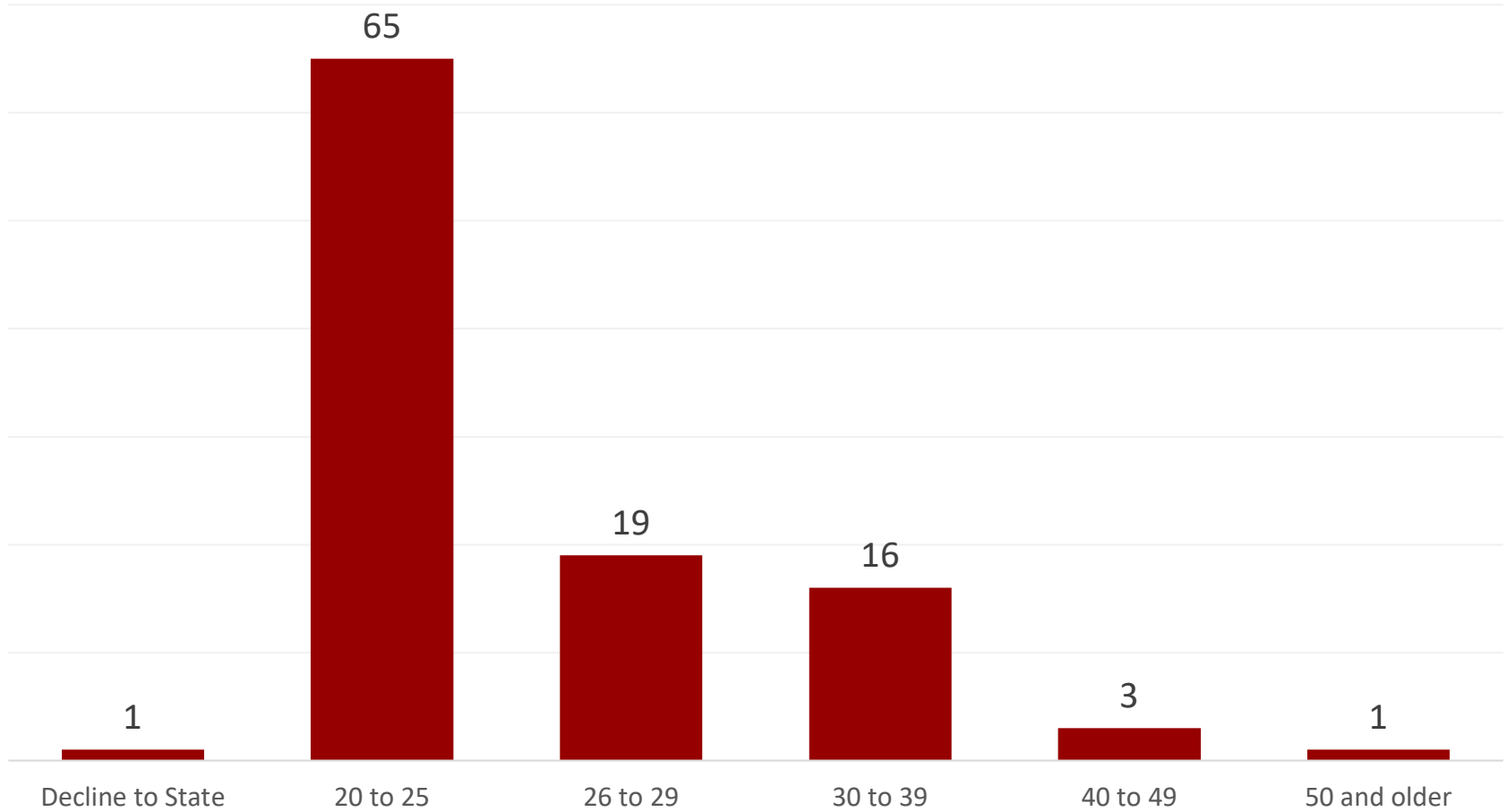
Race and Gender of Degree Recipients



Racial Group	Number of Student	Percent of Sample
Hispanic/Latino	57	54.3%
Asian	30	28.6%
Decline to State	10	9.5%
White/Caucasian	6	5.7%
Black/African-American	1	1.0%
Filipino	1	1.0%

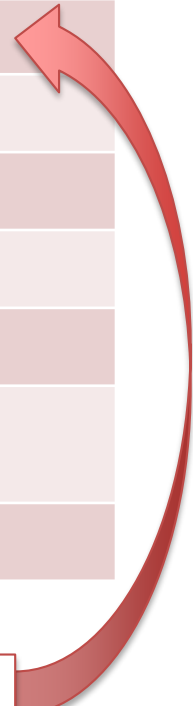
Gender	Number of Student	Percent of Sample
Male	52	49.5%
Female	52	49.5%
Decline to State/Other	1	1.0%

Age of Degree Recipients



Program Involvement

Program Involvement	Number of Students	Percent of Sample
No Programs	83	79%
Adelante Participant	7	7%
Freshman Experience Program Participant	6	6%
Basic Skills Counseling Participant	4	4%
SSTI Participant	3	3%
Freshman Experience Program Participant; Adelante Participant; SSTI Participant	1	1%
Adelante Participant; SSTI Participant	1	1%

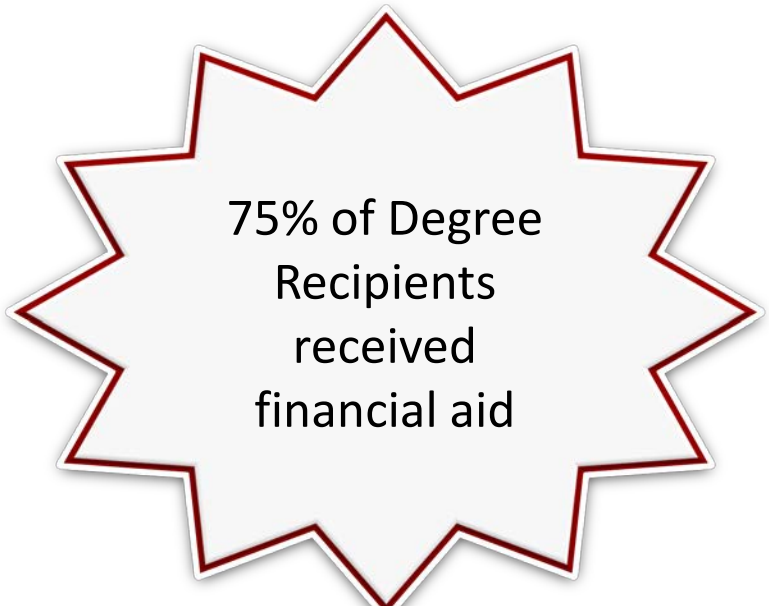


- 17% were involved in one program
- 2% were involved in two or more programs

79% were not involved in any programs

Financial Aid

Financial Aid	Number of Students	Percent of Sample
Dream Act (AB540 BOG Waiver)	7	7%
BOG Waiver	25	24%
No Financial Aid	26	25%
Pell Grant & BOG Waiver	47	44%



75% of Degree Recipients received financial aid

Source and Department Information



SANTA ANA COLLEGE

Research

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Director of College Research

Renee Limback
Research Analyst

Yan Ma, M.A.
Research Analyst

Whitney Youngren, M.A.
Research Analyst

Data Source Information

Source: RSCCD Data Warehouse, Student_Degree table, Term "20152", "20153", "20161", & "20160", Degrees included: "SAC.BUS.AST, SAC.CSU.CA, SAC.CSU.CTF", "SAC.BUS.AST", "SAC.BUS.AS", "SAC.BUS.AST, SAC.CSU.CTF", "SAC.BUS.AS", SAC.BUS.AST,SAC.CSU.CA,SAC.CSU.CTF", "SAC.BUS.AS,SAC.BUS.AST", "SAC.BUS.AS, SAC.CSU.CA, SAC.CSU.CTF"; SEAT

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Love, Janice

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“Grade Distribution for Program Review” is the 2nd dashboard added to the folder.

If you would like a training session regarding this tool, please contact the creator of the tool, Yan Ma, at Ma_Yan@sac.edu.

