National Environmental Health Science & Protection Accreditation Council

2018-2019 Update of Accredited Degree Programs

Compiled by

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2018-2019 Annual Update of EHAC Accredited Degree Programs Report Highlights

Accredited Degree Program Growth and Attrition

- Steady growth in the number of accredited Undergraduate (UG) and Graduate (G) Degree Programs has leveled since 2015, with a current total of 37 EHAC Accredited Degree Programs (28 Undergraduate and nine Graduate Degree Programs).
- A total of 56 UG and G Degree Programs have acquired accreditation and 19 UG and G Degree Programs have lost accreditation since 1969.

Undergraduate and Graduate Enrollment

- UG enrollment increased steadily from 2007-2009 with a decline from 2015-2016 to 2017-2018. 2018-2019 saw a slight increase in enrollment.
- Graduate enrollment steadily increased from 2007 to 2014 with a sharp increase from 2015 to 2016. Since 2016 enrollment has steadily decreased.

Undergraduate and Graduate Graduation Rates

- UG graduation rates have generally increased since 2006 with peaks in 2009-2010 and 2011-2012. However, 2017-2018 saw a slight decrease in UG graduation numbers.
- Graduate graduation rates have increased by steadily with a peak in 2016-2018, but have experienced a decline since 2017-2018.

Undergraduate and Graduate Retention Rates

- The 11-year (2008-2019) average retention rate for UG students is 25%.
- The 11-year (2008-2019) average retention rate for Graduate students is 31.15%.

Undergraduate and Graduate On-Campus Recruitment Techniques

- UG Degree Programs reported more success with face to face tools in 2018-2019.
- Graduate Degree Programs also experienced success with face to face tools, as well as Facebook interactions.

Undergraduate and Graduate Off-Campus Recruitment Techniques

- Similar to 2017-2018, UG Degree Programs were most successful in recruiting students off-campus by participating in career day events, using alumni recruiters and presenting to high school students.
- Graduate Degree Programs rely upon alumni, community university partnerships, participating in local event and electronic media for successful off-campus recruiting.

1.0 Introduction

Each year Environmental Health (EH) Degree Programs accredited by the National Environmental Health Science and Protection Accreditation Council (EHAC) are required to complete an annual update survey. This survey covers topics which allow EHAC to better understand the health of individual Degree Programs, as well as the overall strength of EHAC Accredited Degree Programs.

The data in this report represents responses from 37 of 37 EHAC accredited Undergraduate and Graduate Degree Programs. There are 28 Undergraduate Degree Programs and nine Graduate Degree Programs represented in this survey.

This report provides information on student and faculty diversity, the health of individual Degree Programs, student recruitment, enrollment and retention trends and graduation rates. Additionally, it includes information on faculty degree requirements, faculty salary information, international students, public vs. private sector employment rates of graduates and recruitment strategies.

2.0 Current EHAC Accreditation Degree Program Origin and Reaccreditation Dates

Twenty-eight Undergraduate EH Degree Programs and nine Graduate Degree Programs were accredited by EHAC at the time of this data collection (Table 1). The period of accreditation is six years. Degree Programs begin their reaccreditation process the fall before the end date of their accreditation.

Table 1: Accredited Institutions - Accreditation Origin Date and Reaccreditation Schedule (Degree Programs eligible for 2019 reaccreditation are highlighted in blue)

	EHAC Accredited Institution	Undergraduate/ Graduate Degree Program	Next Reaccreditation Review - Year	Initial Accreditation Date - Year
1	Baylor University	Undergraduate	2022	2010
2	Benedict College	Undergraduate	2022	2004
3	Boise State University	Undergraduate	2018	1982
4	California State University, Northridge	Undergraduate	2020	1979
5	California State University, Northridge	Graduate	2020	1973
6	California State University at San Bernardino	Undergraduate	2025	2004
7	Central Michigan University	Undergraduate	Reassess in 2021	2013
8	Colorado State University	Undergraduate	2022	1973
9	Dickinson State	Undergraduate	Lost accreditation in 2019	2010
10	East Carolina University	Undergrad	2024	1974
11	East Carolina University	Graduate	2024	1981
12	East Central University, Oklahoma	Undergraduate	2020	1975
13	East Tennessee State University	Undergraduate	Reassess in 2021	1969
14	East Tennessee State University	Graduate	2025	1977
15	Eastern Kentucky University	Undergraduate	2025	1985
16	Eastern Kentucky University	Graduate	2025	2012
17	Fort Valley State University	Graduate	2021	2015
18	Illinois State University	Undergraduate	2025	1977

	EHAC Accredited Institution	Undergraduate/ Graduate Degree Program	Next Reaccreditation Review - Year	Initial Accreditation Date - Year
19	Indiana University- Purdue University Indianapolis	Undergraduate	2025	2006
20	Mississippi Valley State University	Undergraduate	2022	1997
21	Mississippi Valley State University	Graduate	2024	2005
22	Missouri Southern State University	Undergraduate	2020	1996
23	North Carolina Central University	Undergraduate	2023	2017
24	Ohio University	Undergraduate	2022	1992
25	Old Dominion University	Undergraduate	2020	1983
26	Old Dominion University	Graduate	Lost accreditation in 2019	2007
27	State University of New York, School of Environmental Science and Forestry	Undergraduate	2021	2017
28	Texas Southern University	Undergraduate	2025	2006
29	University of Findlay	Undergraduate	2024	2012
30	University of Findlay	Graduate	2024	2005
31	University of Georgia, Athens	Undergraduate	2024	1984
32	University of Illinois, Springfield	Graduate	2024	2006
33	University of Washington	Undergraduate	2023	1976
34	University of Wisconsin Eau Claire	Undergraduate	2023	1975
35	University of Wisconsin Oshkosh	Undergraduate	2025	2013
36	West Chester University	Undergraduate	2020	2008
37	Western Carolina University	Undergraduate	2023	1984

Chart 1 presents the historic trend in number of accredited Undergraduate and Graduate Degree Programs from EHAC's first accreditation decision in 1969, to the present. Undergraduate Degree Program numbers show a steady increase from 1969 to 2010. Since 1969, eighteen Undergraduate Degree Programs have lost accreditation, while forty-six Undergraduate Degree Programs have gained accreditation (Chart 2). Graduate Degree Programs have steadily risen as well, since 1971, plateauing at a high of nine since 2011. One Graduate Degree Program lost accreditation and one gained accreditation in 2019 (Chart 2).

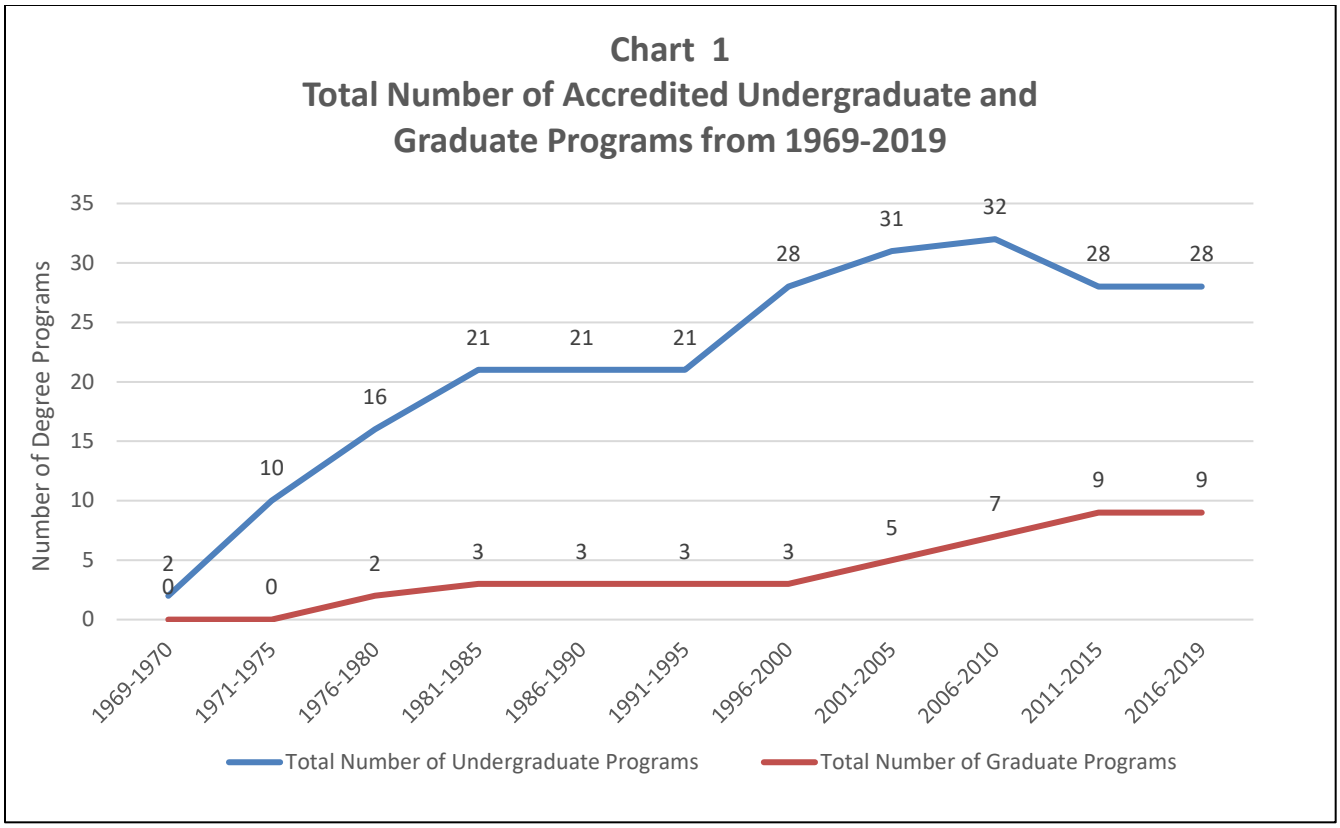


Chart 1
Total Number of Accredited Undergraduate and Graduate Programs from 1969-2019
Number of Degree Programs
35
30
25
20
15
10
5
0
2
10
16
21
21
21
28
31
32
28
28
0
0
2
3
3
3
3
5
7
9
9
1969-1970
1971-1975
1976-1980
1981-1985
1986-1990
1991-1995
1996-2000
2001-2005
2006-2010
2011-2015
2016-2019
Total Number of Undergraduate Programs
Total Number of Graduate Programs

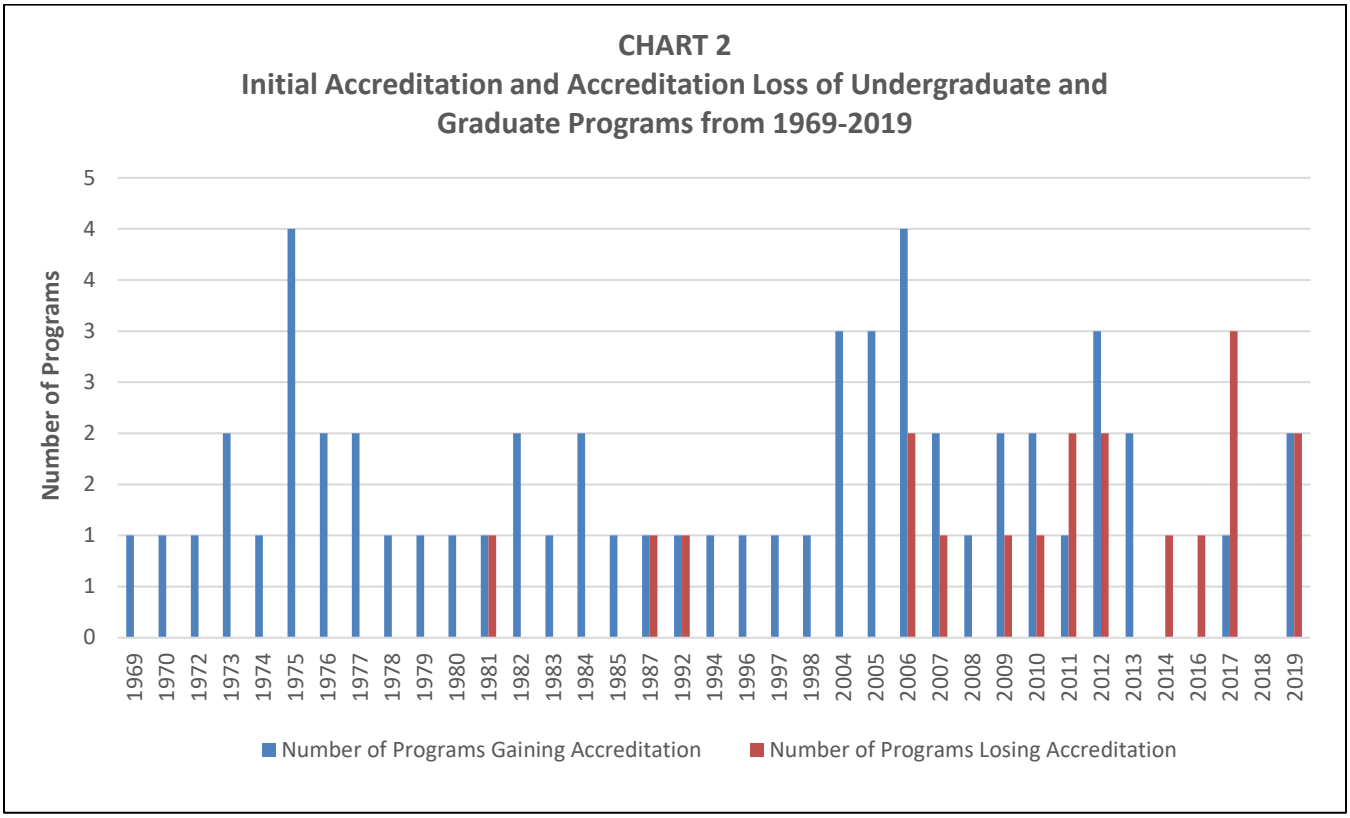


CHART 2
Initial Accreditation and Accreditation Loss of Undergraduate and Graduate Programs from 1969-2019
Number of Programs
5
4
4
3
3
2
2
1
1
0
1969
1970
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981
1982
1983
1984
1985
1987
1992
1994
1996
1997
1998
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2016
2017
2018
2019
Number of Programs Gaining Accreditation
Number of Programs Losing Accreditation

3.0 Degree Program Faculty Updates and Information

3.1 Number of Faculty within Accredited Degree Programs

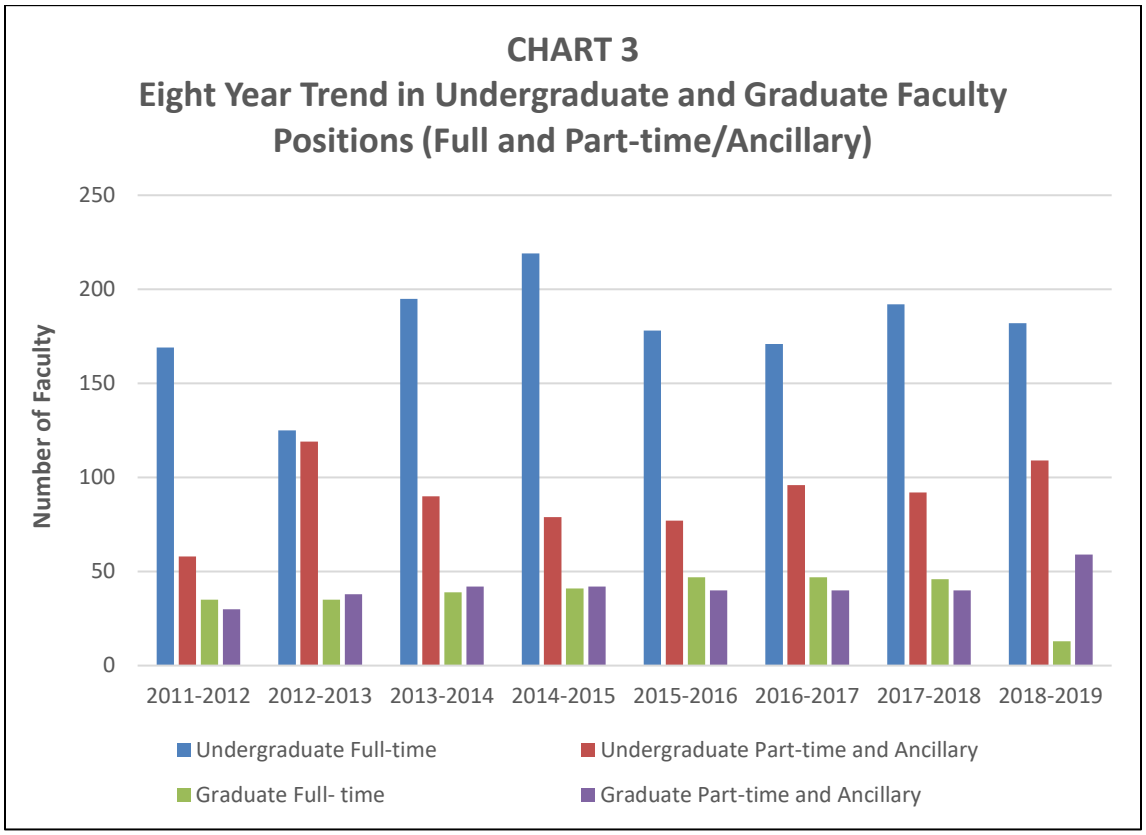
This year, 2018-2019, a total of 363 faculty members were reported by Undergraduate and Graduate Degree Programs, a 1.8% decrease from the previous year, with 370 reported Degree Program faculty members (Tables 2 and 3). This decrease reflects loss primarily in part-time and ancillary faculty numbers for both Graduate and Undergraduate Degree Programs. Chart 3 presents trends in Undergraduate and Graduate full and part-time faculty during the last eight years.

Table 2: Faculty Teaching at Undergraduate EHAC Accredited Degree Programs

University Name	Full-time	Part-time	Ancillary	Total
Baylor University	9	0	1	10
Benedict College	3	1	0	4
Boise State College	3	0	0	3
California State University Northridge	7	18	0	25
California State University San Bernardino	1	2	3	6
Central Michigan University	17	0	0	17
Colorado State University	16	0	0	16
Dickinson State University	0	9	0	9
East Carolina University	7	0	0	7
East Central University	3	0	1	4
East Tennessee State University	5	0	5	10
Eastern Kentucky University	7	3	1	11
Illinois State University	4	0	4	8
Indiana University - Purdue University Indianapolis	5	0	6	11
Mississippi Valley State University	3	0	2	5
Missouri Southern State University	2	1	3	6
North Carolina Central University	6	0	7	13
Ohio University	2		4	6
Old Dominion University	3	0	7	10
State University of New York, Syracuse	19	0	3	22
Texas Southern University	4	0	0	4
University of Findlay	7	0	2	9
University of Georgia, Athens	9	0	0	9
University of Washington	30	10	0	40
University of Wisconsin Eau Claire	2	4	0	6
University of Wisconsin Oshkosh	1	4	0	5
West Chester University	3	4	0	7
Western Carolina University	4	0	4	8
Total	**182**	**56**	**53**	**291**

Table 3: Faculty Teaching at EHAC Graduate Accredited Degree Programs

University Name	Full-time	Part-time	Ancillary	Total
California State University Northridge	6	6	0	12
East Carolina University	0	6	0	6
East Tennessee State University	0	5	5	10
Eastern Kentucky University	2	7	1	10
Fort Valley State University	0	3	0	3
Mississippi Valley State University	0	3	1	4
Old Dominion University	5	5	0	10
University of Findlay	0	7	1	8
University of Illinois, Springfield	0	7	2	9
Total	**13**	**49**	**10**	**72**



3.2 Salary Information

Degree Programs were invited to report average salaries for both junior and senior faculty for nine and twelve-month time periods. Results for Undergraduate and Graduate faculty are shown in Tables 4 and 5.

Charts 4-7 present ten-year trends in Junior and Senior level salary amounts for 9 and 12-month periods at Undergraduate and Graduate Degree Programs. Nine-month period salaries have remained steady for junior and senior level faculty at both UG and G Degree Programs with a decline in Senior faculty salaries between 2018 and 2019. Faculty employed for a 12-month period have experienced the most volatility in salary range for both junior and senior levels at Undergraduate and Graduate Degree Programs. There was a significant increase in senior level Undergraduate faculty salaries in 2018-2019, while Graduate faculty salaries have steadily decreased since 2016-2017 (Charts 6 and 7).

Table 4: Undergraduate Faculty Salary Averages for Nine and 12-month and Mixed Periods

Undergraduate Faculty Position	9-Month Period (# of responses varied - see left)	12-Month Period (2 responses)	Mixed (2 responses)
Instructor (12 responses)	$68,389.00	No data	$10,000.00
Assistant Professor (21 responses)	$69,570.00	$103,500.00	$82,049.00
Associate Professor (16 responses)	$75,845.00	$172,209.00	$84,082.00
Full Professor (19 responses)	$102,394.00	$168,625.00	$116,591.00
Lecturer/Senior Lecturer (9 responses)	$61,777.00	$113,000.00	No data

Table 5: Graduate Faculty Salary Averages for nine and 12-month and Mixed Periods

Graduate Faculty Position	9-Month Period (# of responses varied - see left)	12-Month Period (1 responses)	Mixed (1 response)
Instructor (5 responses)	$43,680.00	$45,000	No data
Assistant Professor (6 responses)	$67,266.00	$55,000.00	$98,089.00
Associate Professor (5 responses)	$75,000.00	$60,000.00	$76,164.00
Full Professor (4 responses)	$95,867.00	$85,000.00	$132,183.00
Lecturer/Senior Lecturer (2 responses)	$55,000.00	$35,0000	No data

CHART 4
Ten Year Trend in Undergraduate Junior and Senior Faculty Salaries - 9 month period

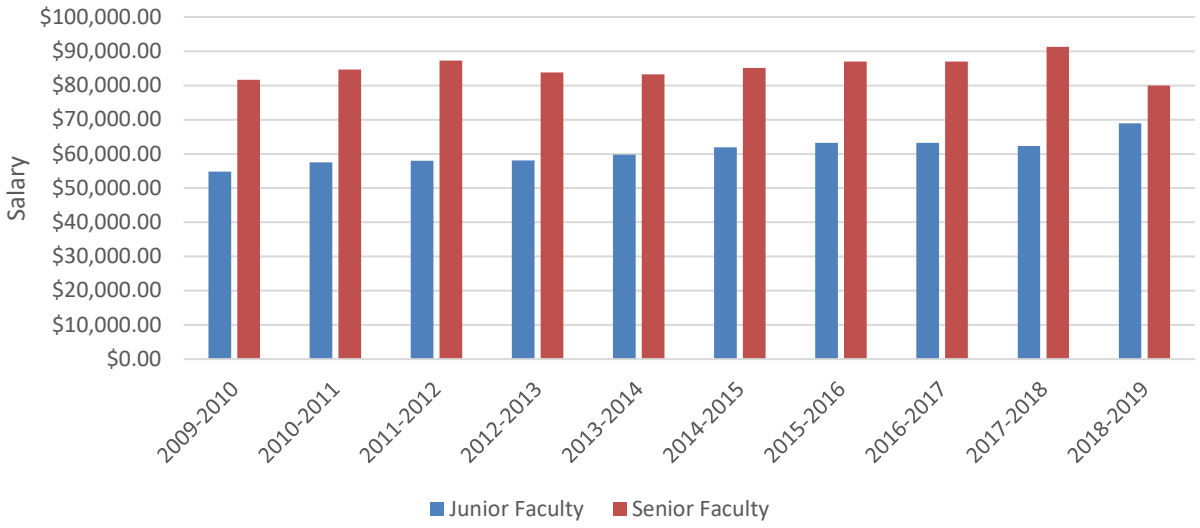
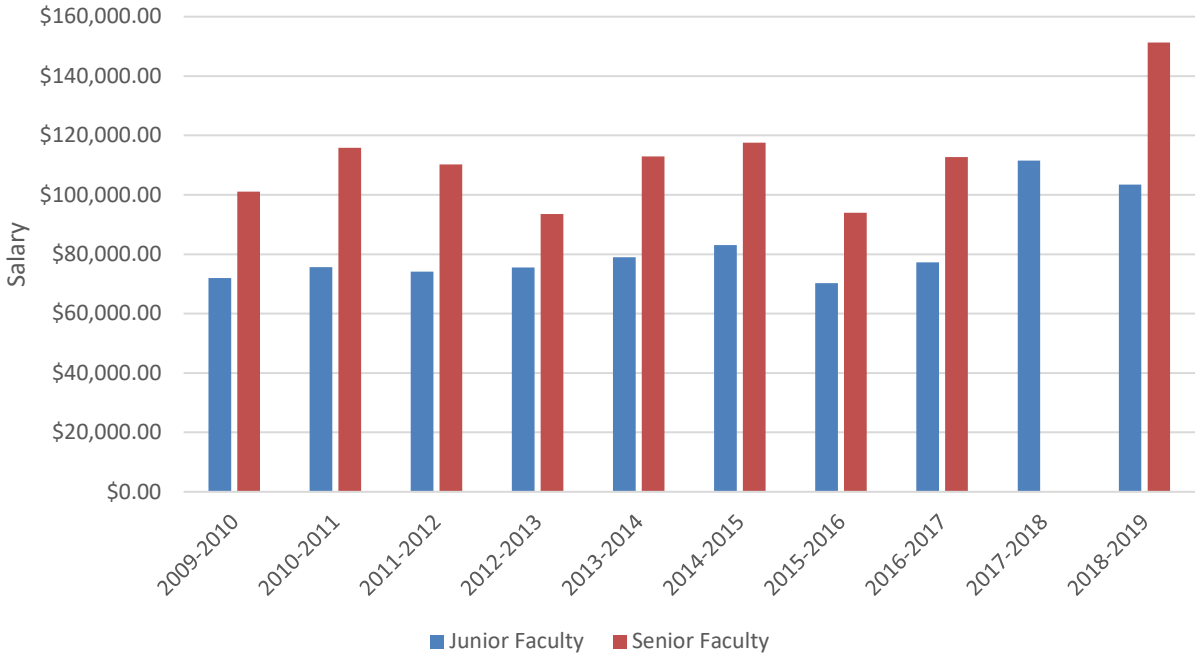


CHART 5
Ten Year Trend in Undergraduate Junior and Senior Faculty Salaries - 12 month period



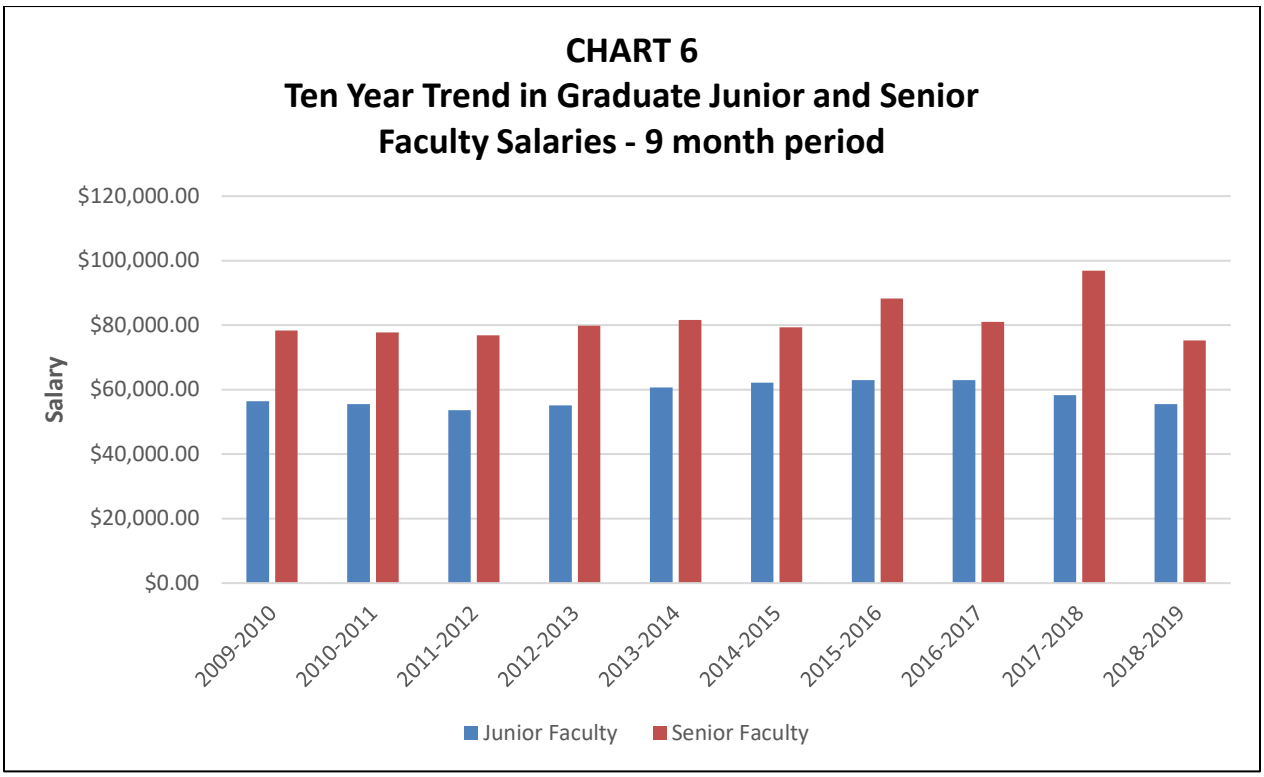


CHART 6
Ten Year Trend in Graduate Junior and Senior Faculty Salaries - 9 month period
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
Salary
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Junior Faculty
Senior Faculty

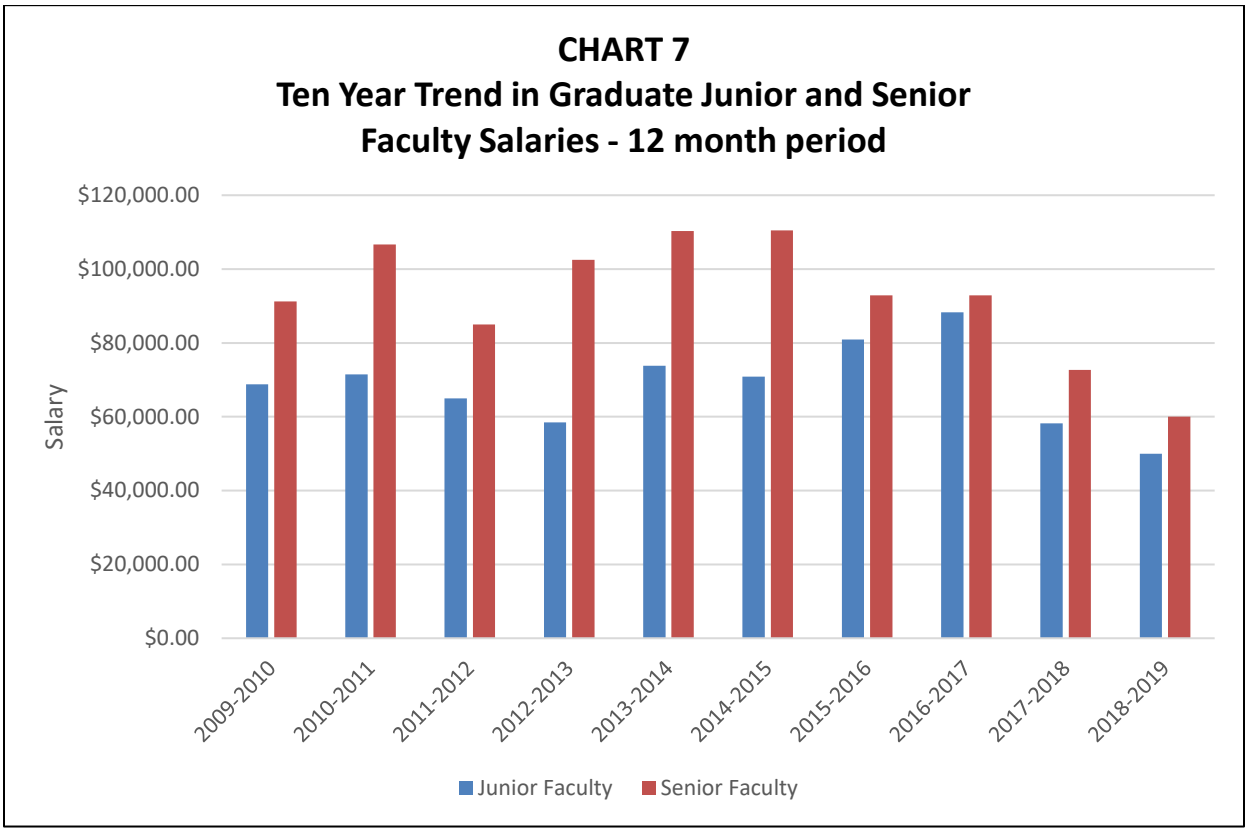


CHART 7
Ten Year Trend in Graduate Junior and Senior Faculty Salaries - 12 month period
$120,000.00
$100,000.00
$80,000.00
$60,000.00
$40,000.00
$20,000.00
$0.00
Salary
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Junior Faculty
Senior Faculty

3.3 Faculty Experience

Tables 6 and 7 identify the levels of EH practitioner-based experience of faculty teaching in Undergraduate and Graduate EHAC accredited EH Degree Programs in 2018-2019. Undergraduate faculty experience remains similar to past years, showing almost a 50/50 split between those with more than 5 years' experience and those with none at all. Conversely, the majority (68%) of Graduate Degree Program faculty have 5 plus years of experience, while 20% of Graduate faculty have no experience.

Charts 8 presents trends in Undergraduate experience during the last nine years. The graph shows an overall steady climb, with fluctuations in the number of faculty with 5 years or more of experience. However, there has also been a steep upward trend in Undergraduate faculty with no experience which continued in 2018-2019. Undergraduate faculty with one year or less of experience have remained steady with small fluctuations in those with lesser amounts of experience.

Ten- year trends in Graduate faculty experience levels appear in Chart 9. While historically, a significant majority of Graduate faculty have had more than 5 years of practical experience, there was a marked increase in the amount of experienced faculty from 2009 through 2013. This experience level was maintained from 2013-2014 to 2016-2017, with a slight decline reported in 2017-2018, which continued in 2018-2019. Graduate faculty with no experience fluctuated a great deal from 2009-2010 to 2014-2015 but has remained steady at around 10% since 2015. Graduate faculty with at least a year of practical experience have been on the rise since a low of 6% in 2012-2013 and a return to 6% in 2016-2017. Faculty with at least one year of experience declined in 2018-2019.

Table 6: Undergraduate Faculty Experience – 2018-2019

EH Based Practitioner Based Experience	Number of Faculty	% with Practitioner Experience
More than 5 years	126	43%
At least 1 year	28	10%
6 months-1 year	5	2%
Less than 6 months	8	3%
No experience	126	43%
Total (reported)	293	

Table 7: Graduate Faculty Experience – 2018-2019

Experience	Number of Faculty	% with Practitioner Experience
More than 5 years	45	68%
At least 1 year	6	9%
6 months-1 year	2	3%
Less than 6 months	0	0%
No experience	13	20%
Total (Reported)	66	

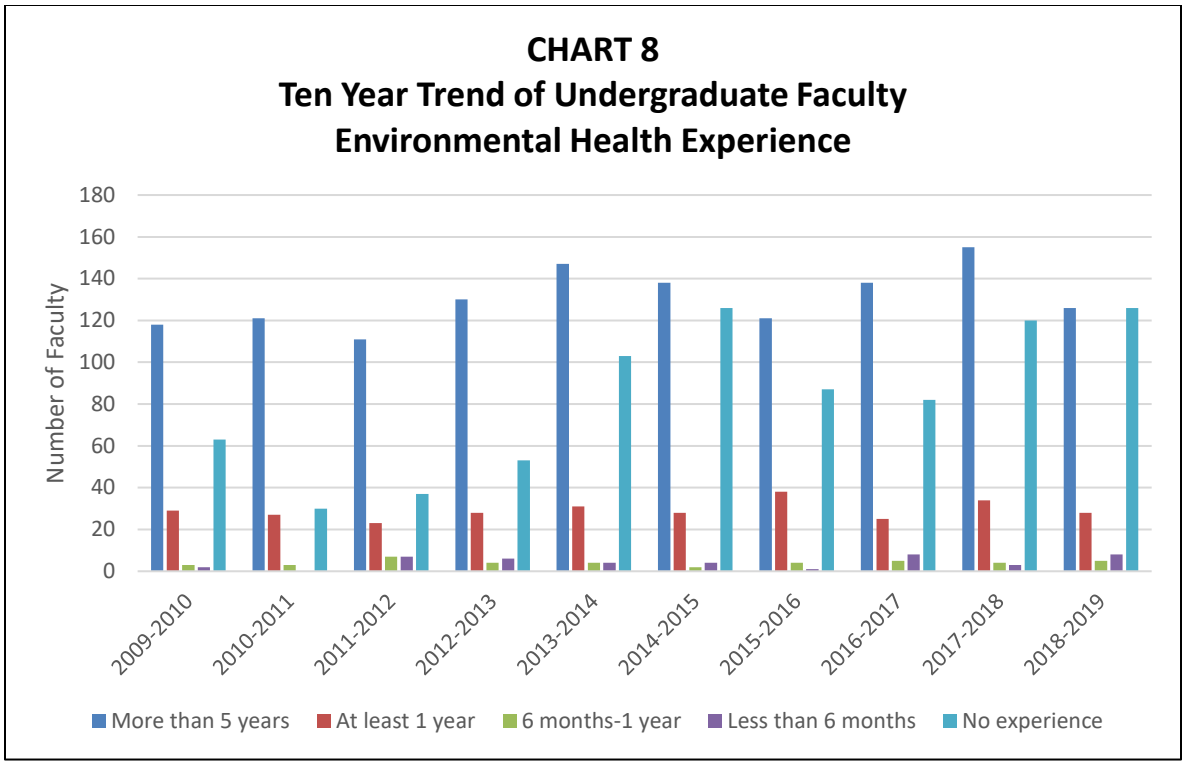


CHART 8
Ten Year Trend of Undergraduate Faculty
Environmental Health Experience
Number of Faculty
180
160
140
120
100
80
60
40
20
0
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
More than 5 years
At least 1 year
6 months-1 year
Less than 6 months
No experience

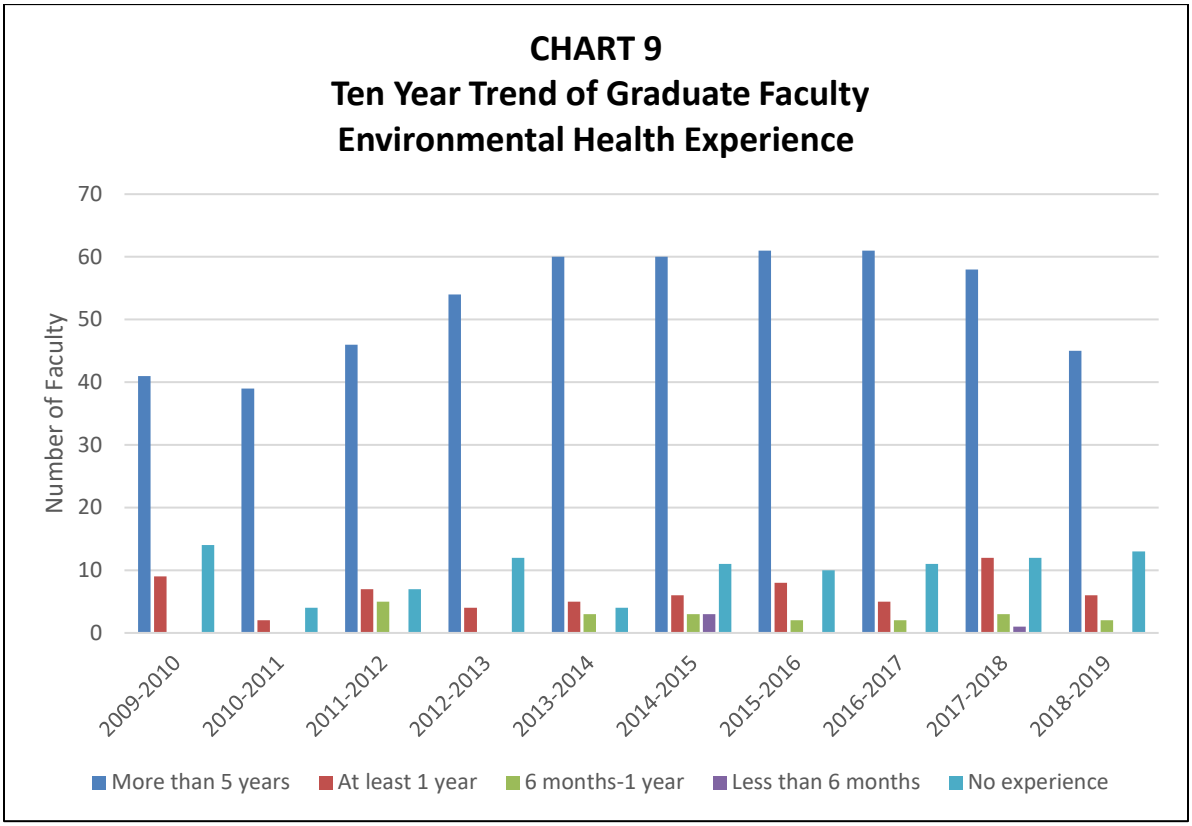


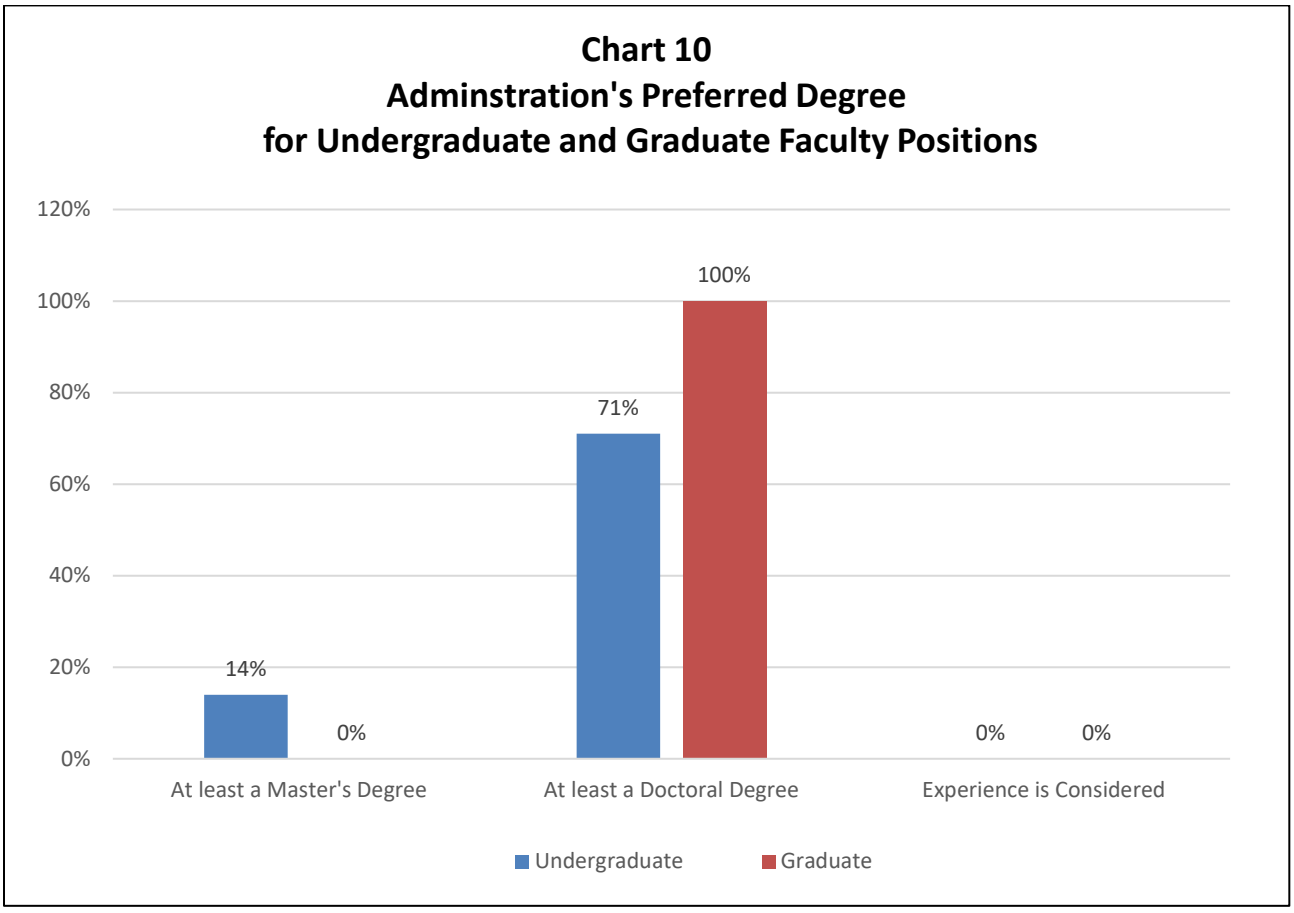
CHART 9
Ten Year Trend of Graduate Faculty
Environmental Health Experience
Number of Faculty
70
60
50
40
30
20
10
0
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
More than 5 years
At least 1 year
6 months-1 year
Less than 6 months
No experience

3.4 Faculty Requirements

Degree Programs were asked to report the preferred degree for their Undergraduate and Graduate faculty. Chart 10 shows that the vast majority of current Undergraduate and Graduate Degree Programs require faculty to have at least a Doctoral Degree. EH related experience is not generally considered in the hiring of either Undergraduate or gradate faculty.

Chart 11 presents ten-year trends in whether a terminal degree is required for Undergraduate faculty positions. The percent of Undergraduate Degree Programs requiring a terminal degree has risen sharply since 2012-2013, with a high of 83% in 2016-2017. The five year increase in a terminal degree requirement for faculty was mirrored by a decrease in the requirement for a terminal degree for only tenured track professors.

Chart 12 presents ten-year trends in terminal degree requirements for Graduate Degree Program faculty. Terminal degrees have been required throughout the last nine years with an overall increase in the number of Degree Programs requiring a terminal degree since 2012-2013.



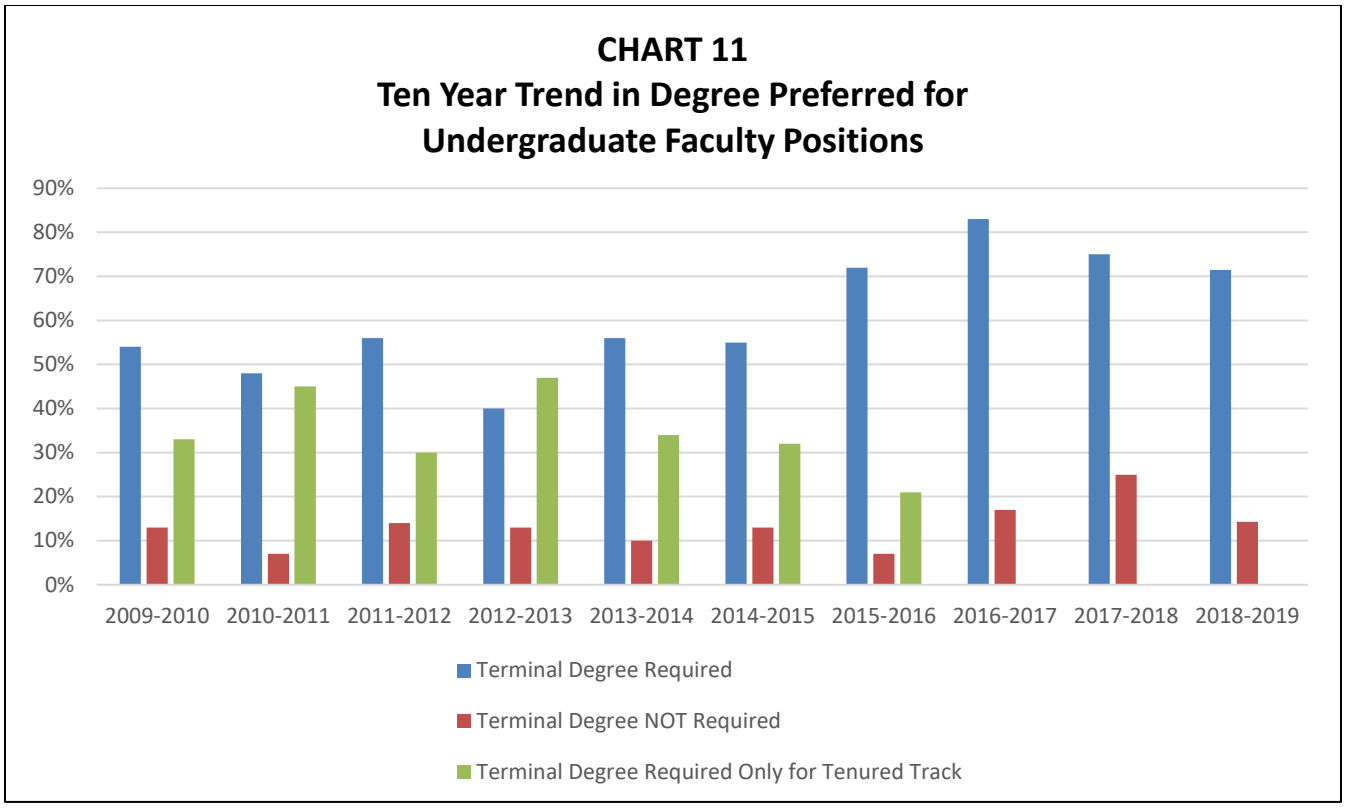


CHART 11
Ten Year Trend in Degree Preferred for Undergraduate Faculty Positions
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Terminal Degree Required
Terminal Degree NOT Required
Terminal Degree Required Only for Tenured Track

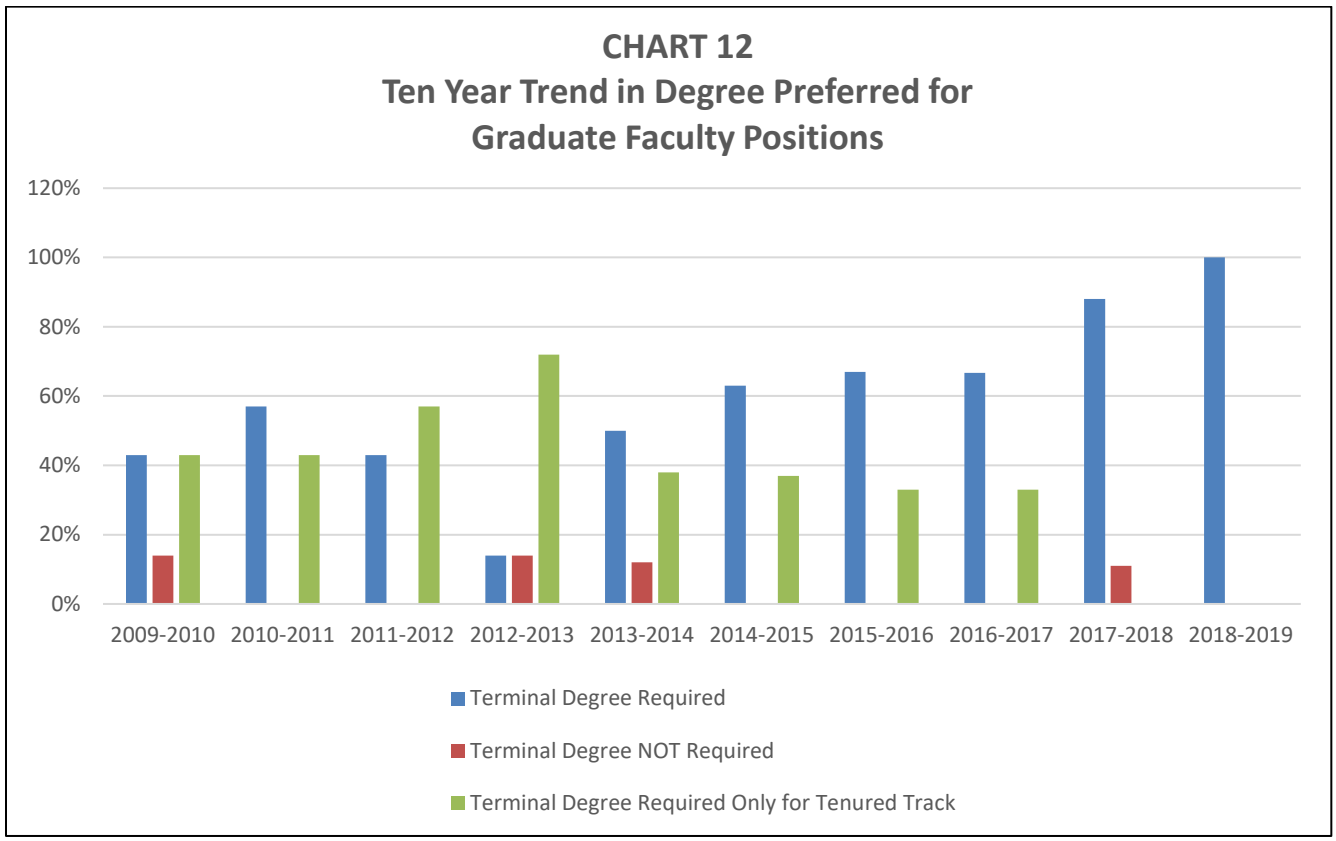


CHART 12
Ten Year Trend in Degree Preferred for Graduate Faculty Positions
120%
100%
80%
60%
40%
20%
0%
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Terminal Degree Required
Terminal Degree NOT Required
Terminal Degree Required Only for Tenured Track

3.5 Faculty Diversity

Chart 13 shows current faculty diversity in Undergraduate and Graduate Degree Programs. Current diversity levels reflect historic diversity trends. Trends in Undergraduate and Graduate faculty diversity are shown in Charts 14 and 15. African Americans and Asians make up the majority of the diverse faculty teaching at EHAC Accredited Degree Programs. These populations are followed by Hispanic faculty. [Note: No diversity data was available from one Graduate Degree Program for 2016-2017].

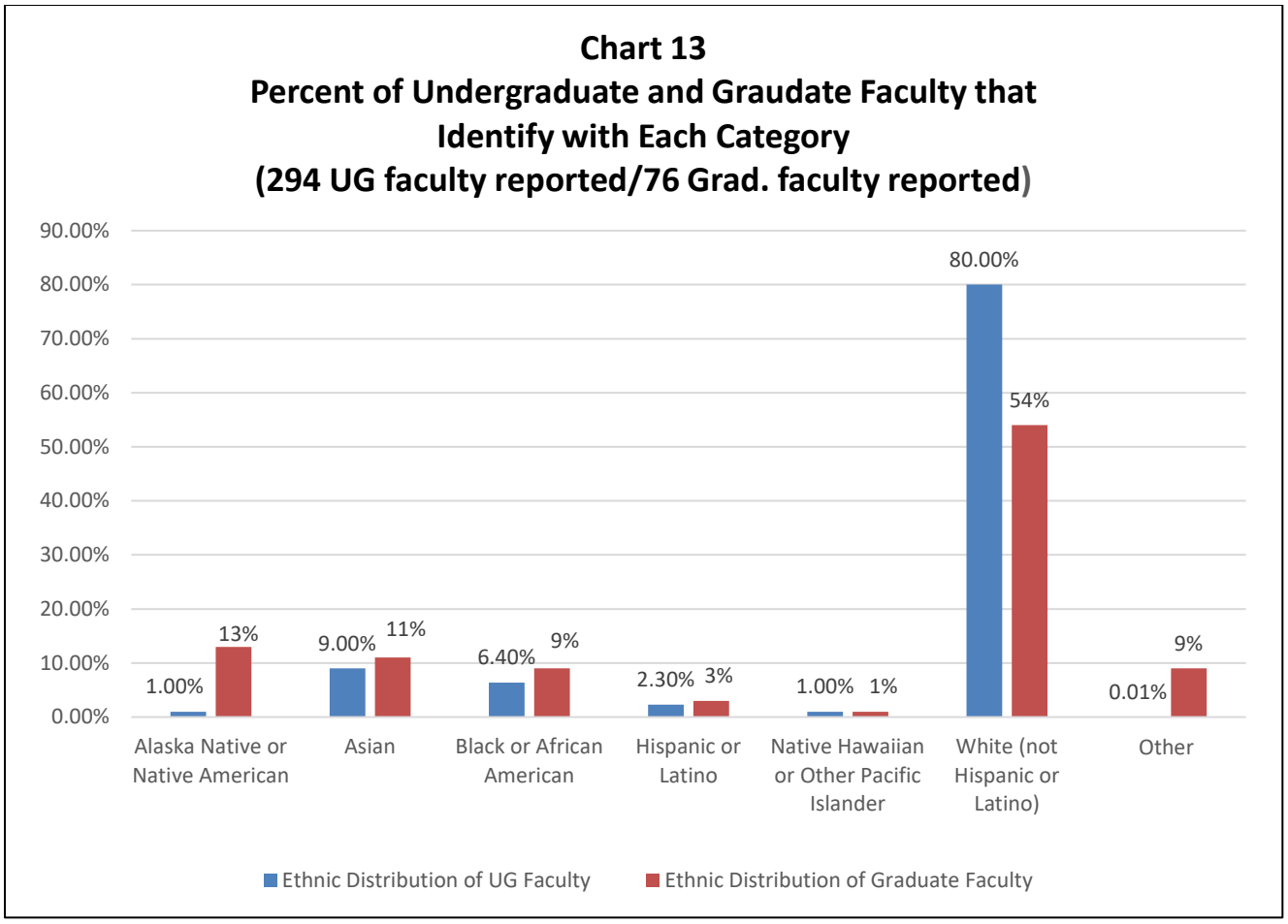


CHART 14
Diversity Trends in Undergraduate Faculty from 2009-2010 to 2018-2019

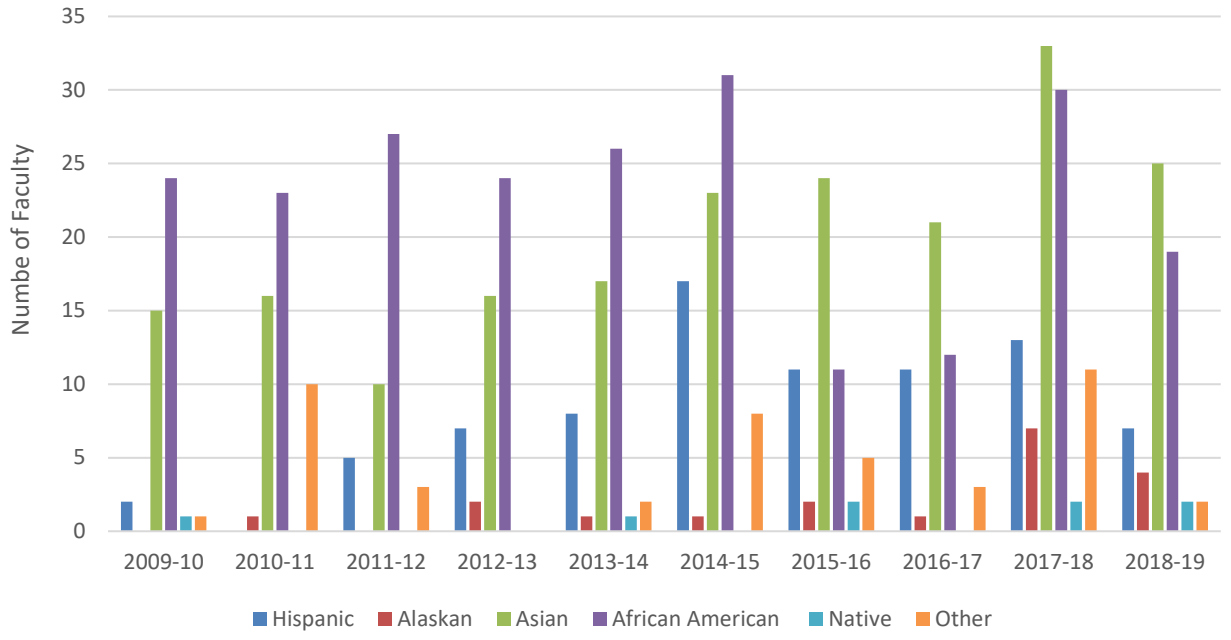
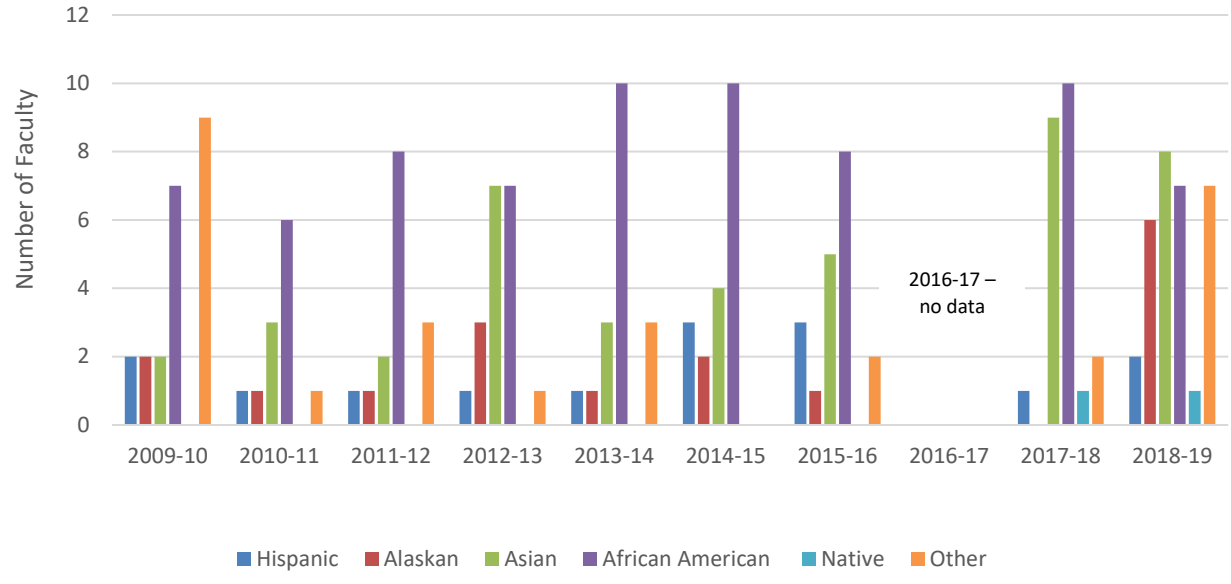


CHART 15
Diversity Trends in Graduate Faculty from 2009-2010 to 2018-2019



3.6 Faculty Gender

Males make up the majority of EH faculty in accredited Undergraduate and Graduate Degree Programs. Charts 16 and 17 show the gender breakdown of faculty teaching at Undergraduate and Graduate Accredited Degree Programs.

Chart 17 shows that while males have historically outnumbered females in the faculty arena, female faculty numbers show a sharp increase between 2016-2017 and 2017-2018. Interestingly, the historic gender trend in Undergraduate Degree Programs shows more female than male students in all years except 2008-2009.

Graduate gender numbers for males have remained steady with a slight increase (44 males in 2008-2009 and 49 males in 2017-2018), while a decrease in male Graduate faculty occurred between 2018 and 2019. The number of female Graduate faculty has continued to increase from 20 females in 2008-2009 to 42 female faculty in 2018-2019 (Chart 17).

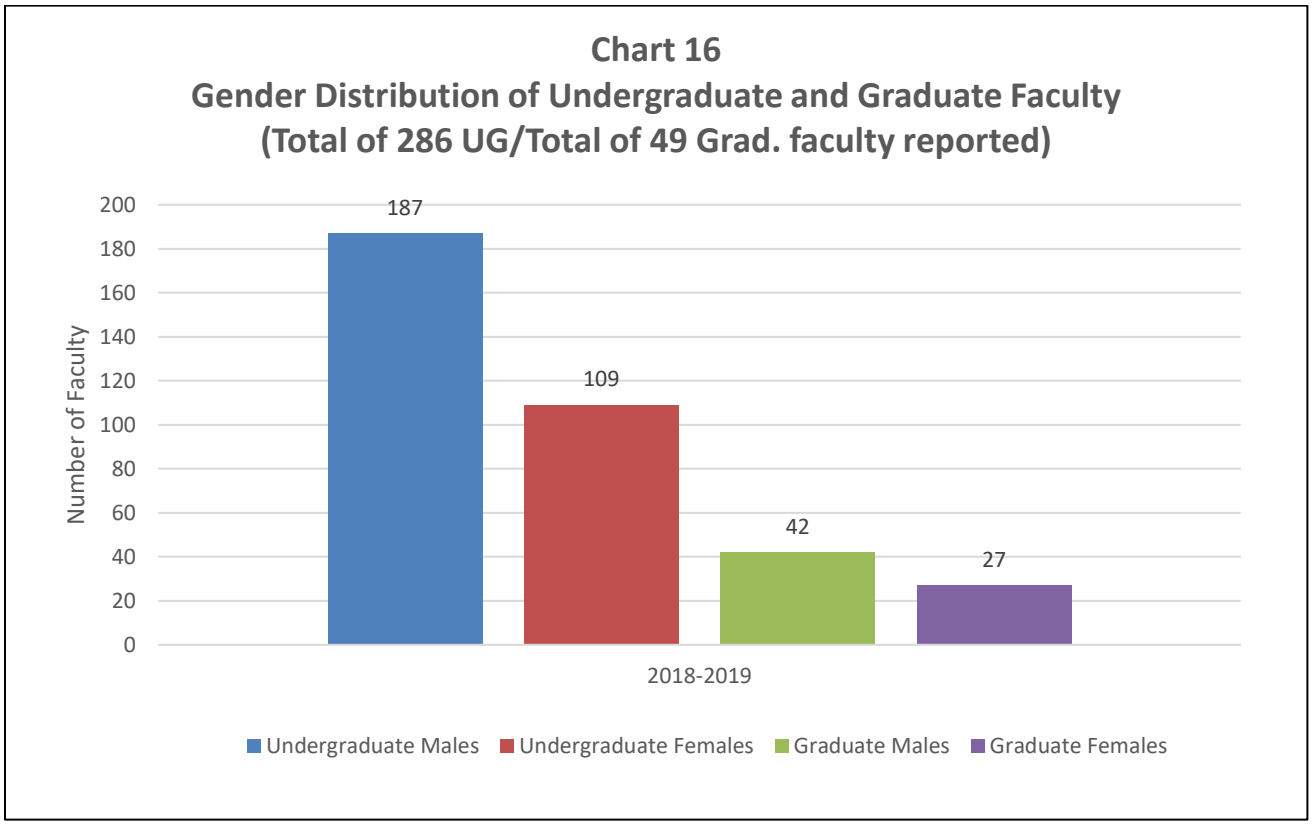
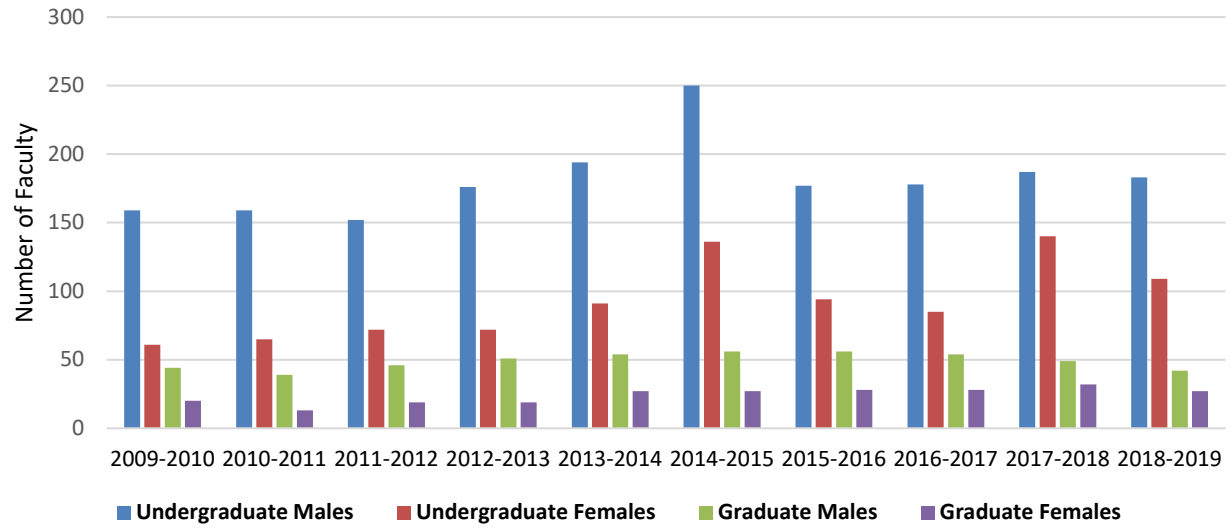


CHART 17
Gender Distribution Trends for Undergraduate and Graduate Faculty from 2009-2010 to 2018-2019



4.0 Enrollment & Graduation

4.1 Undergraduate Enrollment and Graduation

Enrollment increased slightly, from 2017-2018 to 2018-2019.

This year's Undergraduate graduation rate declined from 2017-2018. Chart 18 shows the 12-year enrollment and graduation trends for Accredited Environment Health Degree Programs. (The 2018-19 number is based on Degree Program Directors estimating how many students will graduate 5 months before spring graduation).

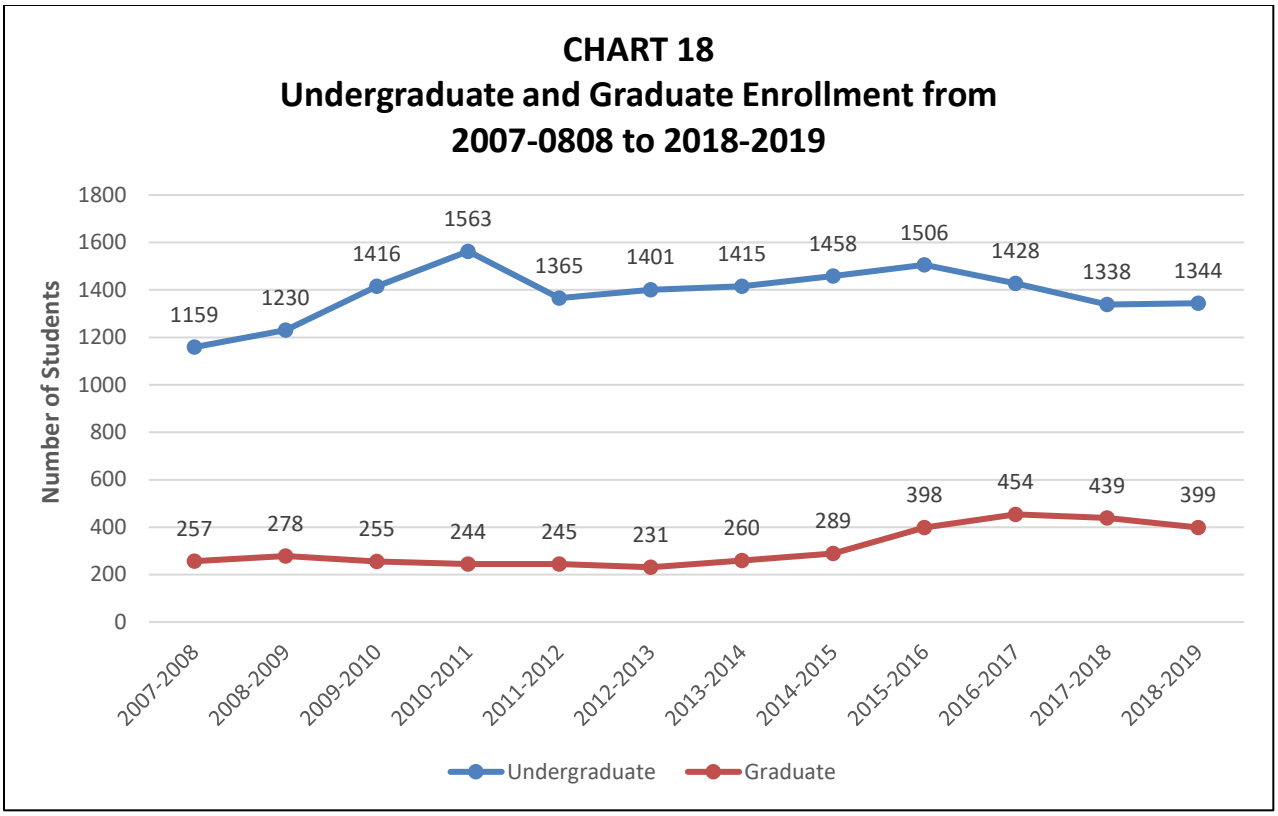


Table 8 illustrates the difference in individual accredited Degree Program enrollment from the academic year 2016-2017 to academic year 2018-2019. Table 8 shows that Undergraduate enrollment increased in twelve Degree Programs, decreased in twelve Degree Programs and was maintained at 5 Degree Programs. Three Graduate Degree programs experienced growth in enrollment from 2017-2018 to 2018-2019.

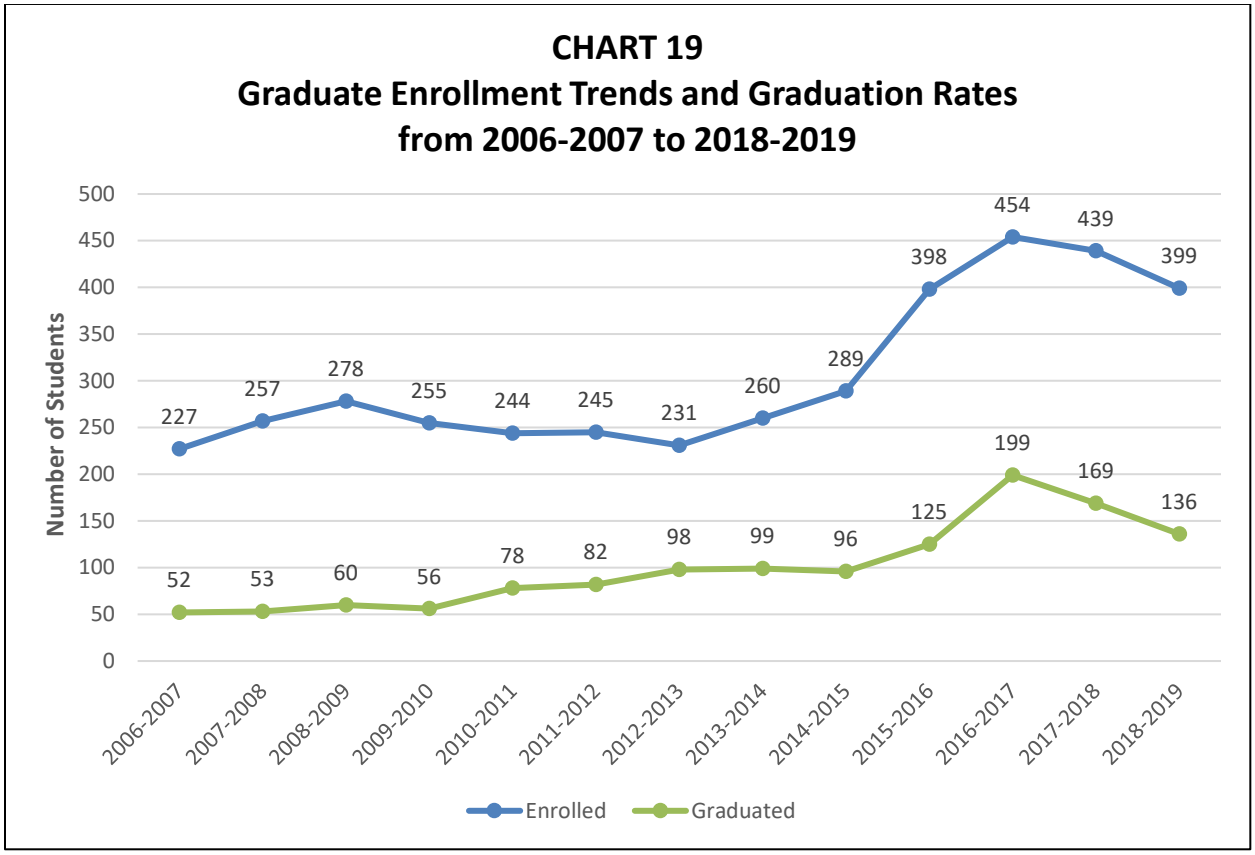
Table 8: Enrollment Comparison between Academic Years 2016-2017 through 2018-2019

Undergraduate Degree Programs	2017-2018 Enrollment	2018-2019 Enrollment	Difference
Baylor University	23	23	0
Benedict College	16	17	1
Boise State College	26	39	13
California State University Northridge	172	180	8
California State University San Bernardino	52	55	3
Central Michigan University	15	13	-2
Colorado State University	71	65	-6
Dickinson State University	3	0	-3
East Carolina University	25	25	0

Undergraduate Degree Programs	2017-2018 Enrollment	2018-2019 Enrollment	Difference
East Central University	36	45	9
East Tennessee State University	33	32	-1
Eastern Kentucky University	103	100	-3
Illinois State University	76	76	0
Indiana University - Purdue University	16	10	-6
Mississippi Valley State University	25	30	5
Missouri Southern State University	70	69	-1
North Carolina Central University	2	3	1
Ohio University	25	22	-3
Old Dominion University	61	73	12
State University of New York, ESF	36	43	7
Texas Southern University	30	35	5
University of Findlay	74	49	-25
University of Georgia, Athens	92	98	6
University of Washington	59	59	0
University of Wisconsin Eau Claire	44	37	-7
University of Wisconsin Oshkosh	15	15	0
West Chester University	59	58	-1
Western Carolina University	79	76	-3
Total	1338	1344	4
California State University Northridge	59	34	-25
East Carolina University	23	22	-1
East Tennessee State University	6	2	-4
Eastern Kentucky University	33	53	20
Fort Valley State University	160	138	-22
Mississippi Valley State University	11	14	3
Old Dominion University	16	16	0
University of Findlay	107	95	-12
University of Illinois, Springfield	24	25	1
Total	439	399	40

4.2 Graduate Enrollment and Graduation Rates

For the 2018-2019 academic year, Graduate enrollment decreased by 9%. The Graduate graduation rate also declined from 169 to 136 Graduates, a difference of 20%. Chart 19 presents enrollment and graduation trends for Graduates during the past decade. (The 2018-2019 graduate number is based on Degree Program directors estimating how many students will Graduate 5 months before graduation.)



4.3 Comparison of Multi-Year Trends in Undergraduate and Graduate Enrollment and Graduation among Accredited Degree Programs

Both Undergraduate and Graduate Degree Programs experienced an overall increase in enrollment from 2006 to 2016 (Chart 20). Since 2016 UG enrollment has declined but increased slightly between from 2017-2018 to 2018 to 2019. Graduate enrollment has experienced a decrease since 2016-2017.

Similarly to enrollment patterns, graduation rates among Undergraduate and Graduate Degree Programs show an overall upward trend over the past thirteen years. UG enrollment experience a slight up tick between 2017-2018 and 2018-2019, while Graduate enrollment has declined since 2016-2017.

Chart 20
Undergraduate and Graduate Enrollment from 2007-2018 to 2018-2019

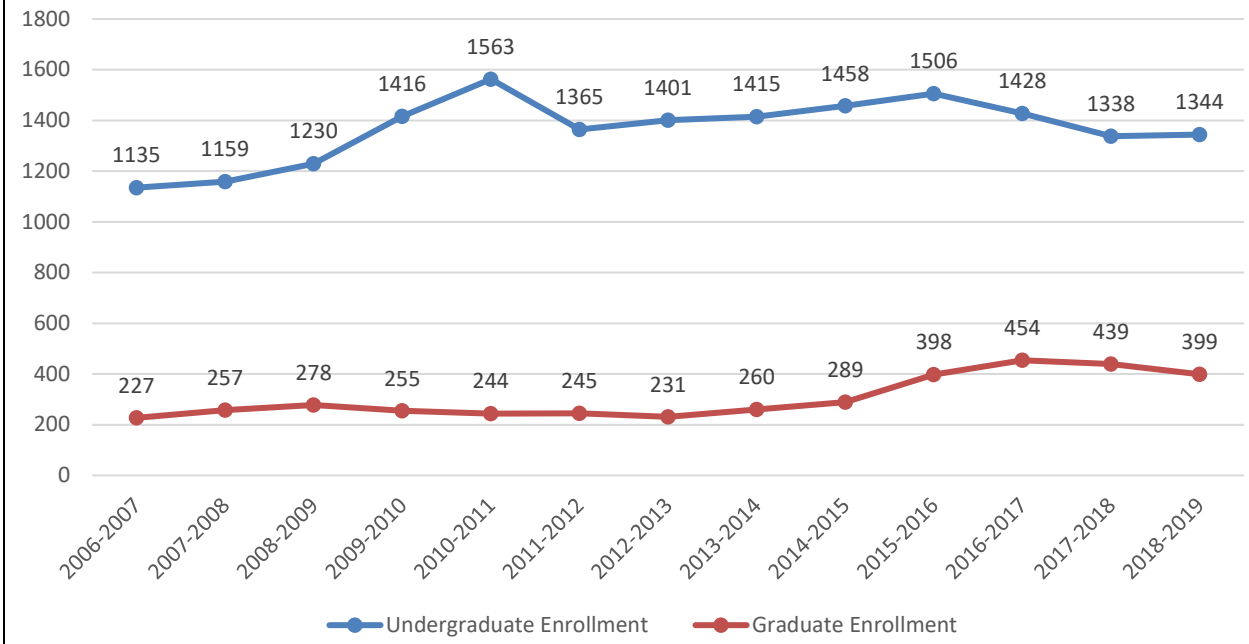
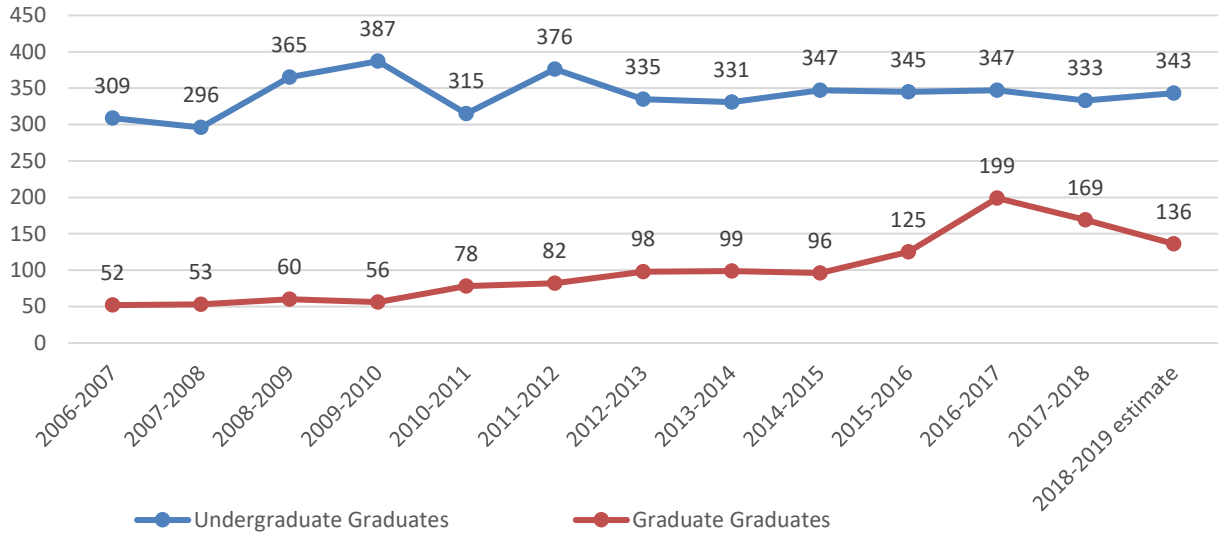


Chart 21
Undergraduate and Graduate Graduation Totals from 2007-2008 to 2018-2019



4.4 Accredited Degree Programs Enrollment Requirements

Four of 28 accredited Undergraduate Degree Programs have a selective admission process outside their University admission requirements. Seven accredited Graduate Degree Programs reported a selective admission process.

4.5 Student Applicant and Employment Trends

Accredited Degree Programs were asked about the number of students applying to their Degree Program. Five Degree Programs reported more applicants than students admitted, and thirteen Undergraduate Degree Programs reported having approximately the same number of student applicants as the number admitted. Five Graduate Degree Programs reported having more students apply than are admitted.

The great majority of Undergraduate Program Director's and just over half of Graduate PDs reported observed increases in EH job opportunities.

5.0 Student Demographics

5.1 Diversity

Currently, approximately 44% of reported Undergraduate students enrolled in EHAC Accredited Degree Programs are minorities. This represents a slight increase from the 2105-2016 academic year (Diversity data was incomplete for 2016-2018). Chart 22 shows the trend in numbers of minority students over the last twelve years. Diversity numbers have fluctuated during the last nine years due in part to the gain and loss of accreditation of historically black colleges including Spelman College (accredited in 2005/accreditation lost in 2012). African American students made up the majority of the diverse students from 2009-2010 to 2014-2015 but were surpassed in number of Hispanic students from 2015-2016 to the present. The Asian student population dropped sharply from 2010-2011 to 2011-2012 and has remained steadily behind African American and Hispanic students since 2013-2014.

Graduate student diversity numbers are similar to Undergraduate numbers related to the predominance of African American students; however Asian students have outnumbered Hispanic students by almost 50% throughout the last seven years (Chart 23). This trend reversed in 2017 with Hispanic students outnumbering Asian students into the present. Additionally, the African American population increased significantly in 2015-2016, due to the addition of Fort Valley State University to EHAC Accredited Degree Programs.

Chart 24 presents the total number of diverse Graduate and Undergraduate students for the past 10 years. Student numbers have risen from a low of 344 in 2006-2007 to a high of 699 in 2018-2019. Again, these numbers mainly reflect the addition and loss of Degree Programs with large African American enrollments.

Chart 22
Ten Year Trend in Undergraduate Student Diversity

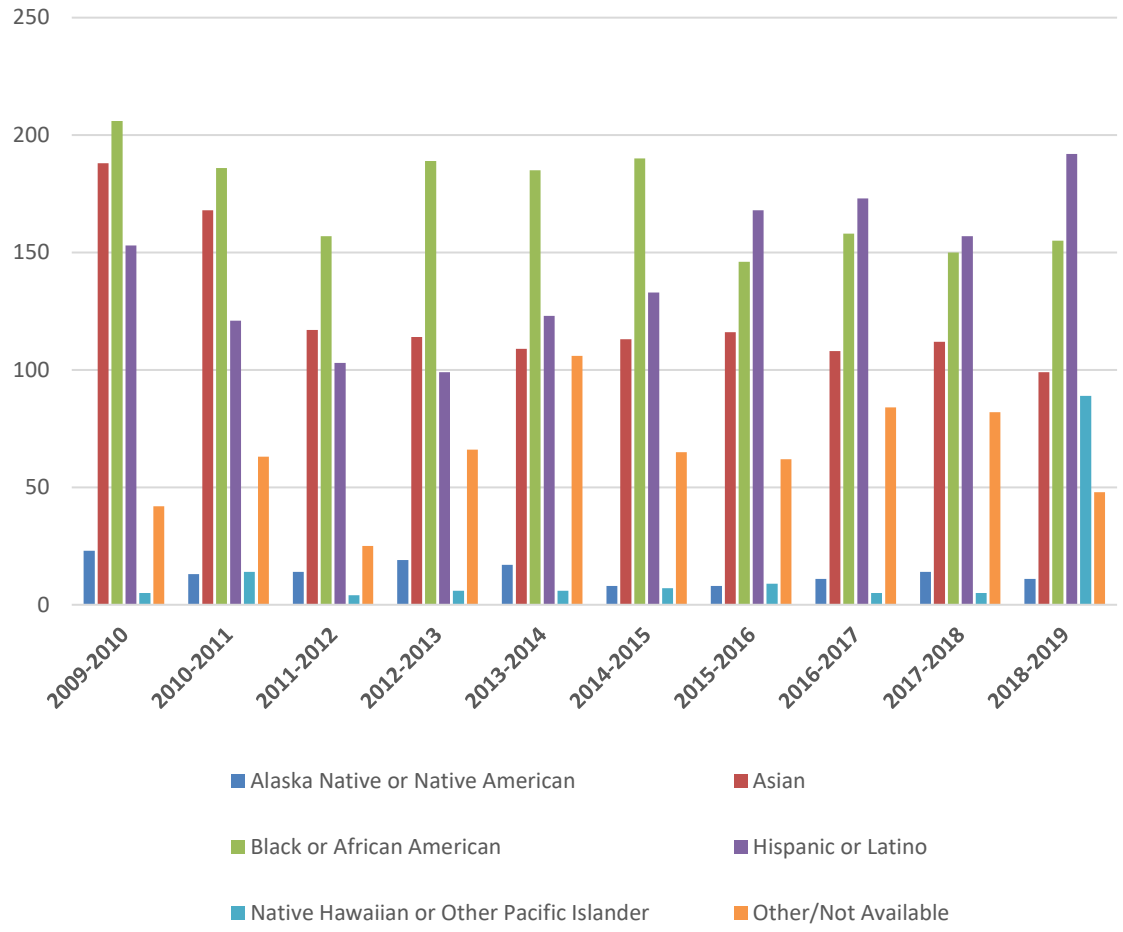
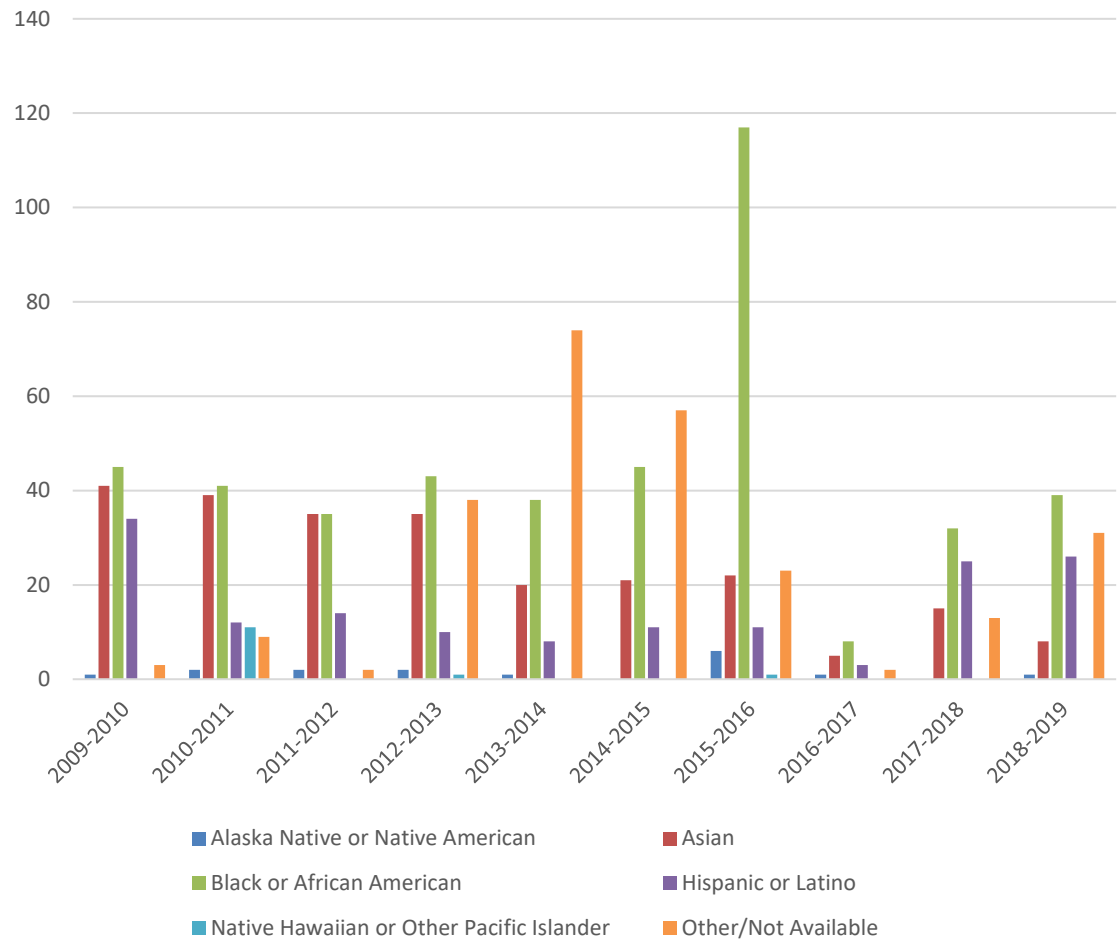
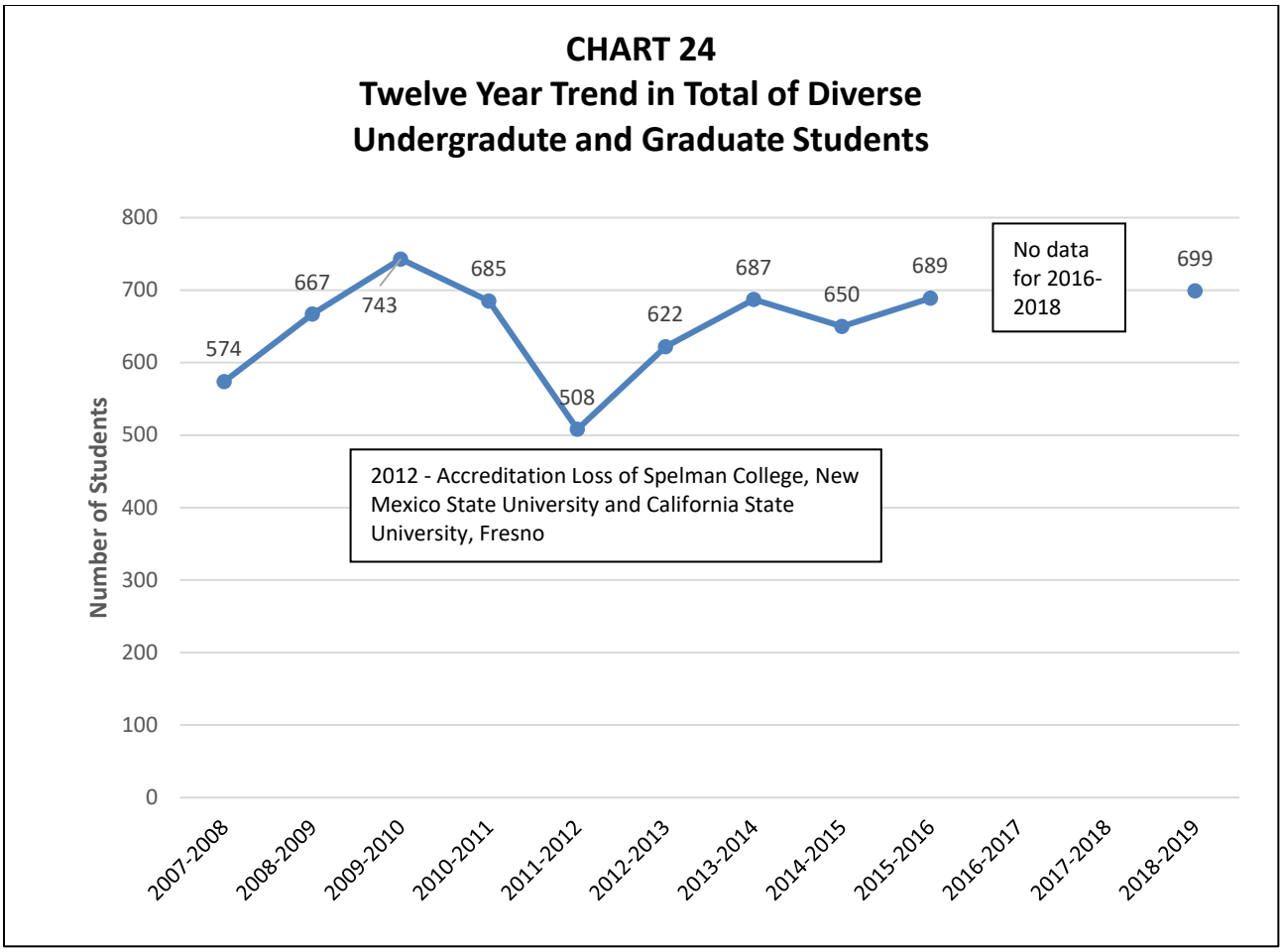


CHART 23
Ten Year Trend in Graduate Student Diversity





5.2 Enrolled Students by Gender

Chart 25 shows that 2018-2019 gender numbers for Undergraduate and Graduate Degree Programs. Similar to years past, female students outnumber male students in UG and Graduate programs, reflecting the historic trend in Undergraduate Degree Programs (Chart 26). 2018-2019 continued to see more female students enrolled in Graduate Degree Programs which differs from the historic norm, where female Graduate students have outnumbered male Graduate students only three times (Chart 27).

Chart 28 presents the historic trend for both male and female Undergraduate and Graduate students over the past 12 years. The overall trend shows total female students surpassing male student numbers in all years except 2009-2010.

CHART 25
2018-2019 Distribution of Female and Male Undergraduate and Graduate Students

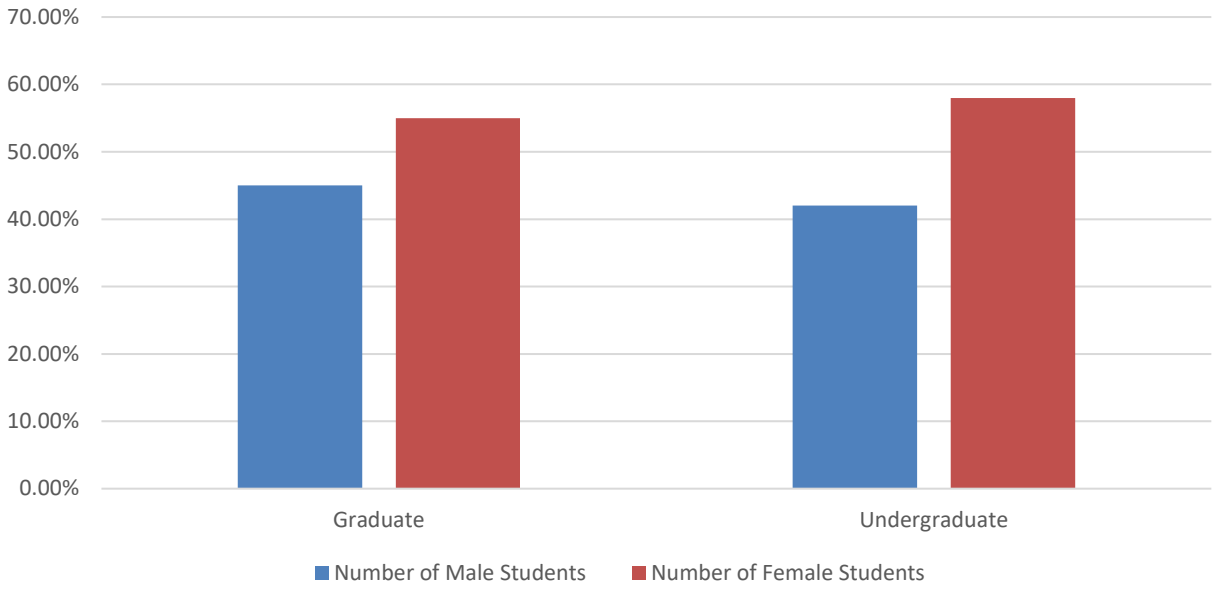
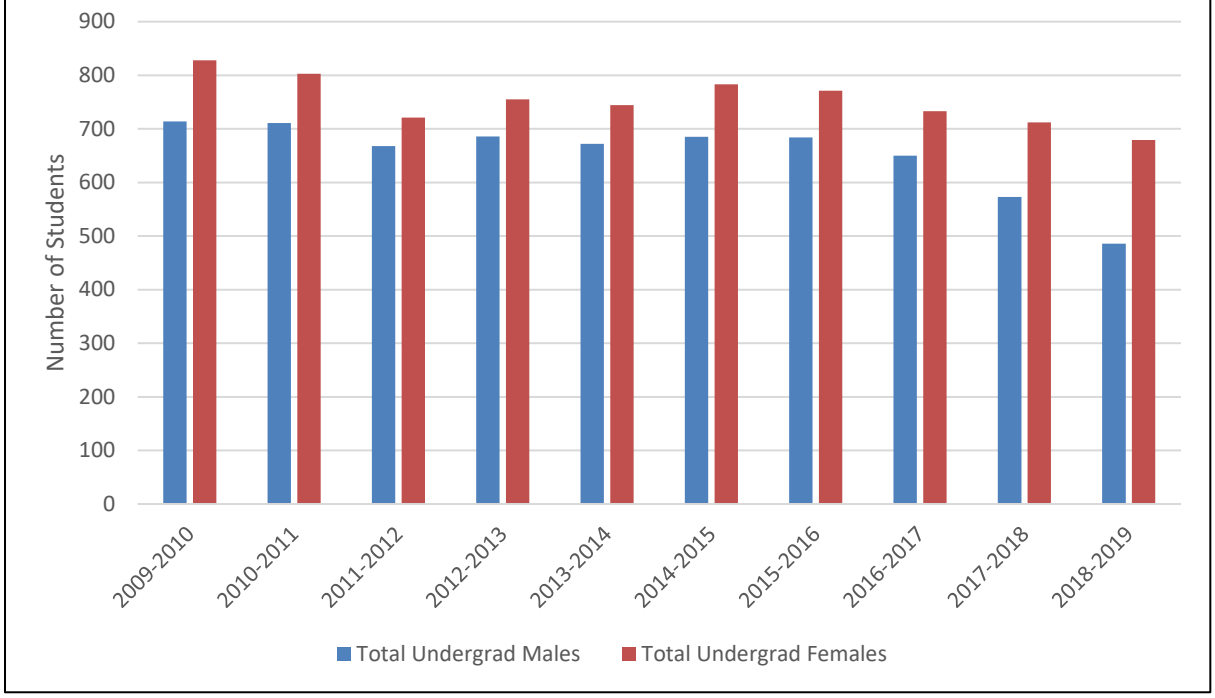


CHART 26
Gender Distribution of Undergraduates from 2009-2010 to 2018-2019



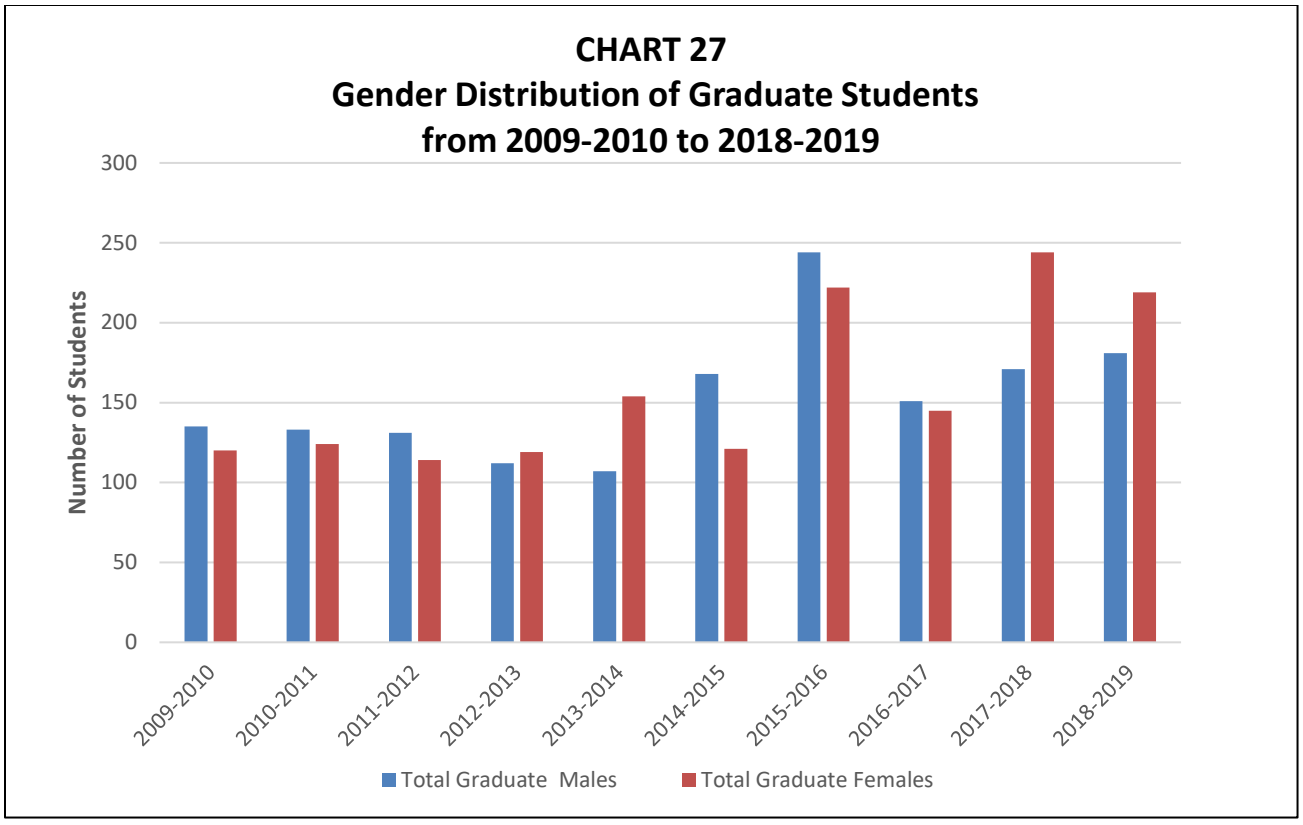


CHART 27
Gender Distribution of Graduate Students
from 2009-2010 to 2018-2019
Number of Students
300
250
200
150
100
50
0
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Total Graduate Males
Total Graduate Females

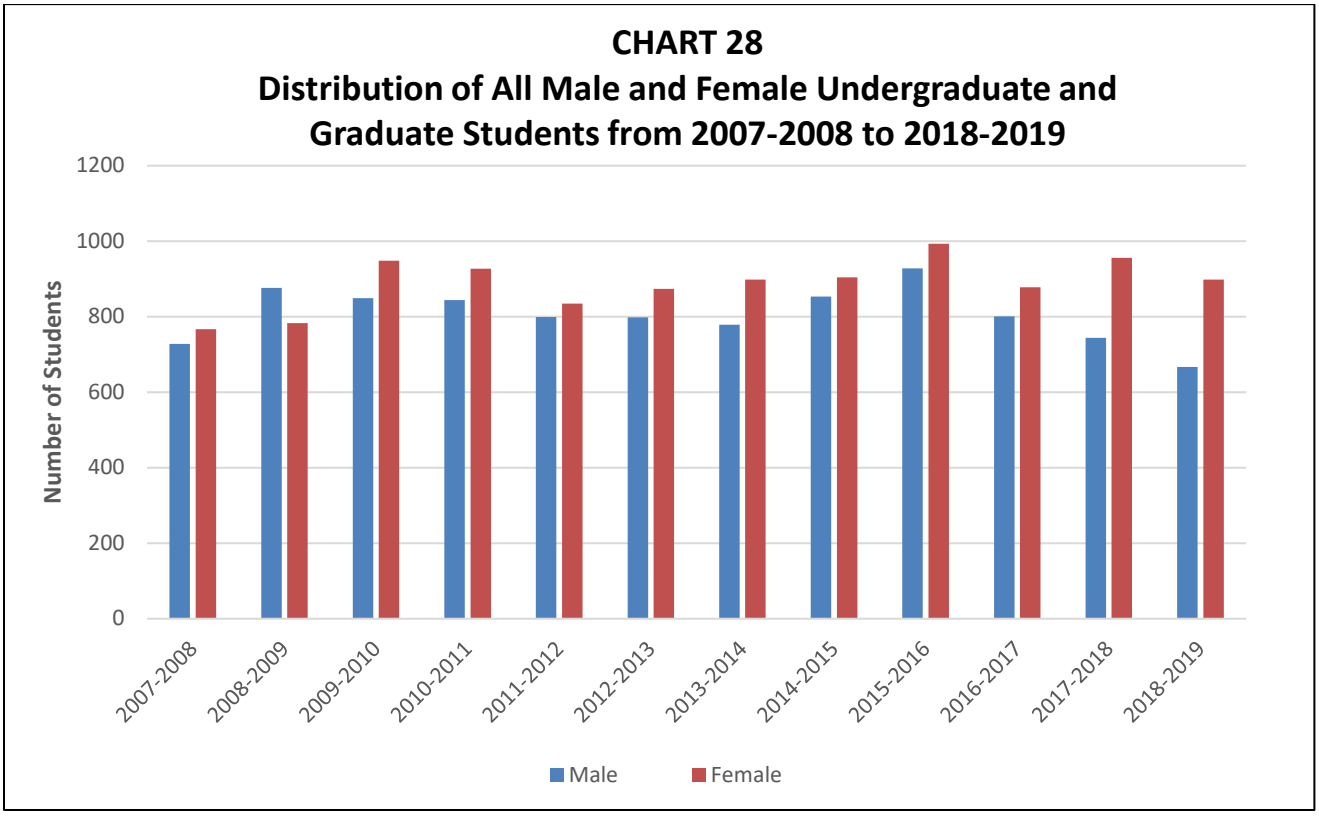


CHART 28
Distribution of All Male and Female Undergraduate and
Graduate Students from 2007-2008 to 2018-2019
Number of Students
1200
1000
800
600
400
200
0
2007-2008
2008-2009
2009-2010
2010-2011
2011-2012
2012-2013
2013-2014
2014-2015
2015-2016
2016-2017
2017-2018
2018-2019
Male
Female

5.3 Enrolled Students by Age

Chart 29 presents Undergraduate and Graduate student age breakdowns. Not surprisingly, students ages 18-22 lead Undergraduate enrollment numbers while the majority of Graduate students range in age from 28-30. This differs from 2017-2018 when more graduate students ranged in age from 31-40.

Historic trends in age of Undergraduates show steady matriculation of recent high school Graduates, a steady but overall decline in students 23-30 years old and a steady but low enrollment of students 31-40 years old (Chart 30). Minor enrollment of students over 41 years of age has declined for the most part since 2009.

Since 2012-2013, historic trends in the age of Graduate students reflects upward trends until 2017-2018, when there was also a notable decline in 23-30 year old Graduate students and increase in 31-40 year students (Chart 31). 23-30 year old Graduate students rebounded in 2018-2019, with a correspodning drop in 31-40 year old students.

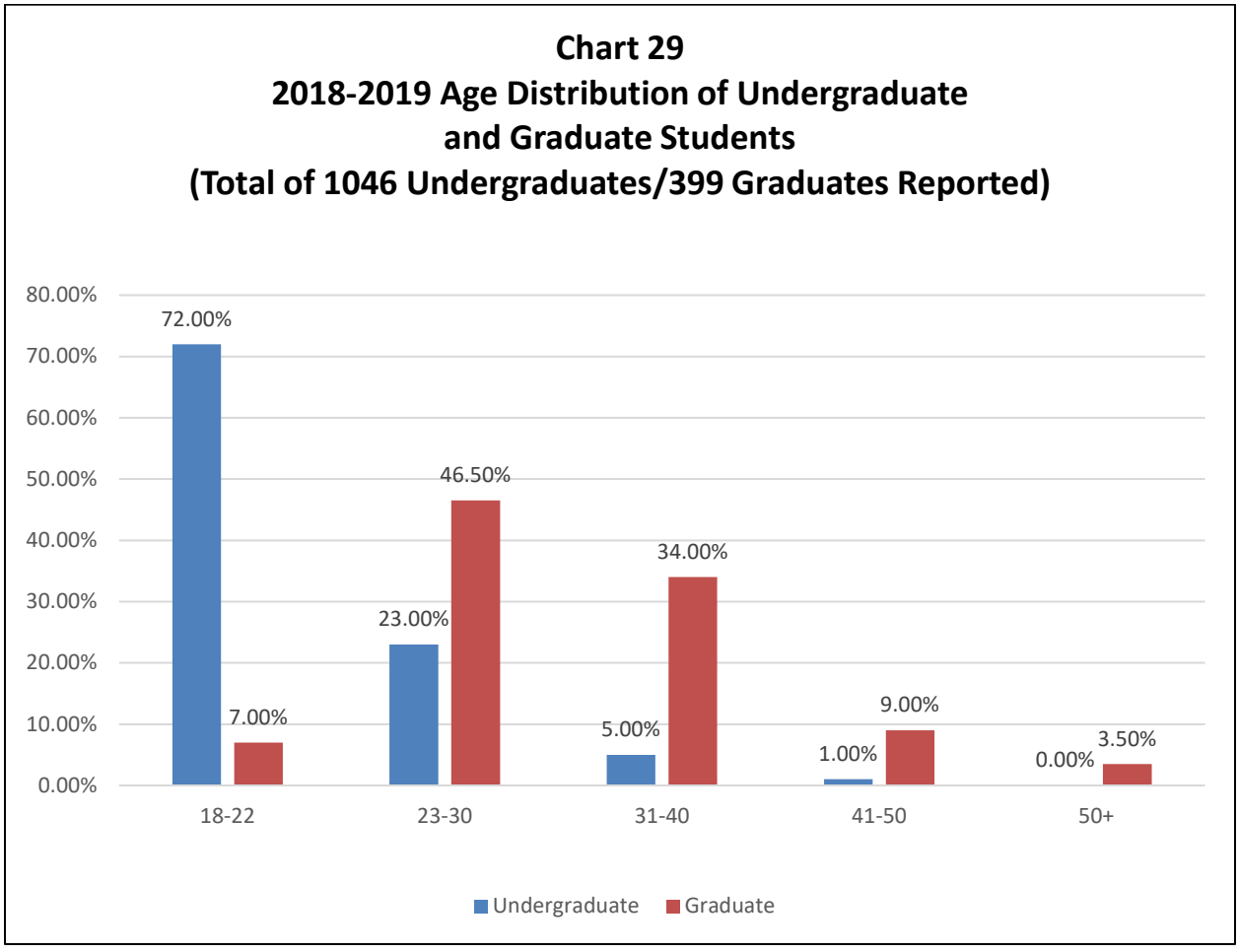


CHART 30
Age Trends for Undergraduate Students
from 2009-2010 to 2018-2019

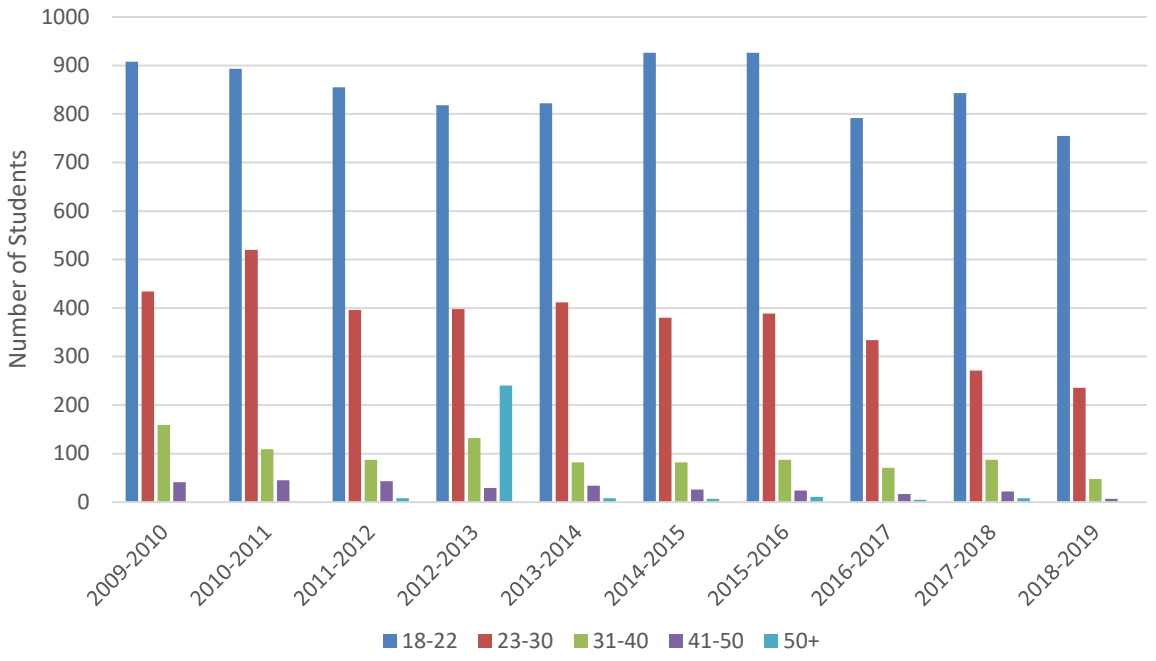
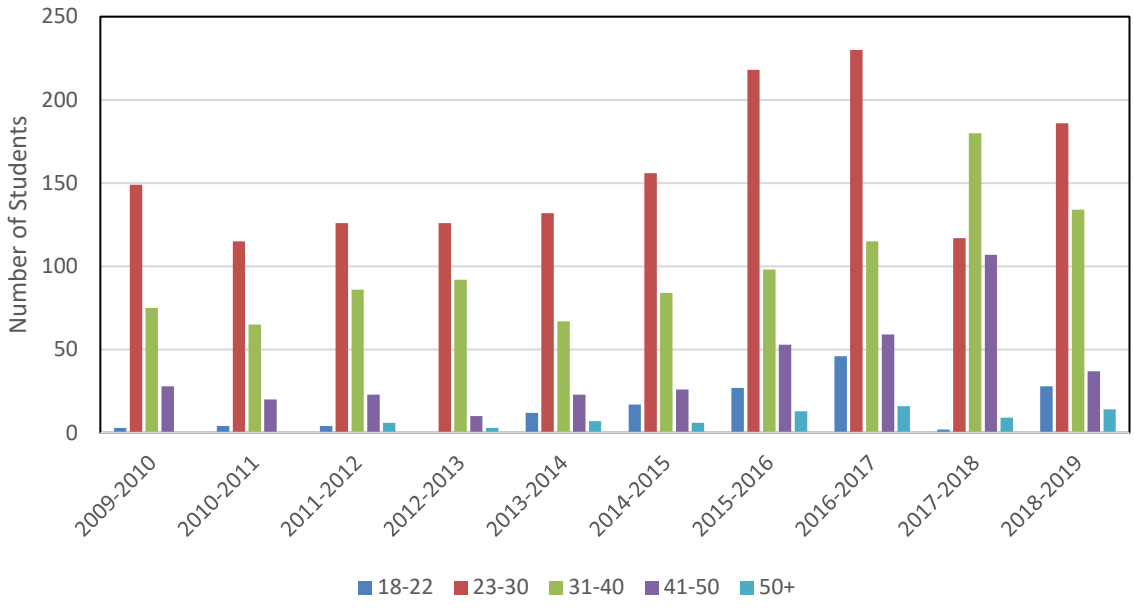


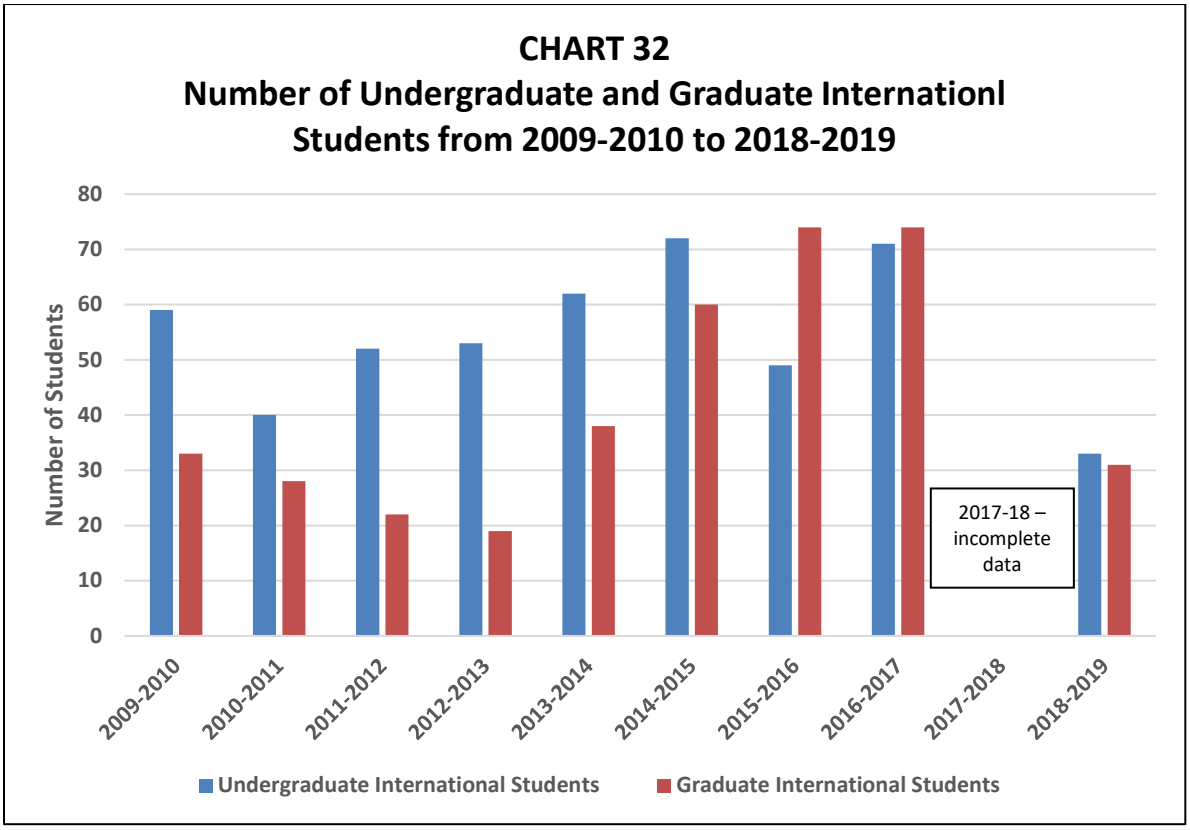
CHART 31
Age Trends for Graduate Students
from 2009-2010 to 2018-2019



5.4 International Students

Accredited Undergraduate and Graduate Degree Programs reported a total of 64 international students enrolled for the 2018-2019 year. This is down significantly from the last data available for 2016-2017, however, this may reflect new administrative restrictions to tracking or reporting this type of data.

Chart 32 shows the distribution of international students among Undergraduate and Graduate Degree Program for the last ten years (with the exception of 2017-2018 when data was incomplete). Chart 32 also shows a steady increase in numbers of Undergraduate international students after a sharp decline in 2010-2011 and similar drop in 2015-2016. The number of international Graduate students declined from 2009 to 2013 but began to increase in 2013-2014. Again, the significant drop in both UG and Graduate students likely is a reporting issue.

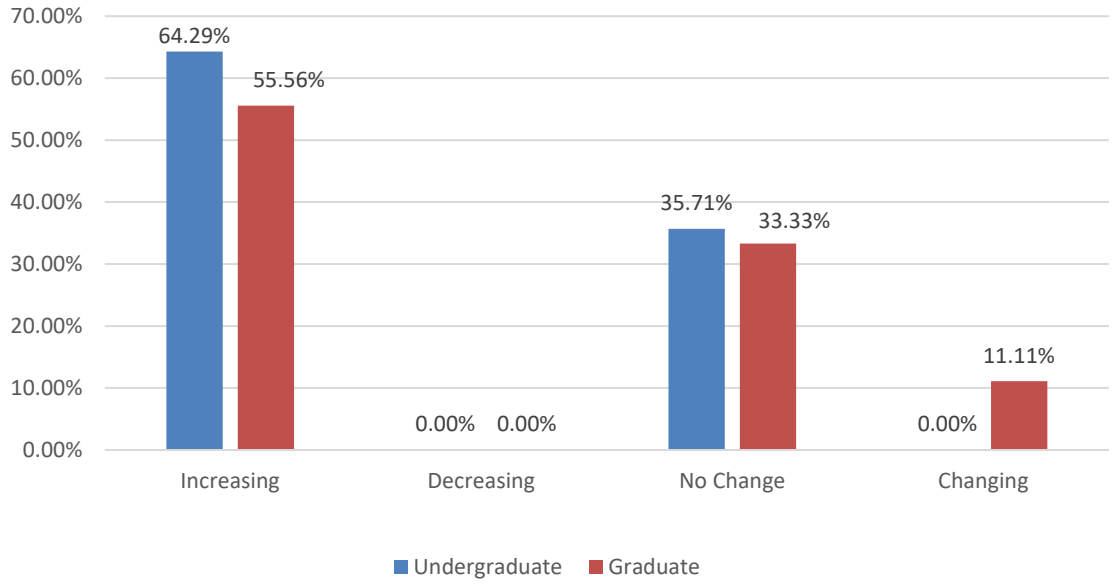


6.0 Employment after Graduation

6.1 Employment Opportunities after Graduation

Sixty-four percent of Undergraduate Degree Programs reported an observed increase in EH employment opportunities. No programs have observed a decrease in job opportunities. More than half of Graduate Degree Program Directors reported an increase in EH employment opportunities (Chart 33).

Chart 33
Undergraduate and Graduate Program Director Opinions of Employment Opportunities Available for Environmental Health Graduates



6.2 Employment Areas: Public vs. Private Sector

Based on accredited Degree Program's Graduate tracking systems for 2018-2019, Undergraduate Degree Program Directors reported 50% of former UG students are working in the private sector while 42% of former students are working in the public sector (Chart 34). Sixty percent of Graduate students found employment in the private sector, while 35% of former Graduate students are working in the public sector. Refer to Chart 35 for details regarding where UG graduates and Master's program graduates are working in the public sectors. Chart 36 present the distribution of Undergraduate employees working in the private sector. Private sector numbers were not available for Graduate Degree Programs.

CHART 34
Distribution of Undergraduate and Graduate Students Working in the Private, Public and Non-profit Sectors - 2018-2019

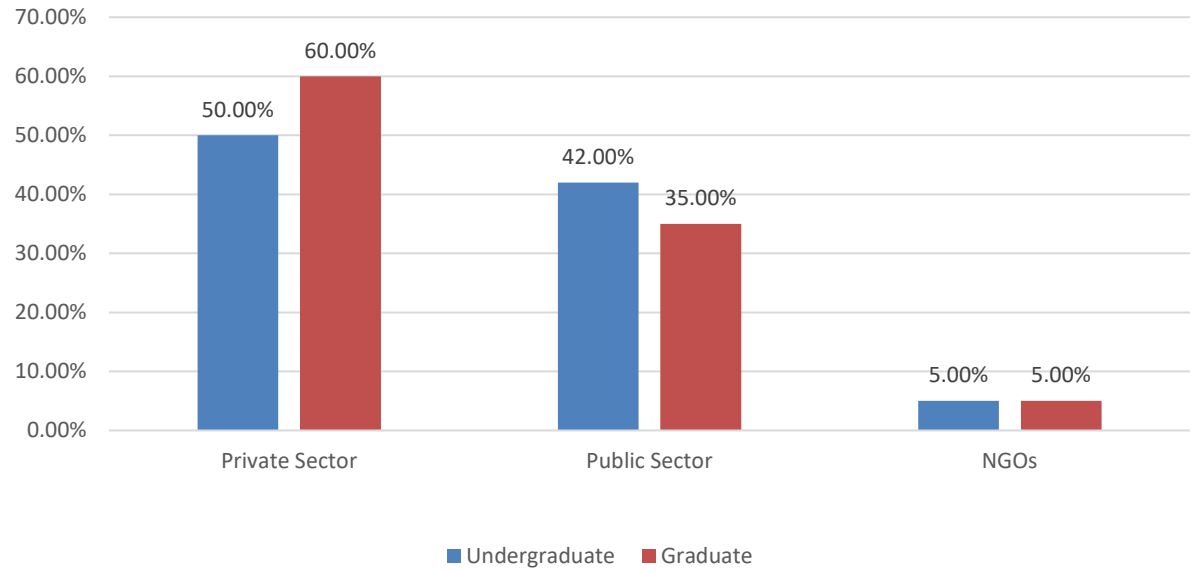
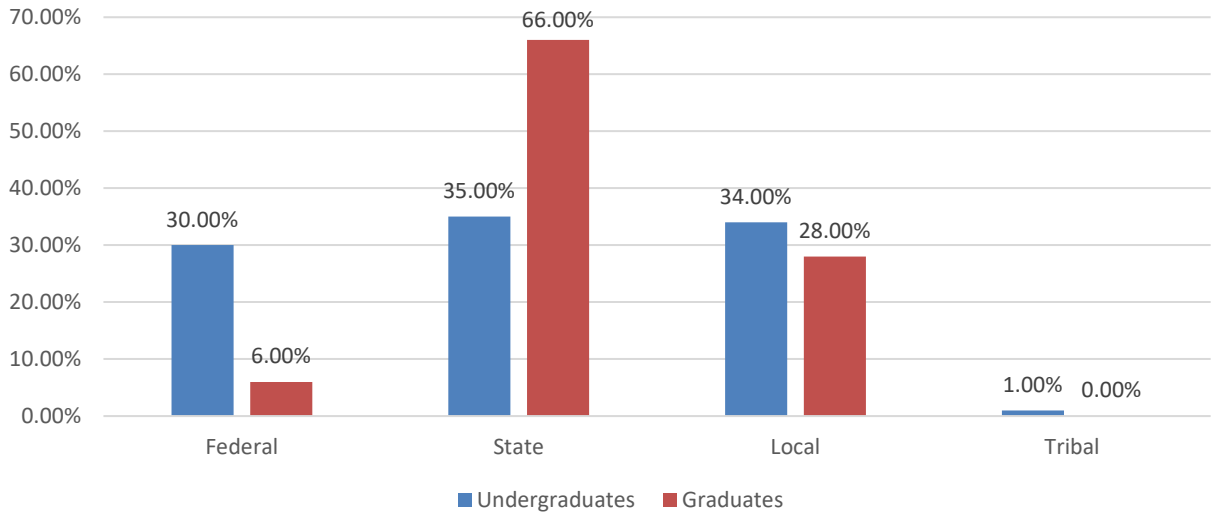
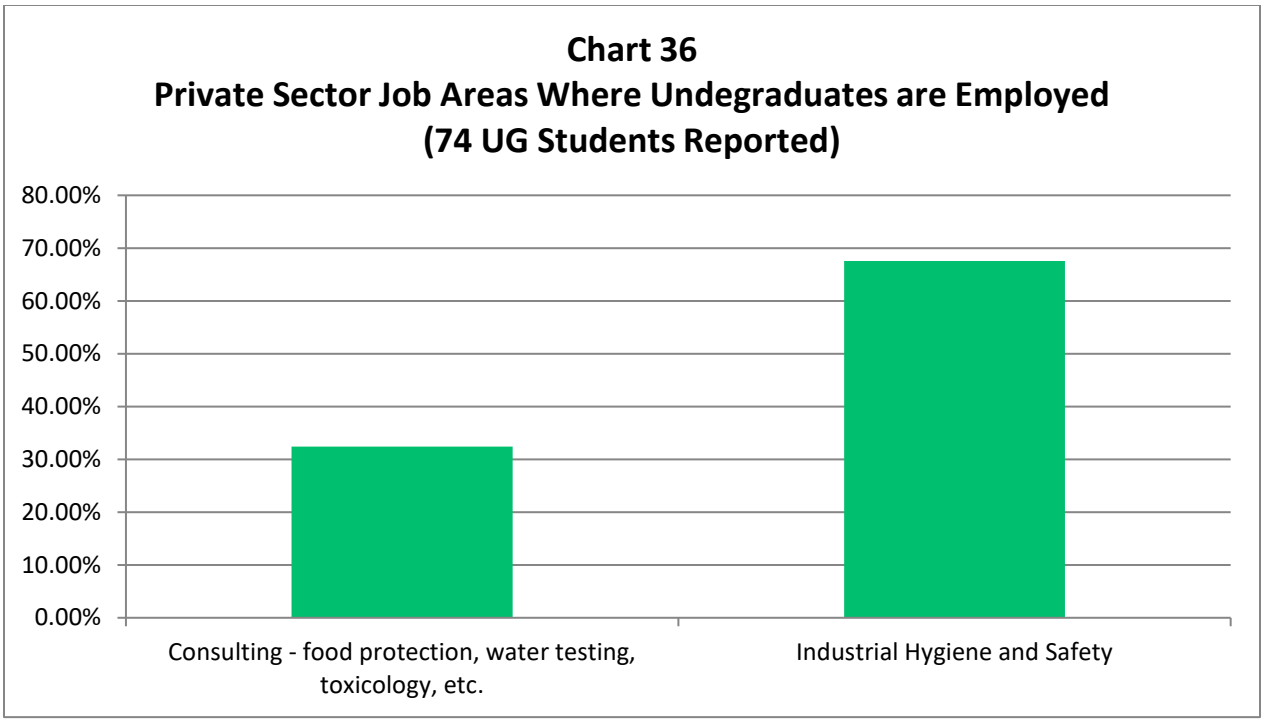


Chart 35
Public Sector Job Areas Where Students and Graduate Students are Employed Students (89 UG Students/29 Graduate Students Reported)





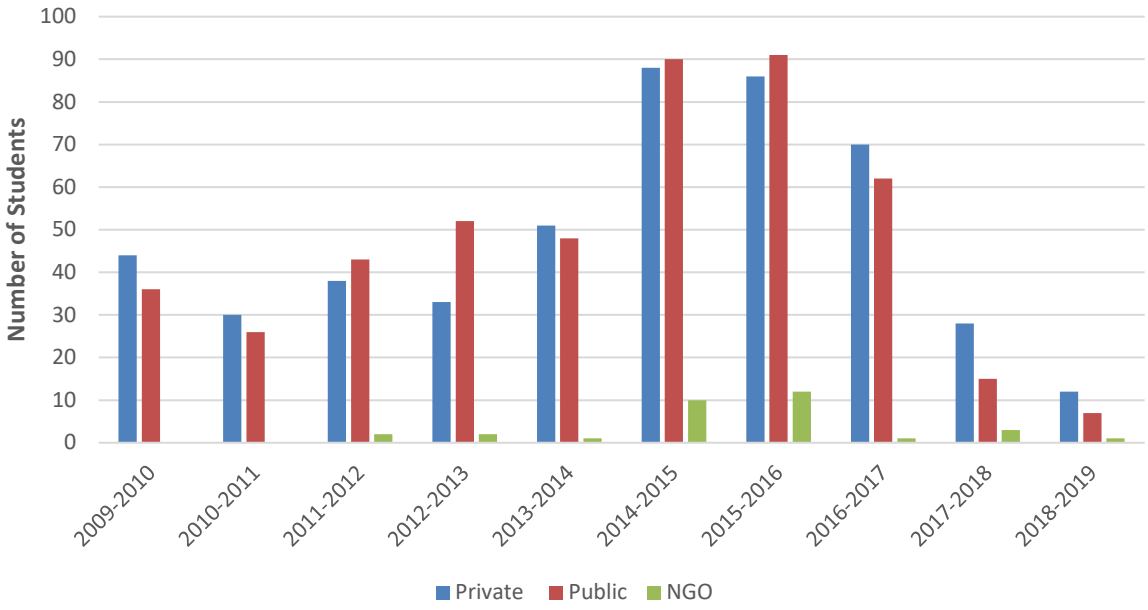
The ten-year trend for Undergraduates employment shows that following a significant drop in private employment from 2019 to 2011, private and public employment have remained essentially neck in neck, with minor fluctuations including public positions edging ahead of private positions about 50% of the time during the last ten years (Chart 37).

Graduate student employment patterns are similar to that of Undergraduates, with Chart 38 showing private employment surpassing public jobs more often during the past ten years.

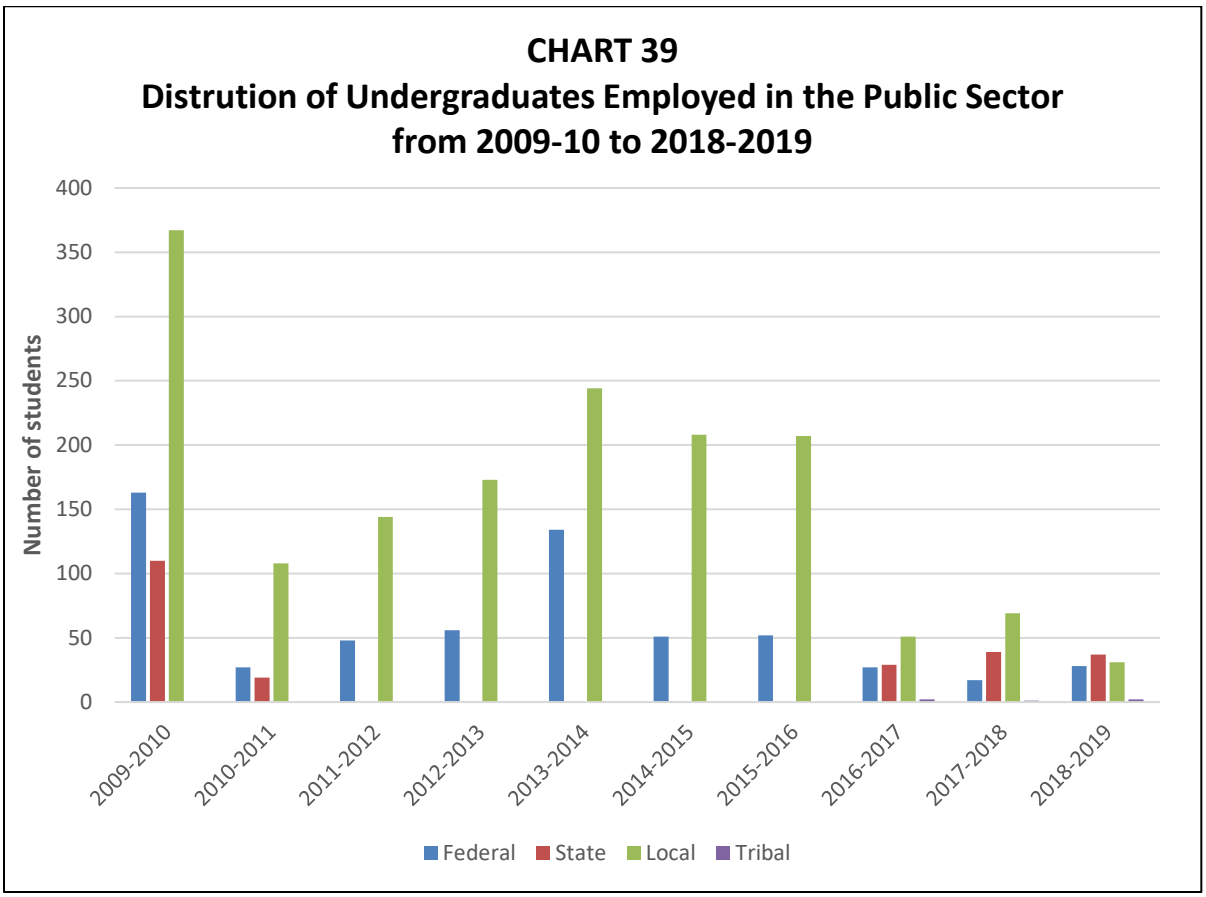
Employment with Non-Government Organizations (NGOs) has been generally minimal for Undergraduate and Graduate students over the past ten years with a notable increase in Graduate NGO employment in 2014-2015 and 2015-2016 (Charts 37 and 38).

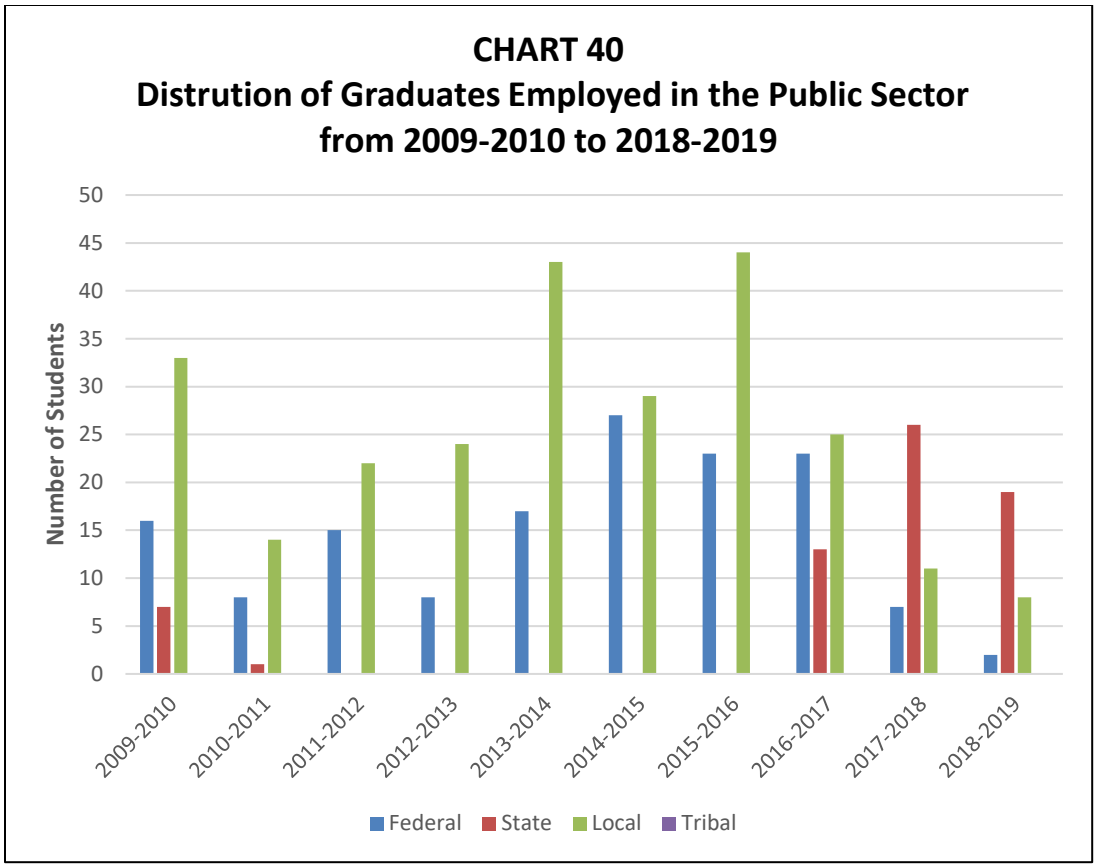
CHART 37
Distribution of Undergraduate Employment Sector from 2009-2010 to 2018-2019

CHART 38
Distribution of Graduate Employment Sectors from 2009-2010 to 2018-2019



Employment with Local Health Departments has led the ten-year trend in public sector employment for Undergraduate employment within the public sector during the past 10 years (Charts 39 and 40). However Graduate employment with state agencies increased significantly in 2016-2017, a trend that continues into the present. The number of positions with local health departments fall below positions with Federal agencies for both UG and Graduate levels from 2009-2010 to 2018-2019. The last three years show a slight increase in state level employment for Undergraduates and a substantial increase in state level employment for Graduate students (Charts 39 and 40).





7.0 Degree Program Health

Degree Programs were asked to assess their administrations' concern and their own personal concern with enrollment trends in their Degree Programs. An additional question asked if there has been discussion related to potential closure of their EH Degree Programs.

7.1 Administration Enrollment Concerns

Chart 41 shows Undergraduate Degree Program Director's assessments of administration enrollment concern peaked from 2012-2014 at 50%, fell during 2015-2016, increased in 2016-2017, and fell again as of 2017-2018. 2018-2019 saw another rise in administration enrollment concern. Currently, more than 50 % of Undergraduate administrations are assessed by PDs as having concern about low enrollment numbers in their EH Degree Programs.

Graduate Degree Program Director assessments of administration concerns about enrollment show a general increase in the amount of concerned administrations from 2011-2015 and then a marked decline in concern in 2016, which reversed in 2017 (Chart 42). Currently, 43% of Degree Program Director's assess their administrations as concerned about low enrollment numbers.

CHART 41
Nine Year Trend of Program Director Assessment of Undergraduate Administration's Enrollment Concern

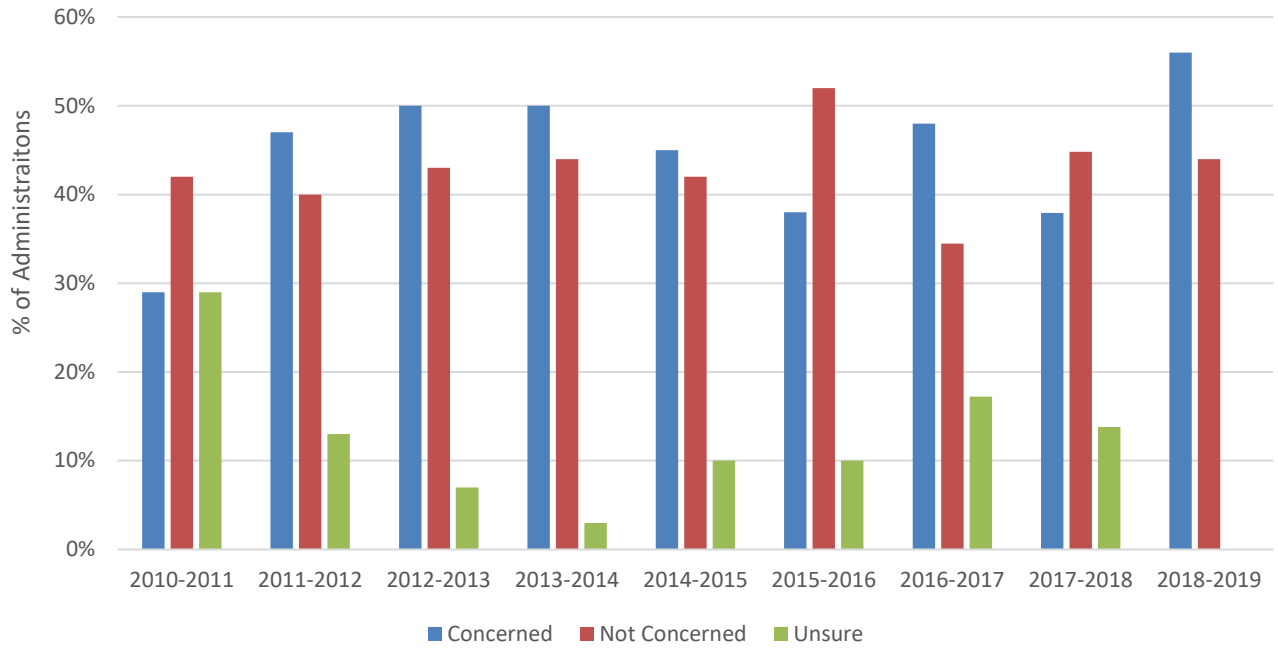
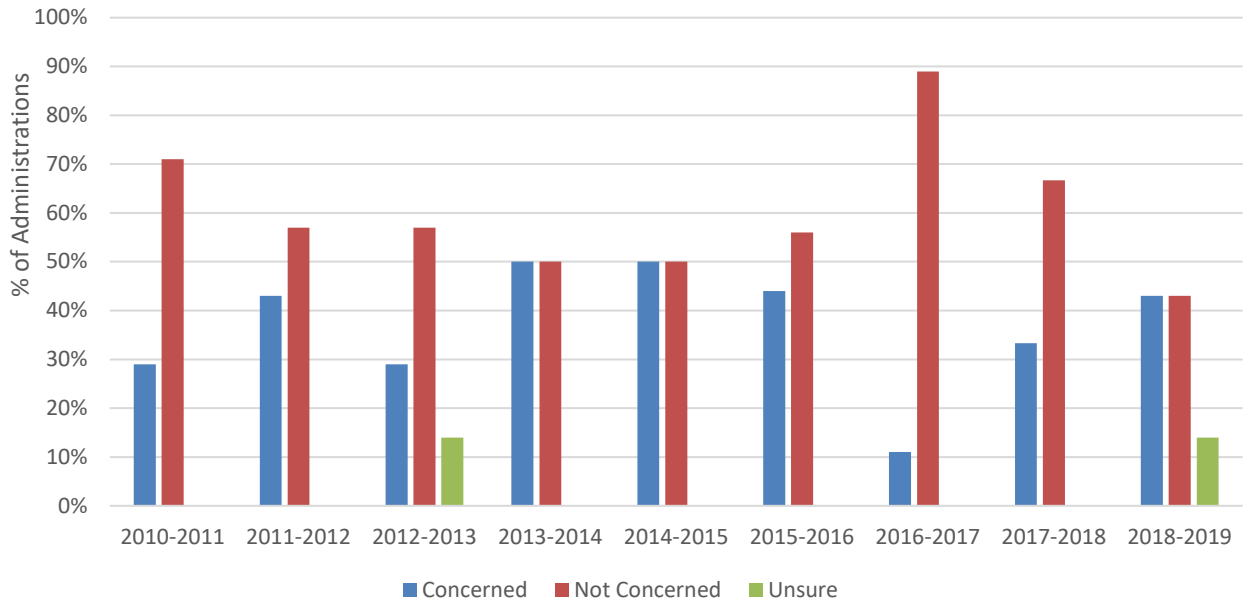


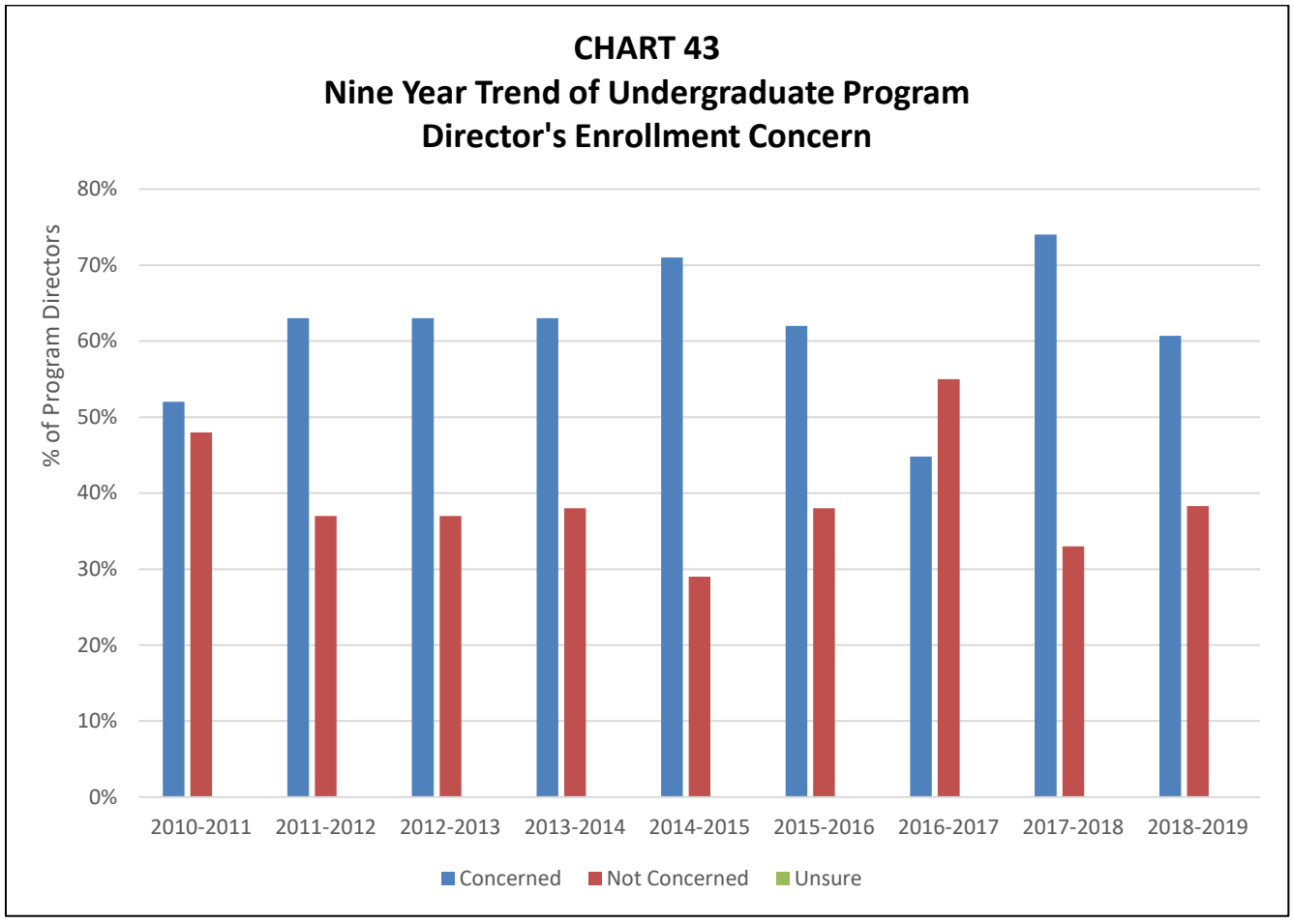
CHART 42
Nine Year Trend of Program Director Assessment of Graduate Administration's Enrollment Concern

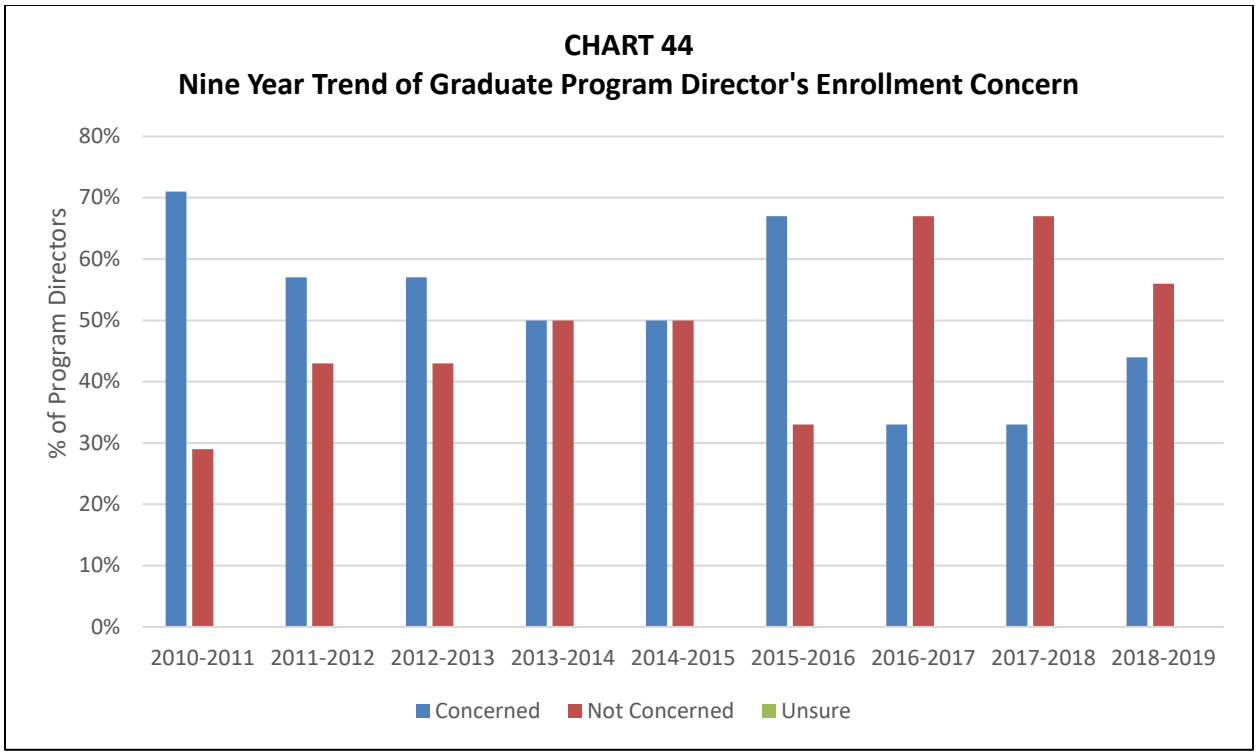


7.2 Degree Program Director Enrollment Concerns

Excepting the period between 2016 and 2017, Chart 43 shows a steady and high rate of Undergraduate Degree Program Director concern about enrollment numbers for the last eight years and a sharp increase in concern from 2016-2017 to 2017-2018. UG PD concern lessened in 2018-2019 but remains high.

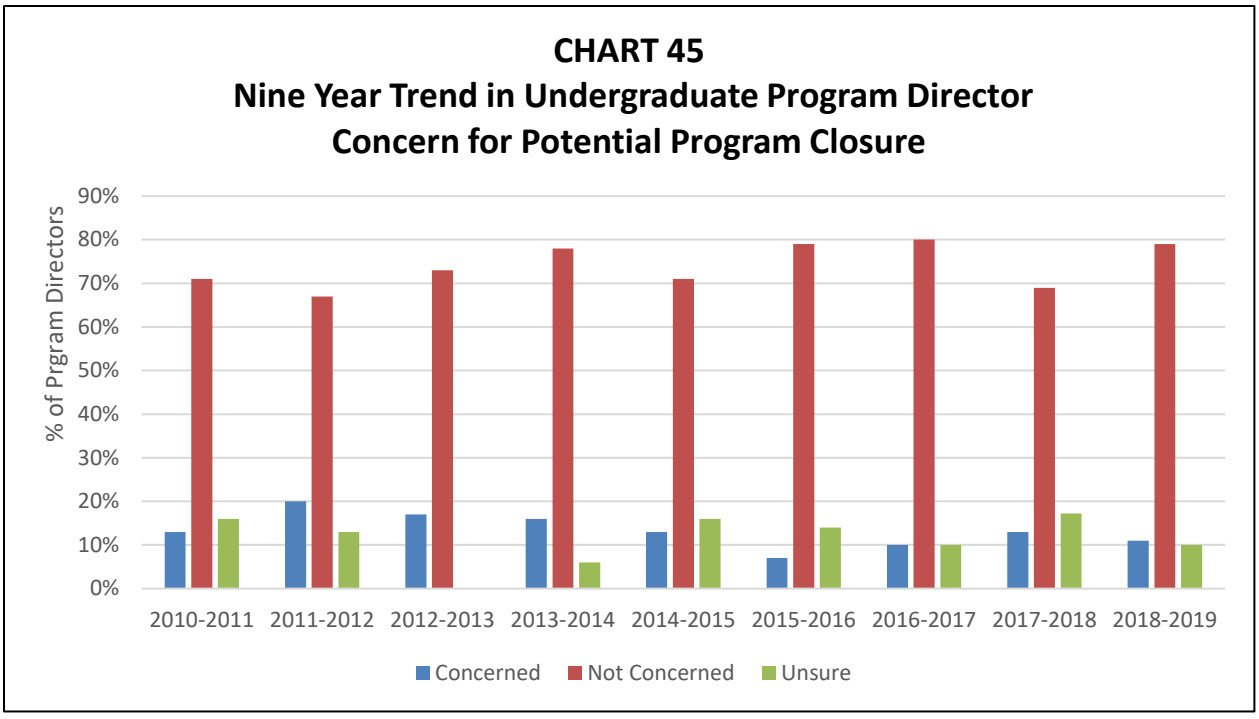
Graduate Degree Program Director enrollment concerns decreased from a 2010-2011 high, then increased sharply in 2015-2016 (Chart 44). Following this increased concern in 2015-2016, concern declined in 2017-2018 but rose slightly in 2018-2019 among Graduate Degree Program Directors (Chart 44).

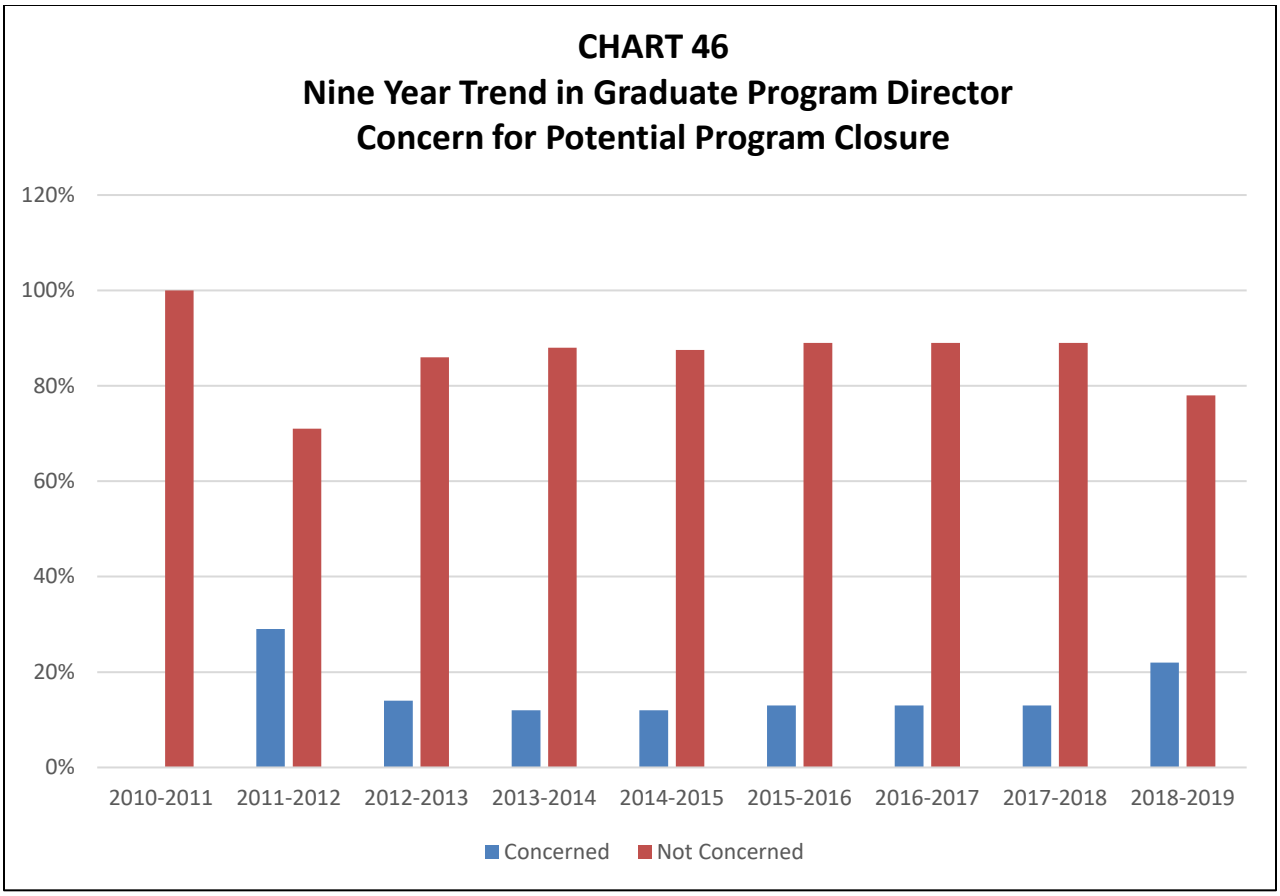




7.3 Degree Program Closure Concerns

The threat of Degree Program closure has remained steadily low for both Undergraduate and Graduate Degree Programs for the past nine-year period, however uncertainty rose slightly among UG Degree Programs in 2017-2018 and remained virtually the same for 2018-2019 (Charts 45 and 46).





7.2 Degree Program Health Commentary

Degree Program Directors were asked to provide an assessment of the general health of their EH Degree Programs. Chart 47 presents the Degree Program health assessment of both Undergraduate and Graduate Degree Program Directors for 2018-2019. Most Undergraduate and Graduate Degree Program Directors report that their Degree Programs are maintaining or improving health-wise. Reports of diminishing Degree Programs were low for Undergraduate Degree Programs, however an unusual increase in concern was noted by Graduate PDs. Tables 9 and 10 show Undergraduate and Graduate Degree Program Director's assessments of their Degree Program's health and explanations for their assessments.

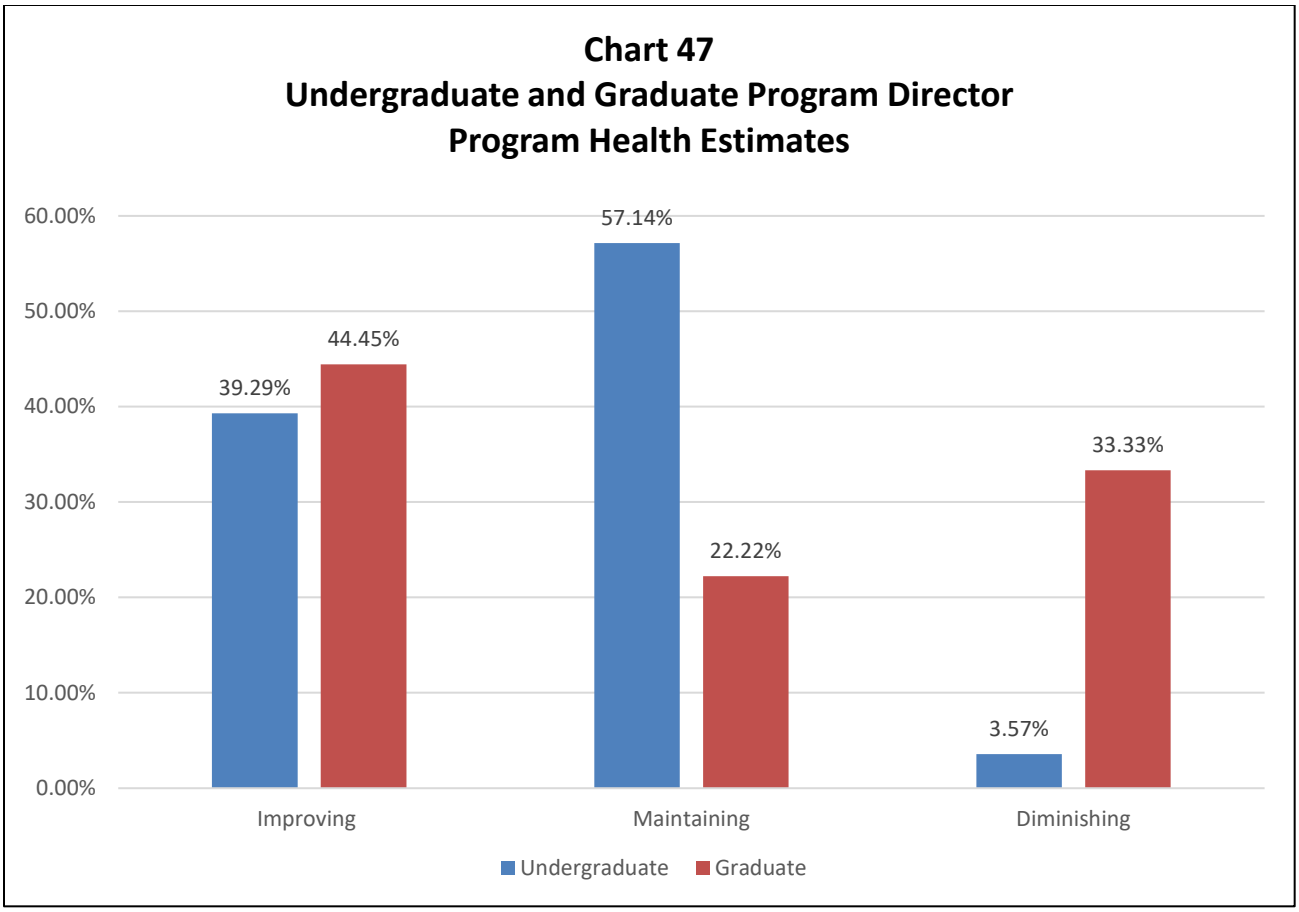


Table 9: Undergraduate Degree Program Director Assessment of Degree Program Health and Explanations – 2018-2019

Undergraduate Degree Program Health Assessments and Explanations:	
Degree Program Health Is Improving	**Explanations**
	We are currently recruiting / conducting interviews for a new Clinical Assistant/Associate Professor of Environmental Health with a Fall 2019 start date. In January 2019, we received approval to add an Environmental Health concentration in our CEPH accredited MPH degree - this will proceed during Fall 2019-Spring 2020 and we will formally engage EHAC regarding Graduate program accreditation application steps in due course.
	Enrollment is starting to increase
	We are trying every way possible to improve our enrollment figures and be more competitive.
	Added new faculty. Great relationships in our Department, many students inquire about EH.
	We have focused more on recruitment efforts across the board and are starting to see an increase in enrollment; especially among incoming freshman. Our student organization has

	flourished over the last year and our students seemed more engaged than ever which is very promising. We have a great team of faculty focused on students and student success.
	We have worked on curriculum revision by going over all classes we teach. Core faculty have been spending more time for recruitment effort and fund securing.
	Just completed a major curriculum revision which should increase enrollment.
	Enrollment and admissions still increasing
Degree Program Health Is Maintaining	**Explanations**
	Enrollment remains relatively constant with graduating seniors being replaced by new, transfer or change-of-major students.
	With declining enrollment, the University as a whole is focusing on recruitment. We are adopting new strategies to advertise EH&S and involve alumni in the process.
	While our numbers are somewhat lower, the quality of students in the program is higher as evidenced by the numbers making it through the chemistry and math requirements. We anticipate that some program changes scheduled for FA2020 will increase our enrollment beginning freshman year, rather than sophomore-junior year transfers as has historically been the case.
	Hired one new faculty member to replace loss of one last year. Another will retire end of this year but already searching for replacement. Enrollment dropped as the economy improved. We have stabilized recently.
	While enrollment is too low, it is relatively stable.
	We are steady in enrollment from last year. No fluctuations in the number of students getting in the program.
	Numbers have fluctuated over the past 10 years from 51 up to 92 then back down to 49.
	We have held steady with about 15-20 majors for the past 5 years. Our program is sufficiently strong that the University approved the replacement of a retiring faculty member with a new, tenure-track slot beginning in the 2019-2020 academic year.
	Our program continues to remain with a steady enrollment and well recognized in Virginia as only national accredited program in our state.

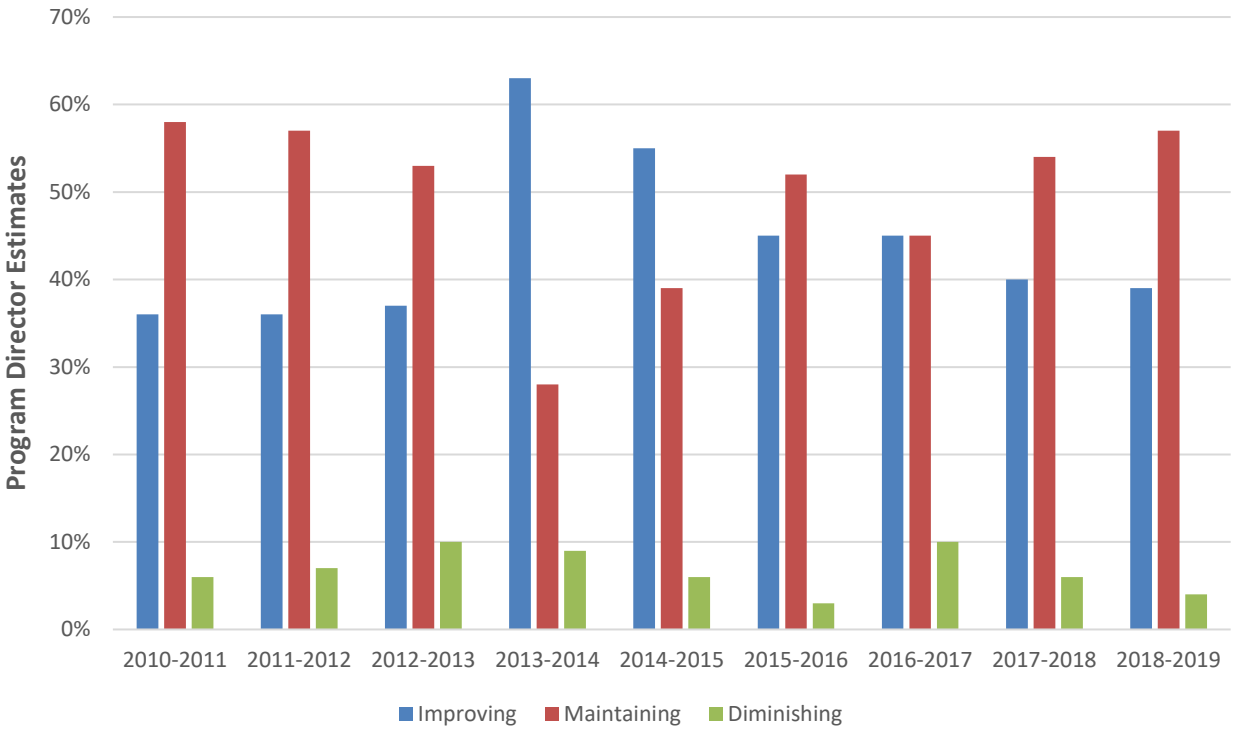
Table 10 presents Graduate Degree Program Director's Degree Program health assessments and explanations for those assessments.

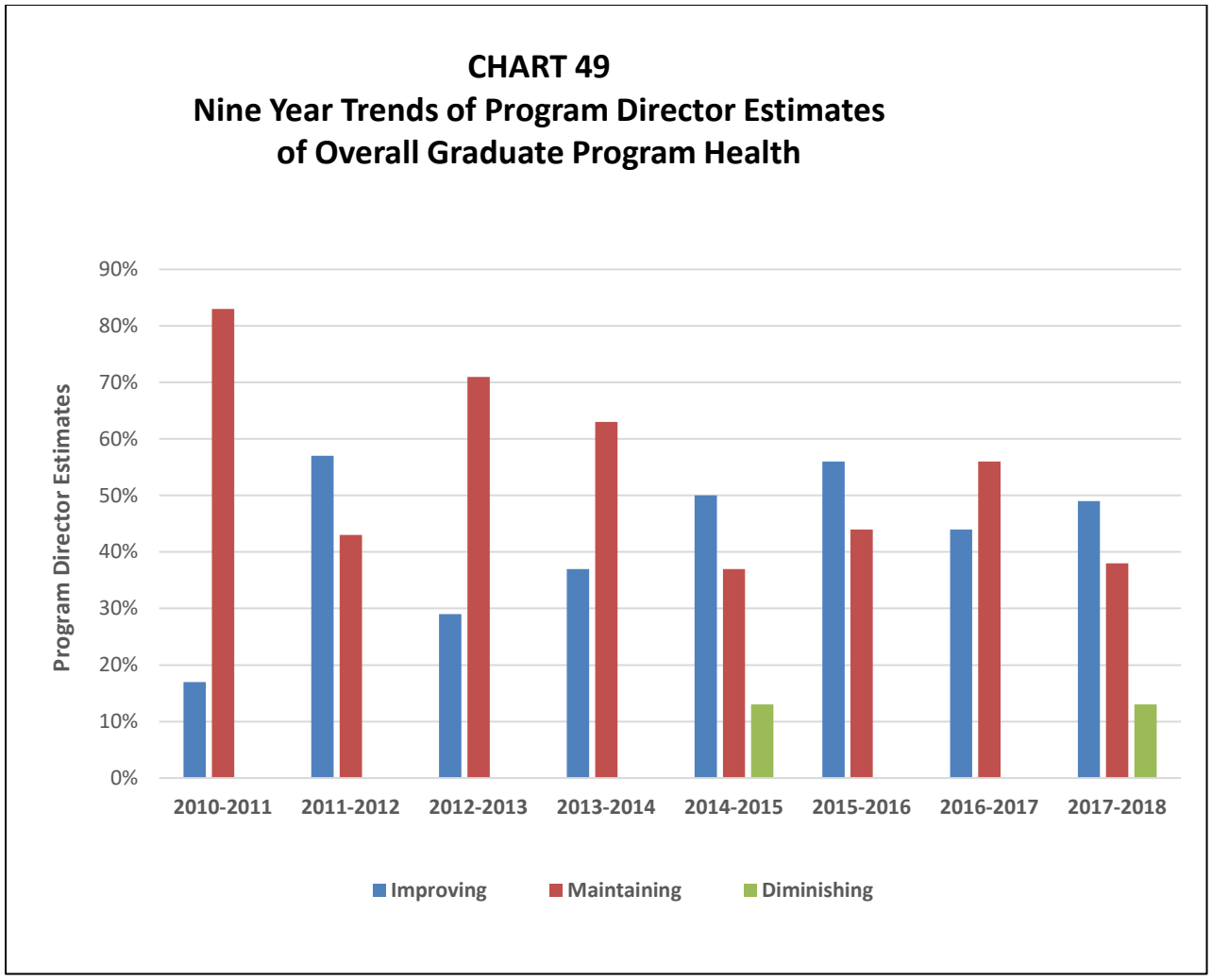
Table10: Graduate Degree Program Director Assessment of Degree Program Health and Explanations – 2018-2019

Graduate Degree Program Health Assessments	
Degree Program Health Improving	**Explanations**
	We are proposing a new bachelor's degree in fall 2020. The program was restructured, now Environmental Health has its own cip code and it a stand alone major, instead of concentration
	With the addition of a 3rd faculty member, we are able to concentrate on grant writing, etc.
Degree Program Health Maintaining	
	Our program remains strong. We have faculty dedicated to students and regularly engage students in meaningful research opportunities.
	Faculty support and student enrollment appear steady.
Degree Program Health Diminishing	
	Dean suspended MSEH admissions Administrators decided to close the program. Had a contractor doing the recruiting into the program. Their contract is being terminated now. The enrollment will increase.

Chart 48 presents the nine-year trend in Degree Program Director estimates of Undergraduate Degree Program health. Charts 48 and 49 show that the majority of Undergraduate and Graduate Degree Program Directors report Degree Programs maintaining or improving during the last eight years. Approximately one to three Undergraduate Degree Programs have reported struggling throughout the past nine years, while only one Graduate Degree Program has historically reported diminishing Degree Program health (2014-2015) (Chart 49).

CHART 48
Nine Year Trends of Program Director Estimates of Overall Undergraduate Program Health

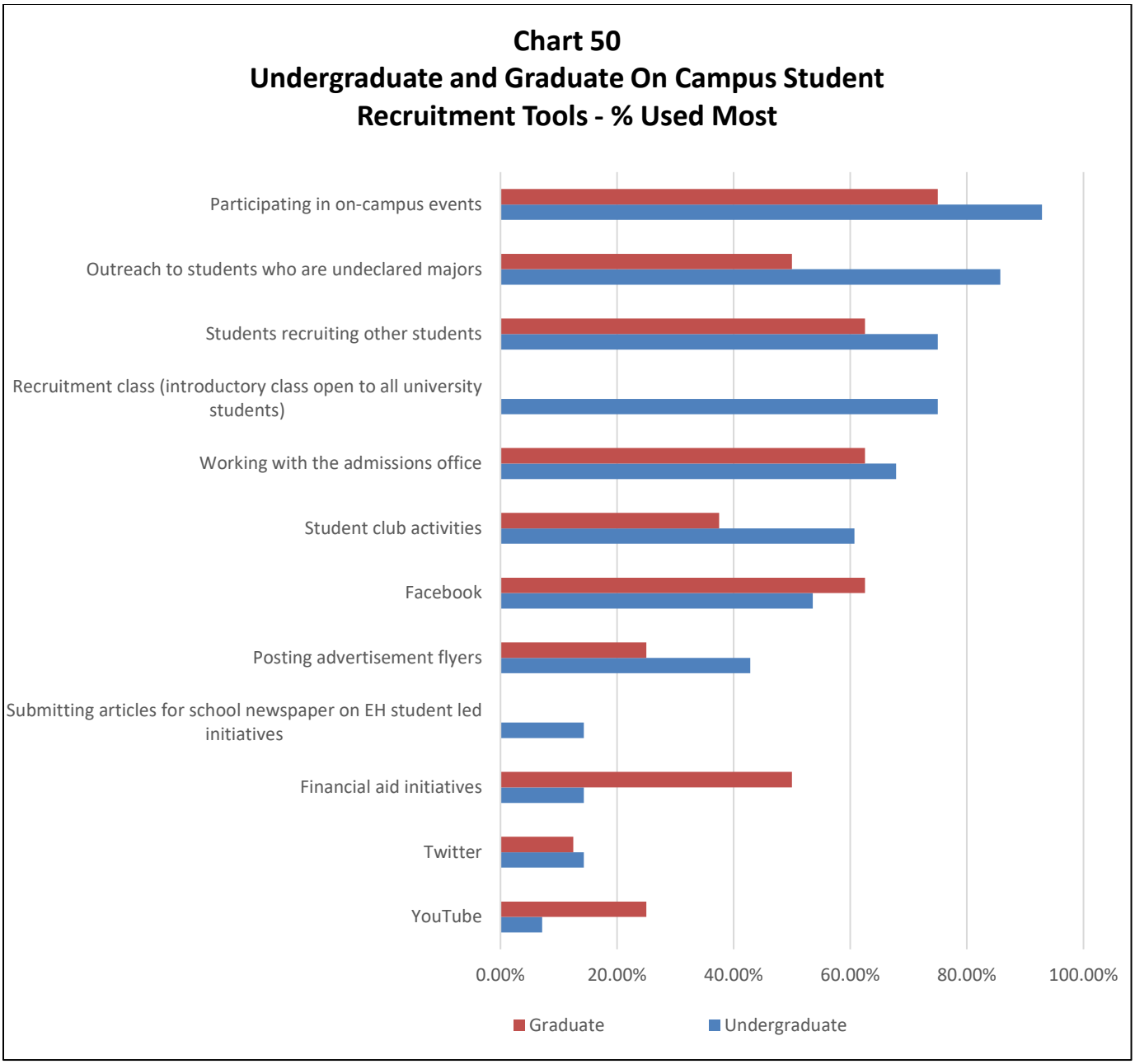




8.0 Recruitment

8.1 On Campus Recruitment

EHAC provided a list of on campus student recruitment techniques for Degree Program Directors to prioritize by their effectiveness. On campus recruitment techniques used by both Undergraduate and Graduate Degree Programs are presented in Chart 50. Social media tools paled in comparison to methods employing face to face contact by both faculty and fellow students. While Facebook was cited as useful by both UG and Graduate degree programs, YouTube and Twitter were at the bottom of the list.

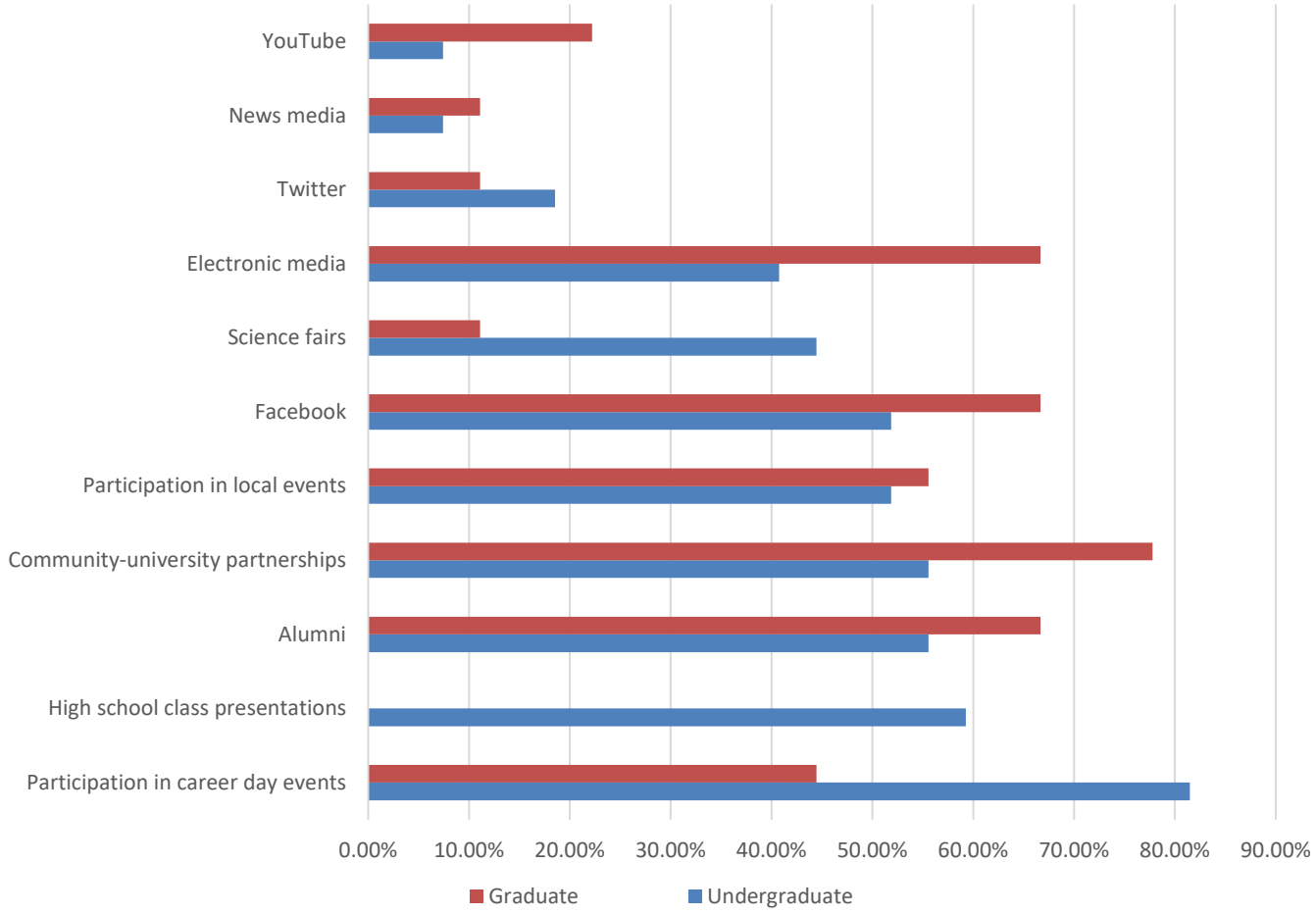


8.2 Off Campus Recruitment

EHAC also provided a list of *off* campus student recruitment techniques for Degree Program Directors to prioritize by their effectiveness. Successful techniques varied between Undergraduate and Graduate Degree Programs for off campus student recruitment. Again, however, the most successful recruiting techniques for both Degree Programs included face to face contact and social media rose in effectiveness for off-campus recruitment (Chart 51).

Reported information for both Degree Program levels reflects anecdotal evidence supporting the importance of face to face communication with potential recruits.

Chart 51
Off Campus Undergraduate and Graduate Student Recruitment Tools - % Used Most



8.3 Diversity Recruitment

Almost 40% of UG Degree Programs and more than 50% of Graduate Degree Programs are employing diversity recruiting strategies.

9.0 Retention

9.1 Ten-Year Retention Rates

Table 11 depicts the ten-year average retention rates of accredited Undergraduate and Graduate Degree Programs.

Table 11: Eleven-Year Average Retention Rates at Undergraduate and Graduate Accredited Degree Programs

EHAC Accredited Undergraduate Programs	2008-2019 Average Enrollment	2008-2019 Average Graduation	2008-2019 Retention Rate
Alabama	11.56	2.33	20.19%
Baylor University	20.56	3.78	18.38%
Benedict College	17.65	3.18	18.04%
Boise State University	36.18	7.64	21.11%
Bowling Green University	25.33	7.00	27.63%
California State University, Fresno	104.00	32.00	30.77%
California State University at Northridge	176.91	48.55	27.44%
California State University at San Bernardino	43.27	9.55	22.06%
Central Michigan University	17.17	4.71	27.46%
Colorado State University	92.00	25.82	28.06%
Dickinson State University	5.50	1.67	30.30%
East Carolina University	32.64	5.36	15.43%
East Central University	42.00	10.45	24.89%
East Tennessee State University	42.64	8.27	19.40%
Eastern Kentucky University	105.91	24.36	23.00%
Ferris State University			
Illinois State University	91.55	26.82	29.29%
Indiana State University	3.00		
Indiana University of Pennsylvania	13.50	14.00	103.70%
Indiana University - Purdue University Indianapolis	23.00	6.36	27.67%
Lake Superior State University	5.78	0.80	13.85%
Mississippi Valley State University	18.45	2.91	15.76%
Missouri Southern State University	49.91	9.18	18.40%
New Mexico State University	20.00	2.00	10.00%
North Carolina Central University	9.00	0.25	2.78%
Ohio University	41.64	9.36	22.49%
Old Dominion University	64.00	14.36	22.44%
Oregon State University			
Salisbury University	11.67	3.00	25.71%

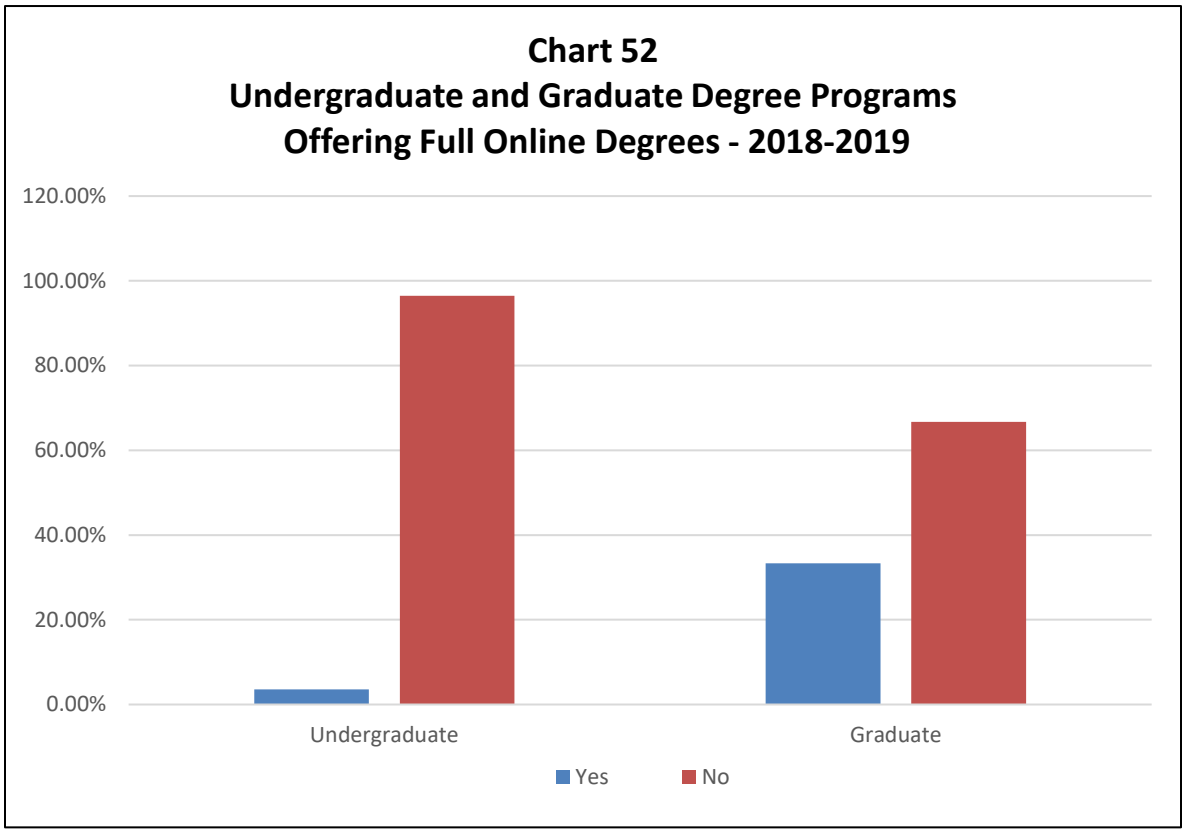
State University of New York, ESF	29.20	8.67	29.68%
Spelman College	22.23	8.67	38.81%
Texas Southern University	34.75	7.27	20.93%
University of Findlay	76.43	15.86	20.75%
EHAC Accredited Undergraduate Programs	**2008-2019 Average Enrollment**	**2008-2019 Average Graduation**	**2008-2019 Retention Rate**
University of Georgia Athens	95.09	19.09	20.08%
University of Massachusetts-Lowell	12.67	1.50	11.84%
University of Washington	46.73	20.91	44.75%
University of Wisconsin Eau Claire	50.27	14.64	29.11%
University of Wisconsin Oshkosh	14.33	2.86	19.93%
West Chester University	50.70	10.64	20.98%
Western Carolina University	64.00	18.09	28.27%
Wright State University	31.11	7.50	24.11%
Eleven Year Totals	1652.33	419.41	25.38%
Graduate			
Response	**2008-2019 Average Enrollment**	**2008-2019 Average Graduation**	**2008-2019 Retention Rate**
California State University Northridge	56.36	25.18	44.68%
East Carolina University	27.18	6.73	24.75%
East Tennessee State University	4.55	0.91	20.00%
Eastern Kentucky University	36.33	13.63	37.50%
Fort Valley State University	131.00	36.60	27.94%
Mississippi Valley State University	18.36	4.73	25.74%
Old Dominion University	16.82	6.70	39.84%
University of Findlay	92.91	28.82	31.02%
University of Illinois Springfield	33.82	10.90	32.23%
Eleven Year Totals	417.33	134.20	31.15%

10.0 Online Opportunities

10.1 Full Online Degree Programs

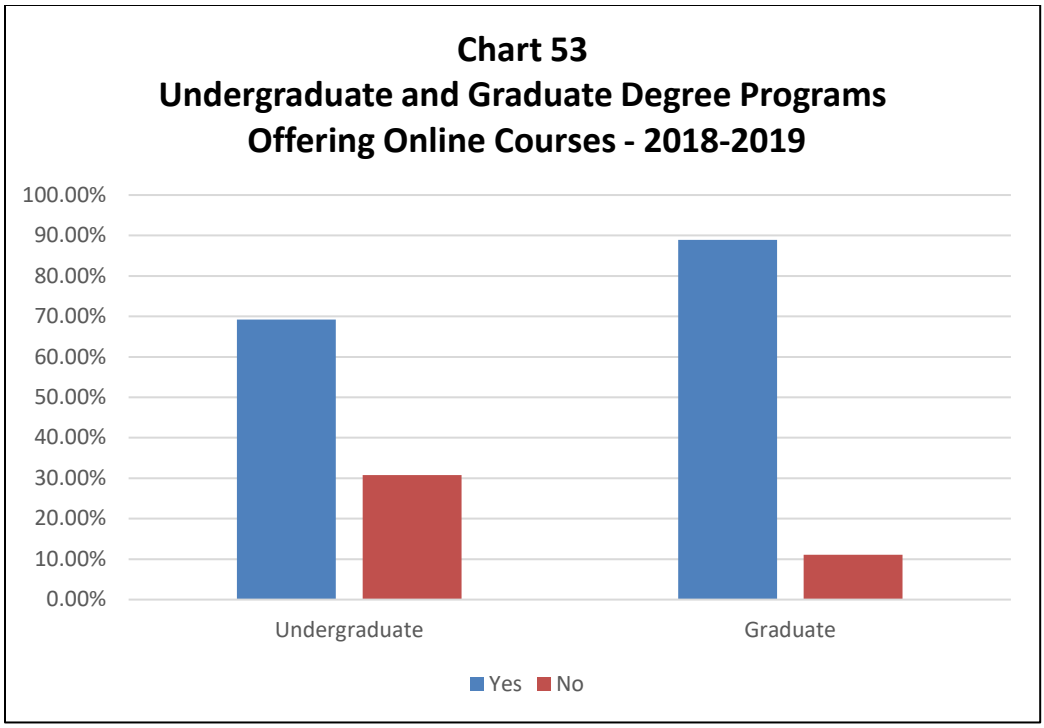
Missouri Southern State University offers a full online Undergraduate degree, while Graduate Degree Programs at East Carolina University, University of Findlay and University of Illinois Springfield have full online Master's Degree Programs. Benedict College and University of

Findlay's Undergraduate Degree Programs are developing online degrees, while East Tennessee University and Fort Valley State University's Graduate Degree Programs are developing online Master's degrees. Chart 52 presents the distribution of Undergraduate and Graduate Degree Programs offering online degrees.



10.2 Online Courses

Twenty-nine of 37 accredited Undergraduate and Graduate Degree Programs offer online courses. Of those that offer online courses, eighteen Degree Programs offer online courses to anyone in addition to students registered at their school. Chart 53 presents the distribution of Undergraduate and Graduate Degree Programs offering online courses.



11.0 Exit Exams

Accredited Degree Programs were asked if they administered an exit examination to graduating students. Seven Undergraduate Degree Programs administer an exit exam and seven Graduate Degree Programs require exit exams of their students. Chart 54 and Tables 12 and 13 present Undergraduate and Graduate Degree Programs that administer exit exams. Explanations of the purpose of these exit exams are included as well in Table 12.

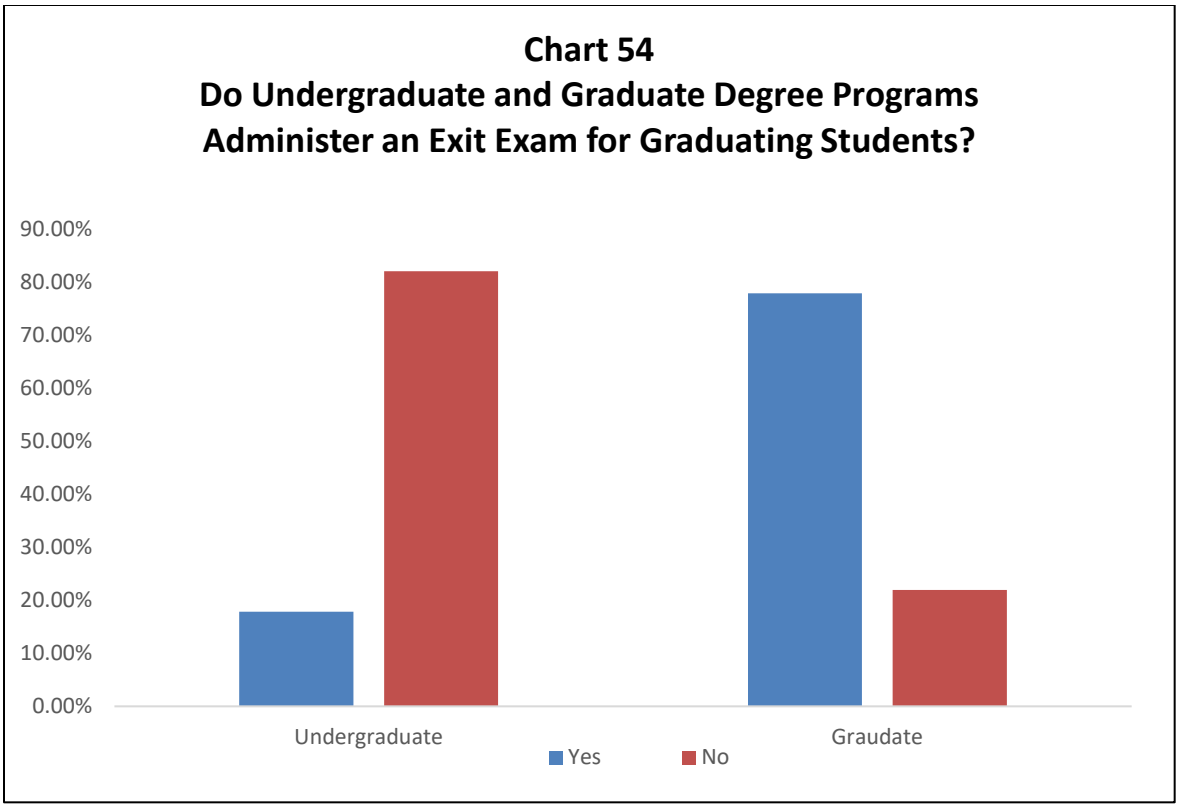


Table 12: Administration of Exit Exams by Accredited Undergraduate Degree Programs – 2018-2019

If Degree Program answered "yes", the focus and purpose of the exam was explained.
The exit exam is administered in the EHS 485 Senior Seminar course. The exam covers a variety of EHS topics and is meant to be a culminating experience to assess knowledge gained throughout their time in the program. The exam also helps them prepare to take the Kentucky Registered Sanitarian and/or the REHS exam after graduation. Students must receive a 70% or greater to pass the exam and pass the course. During the 2017-2018 academic year, 100% of students passed the exit exam.
Students will be tested for Environmental Health knowledge by a comprehensive examination, and internship experience is evaluated by student presentation and a written report.
It is a comprehensive, multiple choice exam that covers a wide range of topics.
Purpose of the exam is for program, college and university assessment . Important to determine if program is adhering to strategic plan on progression.
It is a snapshot of what they learned during their time within the Biology department where EH is housed.
The senior assessment exam is the Certified Environmental Health Specialist exam from the Missouri Board of Certified Environmental Health Professionals. Since our students are obtaining an EHAC Accredited Degree the Board allows our seniors to take the exam instead of needing 2 years of field experience with another type of science-based degree. Primarily the exam is over topics of interest in environmental public health type work as in working for a health department.

Table 13: Administration of Exit Exams by Accredited Graduated Degree Programs – 2018-2019

If Degree Program answered "yes", the focus and purpose of the exam was explained.
It is a comprehensive exam, that covers the six core courses. A student must pass the comprehensive exam in order to receive their degree.
The exam assesses students' written and oral skills.
Yes, we administer a comprehensive exam to all students, unless the choose the thesis option. In 2017/2018, all graduating Master's students took a comprehensive exam.
MSEH Comprehensive Exam.
Graduate students are offered a case study model comprehensive exam that incorporates and test all the EHAC core competencies. Students are also required to submit a written internship report and present as a means of culminating experience for EH Master's program.
The purpose of the MSEH Comprehensive Exam is to evaluate students' competency in areas of Environmental Health related to their coursework and thesis or professional paper. Comprehensive questions are asked on a variety of Environmental Health programmatic topics such as air, water and food quality and protection; epidemiology; toxicology; occupational health/industrial hygiene; vector and disease control; waste management; etc.