

**An Examination of Departure Trends among Pre-Tenure Faculty
at Virginia Tech: 2003-2013**

Introduction

Recruiting, hiring, and retaining tenure-track faculty members is critical to the health of an institution of higher education. Colleges and universities invest significant resources in the faculty members they hire, in order to ensure their success as a tenure-track faculty member. Retaining faculty members allows the institution to create continuity along the lines of teaching and research, enhances an institution's reputation, and creates stronger faculty morale (O'Meara, Louder, & Campbell, 2014). While some turnover is expected due to retirement, changes in personal life, or dissatisfaction with the organization, too much turnover can create many problems for a college or university (Rosser & Townsend, 2006). Therefore, it is imperative that institutions of higher education find ways to not only hire excellent, diverse faculty members, but to foster an institutional culture where those faculty members can be successful.

Institutions have implemented a variety of policy initiatives and programs to improve faculty retention and reduce the departure rate of faculty members, especially those from underrepresented groups. Generally, these policies and programs aim to enhance a sense of belonging, self-efficacy, and connectedness within networks, while ultimately ensuring success in the promotion and tenure process (Lewellen-Williams, et al., 2006; Welling, Ferluga, Luoma, Berens, & Offenbecker, 2015). Although there are policies and programs to retain underrepresented faculty members, many institutions still have higher departure rates for their underrepresented groups than the university average, or have hired so few underrepresented faculty members that there is not enough statistical power to draw adequate conclusions (Gumpertz, Durodoye, Griffith, & Wilson, 2017).

Faculty departure rates can vary based on numerous sociodemographic factors including gender and race/ethnicity (Maranto & Griffin, 2010; Parker, Clayton-Pedersen, Moreno, Teraguchi, & Smith, 2006). Women and faculty of color are more likely to face hostile work environments related to their gender and race, which may lead them to seek positions outside of the institution (Maranto & Griffin, 2010; O'Meara, Louder, & Campbell, 2014). At two of the four land-grant institutions examined, Gumpertz et al. (2017) found that underrepresented faculty were more likely to depart prior to their tenth anniversary than their majoritized peers. Moreover, Gumpertz and her colleagues noted that due to the small numbers of underrepresented faculty hired during their investigative timeframe, the precision and power for comparing underrepresented faculty to other faculty were low (Gumpertz et al., 2017). Thus, both the hiring and retention of underrepresented faculty members must be scrutinized in order to paint a broad picture of faculty success at a given institution.

The purpose of this analysis is to explore faculty retention by hiring cohort year at Virginia Tech. For the purposes of this study, we define a cohort year as running from July 1 of a year until June 30 of the following year, thus including a full academic year. This study includes all faculty hires from 2003-04 through 2012-13, which provides a ten-year overview inclusive of the average 6-year window provided to faculty members to achieve promotion and tenure. This study examines faculty retention and departure rates by cohort year, college, gender, and race/ethnicity.

Data

The data used for this study were obtained from the Strategic Analysis unit of the Office of Analytics & Institutional Effective Office of Institutional Research. Data consists of 601

assistant professors who entered tenure-track positions at Virginia Tech during the years 2003-04 through 2012-13. The data are reported at two distinct levels: institutional and college.

Institutional-level data

Table 1 illustrates the number of new, tenure-track assistant professors by cohort year. As reflected in Table 1, the year with the most new hires was 2011, and the year with the fewest hires was 2009-10, which was due, at least in part, to the national economic downturn at the time.

Table 1. New Tenure-Track Hires by Cohort Year.

Cohort Year	Number Hired
2003-04	43
2004-05	73
2005-06	68
2006-07	71
2007-08	66
2008-09	70
2009-10	20
2010-11	30
2011-12	78
2012-13	82
TOTAL	601

Table 2 reflects the number and percentage of hires who departed after they were hired with a cutoff date of September 30, 2019. Overall, of the 601 individuals included in this sample, 251 (42%) departed Virginia Tech. The cohort year with the highest percentage of departures was 2006-07 (51%), and the year with the smallest percentage of departures was 2012-13 (34%).

Table 2. Departures by Cohort Year.

Cohort Year	Number Hired	Number Departed	Percent Departed
2003-04	43	18	42%
2004-05	73	32	44%
2005-06	68	33	49%
2006-07	71	36	51%
2007-08	66	28	42%
2008-09	70	26	37%
2009-10	20	7	35%
2010-11	30	15	50%
2011-12	78	28	36%
2012-13	82	28	34%
TOTAL	601	251	42%

College-level data

Table 3 presents the number of hires and departed/retained faculty by college. The figure shows that the College of Liberal Arts and Human Sciences hired the most faculty between 2003 and 2013 (156) and the College of Veterinary Medicine hired the fewest (29). This table also indicates the percentage departure rates by college, showing that the Pamplin College of Business had the highest departure rate at 74%, followed by the College of Veterinary Medicine at 48%. The College of Natural Resources and Environment had the lowest departure rate at 23%.

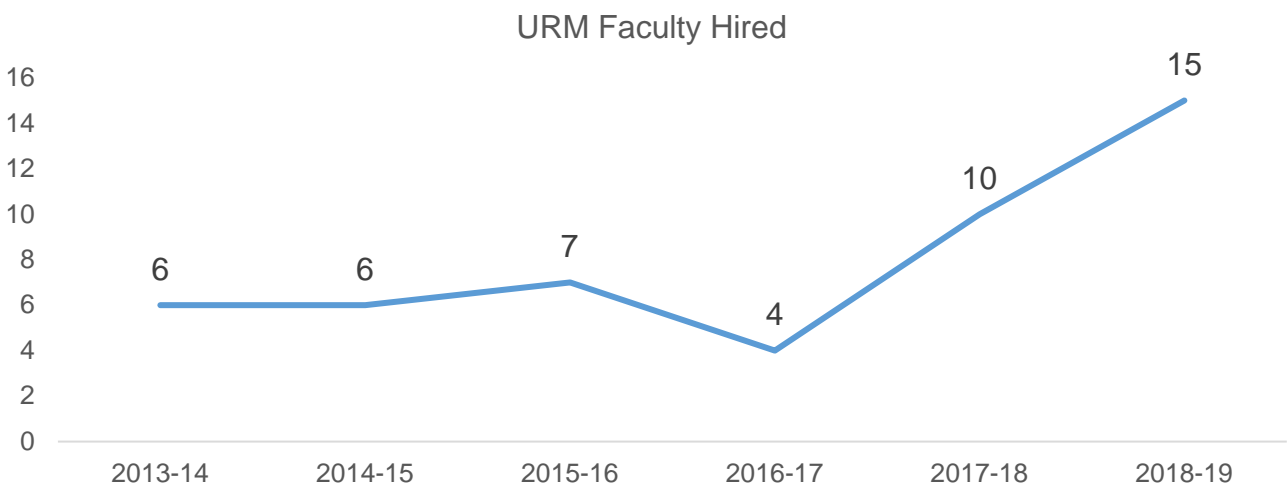
Table 3. Faculty Departure and Retention by College

College	Number Hired	Number Departed	Percent Departed
Liberal Arts and Human Sciences	156	71	46%
Engineering	114	45	39%
Agriculture & Life Sciences	94	42	45%
Science	89	22	25%
Architecture & Urban Studies	55	25	45%
Business	34	25	74%
Natural Resources	30	7	23%
Veterinary Medicine	29	14	48%
TOTAL	601	251	42%

Demographic Data

The demographic data are reported at both the institutional and college level. This allows for a more nuanced view of faculty departure and retention by sociodemographic factors such as gender and race/ethnicity. Due to the small numbers of faculty in various categories, this section contains both relative and absolute measures of faculty departure and retention. It is important to note that Virginia Tech has embarked on a concerted institutional effort to increase the diversity of our faculty. The cohort studied in this report do not reflect those more recent efforts, but Figure 1 shows the trend towards more diverse hiring at the institution. The findings from this study can help to inform practices that will contribute to the retention of those newly recruited faculty members.

Figure 1: Under-Represented Minority (URM) Hires 2013-14 through 2018-19



Institutional-level demographics

Table 4 and Figure 2 provide a picture of tenure-track faculty departures by race/ethnicity. Over the term of this study, 6 of the 9 faculty members who identified as having two or more racial or ethnic identities (or 67%) left Virginia Tech. 15 Black or African American faculty members also left the institution, representing 63% of faculty hired from that race/ethnicity over the same period. Virginia Tech also saw the departure of more than

half (52%) of the Hispanic faculty hired during the study period. Asian faculty left the institution at a similar rate to the institutional average of 42%, and the departure rate for White faculty is lower than the institutional average, at 39%.

Table 4. Faculty Departure Rate by Race/Ethnicity

Race/Ethnicity	Count Hired	Count Departed	Percent Departed
Native American or Alaska Native	1	0	0%
Native Hawaiian or Other Pacific Islander	0	0	0%
White	417	164	39%
Asian	122	52	43%
Hispanic	27	14	52%
Black	24	15	63%
Two or More	9	6	67%
TOTAL	600*	251	42%

*Note: count does not include one faculty member who did not report their race/ethnicity.

Figure 2: Percentage of Faculty Who Were Hired 2003-2013 and Subsequently Departed (by Race/Ethnicity)

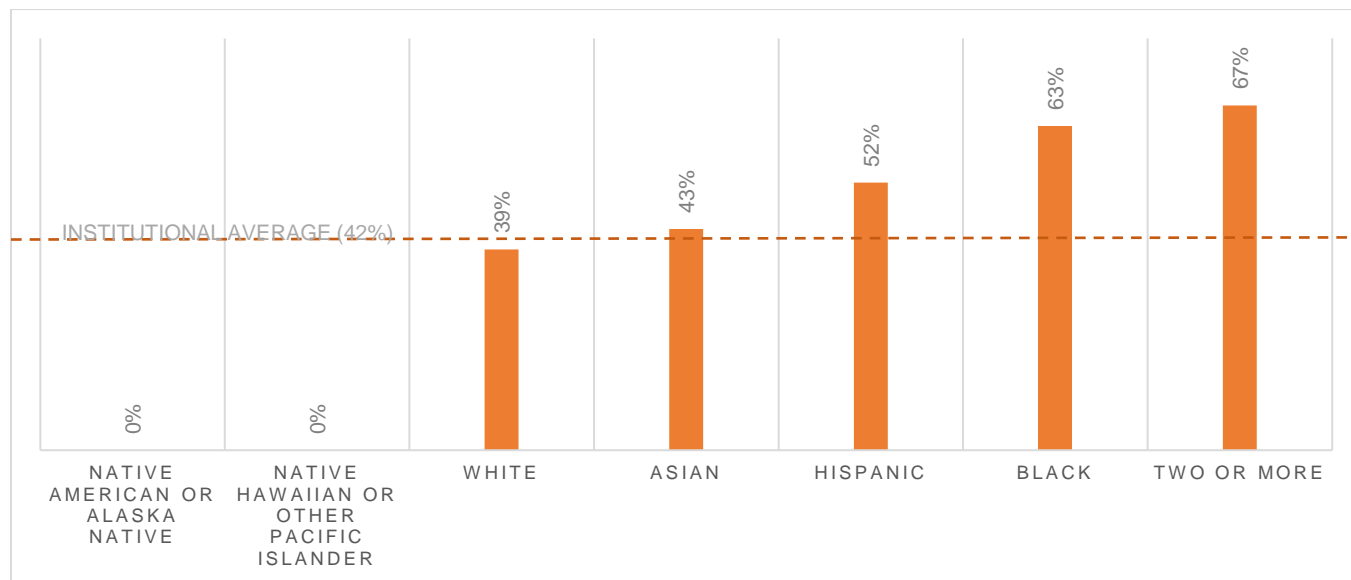


Table 5 shows the retention and departure rates by gender. During the period of this study, there were more male tenure-track-faculty hired than female, with males comprising 60% of the tenure-track hires; however, their respective rates of departure were similar, with female faculty departing at a slightly higher rate than male faculty.

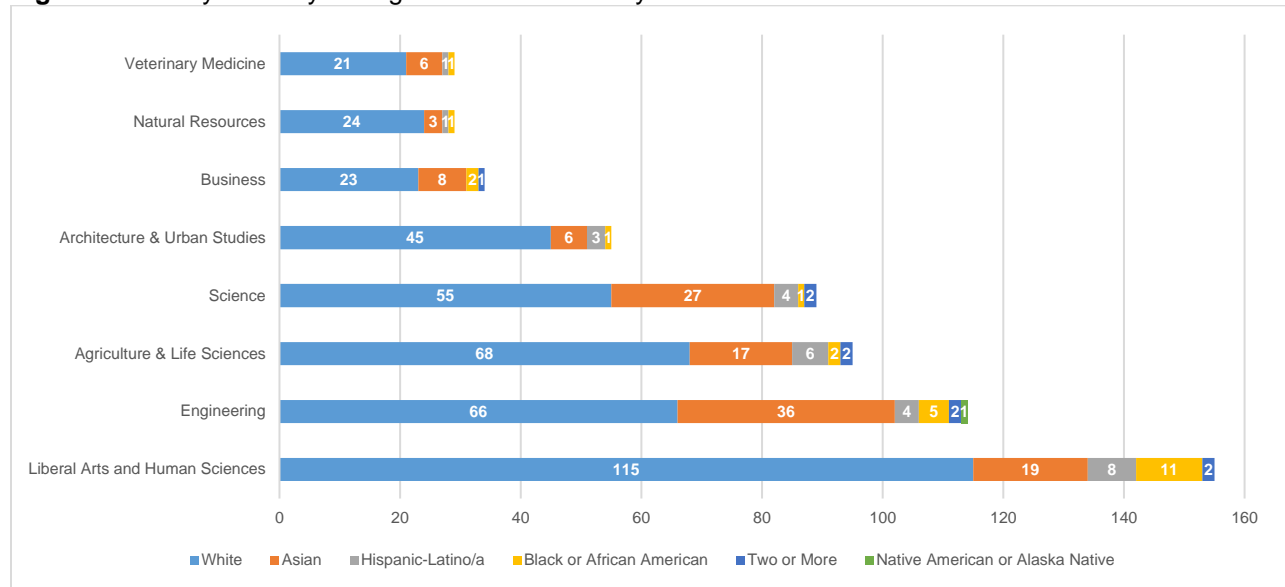
Table 5. Faculty Departure Rate by Gender

Gender	Count Hired	Percent Hired	Count Departed	Percent Departed
Male	363	60%	149	41%
Female	238	40%	102	43%
TOTAL	601		251	42%

College-level demographics

Figure 3 and 4 provide illustrations of the number of faculty members hired by each college by race/ethnicity and gender. As a percentage of new faculty hired during this time period, URM faculty made up 13% of the new hires in Liberal Arts and Human Sciences, and 11% of the new hires in Engineering and Agriculture and Life Sciences, which were also the colleges with the highest number of hires during this time period (156 and 114 hires respectively).

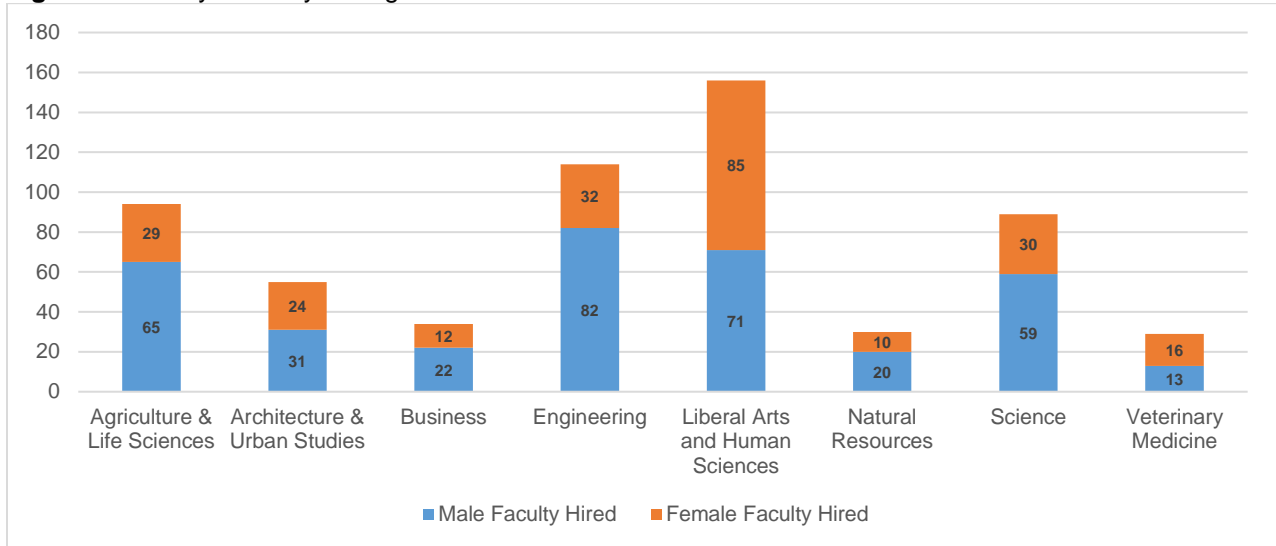
Figure 3. Faculty Hires by College and Race/Ethnicity



Three colleges hired female faculty during this period at a rate above the institutional average of 40%: Veterinary Medicine (55%), Liberal Arts and Human Sciences (54%) and

Architecture & Urban Studies (44%). The College of Engineering hired the lowest percentage of female faculty, at 28% of their total hires for the study period.

Figure 4. Faculty Hires by College and Gender.



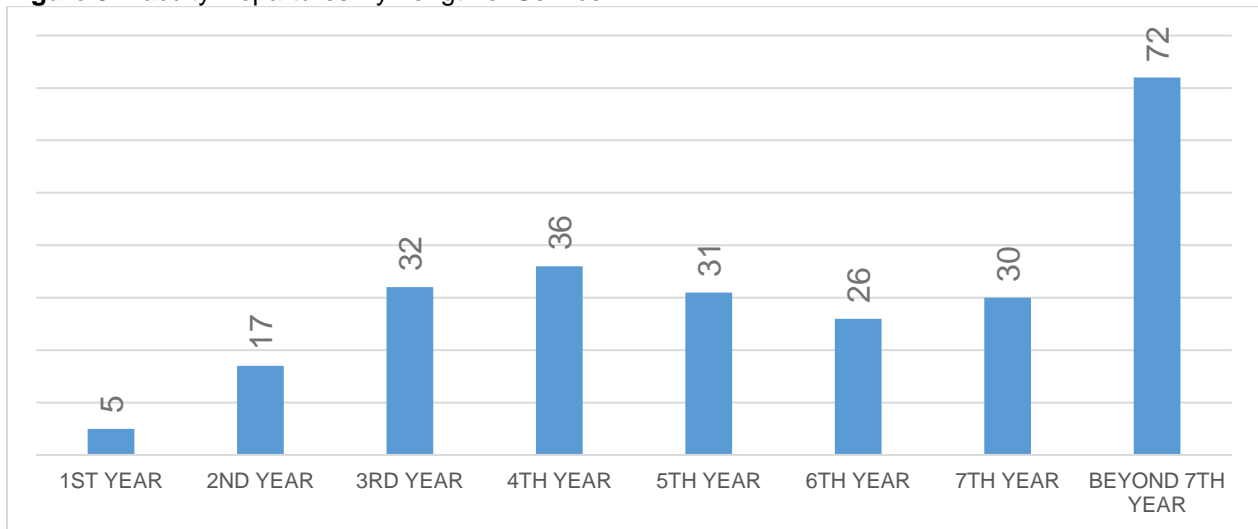
Length of Service

Studies of the success of women and under-represented minorities in academia tend to start with quantitative assessment, but also require a more qualitative discussion of those results. When disparities in the number of women and URM faculty in a particular institution or discipline are identified, discussions tend to focus on the pipeline (in terms of increasing the quantity of applicants) and culture or climate. The latter can directly contribute to negative experiences that can lead to low job satisfaction and, ultimately, departure (Xu 2008, pp. 609). One quantitative way to consider potential concerns with climate and culture is to look at the timing of departures of women and URM faculty. Although it is natural to expect cyclical departures of faculty in the pre-tenure years, it can be informative to identify any differences in the cycle among certain subgroups.

Institutional Level

Fig. 5 shows the cycle of departures at the university level. This chart shows that approximately 24% of departed faculty (147 faculty members) left prior to their tenure year (assuming a 6-year standard tenure clock). Another point of departure for faculty, indicated by this chart, is at the 2 or 3 year review point. In general, faculty are usually reviewed in their 2nd or 3rd year, which explains the increased number of departures at those points in time. There is also a small increase in numbers of departures just before tenure in the 6/7th year. Few faculty departed the institution in their first year.

Figure 5. Faculty Departures By Length of Service.



By Sub Group

Given the institutional cycle, looking at the same cycle of departures for women and URM faculty can identify differences that may be worth further analysis. Figure 8 shows the cycle of departures for woman faculty at the university level. Although women faculty appear to have the same increase in departures at the 2 or 3-year review point, there is not the same increase around the tenure year 6 or 7.

Figure 8. Women Faculty Departures By Length of Service.

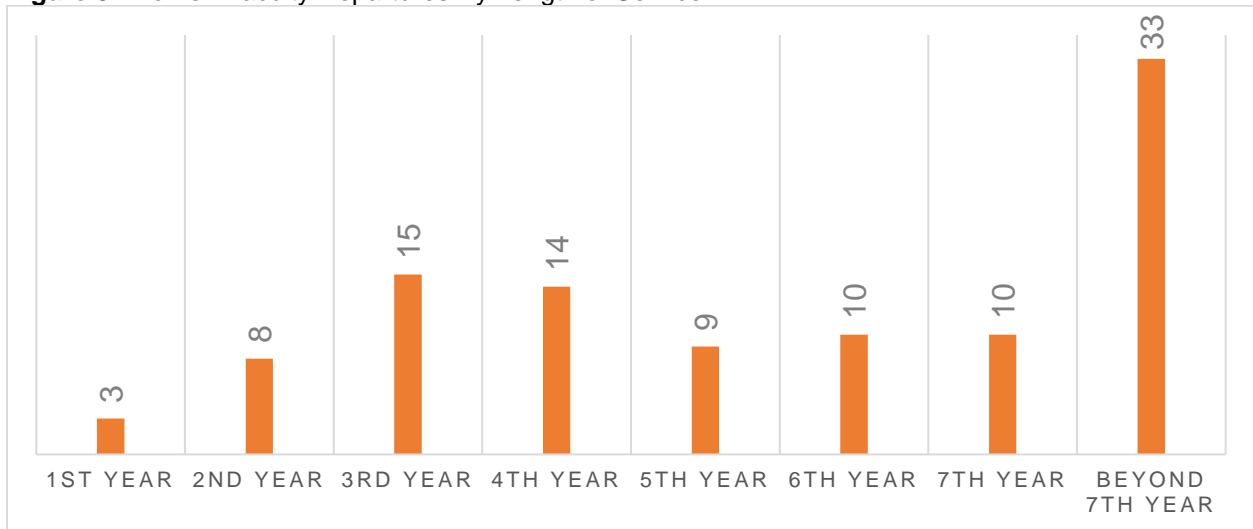
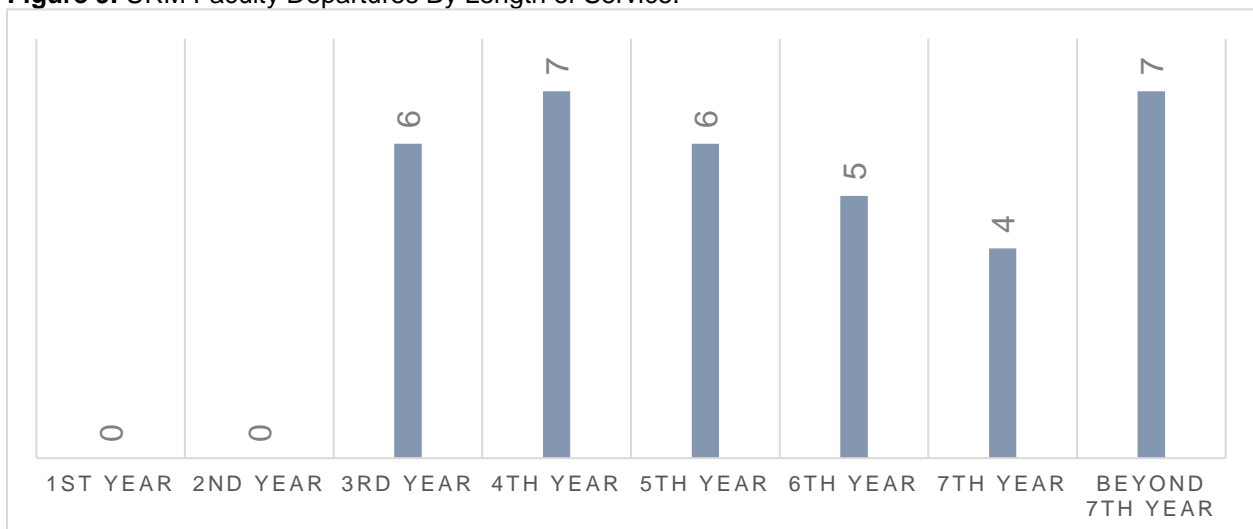


Figure 9 shows the cycle of departures for URM faculty at the university level. Again, URM faculty appear to have the same increase in departures at the 3 year review point, but do not have an increase, and in fact see a decline in departures around the tenure year. In addition, none of the URM faculty in this study departed in the first or second year of service.

Figure 9. URM Faculty Departures By Length of Service.



Although the number of faculty is much smaller (especially in the URM faculty population), looking at the same cycles within each of the colleges could help identify areas of potential investigation or concern.

Reasons for Departure

Qualitatively identifying reasons for departure is a challenge. What a faculty member may share as their reason for departure is often multifaceted and more complex than a simple checkbox. The data we currently collect indicates reasons such as “better job”, “leaving area” or “personal”. Each of those reasons elicit a number of additional questions: is a job better because of cultural or climate issue at Virginia Tech? Are personal reasons related to institutional and professional support for advancement?

The Collaborative on Academic Careers in Higher Education (COACHE) has been conducting a national study of institutions to better identify the reasons faculty leave, and Virginia Tech has joined that study and will benefit from those results after 3 years of data collection. That data will complement the information we already have to inform institutional policy and practice.

Conclusions

Based on the faculty data in this sample, there are notable differences in the departure rate for Black (63%), Hispanic/Latino (52%), and faculty who identify with two or more racial or ethnic categories (67%) as compared to White (39%), Asian (43%), and the institutional average (42%). In addition, there is an observable difference in percentage of male faculty hired (60%) when compared to female faculty hired (40%), with a slightly higher departure rate for women faculty (43%) than male faculty (41%).

The disparities in departure rates continue to be a challenge for the institution, and with the focus on increasing the hiring of URM faculty in recent years, the results of institutional efforts will become more evident in this study in the coming years. Especially compelling

is the data showing that URM faculty in this study did not depart in the first 2 years of service. One potential reason for this may be a well-intentioned and well-resourced support mechanism for new URM faculty that declines or reduces noticeably after the first 2 years.

It is important to note that, through *AdvanceVT*, Virginia Tech has worked to address concerns about the advancement of women in academia for over a decade. That work resulted in transformational change in the culture and climate for women at the institution, and has created several programs and policies that benefit all faculty. But that work is not done, and as we seek to identify the reasons for higher than average departures of our URM faculty, we should also watch carefully the departure rates of our female faculty. A prolonged increase in those departure rates, especially as compared to male faculty departures, should be an alarming indicator of a regression in our institutional culture and practices.

At an institutional level it is difficult to identify the underlying causes of culture and climate issues that may contribute to a negative environment for URM and female faculty. By sharing this report widely, in addition to providing additional data at the college level, these results can complement the anecdotal and other data available to deans and department heads to identify areas of concern. In addition, results from the COACHE study of faculty exit and retentions will provide more detailed information about the reasons that faculty depart. From there, the departments, colleges, and senior leadership can work together to identify policies, practices, and communication strategies that may help improve retention rates for URM and women faculty at the institution.

References

- Gumpertz, M., Durodoye, R., Griffith, E., & Wilson, A. (2017). Retention and promotion of women and underrepresented minority faculty in science and engineering at four large land grant institutions. *PLoS One*, 12(11), e0187285.
- Lewellen-Williams, C., Johnson, V. A., Deloney, L. A., Thomas, B. R., Goyol, A., & Henry-Tillman, R. (2006). The POD: A new model for mentoring underrepresented minority faculty. *Academic Medicine*, 81(3), 275-279.
- Maranto, C. L., & Griffin, A. E. (2010). The antecedents of a 'chilly climate' for women faculty in higher education. *Human Relations*, 64(2), 1-21.
- O'Meara, K. (2015). Half-way out: How requiring outside offers to raise salaries influences faculty retention and organizational commitment. *Research in Higher Education*, 56(3), 279-298.
- O'Meara, K., Lounder, A., & Campbell, C. M. (2014). To heaven or hell: Sensemaking about why faculty leave. *The Journal of Higher Education*, 85(5), 603-632.
- Parker, S., Clayton-Pedersen, A., Moreno, J., Teraguchi, D., & Smith, D. G. (2006). The revolving door for underrepresented minority faculty in higher education: An analysis from the campus diversity initiative. Retrieved from the James Irvine Foundation Website: <https://www.irvine.org/youth/linked-learning/campus-diversity-initiative>.
- Rosser, V. J., & Townsend, B. K. (2006). Determining public 2-year college faculty's intent to leave: An experimental model. *The Journal of Higher Education*, 77(1), 421-437.
- Welling, S., Luoma, K. L., Ferluga, K., Berens, M. M., & Offenbecker, S. K. (2015). *Faculty perceptions of belongingness: Examining esteem, efficacy, and connectedness to improve employee satisfaction and retention*. Poster presented at the Virginia Henderson Global Nursing Conference.
- Xu, J.X. (2008). Gender Disparity in STEM Disciplines: A Study of Faculty Attrition and Turnover Intentions. *Research in Higher Education*, 49, 607-624. DOI 10.1007/s11162-008-9097-4