

# De Anza College Office of Institutional Research and Planning

**To: De Anza Math Department**

**From:** Mallory Newell, De Anza Researcher

**Date:** 4/20/2018

**Subject:** AB 705 Proposed Statistics and PreCalculus Recommendations Analysis

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This analysis uses historical high school transcript data and De Anza math course enrollment between 2004 and 2015 to explore the percent of students who fall within each GPA range as might be recommended by the AB 705 Implementation Committee ([shared as draft on 4/17/18](#)). The courses enrolled represent the first course a student took, this is likely the course in which they placed, but enrollment data was provided rather than assessment data.

## Statistics Recommendations – Non STEM Pathway

**Table 1. Students by GPA Range Based on AB 705 Draft Recommendations**

High School Performance	Count	%	Recommended Support
HS GPA $\geq$ 3.0	6,355	34%	Transfer-Level No Additional Support
HS GPA $\geq$ 2.3 & C or better in HS Precalculus	3,961	21%	Transfer-Level No Additional Support
HS GPA 2.3-3.0	5,023	27%	Transfer-Level Support Recommended
HS GPA < 2.3	3,507	19%	Transfer-Level Support Strongly Recommended
Total	18,846	100%	

GPA = High school unweighted cumulative GPA  
Excludes any students who did not pass Algebra I in high school

- Of the students in the data file provided by CalPass Plus of students with high school transcript data who took a math class at De Anza:
  - 34% had a GPA greater than or equal to 3.0 and would be placed into transfer-level Statistics with no support recommended
  - 21% had a GPA greater than or equal to 2.3 and obtained a C or better in high school Precalculus (or a higher course) and would be placed into transfer-level Statistics with no support recommended
  - 27% had a high school GPA between 2.3 and 3.0 and would be placed into transfer-level Statistics with corequisite support recommended
  - 19% had a high school GPA less than 2.3 and would be placed into transfer-level Statistics with corequisite support strongly recommended

**Table 2. First Math Course Enrolled by GPA Range**

GPA	First Math Course at DAC	Count	%
≥ 3.0	Transfer-Level	4,221	66%
	MATH114	1,068	17%
	MATH212	867	14%
	MATH210	199	3%
		6,355	100%
≥ 2.3 & C or Better in Precalculus	Transfer-Level	3057	77%
	MATH114	555	14%
	MATH212	295	7%
	MATH210	54	1%
	Total	3961	100%
2.3 - 3.0	Transfer-Level	1,368	27%
	MATH114	1,228	24%
	MATH212	1,807	36%
	MATH210	620	12%
	Total	5,023	100%
<2.3	Transfer-Level	336	10%
	MATH114	625	18%
	MATH212	1,602	46%
	MATH210	944	27%
	Total	3,507	100%

GPA = High school unweighted cumulative GPA

Excludes any students who did not pass Algebra I in high school

- Table 2 displays the GPA range of students and their first math course enrolled at De Anza College by level.
  - 66% of students with  $\geq 3.0$  enrolled in transfer-level math as their first course, however, 17% (1,068) enrolled in a degree applicable course, and 18% enrolled in a basic skills course, historically when using placement tests.
  - 77% of students with a HS GPA and had a C or better in high school Precalculus enrolled in a transfer-level math course as their first course at De Anza, however 22% enrolled below transfer-level.
  - Students with a high school GPA between 2.3 and 3.0, 27% enrolled at transfer-level as their first course.
  - Students with less than a 2.3 high school GPA, only 10% enrolled at transfer-level as their first course.

**Table 3. First Math Course Enrolled at Transfer-Level by GPA Range**

GPA	Transfer-Level Course	Count	GPA	Transfer-Level Course	Count	GPA	Transfer-Level Course	Count	GPA	Transfer-Level Course	Count
<b>≥ 3.0</b>	MATH001A	579	<b>≥ 2.3 &amp; C or Better in Precalc ulus (or</b>	MATH001A	496	<b>2.3 - 3.0</b>	MATH001A	140	<b>&lt;2.3</b>	MATH001A	35
	MATH001B	331		MATH001B	314		MATH001B	65		MATH001B	11
	MATH001C	310		MATH001C	209		MATH001C	21		MATH001C	9
	MATH001D	65		MATH001D	49		MATH001D	1		MATH001D	1
	MATH002A	72		MATH002A	42		MATH002B	3		MATH010.	97
	MATH002B	28		MATH002B	19		MATH010.	420		MATH011.	18
	MATH010.	1379		MATH010.	1177		MATH011.	65		MATH041.	72
	MATH011.	99		MATH011.	73		MATH012.	1		MATH042.	8
	MATH012.	20		MATH012.	11		MATH022.	12		MATH043.	13
	MATH022.	71		MATH022.	51		MATH041.	227		MATH044.	3
	MATH041.	416		MATH041.	298		MATH042.	35		MATH049A	21
	MATH042.	87		MATH042.	55		MATH043.	65		MATH049B	8
	MATH043.	160		MATH043.	136		MATH044.	17		MATH051.	40
	MATH044.	19		MATH044.	15		MATH049A	99			
	MATH049A	204		MATH049A	175		MATH049B	58			
	MATH049B	124		MATH049B	104		MATH051.	137			
	MATH051.	251		MATH051.	180		MATH052.	3			
MATH052.	6	MATH052.	4								

- Of students who enrolled into a transfer-level math course as their first course, the highest enrollment was into MATH10 for all groups, followed by MATH1A and MATH41.

## PreCalculus Recommendations – STEM Pathway

Table 4. Students by GPA Range Based on AB 705 Draft Recommendations

High School Performance	Count	%	Recommended Support
HS GPA $\geq$ 3.4	7,082	25%	Transfer-Level No Additional Support
HS $\geq$ 2.6 AND enrolled in HS Calculus	1,999	7%	Transfer-Level No Additional Support
HS GPA $\geq$ 2.6 OR enrolled in HS Precalculus	13,473	48%	Transfer-Level Support Recommended
HS GPA $\leq$ 2.6 AND no HS Precalculus	5,429	19%	Transfer-Level Support Strongly Recommended
Total	27,983	100%	

GPA = High school unweighted cumulative GPA  
 Excludes any students who did not pass Algebra II in high school

- Of the students in the data file provided by CalPass Plus of students with high school transcript data who took a math class at De Anza:
  - 25% had a GPA greater than or equal to 3.4 and would be placed into a transfer-level course within the STEM pathway with no support recommended
  - 7% had a GPA greater than or equal to 2.6 and enrolled in high school Calculus and would be placed into a transfer-level course with no support recommended
  - 48% had a high school GPA greater than or equal to 2.6 OR had enrolled in high school Precalculus and would be placed into a transfer-level course with corequisite support recommended
  - 19% had a high school GPA less than or equal to 2.6 and did not enrolled in high school Precalculus and would be placed into a transfer-level course with corequisite support strongly recommended

**Table 5. First Math Course Enrolled by GPA Range**

<b>HS Performance</b>	<b>First Math Course at DAC</b>	<b>Count</b>	<b>%</b>
$\geq 3.4$	Transfer-Level	4,649	66%
	MATH114	1,288	18%
	MATH212	978	14%
	MATH210	167	2%
		7,082	100%
$\geq 2.6$ & enrolled in Calculus	Transfer-Level	1,795	90%
	MATH114	153	8%
	MATH212	44	2%
	MATH210	7	0%
	Total	1,999	100%
$\geq 2.6$ or enrolled in Precalculus	Transfer-Level	8,717	65%
	MATH114	2,505	19%
	MATH212	1,860	14%
	MATH210	391	3%
	Total	13,473	100%
$\leq 2.6$ AND no Precalculus	Transfer-Level	414	8%
	MATH114	913	17%
	MATH212	2,557	47%
	MATH210	1,545	28%
	Total	5,429	100%

GPA = High school unweighted cumulative GPA

Excludes any students who did not pass Algebra II in high school

- Table 5 displays the GPA range of students and their first math course enrolled at De Anza College by level.
  - 66% of students with  $\geq 3.0$  enrolled in transfer-level math as their first course, however, 18% (1,288) enrolled in a degree applicable course, and 16% enrolled in a basic skills course, historically when using placement tests.
  - 90% of students with a high school GPA greater than or equal to 2.6 and had enrolled in Calculus enrolled in a transfer-level math course as their first course at De Anza, and 10% enrolled below transfer-level.
  - 65% of students with a high school GPA greater than or equal to 2.6 and had enrolled in Precalculus enrolled in a transfer-level math course as their first course.

**Table 6. First Math Course Enrolled at Transfer-Level by GPA Range**

GPA	Transfer- Level Course	Count	GPA	Transfer- Level Course	Count	GPA	Transfer- Level Course	Count	GPA	Transfer- Level Course	Count
<b>≥ 3.4</b>	MATH001A	619	<b>≥ 2.6 &amp; enrolled in Calculus</b>	MATH001A	208	<b>≥ 2.6 OR Precalculus</b>	MATH001A	1181	<b>≤ 2.6 AND no Precalculus</b>	MATH001A	25
	MATH001B	362		MATH001B	240		MATH001B	695		MATH001B	11
	MATH001C	322		MATH001C	180		MATH001C	540		MATH001C	5
	MATH001D	65		MATH001D	36		MATH001D	115		MATH010.	141
	MATH002A	70		MATH002A	33		MATH002A	113		MATH011.	32
	MATH002B	31		MATH002B	16		MATH002B	50		MATH022.	2
	MATH010.	1508		MATH010.	653		MATH010.	2865		MATH041.	78
	MATH011.	120		MATH011.	24		MATH011.	225		MATH042.	10
	MATH012.	18		MATH012.	4		MATH012.	32		MATH043.	12
	MATH022.	77		MATH022.	30		MATH022.	131		MATH044.	7
	MATH041.	466		MATH041.	81		MATH041.	870		MATH049A	26
	MATH042.	100		MATH042.	21		MATH042.	173		MATH049B	9
	MATH043.	180		MATH043.	65		MATH043.	345		MATH051.	55
	MATH044.	20		MATH044.	2		MATH044.	39		MATH052.	1
	MATH049A	241		MATH049A	84		MATH049A	479			
	MATH049B	145		MATH049B	51		MATH049B	288			
	MATH051.	299		MATH051.	64		MATH051.	565			
MATH052.	6	MATH052.	3	MATH052.	11						

- Of students who enrolled into a transfer-level math course as their first course, the highest enrollment was into MATH10 for all groups.