Instructional Discipline Template

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A. Program Information

Program Mission Statement

Please enter your mission statement here.

Answer:

A well-educated engineering workforce is essential to Silicon Valley's local economy. The mission of the Foothill Engineering Program is to support and inspire all students in their pursuit of an engineering career regardless of their prior exposure to engineering. We do this by providing stepping stones through our courses and activities in the Foothill community to achieve transfer to four-year engineering programs.

Program Level Student Learning Outcomes

Please list the program level student learning outcomes.

Answer:

By the end of the engineering program, students should feel supported and inspired in becoming an engineer by: knowing what engineers do and what the pathway to becoming an engineer includes, applying knowledge and skills of engineering fundamentals (computation), synthesizing problems and creating and evaluating solutions (community and critical thinking), participating in and analyzing team work and communication skills (communication), and valuing the workplace ethical responsibility of engineers.

Enrollment Variables and Trends

Enrollment Trends
Physical Scienc, Math & Engin - Engineering-FD

	2014-15	2015-16	2016-17	2017-18	2018-19	5-yr %Inc
Unduplicated Headcount	428	411	395	360	316	-26.2%
Census Enrollment	677	638	667	551	438	-35.3%
Sections	40	35	41	24	19	-52.5%
WSCH	1,273	1,202	1,229	1,036	794	-37.6%
FTES (end of term)	86	81	82	69	53	-38.2%
FTEF (end of term)	4.1	3.8	3.9	2.8	1.8	-54.6%
Productivity (WSCH/FTEF)	314	314	312	368	431	37.3%

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B. FTES - Enrollment Trends

1. In the data table above, what does the FTES data trend indicate?

- ☐ the data trend shows an increase in FTES
- ☑ the data trend shows a decrease in FTES
- ☐ the data trend shows no change in FTES

Discuss the factors that would help the college understand these trends and whether there are tangible reasons for the increase or decrease.

Answer:

The Engineering Program has seen a decrease in FTES over the last 5 years (38.2%). However, the decrease is in line with what other Engineering departments at other California community colleges are seeing. We also switched an emphasis from WSCH to Productivity, cutting sections (by over 50%) to have more full sections - which meant some students were no longer able to be served by our more limited offerings. Lastly, Engineering programs seem to be strongly and inversely linked to the economy, which was continuing to do well during this time period.

2. Looking at the data trend, has the faculty/staff discussed proposed actions to stabilize/increase FTES?

- ☑ yes
- ☐ no

If yes, describe the proposed actions for stabilizing/increasing the FTES.

Answer:

FTES could be increased with Guided Pathways high or working with high schools. This would lead to more full sections. To achieve this, first, we need to reflect on our offerings and how many colleges and universities require them to build a list of required courses. Second, we need to design a sequence for those courses based on their pre-requisites. Third, we need to work with the schedulers and counselors so that course schedules make sense. After filling these sections, we will listen to students about additional courses or additional sections at different times that would further expand our FTES.

C. Sections - Enrollment Trends

1. In the data table above, what does the data trend indicate about the number of sections offered?

- ☐ the data trend shows an increase in sections
- ☑ the data trend shows a decrease in sections
- ☐ the data trend shows no change in sections

If the data trend shows an increase or decrease in sections, explain why the number of sections increased or decreased.

Answer:

The decrease in sections (52.5%) from 40 sections to 19 sections happened for a number of reasons. First, many sections that were duplicates of courses offered at different times were not offered with the intention of pushing students into more full sections to increase Productivity. Second, class sections that did not fill quickly enough were cancelled, also to increase Productivity and avoid running courses that were on the smaller side. The sections that ended up getting cancelled, may not have filled quickly because with fewer pre-requisite sections offered, there were fewer students ready to take those courses.

If the data indicates an increase in sections with a decrease in FTES, explain why the number of sections increased while FTES decreased.

Answer:

N/A

D. Productivity - Enrollment Trends

1. In the data table above, what does the data trend indicate about the productivity number?

- ☑ the data trend shows the productivity number increased
- ☐ the data trend shows the productivity number decreased
- ☐ the data trend shows no change in the productivity number

If the data trend shows an increase or decrease in productivity, explain why the productivity increased or decreased.

Answer:

Productivity for the Engineering Program increased statistically significantly by 37.3% over the last five years. This was achieved by offering fewer sections and cancelling courses that did not fill quickly enough. Courses with online sections seem to have very high Productivity (although lower success rates). Additionally, reducing the number of sections offered has increased Productivity by about 40% for most of our courses. A notable exception is that ENGR 45 decreased from 3 sections in 2014-2015 to 1 section in 2017-2018 and increased its productivity 160% up to 482. Unfortunately, ENGR 45 was not offered in 2018-2019.

2. Does the data trend suggest changes are necessary to improve productivity?

- [x] yes
- [ ] no

If yes, describe the proposed actions for stabilizing/increasing the productivity number.

Answer:

While our Productivity has increased, we can make changes to have it increase further. Guided Pathways for Engineering can allow more students to enroll in existing sections. Increasing online offerings can also increase productivity by allowing students without reliable transportation or with complicated schedules to have access. In addition to creating a schedule that reduces course overlap, we can investigate how many students on the engineering pathway have the pre-requisites for the courses and figure out how to streamline their success in the courses that become roadblocks.

E. Enrollment by Student Demographics

Enrollment Distribution

by Gender

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
Female	141	21%	127	20%	122	18%	111	20%	70	16%
Male	533	79%	501	79%	543	81%	436	79%	360	82%
Not Reported	3	0%	10	2%	2	0%	4	1%	8	2%
Total	677	100%	638	100%	667	100%	551	100%	438	100%

by Ethnicity

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
African American	28	4%	16	3%	30	4%	28	5%	9	2%
Asian	280	41%	216	34%	238	36%	244	44%	188	43%
Filipinx	15	2%	27	4%	26	4%	24	4%	21	5%
Latinx	90	13%	93	15%	107	16%	75	14%	83	19%
Native American	3	0%	2	0%	3	0%	0	0%	0	0%
Pacific Islander	7	1%	5	1%	12	2%	9	2%	2	0%
White	180	27%	206	32%	167	25%	145	26%	129	29%
Decline to State	74	11%	73	11%	84	13%	26	5%	6	1%
Total	677	100%	638	100%	667	100%	551	100%	438	100%

by Age

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
19 or less	127	19%	121	19%	94	14%	78	14%	65	15%
20-24	382	56%	346	54%	409	61%	352	64%	263	60%
25-39	143	21%	148	23%	147	22%	104	19%	103	24%
40 +	25	4%	23	4%	17	3%	17	3%	7	2%
Total	677	100%	638	100%	667	100%	551	100%	438	100%

by Education Level

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent	Enr	Percent
Bachelor or higher	69	10%	69	11%	68	10%	39	7%	22	5%
Associate	27	4%	14	2%	18	3%	29	5%	23	5%
HS/Equivalent	510	75%	506	79%	545	82%	466	85%	369	84%
All Other	71	10%	49	8%	36	5%	17	3%	24	5%
Total	677	100%	638	100%	667	100%	551	100%	438	100%

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a. Enrollment by Gender

The following questions concern enrollment distribution by gender.

1. In the data table above, what does the data trend indicate about program enrollment by gender?

Females

- ☐ the data trend shows an increase in the female enrollment rates
- ☑ the data trend shows a decrease in the female enrollment rates
- ☐ the data trend shows no change in the female enrollment rates

Males

- ☑ the data trend shows an increase in the male enrollment rates
- ☐ the data trend shows a decrease in the male enrollment rates
- ☐ the data trend shows no change in the male enrollment rates

If the data trend shows a change in male or female enrollment, explain why there was a change.

Answer:

The percentage of women in our Engineering Program has ranged between 21% to 16% over the last five years, which is not statistically significant. Because we see the swing in female enrollment across almost all courses, a factor outside of the individual courses might be in play - a less active Women in STEM club, economic factors, or national trends, perhaps.

2. Does your program differ in the percentage of males to females, in this most recent year, compared to the College? (College 2018-19 = 52% Female, 48% Male)

- ☑ yes
- ☐ no

If the data indicates a lack of gender parity in your program as compared to the college percentages, what is the source of that disparity and what proposed/planned actions is the program taking to achieve parity?

Answer:

There is a large difference between our percentage of female engineering students (16%) and the percentage of female students in the college (52%). The main reason for this is that the percentage of women in the engineering workforce is low nationally (13%) and low for graduates (20%) even though engineering bachelor programs have been working on increasing that percentage for decades. There are many different approaches to increase the percentage of women present in engineering: provide more information about what engineering is and how engineers help people, provide more authentic projects, provide more teamwork opportunities, and more role models.

Data Table for Enrollment by Gender of Declared Majors

https://foothill.edu//programreview/prg-rev-docs/fh-programreview2019_20enroll-by-gender-and-declared-major.pdf (https://foothill.edu//programreview/prg-rev-docs/fh-programreview2019_20enroll-by-gender-and-declared-major.pdf)

Click the link to view Enrollment by Gender of Declared Majors data table and respond to the questions below.

3. In the data table above, what does the data trend indicate about enrollment (headcount) by gender of declared majors in the program?

Females

- ☑ the data trend shows an increase in the female enrollment of the declared major
- ☐ the data trend shows a decrease in the female enrollment of the declared major
- ☐ the data trend shows no change in the female enrollment of the declared major

Males

- ☑ the data trend shows an increase in the male enrollment of the declared major
- ☐ the data trend shows a decrease in the male enrollment of the declared major
- ☐ the data trend shows no change in the male enrollment of the declared major

b. Enrollment by Ethnicity

The following questions concern enrollment distribution by ethnicity.

1. In the data table above, what do the data trends indicate about program enrollment by ethnicity?

African American

- ☐ the data trend shows an increase in the African Americans enrollment rates
- ☐ the data trend shows a decrease in the African Americans enrollment rates
- ☑ the data trend shows no change in the African Americans enrollment rates

Asian

- ☐ the data trend shows an increase in the Asian enrollment rates
- ☐ the data trend shows a decrease in the Asian enrollment rates
- ☑ the data trend shows no change in the Asian enrollment rates

Filipinx

- ☑ the data trend shows an increase in the Filipinx enrollment rates
- ☐ the data trend shows a decrease in the Filipinx enrollment rates
- ☐ the data trend shows no change in the Filipinx enrollment rates

Latinx

- ☑ the data trend shows an increase in the Latinx enrollment rates
- ☐ the data trend shows a decrease in the Latinx enrollment rates
- ☐ the data trend shows no change in the Latinx enrollment rates

Native American

- ☐ the data trend shows an increase in the Native American enrollment rates
- ☐ the data trend shows a decrease in the Native American enrollment rates
- ☑ the data trend shows no change in the Native American enrollment rates

Pacific Islander

- ☐ the data trend shows an increase in the Pacific Islander enrollment rates
- ☐ the data trend shows a decrease in the Pacific Islander enrollment rates
- ☑ the data trend shows no change in the Pacific Islander enrollment rates

White

- ☐ the data trend shows an increase in the White enrollment rates
- ☐ the data trend shows a decrease in the White enrollment rates
- ☑ the data trend shows no change in the White enrollment rates

Decline to State

- ☐ the data trend shows an increase in the Decline to State enrollment rates
- ☑ the data trend shows a decrease in the Decline to State enrollment rates
- ☐ the data trend shows no change in the Decline to State enrollment rates

2. Does your program differ in enrollment distribution among ethnic groups, in this most recent year, compared to the College enrollment by ethnic group? (College 2018-19 = 5% African American, 30% Asian, 5% Filipinx, 26% Latinx, 0% Native American, 1% Pacific Islander, 29% White, 4% Decline to State)

- ☑ yes
- ☐ no

If yes, looking at the ethnic groups above, explain changes identified over the past five years for each ethnic group (address each ethnic group by bullet point).

Answer:

The following list specifies the differences from college enrollment along with changes indicated by the data: - African Americans - below college average - Asian - above college average - Filipinx - statistically significantly increasing up to same as college average - Latinx - below college average and increasing - Native American - same as college average - Pacific Islander - below college average - White - same as college average - Decline to State - below college average and decreasing

3. Do the data trends suggest programmatic actions are necessary to address disparities in enrollment by ethnicity, including low enrollment within a particular group?

- ☑ yes
- ☐ no

If yes, describe the proposed actions for addressing disparities in enrollment by ethnic group within the program.

Answer:

The following list specifies the proposed actions for increasing presence for underrepresented ethnic groups: - African Americans - work with Umoja, include African American role models on our website, include African American engineers in the curriculum - Latinx - work with Puente, continue team-forming practices, include more Latinx role models who have gone through the program on our website, include Latinx engineers in the curriculum - Pacific Islander - include Pacific Islander engineers in the curriculum Also, mentoring program that connects current students to successful Foothill alumni might help. Additionally, Guided Pathways could remove some logistical barriers.

F. Student Course Success

Course Success Rates by Unit

Course Success
Physical Scienc, Math & Engin - Engineering-FD

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
Success	553	82%	522	82%	556	83%	429	78%	304	69%
Non Success	75	11%	60	9%	55	8%	65	12%	83	19%
Withdrew	49	7%	56	9%	56	8%	56	10%	51	12%
Total	677	100%	638	100%	667	100%	550	100%	438	100%

Course Success for African American, Latinx, and Filipinx Students

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Success	97	73%	101	74%	133	82%	94	74%	78	69%
Non Success	27	20%	24	18%	15	9%	20	16%	22	19%
Withdrew	9	7%	11	8%	15	9%	13	10%	13	12%
Total	133	100%	136	100%	163	100%	127	100%	113	100%

Course Success for Asian, Native American, Pacific Islander, White, and Decline to State Students

	2014-15		2015-16		2016-17		2017-18		2018-19	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Success	456	84%	421	84%	423	84%	335	79%	226	70%
Non Success	48	9%	36	7%	40	8%	45	11%	61	19%
Withdrew	40	7%	45	9%	41	8%	43	10%	38	12%
Total	544	100%	502	100%	504	100%	423	100%	325	100%

Some courses may continue to be listed but no longer have data due to renumbering or because the course was not offered in the past five years.

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a. Student Course Success

1. In the data table above, what does the data trend indicate about overall course success?

- ☐ the data trend shows an increase in the students' course success percentage
- ☑ the data trend shows a decrease in the students' course success percentage
- ☐ the data trend shows no change in the students' course success percentage

If the data trend shows an increase, decrease, or no change in students' course success percentage, explain what programmatic factors led to such a trend.

Answer:

The overall success rate is decreasing for Engineering, dropping from 83% success to 69% success. The success rates decreased for the courses that had online offerings (Engr 35: Statics, and Engr 37: Circuits); although, we can investigate the mode of teaching more. Additionally, students typically do quite well in Engr 10: Introduction to Engineering; fewer sections were offered and fewer students took that course in the most recent year which would effect the average. Engineering tends to have less tutoring available, both in person or online. Lastly, there is a difference in part-time to full time instructors teaching these classes.

2. Do the data suggest changes are necessary to improve student course success?

- ☑ yes
- ☐ no

If yes, describe the proposed actions for stabilizing/increasing the student's course success percentages.

Answer:

The low success rates in our online courses (average success rate of 47%) are worth looking into. There is a lot of support that can be given in an online learning environment and we should both ask the students for feedback on how to better support them in addition to asking online learning experts about additional strategies for supporting student success. As we do more teaching online, we will

develop strategies that best support students. Additionally, we should look into increasing access to engineering tutoring both online and in person.

b. Student Course Success by Student Groups

1. In the data table above, what is the observed trend for course success rates for African American, Filipinx, and Latinx student groups?

- ☐ the data trend shows an increase in the course success percentage
- ☐ the data trend shows a decrease in the course success percentage
- ☑ the data trend shows no change in the course success percentage

2. In the data table above, what is the observed trend for course success rates for Asian, Native American, Pacific Islander, White, and Decline to State student groups?

- ☐ the data trend shows an increase in the course success percentage
- ☑ the data trend shows a decrease in the course success percentage
- ☐ the data trend shows no change in the course success percentage

3. In the data table above, is there a course success gap between African-American, Latinx, Filipinx student groups and Asian, Native American, Pacific Islander, White, Decline to State student groups?

- ☑ yes
- ☐ no

If the data trend shows an increase or decrease in course success gap, explain why the course success gap increased or decreased.

Answer:

Five years ago, the gap in success rate was 11% and now it has been reduced to 1%. This may be due, in part, to there being less of a success gap in online courses. As online courses can potentially alleviate some of the stereotype threat that underrepresented students experience in face to face classes. From the Inquiry Tool, it seems like there is less of a consistent success gap by ethnicity online. As we improve online support for students, we should be mindful that the support is equitable.

4. Does the data suggest that changes are necessary to decrease student course success gap between African-American, Latinx, Filipinx student groups and Asian, Native American, Pacific Islander, White, and Decline to State student groups?

- ☑ yes
- ☐ no

If yes, what actions are program faculty and staff engaged in to decrease the course success gap between African-American, Latinx, and Filipinx student groups and Asian, Native American, Pacific Islander, White, and Decline to State student groups?

Answer:

We should look to take steps to improve student success including: - Hiring engineering tutors for online and in person tutoring - Including more teamwork and team-based assignments in our courses both in person and online - Fostering a sense of community in our courses both in person and online

G. Student Course Success by Demographics

a. Student Course Success by Gender

The following questions concern student success rates by gender.

Course Success Rates by Group

Success Rates by Gender
Physical Scienc, Math & Engin - Engineering-FD

	2018-19

	Success		Non Success		Withdrew		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Female	51	73%	11	16%	8	11%	70	100%
Male	249	69%	69	19%	42	12%	360	100%
Not Reported	4	50%	3	38%	1	13%	8	100%
All	304	69%	83	19%	51	12%	438	100%

2017-18

	Success		Non Success		Withdrew		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Female	92	84%	6	5%	12	11%	110	100%
Male	335	77%	57	13%	44	10%	436	100%
Not Reported	2	50%	2	50%	0	0%	4	100%
All	429	78%	65	12%	56	10%	550	100%

2016-17

	Success		Non Success		Withdrew		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Female	96	79%	13	11%	13	11%	122	100%
Male	458	84%	42	8%	43	8%	543	100%
Not Reported	2	100%	0	0%	0	0%	2	100%
All	556	83%	55	8%	56	8%	667	100%

2015-16

	Success		Non Success		Withdrew		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Female	105	83%	9	7%	13	10%	127	100%
Male	409	82%	49	10%	43	9%	501	100%
Not Reported	8	80%	2	20%	0	0%	10	100%
All	522	82%	60	9%	56	9%	638	100%

2014-15

	Success		Non Success		Withdrew		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
Female	124	88%	11	8%	6	4%	141	100%
Male	426	80%	64	12%	43	8%	533	100%
Not Reported	3	100%	0	0%	0	0%	3	100%
All	553	82%	75	11%	49	7%	677	100%

Success Rates by Age

Physical Scienc, Math & Engin - Engineering-FD

2018-19

Success	Non Success	Withdrew	Total

	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
19 or less	50	77%	7	11%	8	12%	65	100%
20-24	185	70%	50	19%	28	11%	263	100%
25-39	66	64%	25	24%	12	12%	103	100%
40 +	3	43%	1	14%	3	43%	7	100%
All	304	69%	83	19%	51	12%	438	100%

2017-18

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
19 or less	65	83%	7	9%	6	8%	78	100%
20-24	280	80%	37	11%	35	10%	352	100%
25-39	71	69%	18	17%	14	14%	103	100%
40 +	13	76%	3	18%	1	6%	17	100%
All	429	78%	65	12%	56	10%	550	100%

2016-17

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
19 or less	78	83%	8	9%	8	9%	94	100%
20-24	363	89%	26	6%	20	5%	409	100%
25-39	106	72%	19	13%	22	15%	147	100%
40 +	9	53%	2	12%	6	35%	17	100%
All	556	83%	55	8%	56	8%	667	100%

2015-16

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
19 or less	105	87%	6	5%	10	8%	121	100%
20-24	276	80%	40	12%	30	9%	346	100%
25-39	121	82%	13	9%	14	9%	148	100%
40 +	20	87%	1	4%	2	9%	23	100%
All	522	82%	60	9%	56	9%	638	100%

2014-15

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
19 or less	108	85%	12	9%	7	6%	127	100%
20-24	315	82%	45	12%	22	6%	382	100%
25-39	113	79%	15	10%	15	10%	143	100%
40 +	17	68%	3	12%	5	20%	25	100%
All	553	82%	75	11%	49	7%	677	100%

Success Rates by Ethnicity

Physical Scienc, Math & Engin - Engineering-FD

2018-19

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
African American	7	78%	2	22%	0	0%	9	100%
Asian	122	65%	43	23%	23	12%	188	100%
Filipinx	13	62%	6	29%	2	10%	21	100%
Latinx	58	70%	14	17%	11	13%	83	100%
Native American	0	N/A	0	N/A	0	N/A	0	100%
Pacific Islander	0	0%	1	50%	1	50%	2	100%
White	101	78%	15	12%	13	10%	129	100%
Decline to State	3	50%	2	33%	1	17%	6	100%
All	304	69%	83	19%	51	12%	438	100%

2017-18

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
African American	20	71%	4	14%	4	14%	28	100%
Asian	199	82%	21	9%	23	9%	243	100%
Filipinx	20	83%	2	8%	2	8%	24	100%
Latinx	54	72%	14	19%	7	9%	75	100%
Native American	0	N/A	0	N/A	0	N/A	0	100%
Pacific Islander	6	67%	1	11%	2	22%	9	100%
White	111	77%	18	12%	16	11%	145	100%
Decline to State	19	73%	5	19%	2	8%	26	100%
All	429	78%	65	12%	56	10%	550	100%

2016-17

	Success		Non Success		Withdrew		Total	
	Grades	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**	**Grades**	**Percent**
African American	21	70%	5	17%	4	13%	30	100%
Asian	202	85%	16	7%	20	8%	238	100%
Filipinx	23	88%	0	0%	3	12%	26	100%
Latinx	89	83%	10	9%	8	7%	107	100%
Native American	3	100%	0	0%	0	0%	3	100%
Pacific Islander	6	50%	4	33%	2	17%	12	100%
White	133	80%	17	10%	17	10%	167	100%
Decline to State	79	94%	3	4%	2	2%	84	100%
All	556	83%	55	8%	56	8%	667	100%

2015-16

Success	Non Success	Withdrew	Total

	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
African American	9	56%	5	31%	2	13%	16	100%
Asian	180	83%	13	6%	23	11%	216	100%
Filipinx	24	89%	2	7%	1	4%	27	100%
Latinx	68	73%	17	18%	8	9%	93	100%
Native American	2	100%	0	0%	0	0%	2	100%
Pacific Islander	4	80%	0	0%	1	20%	5	100%
White	169	82%	18	9%	19	9%	206	100%
Decline to State	66	90%	5	7%	2	3%	73	100%
All	522	82%	60	9%	56	9%	638	100%

2014-15

	Success		Non Success		Withdrew		Total	
	Grades	Percent	Grades	Percent	Grades	Percent	Grades	Percent
African American	21	75%	6	21%	1	4%	28	100%
Asian	237	85%	20	7%	23	8%	280	100%
Filipinx	9	60%	4	27%	2	13%	15	100%
Latinx	67	74%	17	19%	6	7%	90	100%
Native American	2	67%	0	0%	1	33%	3	100%
Pacific Islander	6	86%	1	14%	0	0%	7	100%
White	146	81%	20	11%	14	8%	180	100%
Decline to State	65	88%	7	9%	2	3%	74	100%
All	553	82%	75	11%	49	7%	677	100%

Some courses may continue to be listed but no longer have data due to renumbering or because the course was not offered in the past five years.

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1. In the data table above, what does the data indicate about program course success by gender?

Females

- ☐ the data trend shows an increase in the female course success rates
- ☑ the data trend shows a decrease in the female course success rates
- ☐ the data trend shows no change in the female course success rates

Males

- ☐ the data trend shows an increase in the male course success rates
- ☑ the data trend shows a decrease in the male course success rates
- ☐ the data trend shows no change in the male course success rates

If the data trend shows an increase or decrease in the male or female student course success percentages, explain why the percentage increased or decreased for both.

Answer:

The success rate decreased for female and male students by 15 percentage points and 11 percentage points, respectively. This is in alignment with the overall decrease in success rate seen by the department as a whole. Overall, the gender gap in success rate is closing as well.

2. Do the data suggest changes are necessary to improve female or male student course success percentage rates?

- ☑ yes

☐ no

If yes, describe proposed actions to stabilize/increase the course success rates for either male or female.

Answer:

Because the success rates could be higher, we should take actions to increase success rates. The downward trend seems to be led by increasing online offerings along with a low success rate for online offerings. Addressing how to improve online course success should help both male and female students. Our goals for improving courses include: better fostering a sense of community online, assigning more team-based assignments online, and including more alumni success cases on our website.

b. Student Course Success by Ethnicity

These questions concern the course success rates of students by ethnicity.

1. In the data table above, what does the data trend indicate about program student course success by ethnicity?

African Americans

☐ the data trend shows an increase in the African Americans course success rates
☐ the data trend shows a decrease in the African Americans course success rates
☑ the data trend shows no change in the African Americans course success rates

Asian

☐ the data trend shows an increase in the Asian course success rates
☑ the data trend shows a decrease in the Asian course success rates
☐ the data trend shows no change in the Asian course success rates

Filipinx

☐ the data trend shows an increase in the Filipinx course success rates
☐ the data trend shows a decrease in the Filipinx course success rates
☑ the data trend shows no change in the Filipinx course success rates

Latinx

☐ the data trend shows an increase in the Latinx course success rates
☐ the data trend shows a decrease in the Latinx course success rates
☑ the data trend shows no change in the Latinx course success rates

Native American

☐ the data trend shows an increase in the Native American course success rates
☐ the data trend shows a decrease in the Native American course success rates
☑ the data trend shows no change in the Native American course success rates

Pacific Islander

☐ the data trend shows an increase in the Pacific Islander course success rates
☑ the data trend shows a decrease in the Pacific Islander course success rates
☐ the data trend shows no change in the Pacific Islander course success rates

White

☐ the data trend shows an increase in the White course success rates
☑ the data trend shows a decrease in the White course success rates
☐ the data trend shows no change in the White course success rates

Decline to State

☐ the data trend shows an increase in the Decline to State course success rates
☑ the data trend shows a decrease in the Decline to State course success rates
☐ the data trend shows no change in the Decline to State course success rates

If the data trend shows a decrease in any of the student ethnic groups' course success rates, explain why the percentage decreased for each (address each ethnic group by bullet point).

Answer:

Overall, student success rates have decreased for most ethnic groups. We attribute this to the overall decline in success rate in the department, led by increasing online class offerings, which have had a low success rate.

2. Do the data indicate a gap in course success for any of the ethnic groups as compared to other groups?

☑ yes
☐ no

If yes, describe the reasons for the gap in course success.

Answer:

The success rates by ethnic group seem to fluctuate greatly from year to year. As it is, the swing from year to year exceeds the difference between groups, so comparisons are hard to make. The reasons for this could be numerous, ranging from issues consistent with national studies on historical preparation and support, to components of our curriculum. To understand what the actual reasons are, we should ask the students about their supports and barriers to success.

3. Do the data suggest that changes are necessary to improve program course success equality?

- [x] yes
- [ ] no

If yes, describe the proposed actions for stabilizing/improving the course success by ethnicity.

Answer:

Changes are necessary to improve course success because none of the ethnic groups have 100% success. Our goal should be to help every single student to achieve success and we will continue to need to make changes to our courses (and to our support programs) until we get to that point. - Hiring engineering tutors for online and in person tutoring - Including more teamwork and team-based assignments in our courses both in person and online - Fostering a sense of community in our courses both in person and online

Use this opportunity to provide feedback on the template or address a topic that was not previously discussed.

Answer:

N/A

This form is completed and ready for acceptance.