

RETENTION INVESTIGATION TASK FORCE

REPORT AND STRATEGIES

JULY 2020

Executive Summary

Increasing retention rates typically lead to increased graduation rates, as most schools experience the highest attrition in a student's first year. At four-year private non-profit institutions (the group to which Bucknell University belongs), the average first-year retention rate from Fall 2017 to 2018 was 80%. Bucknell traditionally hovers between an 88-92% retention rate. Although comparatively strong, the University recognizes the importance of focusing on the 8-12% of students Bucknell does not retain. Understanding the nuances of who exactly those students are, and any disproportionate representation of particular demographics, is essential and part of the University's due diligence.

In November 2019, Provost Elisabeth Mermann-Jozwiak and Vice President for Strategic Initiatives Robert Midkiff formed the Retention Investigation Task Force charged with creating a retention report.

This resulting report is organized into five sections:

1. Overview of best practices in retention in higher education, as well as the state of the University and its student body
2. Discussion of the robust examination of the quantitative and qualitative data generated by internal and external surveys, in addition to all periodically analyzed data by the Office of Institutional Research & Planning (See Appendix 1 for a list of the data sources)
3. Retention strategies, goals and objectives, including actionable steps, responsible parties, measures of success, and timelines
4. Broad recommendations
5. Appendix, including descriptions of the data and analysis, and any supporting documentation

In order to embrace the mission and goals of the retention strategies, the following short-term recommendations are provided in order to move forward and take action in retaining students.

1. The committee recommends the Action Steps identified with Fall 2020 and highlighted in yellow be implemented in time for the Fall 2020 semester.

2. The comprehensive retention plan proposed in Section 3 be shared and shaped by input and feedback by all stakeholders (i.e., faculty, staff, students, administrators, and board of trustees) during the summer, and adopted and implemented by January 2021.
3. Given the recent experiences with COVID-19, this retention plan should intersect with the work on student well-being and mental health already being done by existing fall planning teams formed this past year, including Community Engagement, Student Experience, Athletics & Recreation, Finance & Budget, as well as the Academic Response Team.
4. In response to the current civil and political unrest across the country in relation to anti-Black violence, we strongly recommend that the University consider implementing action plans put forth by Black faculty and staff, the Black Student Union, Diversity, Equity & Inclusion in Student Affairs, the Faculty & Staff of Color Group, and multiple alumni groups. These plans intersect directly with campus climate, sense of belonging, and retention for multiple at-risk groups identified in the research presented in this report.

A successful retention plan requires long-term efforts in order to determine efforts that are successful and building on them over time to improve and retain students in the long term. The Task Force recommends several long-term efforts, as well.

Introduction

Two measures are especially important in higher education: graduation rates and retention rates. Graduation rates measure the percent of matriculating students who graduate in four or six years. Retention refers to the rate of matriculated students who remain at a school into their second year. In other words, the percent of students who return as sophomores.

Increasing retention rates typically lead to increased graduation rates, as most schools experience the highest attrition in a student's first year. According to the 2019 National Clearinghouse Research Center Report, "of the 3.5 million students who enrolled in college for the first time in Fall 2017, 74% persisted as of Fall 2018." This means that of the students who started college, 74% continued their studies — but not necessarily the institution at which they started. And 26% were no longer in college at all. At four-year private non-profit institutions (the group to which Bucknell University belongs), the average retention rate from Fall 2017 to 2018 was 80%. Bucknell traditionally hovers between an 88-92% retention rate.

Within this group, Bucknell measures very well. However, the University recognizes the importance of focusing on the 8-12% of students Bucknell does not retain. Understanding the nuances of who exactly those students are, and any disproportionate representation of particular demographics, is essential and part of the University's due diligence. [Bucknell does an excellent job preparing students for the workforce and their lives](#), and we understand that the University has a responsibility to do well by all students who matriculate at Bucknell. The student experience is also critical as we consider its effect on student wellbeing, as well as the University's reputation, rankings, and financial health.

Accordingly, the University has set a goal of improving its retention rate to 95%. To help achieve this, in November 2019 Provost Elisabeth Mermann-Jozwiak and Vice President for Strategic Initiatives Robert Midkiff formed the Retention Investigation Task Force. They set the following charge:

- Investigate and examine why students leave Bucknell in the hopes of finding trends and opportunities.
 - Explore the quantitative and qualitative data generated from the Exit Interviews since 2014 to look for trends or major issues.
 - Examine Predictive Analytics model, including Student Strengths Inventory scores, for useful ways to use this information.
- Investigate and examine why students who were considering leaving decide to stay.
 - Investigate the reasons students chose to stay despite requesting College Transfer Reports.

- Provide initial recommendations for actions and strategies to address identified trends that have the potential to increase retention.

Retention Investigation Task Force Members

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It is an understatement to say that between November 2019 and July 2020, much has happened in the world — and specifically in the United States — which may permanently affect higher education and will most certainly affect retention of students for the next several years. While we were prepared to investigate the historical trends in retention at Bucknell with the backdrop of changes in September 2019 to the [Code of Ethics by the National Association for College Admission Counseling](#), we did not anticipate the global pandemic of COVID-19 and its associated economic fallout.

Furthermore, while we were prepared to investigate retention according to a variety of demographic dimensions, the cruel reality of deep-seated anti-Black racism that plagues, both covertly and overtly, the United States, Pennsylvania, Lewisburg, and unfortunately Bucknell's predominantly white campus, made us even more determined to investigate, discuss, and recommend the effects of such racism on retention and experience at the University.

In light of this social and economic context, we felt compelled to go beyond our initial charge to make recommendations based on Bucknell's historical retention data, and consider a future that is turbulent and chaotic.

This report is organized into five sections:

1. Overview of best practices in retention in higher education, as well as the state of the University and its student body
2. Discussion of the robust examination of the quantitative and qualitative data generated by internal and external surveys, in addition to all periodically analyzed data by the Office of Institutional Research & Planning (See Appendix 1 for a list of the data sources)
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5. Appendix, including descriptions of the data and analysis, and any supporting documentation

Guiding Principles

The following guiding principles related to retention that shaped our investigation and form the backbone of this report.

- ❖ There is no single action, investment, or policy that will unilaterally improve retention rates. This report and the strategies within identify and prioritize a range of actions in response to the specific needs of various Bucknell populations.
- ❖ This report and the strategies within define retention primarily as the percentage of first-time, full-time students who return to the University in the fall of their second year, and secondarily as the percentage of students who return in each succeeding year through year six (excluding transfers). Four- and six-year graduation rates reflect the percentage of first-time, full-time students who ultimately graduate (in either four or six years).
- ❖ This report and the strategies within should be shared and shaped further by input from all stakeholders.
- ❖ The University's retention plan should be simple, feasible, and measurable.

Section 1. Overview of Institutional Priorities and Best Practices

To find opportunities for improving retention at Bucknell, we took into account the state of the University and aimed to understand its students. We also identified best practices for engaging student populations considered at risk for attrition.

State of the University

Over two academic years (2017-18 and 2018-19), Bucknell University engaged in a strategic planning process that resulted in [The Plan for Bucknell 2025](#). This plan lays out four interconnected strategic commitments:

1. Cultivating academic excellence across the institution
2. Building and sustaining a diverse community in which all students, faculty, and staff experience a sense of belonging supported by a foundation of inclusion, equity, and access
3. Providing an integrated and exemplary residential student experience
4. Creating a sustainable future through the responsible stewardship of the University's financial, natural, human, and other resources

After engaging in seven months' study of feedback shared by students who chose to remain at Bucknell and by students who left the University, it became clear that, in relation to retention, the second Strategic Commitment is most salient:

BUCKNELL UNIVERSITY IS COMMITTED TO building and sustaining a diverse community in which all students, faculty and staff experience **a sense of belonging** supported by a foundation of inclusion, equity, and access. [emphasis added]

Despite current best efforts, those students who chose to leave the University indicated that they did not feel they "fit in" at Bucknell, or that they belonged.

Understanding "Gen Z"

To retain their students, residential colleges and universities like Bucknell must engage students aged 18-22 — born between 1995-2012 and commonly called "Gen Z" — who are from increasingly diverse backgrounds and experiences.

For Gen Z, the main purpose of college is to prepare them for a career. This generation is observed to have a close relationship with technology and uses it readily and daily. Gen Z is heavily influenced by the traumatic events of September 11, 2001, and the economic uncertainties subsequent to the financial recession of 2008. Their response to these events is evidenced by their worry about finances, their focus on the value of their education, and their concern for the support services — rather than amenities — available to them. This generation expects convenient access to resources, and if they can receive support via an app on their phone, even better. A supportive environment is key for Gen Z. They want opportunities to engage with their peers and faculty members.

An important consideration for University administration is that “today’s students come to campus less seasoned than previous generations, which raises the stakes for personal development as part of the college experience — more guidance on issues like study habits, wellness, and free speech.” ([Selingo, 2018](#))

Identifying “At-risk” Student Populations

Retention efforts nationwide often focus on students who report facing challenges to being able to graduate on time, and thus are considered “at risk.” These student populations are typically retained and/or graduate at significantly lower levels than the national average. In his book *The Privileged Poor: How Elite Colleges are Failing Disadvantaged Students* (2019), author Anthony Jack defines these students as “doubly disadvantaged.” He writes that although academically gifted, these students usually come to college less exposed to its norms and unspoken expectations, making the transition especially difficult. They view asking for help as a sign of weakness and have a difficult time finding community or sense of belonging.

Using [national retention and graduation data](#) does not necessarily help to identify at-risk populations at Bucknell, due to the very different socio-cultural and historical norms from many other institutions of higher education in the U.S. Challenges related to a sense of belonging, sense of connectedness, fitting in, the social scene, Greek life and/or party scene are all ways that campus climate has been shown to negatively affect some students’ experience at Bucknell. From [previous campus climate research](#), there is strong evidence to support that the ways we engage (and graduate) students socially works well for a subset of the population (wealthy, white, fraternity-associated men). However, these same systems of bonding and belonging alienate students who identify as women, students of color, male Pell-eligible students, and high achieving female students in particular. Ironically, social capital among this power group is achieved through performance of apathy or disengagement which, in turn, further alienates the aforementioned groups.

The campus climate issue then turns to one of ethics and sustainability. If the University supports a more equitable power structure on campus, as outlined in

the strategic plan, it could allow all or more students to feel a sense of belonging, but could potentially result in higher attrition for the power group.

We must be specific, measured, and contractual in identifying not only how we will address issues of climate for marginalized populations, but how we will undo the structures that currently exist. This will undoubtedly mean removing some of the unchallenged privilege that many groups have enjoyed for decades and remain committed through potential backlash, threats of pulling funds, and ostracization. Bucknell, like many universities across the country, is at a crossroads.

Best Practices in Higher Education

Much research has been done on addressing challenges for specific at-risk student populations, some of which has brought forward broad and overarching strategies that can be applied to any population that is currently graduating and being retained at disproportionately lower levels. We consider these among best practices for retaining all at-risk student populations.

The Center for First-generation Student Success Report "[First-generation Student Success: A Landscape Analysis of Programs and Services at Four-year Institutions](#)" explores how four-year institutions are currently trying to support first-generation students, how successful these efforts are, and how students perceive these efforts. (Whitley, Benson & Wesaw, 2018) The strategies it outlines in the report include:

Best Practice: Recognize Assets vs. Deficits

The report recommends that institutions develop programming around supporting students' assets rather than perceiving and addressing deficits. For example, institutions that found ways to help students understand and recognize the concept of imposter syndrome empowered them to normalize this feeling.

Best Practice: "Student-ready" Mindset

Another broadly applicable recommendation is changing the institutional mindset from "college-ready" to "student-ready." Instead of trying to change the students, this approach emphasizes "changing policies, processes, and practices to improve services and reduce barriers to success" (p. 4).

Best Practice: Cohort- and Network-based Programs

A third recommendation is to implement both cohort- and network-based programs. At Bucknell we have existing and successful cohort-based programs, such as [T.E.A.M.](#), [POSSE](#), and [ESA](#). Network-based programs would connect

students with interconnected resources readily available, and engage all at-risk student populations.

Best Practice: First-year Programming

A successful first year requires an intentional student experience that is created, implemented, and followed-through by a team of individuals created as a support and resource network for each individual student. The AACU article "[Fostering Student Learning and Success through First-Year Programs](#)" suggests the following should be at the core of a successful first-year experience:

- establishing first-year experience initiatives
- emphasizing that a successful experience is a campus-wide commitment
- providing resources to the educators doing the work
- realizing the institutional potential

Best Practice: Mentoring

Research suggests that students who engage in a mentoring relationship have a higher sense of belonging and a feeling of connectedness to their college or university. [The Mentor Collective](#) shared the following statistics:

- Students feel significantly more integrated and connected to their college or university at the end of their first semester compared with non-mentored students. ([Bettinger, E.P., & Baker, R., 2011](#))
- "Students with a mentor are 14% more likely to stay in college and 13% more likely to graduate, compared with their non-mentored peers." ([Yomtov, D., et al., 2015](#))
- "Even in programs that address all the factors listed above ... the potential lack of social interaction in the online courses can contribute to the possible failure." ([Homitz and Berge, 2008](#))

Mentoring is important for students as it helps with relationship building and provides access to skill building and connections across campus. Mentors provide support and resources for students and help individuals succeed through their college experience.

Having identified the general characteristics of GenZ, perceived "at risk" student populations nationally, and recommended best practices in higher education, we now move to an analysis of the specific situation at Bucknell.

Section 2. Overview of Analysis

Initial Findings

Based on the research completed by the Office of Institutional Research & Planning and members of the Retention Investigation Task Force (Appendix 1), we identified specific populations that would most benefit from targeted programming. By analyzing students' academic and social experiences — including relevant surveys and forms, housing, campus climate and differences by race, gender and home region — we sought to understand the motivations and factors behind students' retention decisions. However, we caution that our quantitative and qualitative analyses are limited by the current availability of data, which were not always sufficient to help address our questions.

University Populations

We recommend the University focus its intervention programs on the following groups:

- First-generation students, especially male (Appendix 2, Appendix 3)
- Male Pell recipients (Appendix 2)
- Black students (Appendix 2)
- Hispanic students (Appendix 2)
- Students with low first-semester GPAs (Appendix 2)
- Male athletes (Appendix 3)
- High achieving female students (Appendix 4)

College-specific Populations

College of Arts & Sciences

The retention rate for the College of Arts & Sciences is 92%. The relatively small attrition numbers make it difficult to clearly identify any at-risk groups. We recommend the college focus its intervention programs on the following groups: (Appendix 5)

- Male Pell recipients

- First-generation male students
- Female students with GPA > 3.5, especially female students receiving scholarships other than Presidential and Dean
- Male students with GPAs > 3.5 who are not connected¹
- Male student athletes; and students with no majors (not a clear trend)

College of Engineering

The retention rate for the College of Engineering is 95%. As a result, the attrition numbers are very small (six students per cohort), which makes it difficult to clearly identify any at-risk groups. We recommend that the college focus its intervention programs on the following groups: (Appendix 6)

- Male students, especially Pell recipients
- First-generation male students
- Students with low first-semester or first-year GPAs

Freeman College of Management

The retention rate for the Freeman College of Management is 96%. As a result, the attrition numbers are very small (six students per cohort), which makes it difficult to clearly identify any at-risk groups. We recommend that the college focus its intervention programs on the following groups (Appendix 7):

- Male Pell recipients (no clear trend)
- First-generation male students (no clear trend)
- Male students with GPAs below 3.5

Methods

In order to research more deeply the factors that most affect a student's decision to leave the University, the members of the Retention Task Force were divided into two teams. One team, "Blue," focused on analyzing pertinent institutional data. The other team, "Orange," focused on the Student Affairs support and mentorship programs that are available to our students. In this section, we will begin by describing the salient research findings and then describe an inventory of existing and future resources.

¹ The category of "connectedness" includes students who were connected in any of the following groups before they started their first semester at Bucknell: Athletes, Presidential Fellows, Bauer Scholars, Legacy, STEM Scholar, International students, Fremont Scholars, ROTC, Residential College, Arts First, ESA program, BuckWild, Blink, and POSSE.

Salient Findings from Research/Analysis (Blue Team)

In researching and analyzing data, we reviewed three documents:

1. The 2018 and 2019 First-year Transition Surveys, usually administered after the first four weeks of classes in the first semester at Bucknell
2. The Withdrawal Form, which students fill out online to separate from Bucknell, and is then routed through various offices
3. Institutional Research data for class cohorts from 2014 to 2018

Based upon these data, we performed both textual and statistical analysis to better understand the motivations and factors behind students' retention decisions.

Related to Academic Experience

Withdrawal Form Analysis

We used several computational platforms ([Voyant](#), [Antconc](#) and [LIWC](#)) to analyze comments from 266 student Withdrawal Forms. The results show certain computed psychological dimensions of student text as percentages of the whole corpus (i.e. words in one category/total word count).

We made the following observations:

- Students' academic experiences, in particular their professors and classes, were identified as the most rewarding experiences at Bucknell.
- Campus life, the social scene, and other students were among the most disappointing facets of students' experiences.
- Students whose language displayed the most dissatisfaction or "anger" cited the social scene and Greek life as the most disappointing parts of their life at Bucknell. Of these students, most were white females.
- Those students whose language displayed the most dimensions of "happiness" with Bucknell, but who were still withdrawing, were 70% white. This group was 57% female and 43% male. The language of this group displayed the lowest value for the dimension of "affiliation," or having a sense of belonging.
- Among those students who identified as persons of color on the Withdrawal Form and whose language scored above 90% for positive emotion, eight were Asian and one was Black. Among this same cohort, those whose language scored the lowest (below 25%) for positive emotion, 38% were female, 62% male. 52% were Hispanic/Latino. The most frequent words

occurring in the category “most disappointing” were “Greek life” and “social life.”

- Among those students who identified as persons of color on the Withdrawal Form, those whose language displayed the smallest amount of “clout” or privilege (except for two Hispanic/Latino students) cited Greek Life as the most disappointing part of their experience at Bucknell.
- Except for one student, the language of all the students who identified as persons of color on the Withdrawal Form displayed scores of 13% or below on the “affiliation” dimension. Again, the most frequent term in the language of these students was “Greek life” and “the social scene.”

Conclusion: Disappointment with the social scene and lacking a sense of belonging are factors that may influence a student’s decision to withdraw from Bucknell.

First-year Transition Survey Analysis

In analyzing the 2018-19 First-year Transition Survey (Appendix 8), the **emotions** shown by students who had already made up their minds to transfer (see above) were also detectable in students’ comments during their first semester at Bucknell. However, employing the same methodology with data from the First-year Transition Survey as with the Withdrawal Form analysis above, the students’ language in their responses to the prompt “The semester is not going well because ...” shows clearly that academic concerns are causing students to feel negative about their initial weeks at Bucknell.

- Specifically, 84% of the total number of female students used language that scored less than a 26% positive tone. For both white and students of color who are female, the most frequent terms used were “hard,” “classes,” and “homework.”
- 82% of male students used language that scored less than 26% for a positive tone. For both white and students of color who identify as male, once again the most frequent terms used were “hard,” “classes,” “work,” and “difficult time.”

The responses showed no variation across all three colleges.

Conclusion: Academic concerns may cause some students to feel negative about their transition to Bucknell.

Related to Social Experiences

Housing

Using Institutional Research data for cohorts 2014–18, the findings show 2.08% of 4,426 students changed residence halls. The data also show a substantial variation across time: 2.19% in 2014, 0.87% in 2015, 3.63% in 2016, 1.84% in 2017, and 2.05% in 2018. There were no significant findings of difference among the three colleges: 2.08% in College of Arts & Sciences (2,975 students), 2.00% in College of Engineering (898 students), and 2.17% in the Freeman College of Management (553 students).

Among students who did not change housing, the retention rate is 94.8%; and for students who changed housing, the retention rate is down to 83.7%. The difference of 11.1% implies that a student who changed housing is associated with a lower retention rate. (Appendix 9)

The data show a relationship between a change of housing on the retention rate using two discrete choice models. The two quantitative models (Logit and Probit) show consistent results that students who changed their housing assignments have a 6.7-6.9% higher probability of leaving Bucknell than those who did not change their rooms. (Appendix 10)

Conclusion: The quantitative analysis shows that students' changes of housing assignment correlated with a substantially higher probability of leaving Bucknell over the 2014-2018 period.

Differences by Race/Gender/Home Region

Initial quantitative and qualitative analysis identified "sense of connectedness"² as a potential factor that plays a role in whether students return to Bucknell after their first year. In this analysis, we used Institutional Research data from 2014–18 to explore whether connectedness is an important factor in predicting retention, and if so, whether other factors such as gender, Pell grant status, race/ethnicity, and home region play a role in this relationship.

Given the high number of students who are retained every year, it is difficult to predict factors that influence retention because the data are overly influenced by students who stay at Bucknell. To account for this problem, we used a case-control

² The category of "connectedness" includes students who were connected in any of the following groups before they started their first semester at Bucknell: Athletes, Presidential Fellows, Bauer Scholars, Legacy, STEM Scholar, International students, Fremont Scholars, ROTC, Residential College, Arts First, ESA program, BuckWild, Blink, and POSSE.

study design, where we regarded students that were not retained as “cases,” and matched them to “controls” based on certain criteria. In this analysis, we explored both whether having *any* “connections” was associated with a higher chance of being retained, as well as whether the number of “connections” was important.

For both of these analyses, we controlled for student cohort, gender, whether students were recipients of Pell grants, race/ethnicity, and students’ home region. (Appendix 11) Results suggest that connected students have 39% higher odds of being retained as compared to students without any connections, and that an additional “connection” increases the odds of retention by 20%.

Conclusion: Connectedness is an important factor in predicting student retention, and the number of connections that students have seems important (increasing number of connections increases the odds of retention) — but simply being connected at all also helps with retention. (Appendix 12)

Salient Findings from Investigation of Current Systems (Orange Team)

As mentioned earlier, the conclusions presented above are limited by the availability of relevant data, which were not always sufficient to address questions related to the factors affecting a student’s retention decision. For example, we were unable to parse out why change of housing is associated with reduced probability of retention, the role of Greek life and its interaction with other forms of student connections, and issues around food and dining.

We therefore sought to collect additional data from students on the factors that shaped their decision to leave or stay at Bucknell. Our first objective was to reach out to current Bucknell students who at some point indicated their desire to leave Bucknell, but eventually decided to stay.

Related to Remaining at Bucknell

In order to gather individual student perspectives on retention at Bucknell, an effort was initiated to conduct one-on-one interviews with students that indicated interest in withdrawing but then decided to stay at Bucknell after their first year. The following steps were completed:

- developed a process and timeline for conducting interviews

- identified possible interviewers (administration such as deans, student group mentors, student life leaders, etc.)
- wrote an email asking interviewers to participate in the effort and overall goal/process
- wrote an email invitation to all students that indicated interest in withdrawing, but then were retained
- created an interview facilitation guide for interviewers
- created a list of interview questions
- created a post-interview survey for students to share additional information

The original plan for the one-on-one interview process was slated to begin after spring break 2020. However, due to the timing of COVID-19, the process was halted as students completed the remaining spring 2020 semester remotely. Since the primary goal of the interviews was to collect one-on-one information through face-to-face experiences, the switch to remote learning prevented the ability to conduct interviews.

Therefore, future steps include developing a new timeline that would correspond with when students are on campus and then reinitiating the interview process in order to gather information on retention.

Conclusion: A plan for investigating students' reasons for staying are important and worthwhile, and the process developed should be employed when face-to-face interviews can be safely conducted.

Mentoring at Bucknell

Research indicates that mentoring can help to support students in their transition to college and provide a connection to a university. We defined a mentoring program to be one that offers peer-to-peer, administrator-to-student and faculty-to-student leadership, support and resources for undergraduate students. There are many such programs in place, but they are scattered across the University and are not centrally catalogued.

We have identified University [peer mentoring programs](#) with a support system connecting students to the Bucknell community and beyond. We also reviewed the programs to determine which dimensions of mentoring the programs addressed, namely, academics, social/emotional, career readiness, personalized matching, deep relationships, transition, and leadership development.

An assessment of the existing mentoring programs shows that while many incoming and continuing students are supported, some populations and

dimensions are missing — most striking is a majority of incoming students in the College of Arts & Sciences. Also, the programs are housed in a variety of offices across the University, which may result in duplicated efforts and resources.

Conclusion: Opportunities for mentoring exist at Bucknell, but the efforts may not be equitably resourced or available.

Section 3. Retention Strategies

The overall retention goal for Bucknell is 95%. The retention goals for the three colleges are 94% for the College of Arts & Sciences, 96% for the Freeman College of Management, and 95-96% for the College of Engineering. In light of these goals and Bucknell’s historic retention rates (Appendix 14), and based on the analyses presented above, the Task Force has formulated four goals to shape a retention plan for Bucknell. Please note that due to limitations of the data analysis and our inability to collect new data on factors behind decisions to leave Bucknell, we additionally factored in anecdotal information from colleagues in Student Affairs and the Deans Offices to develop strategies to improve retention at Bucknell.

1. Enhance the transition to college experience for all first-year students
2. Set systems that will allow us to monitor and support student retention
3. Create University and college structures to support and manage retention activities
4. Provide timely and transparent communication

To achieve these goals, we identify strategies and responsible parties at the University, target populations, measures for success, timelines, and final goals.

Note: Action Steps highlighted in yellow have a recommended Fall 2020 implementation date.

Goal 1: Enhance first-year students’ transition to college				
Strategy 1.1: Provide a minimum of one peer mentor for each incoming first-year student that helps to connect them with someone with desired shared identities (e.g., major, first-gen, race, gender) in the summer prior to matriculation and continues through their first year				
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and/or Person</i>	<i>Specific Target Population</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Continue the Freeman Fellows program	Freeman College Associate Dean	Freeman College first-years	Fall 2020 / ongoing	96%

Implement Garman Guides for College of Engineering	College of Engineering Associate Dean	College of Engineering first-years	Fall 2020	95%
Engage with Mentor Collective to provide the infrastructure for the College of Arts & Sciences (Appendix 15)	College of Arts & Sciences Associate Dean	College of Arts & Sciences first-years	Fall 2020	94%
Continue promoting and encouraging students to participate in the GenFirst!@Bucknell mentoring program	Associate Provost for Diversity, Equity & Inclusion	First-generation students	Ongoing	95%
Continue to recruit for and maintain the T.E.A.M. mentoring program	Director of Multicultural Student Services	Students of Color	Ongoing	95%
Identify a coordinator for all mentoring activities on campus.	Provost	All Incoming Students	Spring 2021	

Strategy 1.2: Implement a reimagined first-year experience that begins once a student accepts the University's offer of admission.				Reasons for being part of the report: University's Strategic Plan, best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) or Description for Success</i>	<i>Timeline</i>	<i>Final goals or Description of Success</i>
Establish working group to investigate and prepare a proposal for a first-year program	Provost's Office, Student Affairs, Colleges, Admissions	Established working group; outlined structure for a first-year experience by	Fall 2021	Create an integrated first-year experience for all first-year students

		spring 2021		
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Strategy 1.3 Redesign First-year Student Orientation (Appendix 16)				Reasons for being part of the report: MyVoice, Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Incorporate data and generational trends into planning a re-imagined first year experience.	<i>Associate Dean of Students (Living, Learning, & Leadership)</i>	<i>Student Affairs works closely with Academic Affairs to redesign First-year Student Orientation</i>	<i>Fall 2021</i>	<i>A redesigned orientation ready for the Class of 2025</i>
Incorporate orientation activities designed to build cohorts of and empower students with shared experiences. (e.g., first-gen, registered with the Office of Accessibility Resources)	<i>Associate Dean for Diversity, Equity & Inclusion, Associate Dean of Students (Diversity & Inclusion), Associate Dean of Students (Living, Learning & Leadership)</i>	<i>Student Affairs works closely with Academic Affairs to redesign First-year Student Orientation</i>	<i>Fall 2021</i>	<i>A redesigned orientation ready for the Class of 2025</i>

Strategy 1.4: Improve academic advising (Appendix 17)				Reasons for being part of the report: MyVoice, Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>

	<i>and or Person</i>			
Advisor(s) connect with incoming students over the summer and during First-year Student Orientation to create early association to their college and the University	Academic Associate Deans, Advising Committee	Results from NSSE and MyVoice surveys	Fall 2020	Improved survey scores for questions related to academic advising
Create opportunities for students to learn about Beacon and how best to work with their adviser	Associate Provost for Transformative Teaching and Learning, Academic Deans, Advising Committee	Results from NSSE and 2019 MyVoice surveys	Fall 2020	Improved survey scores on questions related to academic advising
Require periodic connections between advisers and advisees throughout each semester	Academic Deans, Advising Committee	Results from NSSE and MyVoice surveys	Fall 2020	Improved survey scores on questions related to academic advising
Conduct study of first-semester course selection for incoming students; make changes based on recommendations	Academic Associate Deans, Advising Committee	Results from NSSE and MyVoice surveys	Fall 2021	Improved survey scores on questions related to academic advising
Continue intentional recruitment and selection of Foundations seminar instructors, both in and outside of the Residential Colleges	Academic Deans, Advising Committee	Results from NSSE and MyVoice surveys	Fall 2021	Improved survey scores on questions related to academic advising
Provide specialized training to first-year advisors prior to and throughout the fall semester	Academic Deans, Advising Committee, TLC	Results from NSSE and MyVoice surveys	Fall 2020	Improved survey scores on questions related to academic

				advising
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Strategy 1.5: Strengthen experience of transition to college (Appendix 18)				Reasons for being part of the report: MyVoice, Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Create a curriculum of co-curricular modules or mini-courses that students select and take each semester (topics to include mental health and well being, financial planning, career planning, equity and inclusion)	Associate Provost for Transformative Teaching and Learning, Academic Deans, Dean of Students	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Provide specific programming by the Center for Career Advancement for Pell and first-generation students	Center for Career Advancement	First-year Student Transition Survey; MyVoice	Spring 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Offer Foundation Seminars that focus on cross-cultural communication and may be attractive to non-native English speakers. (Appendix 19)	Academic Deans, Dean of Students	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice

Increase opportunities for faculty and staff to receive cross-cultural competency training	Associate Provost for DEI; Languages, Cultures & Linguistics Department, International Student Services		Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Investigate the option to offer first semester Pass/No Pass for all first-time first-year students.	Academic Deans, COI, Provost's Office	Proposal	Spring 2021	If the proposal is approved, implement the Pass/No Pass first semester in Fall 2021

Strategy 1.6: Improve student housing experiences				Reasons for being part of the report: MyVoice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for success</i>	<i>Time line</i>	<i>Final goals or description of success</i>
Revisit the 2011 Campus Climate report recommendations on housing in light of Gen Z students' interests and act on appropriate recommendations?	Associate Dean (Living, Learning, and Leadership), Director of Housing, Director of Residential Education	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Continue to make changes to improve the roommate matching process (Appendix 21)	Student Affairs	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments

Strategy 1.7: Improve Social Life and Campus Climate (Appendix 20)				Reasons for being part of the report: MyVoice, Best practice
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<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for success</i>	<i>Time line</i>	<i>Final goals or description of success</i>
Create opportunities for more interactions with upper-class students that are centered around academic or personal interests	Academic Deans, Student Affairs	First-year Student Transition Survey and MyVoice Survey; MyVoice	Fall 2020	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Provide more social events that appeal to Gen Z students	Student Affairs	First-year Student Transition Survey; MyVoice	Spring 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Provide more open houses for clubs and activities	Student Affairs	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Investigate and implement processes or technologies to help every student to find a connection to Bucknell	L&IT, Student Affairs	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice
Inform and engage high achieving first-years in highly effective practices, within the college/school and campuswide, after the fall semester, if not before; promote student	Provost's Office, Academic Deans, Student Affairs	First-year Student Transition Survey; MyVoice	Fall 2020	Improved scores and comments in the First-year Student Transition

involvement in undergraduate research, study abroad, service learning, campus farm, makerspaces, etc.				Survey and MyVoice; improved retention rate
Revisit the 2011 Campus Climate report's recommendations on Greek Life; update University policies so they are in accordance with national Greek chapters' bylaws and expectations	Associate Dean (Living, Learning, and Leadership), Director of Fraternity and Sorority Affairs	First-year Student Transition Survey; MyVoice	Fall 2021	Improved scores and comments in the First-year Student Transition Survey and MyVoice

Goal 2: Set systems that will allow us to monitor and support student retention				
Strategy 2.1: Implement Beacon (a centralized platform that allows us to bring together information from academic affairs, Student Affairs, and athletics; scale student support initiatives; and reach more students more effectively); develop a comprehensive early intervention system (our current academic interventions for first-year students typically come after midterm grades are turned in; by then it is often too late for students to recover academically).				Reasons for being part of the report: Best practice
Action Steps	Responsible Party: Office, Department, College, Division and or Person	Measure(s) for Success	Timeline	Final Goals
Provide orientation to faculty and staff regarding the use of "triggers" to alert the appropriate responder	Each college	% of faculty/staff participating	Fall 2020	100% participation
Create a Student Success Team for each student and include the names / faces / contacts for each person in the	Academic Associate Deans and Student Affairs Associate Deans		Fall 2020	

students' dashboards				
Orient students on how to use Beacon to access the resources in their dashboard (e.g., Adviser, Community Director, OAR Director)	Academic associate deans, Student Affairs		Fall 2020	100% of students accessing and using Beacon
Use SSI scores and connectedness indicators to identify "at-risk" students	Academic associate deans, athletics staff, Student Affairs	GPA and retention rates of underachieving students	Fall 2020 / ongoing	
Encourage faculty and staff to use the 'trigger' system within Beacon to alert the appropriate responder to the academically promising but disconnected students	All three colleges, Student Affairs, athletics staff	Retention of high achieving students	Fall 2020	Improved retention rate for high achieving students to 95-96%
Use Beacon's analytic capabilities annually to assess intervention activities	Academic associate deans	Collecting information in the initiatives	Annually	Annual report that list the initiatives and discusses their effect

Strategy 2.2: Capitalize on models that have worked well				Reasons for being part of the report: best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department,</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals</i>

	<i>College, Division and or Person</i>			
Offer UNIV 100 Psychology of Success in the second semester to first-year students who have a low GPA	Each college	List of specific practices	Fall 2020 / ongoing	Annual report that list new practices and discusses their effect
Review, identify, and change all signaling, midterm, and warning messaging to normalize rather than stigmatize the need for help		Identifying and changing necessary language	Fall 2020	
Connect upperclass student mentors with incoming students in learning communities to foster community, connection to the University and interest in the field of study.	Each college	Collect feedback from mentors/mentees	Summer 2020 / Fall 2020 / Spring 2021	Increase connection to the University and improve retention rate; Increase leadership responsibilities for upperclass students
Create a visible triage team (concierge service) to improve the student experience, answer questions/solve problems in the moment and build personal connections with students	Each college	Percentage of students serviced; comment card student feedback	Fall 2020 / ongoing	Decrease frustration in not knowing who to go to/where to find answers

Create and continuously update Faculty and Student Moodle pages that each provide easy access "requirement/course offering cheat sheets" to ensure faculty/students have accurate information about major/college requirements	Associate Deans; faculty in each college		Fall 2020 / ongoing	Decrease student/parent frustration with mis-information
Create mentor/mentee pairings between students and alums/parents to provide real world advice and networking	Center for Career Advancement; each college; University Advancement	% of active pairings; feedback from mentors and mentees	Spring 2021/ ongoing	Create access for students without connections (ex: first gen); Increase student knowledge of business world; increase ease of student communication with business execs to better prepare them for interviews/real world interactions

Strategy 2.3: Investigate and have a fully operational Predictive module under Moodle				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals</i>
Upgrade Moodle to version 3.8 to allow saving more than one semester of data	L&IT	Update completed	Fall 2020	Moodle 3.8 fully operational in Fall 2020

"Teach" Moodle's Predictive module to show what constitutes good student behaviors	L&IT, OIRP	Test the module with spring data	Fall 2021	Implementation of the Predictive module
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Strategy 2.4: Evaluate and recommend changes in data collected				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals</i>
Review all surveys and forms used for retention data collection	Provost, Student Retention Council (See Goal 3)	All forms and surveys updated	Fall 2021	Regularly review and update data collection
Identify data that is not currently collected and recommend changes to forms and surveys	Provost, Student Retention Council (see Goal 3)	All forms and surveys updated	Fall 2021	Regularly review and update data collection

Goal 3: Create university and college structures to support and manage retention activities

Strategy 3.1: Establish a Student Retention Council				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) or Description for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Establish a permanent Student Retention Council (Suggested membership below)	Provost	Charge created and people assigned to serve on the	Fall 2020	Council fully operational by Fall 2020

		Council		
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Strategy 3.2: Establish an advisory group Student Retention Council				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final goals or Description of Success</i>
Establish an advisory group to the Student Retention Council (Suggested membership below)	Provost	Advisory Groups established	Fall 2021	Advisory group fully operational by Fall 2020

Strategy 3.3: Increase Support Staff in Offices Supporting Retention				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final goals or Description of Success</i>
Increase the number of staff members that serve in the pillar of Diversity & Inclusion	Dean of Students	Increased staff members	Fall 2021	Increased retention

Strategy 3.4: Establish persons in charge of retention efforts				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final goals or Description of Success</i>
Each college determines the person in charge in	Academic Deans	Assign retention champion	Fall 2020	Active retention in each college

the structure that will best support its retention efforts and achieve its retention goals				
Actualize an Associate Provost for Transformational Teaching and Learning who can coordinate the retention initiatives and plan	Provost	Associate Provost is in place	Fall 2020	

Goal 4: Provide timely and transparent communication				
Strategy 4.1: Communicate retention-related changes and results				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) or Description for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Make the retention plan (not this report) public and accessible	Communications	Report is easily accessible to all	Ongoing	
Ask the community to hold Bucknell accountable for its progress	Student Affairs, Colleges		Ongoing	
Tell student stories that highlight students' positive experiences with retention efforts; distribute media releases touting significant improvements in	Communications	Intentional in our communications regarding the improvements made	Ongoing	Student stories are posted on the website and shared on social media; media releases are sent to media outlets

retention numbers (should they occur)				
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Strategy 4.2: Communicate with families about the resources we provide				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Link to student resources on the Parents & Family web page	Communications, University Advancement, Student Affairs, Colleges	The link and page is updated and families make use of the page	January 2021 / updated annually	
Include on the Family page (https://www.bucknell.edu/parents-families) a link to submit a concern or question that is routed to the appropriate office.	Communications / L&IT	Families use the system to alert us about concerns with their student	January 2021/updated annually	

Strategy 4.3: Engage the entire university in retaining Bucknell students				Reasons for being part of the report: Best practice
<i>Action Steps</i>	<i>Responsible Party: Office, Department, College, Division and or Person</i>	<i>Measure(s) for Success</i>	<i>Timeline</i>	<i>Final Goals or Description of Success</i>
Provide frequent communication and education about best	Communications, Student Affairs, Colleges	Intentional in our communications regarding the	Ongoing	

practices in student retention and the importance of those practices for student success.		improvements made		
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Section 4. Recommendations

The following section includes broad recommendations in relation to the goals and initiatives included in the report. The section is divided into two parts: immediate steps as well as long-term recommendations.

Immediate Steps to Move Forward

In order to embrace the mission and goals of the retention strategies, the following short-term recommendations are provided in order to move forward and take action in retaining students.

1. The committee recommends the Action Steps identified with Fall 2020 and highlighted in yellow be implemented in time for the Fall 2020 semester.
2. The comprehensive retention plan proposed in Section 3 be shared and shaped by input and feedback by all stakeholders (i.e., faculty, staff, students, administrators, and board of trustees) during the summer, and adopted and implemented by January 2021.
3. Given the recent experiences with COVID-19, this retention plan should intersect with the work on student well-being and mental health already being done by existing fall planning teams formed this past year, including Community Engagement, Student Experience, Athletics & Recreation, Finance & Budget, as well as the Academic Response Team.
4. In response to the current civil and political unrest across the country in relation to anti-Black violence, we strongly recommend that the University consider implementing action plans put forth by Black faculty and staff, the Black Student Union, Diversity, Equity & Inclusion in Student Affairs, the Faculty & Staff of Color Group, and multiple alumni groups. These plans intersect directly with campus climate, sense of belonging, and retention for multiple at-risk groups identified in the research presented in this report.

Long-term Recommendations

A successful retention plan requires long-term efforts in order to determine efforts that are successful and building on them over time to improve and retain students in the long term. Long-term recommendations:

1. In order to determine the effectiveness and success of the goals and initiatives proposed, evaluation, and validation of those efforts will be

needed. Therefore, the committee recommends annual reports and updates from each person responsible for an action item.

2. Committees both new and existing carry out the work presented in this plan.
 - a. A new, standing University Student Retention Committee should be established and be responsible for overseeing the data collection, annual reports, and on-going work by each office tasked with action steps. We recommend that the committee should be chaired by the Associate Provost for Transformative Teaching & Learning. Its membership should include representatives from the following constituents:
 - i. All three college Dean's Offices
 - ii. Student Affairs Division
 1. Diversity & Inclusion
 2. Living, Learning and Leadership
 3. Health, Wellness & Safety
 - iii. Office of Institutional Research and Planning
 - b. A new standing Student Retention Advisory Group should be established and be responsible for providing feedback and input, and for keeping Bucknell accountable for the retention plan. We recommend that the committee should be chaired by the Associate Provost for Transformative Teaching & Learning. Its membership should include representatives from the following constituents
 - i. All three college Dean's Offices
 - ii. Student Affairs Division
 - iii. Office of Institutional Research & Planning
 - iv. Enrollment Management
 1. Admissions
 2. Financial Aid
 - v. Faculty
 - vi. Athletics
 - vii. Student (One for each Class Year)
 - c. Existing Connections with Retention
 - i. University Committee--Committee on Campus and Student Life should be made aware of the retention plan and contribute where appropriate.
 - ii. Students of concern should be kept aware of initiatives and contribute to data collection where appropriate.
 - iii. Individuals responsible for partnerships and individual programs be included and connected with the retention efforts

(e.g., Director of Partnerships, Director of Multicultural Student Services, Director of International Student Services).

References

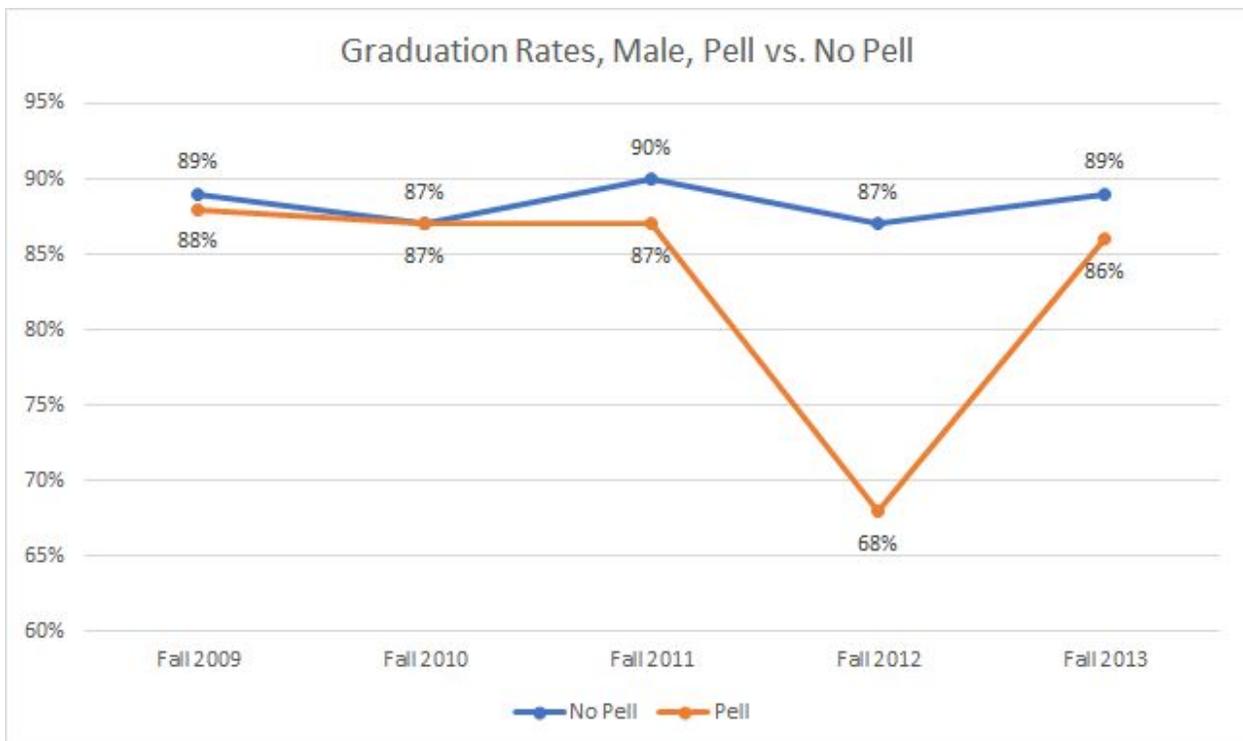
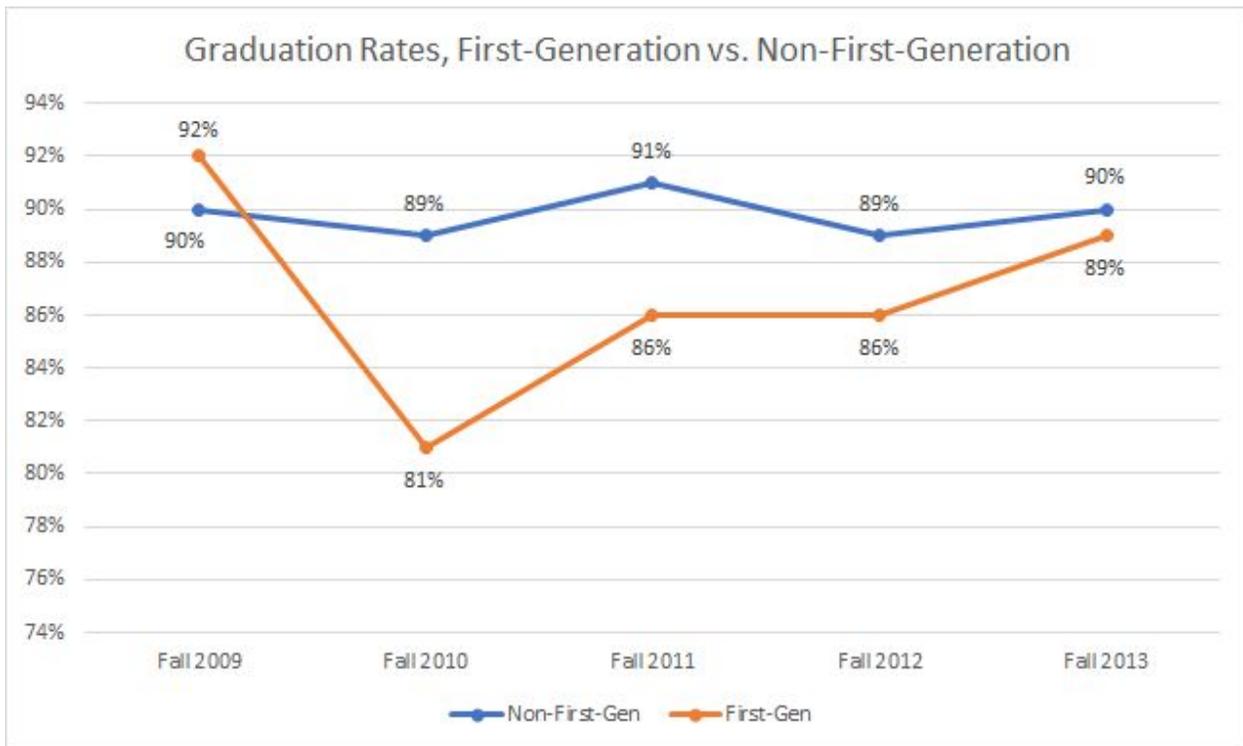
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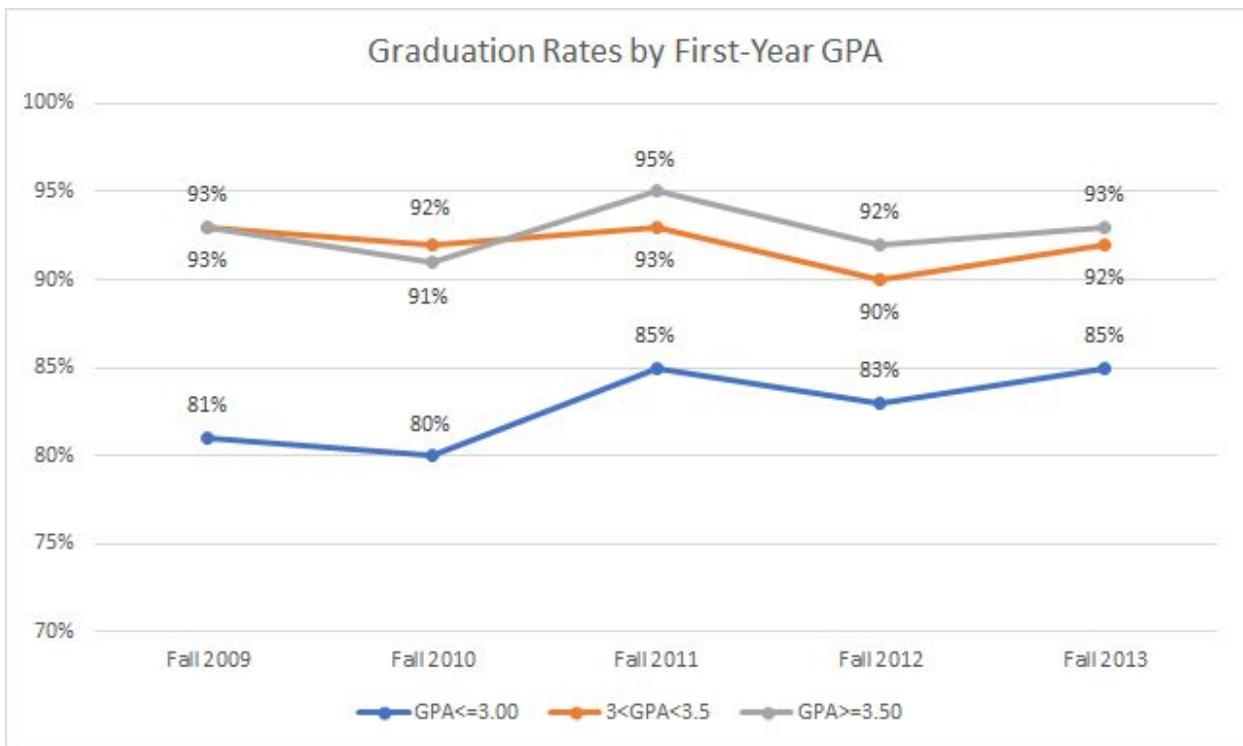
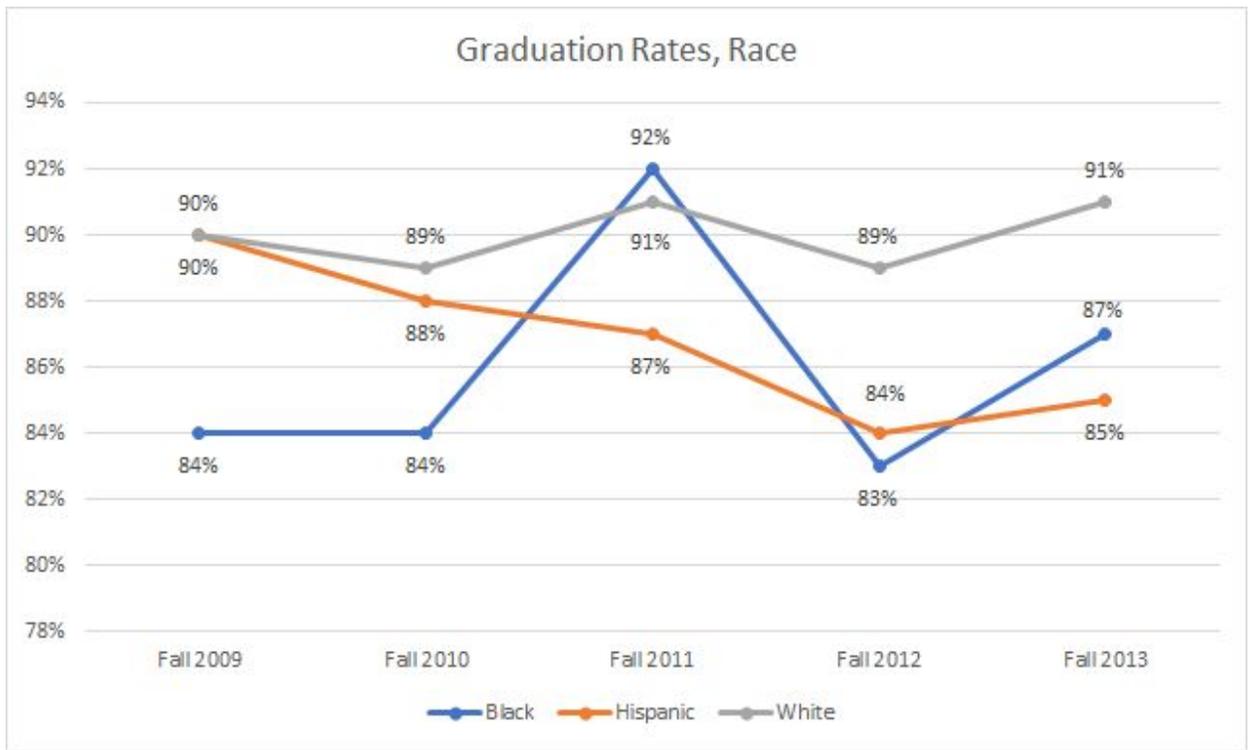
Section 5. Appendices, Tables & Charts

Appendix 1 - Resources

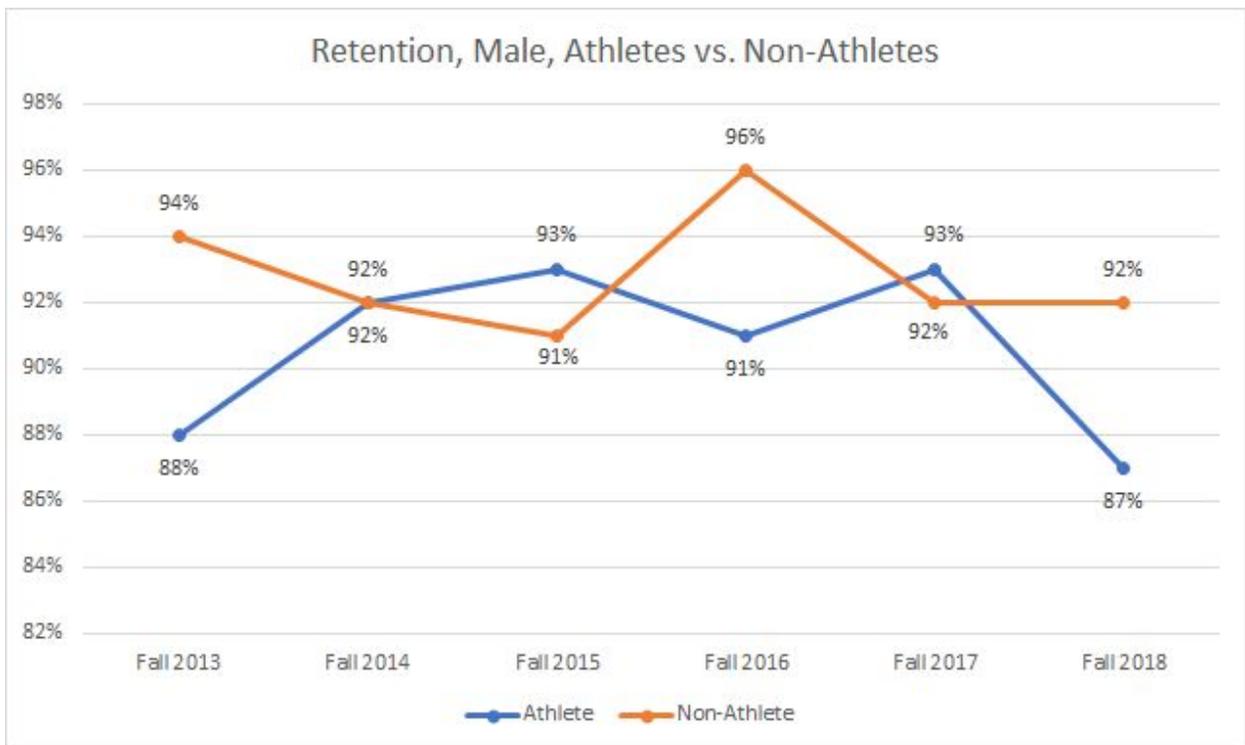
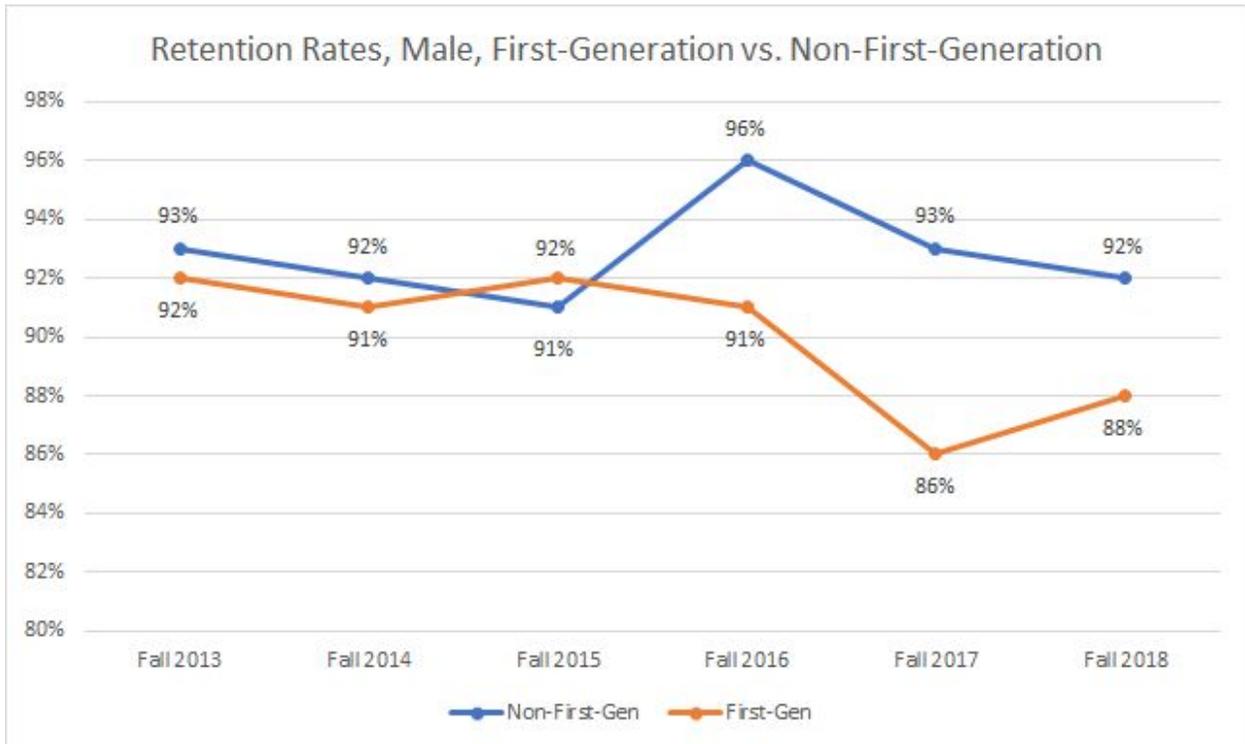
2019 and 2018 First-year Student Transition Survey Data - on file at the OIRP
2019 and 2018 First-year Transition Survey Reports - on file at the OIRP
Retention Rates by Residence Halls - on file at the OIRP
Retention Rates by Connected and Not-Connected students - on file at the OIRP
Report on First-year Programs at Peer Institutions - on file at the OIRP
[Peer and Overlap Schools Retention and Graduation Rates](#) (Bucknell login required)
2019 Retention and Graduation Report - on file at the OIRP
2019 Higher Education Data Sharing Consortium (HEDS) COVID-19 Student Survey
2019 MyVoice Report
[National Survey of Student Engagement \(NSSE\)](#) (Bucknell login required)
2019 International Students Survey Report - on file at the OIRP
Retention and Graduation Rates Dashboard - OIRP
At-Risk Students Dashboard _ OIRP
[Peer Dashboard](#) (Bucknell login required)

Appendix 2 - Graduation Rates

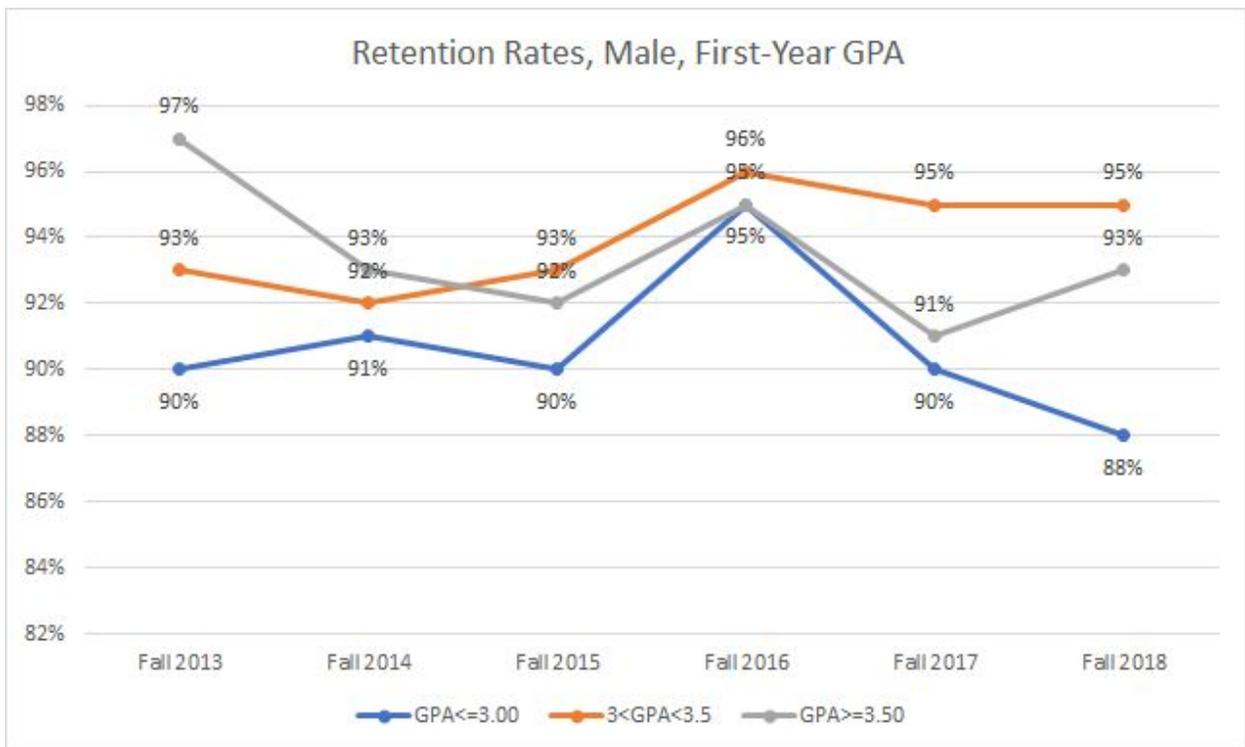
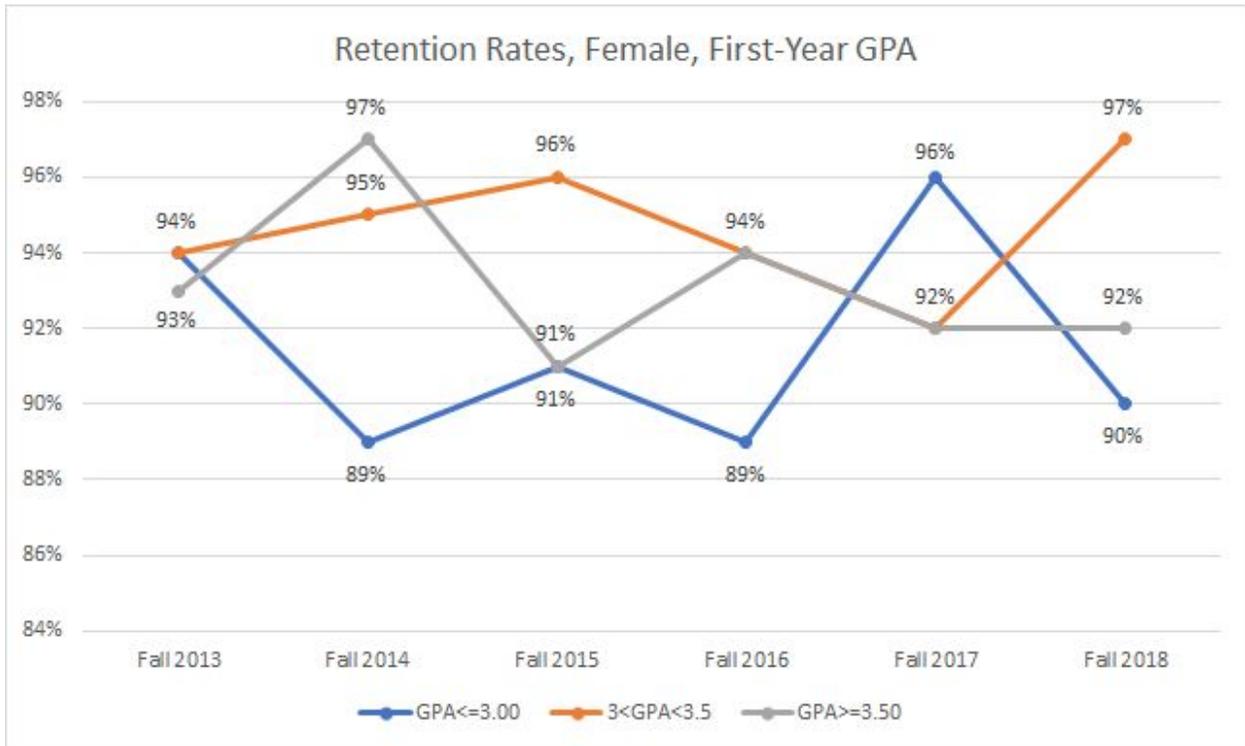




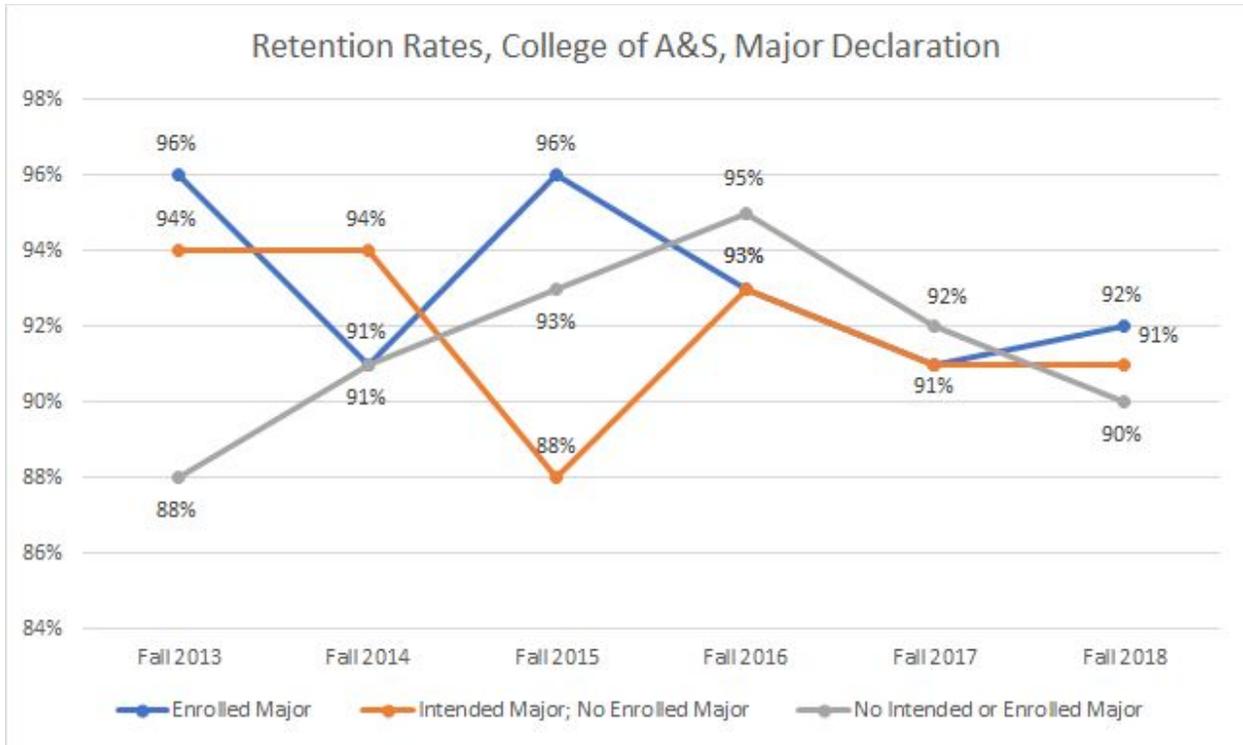
Appendix 3 - Retention

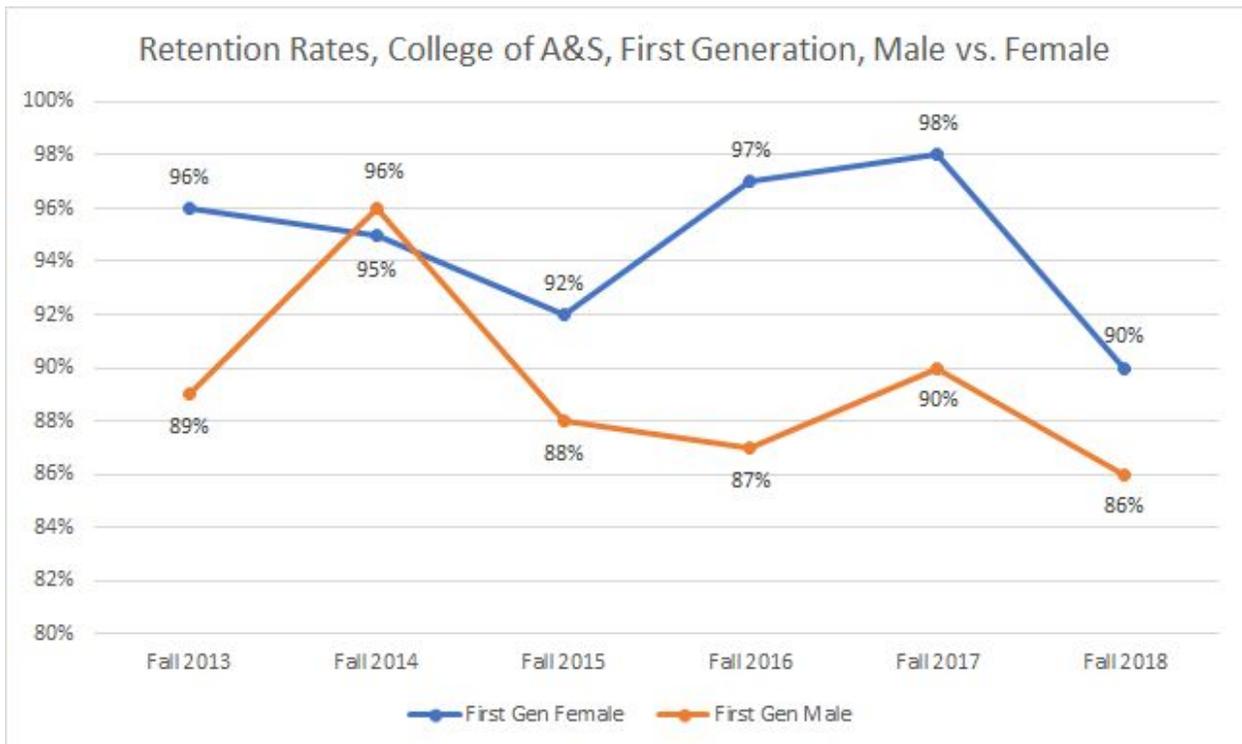
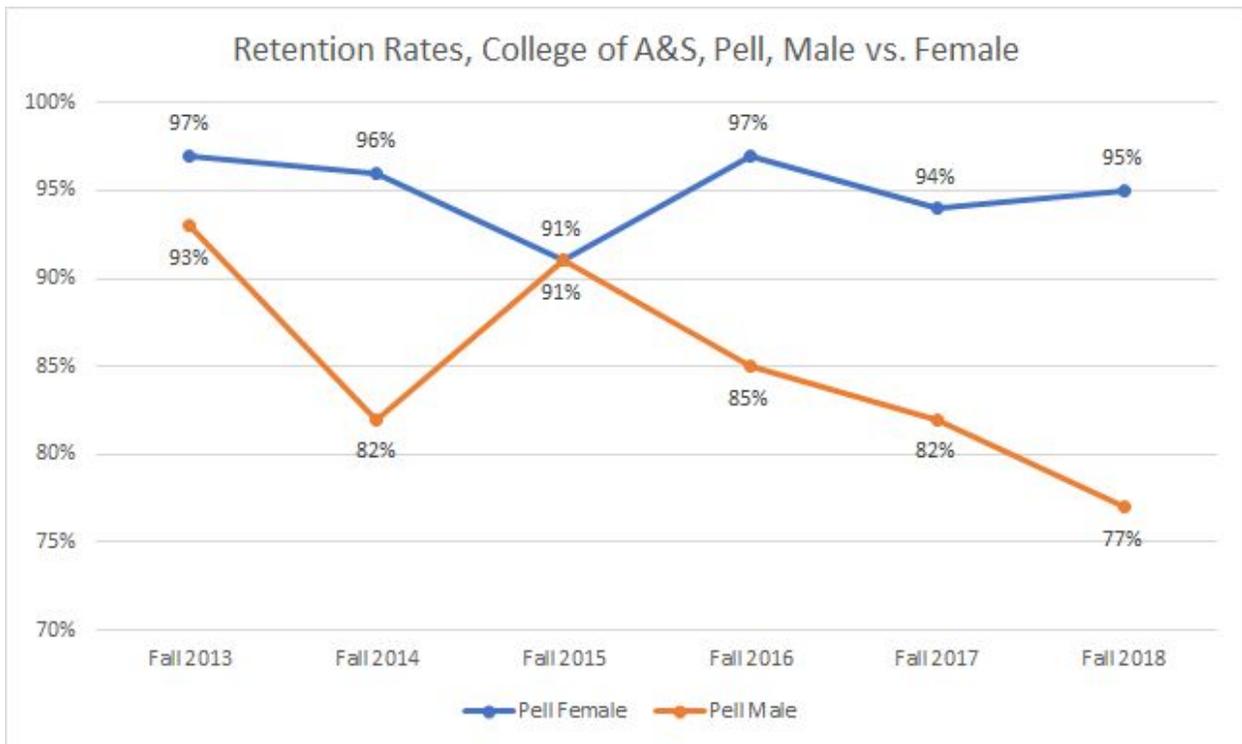


Appendix 4 - Retention of High Achieving Students

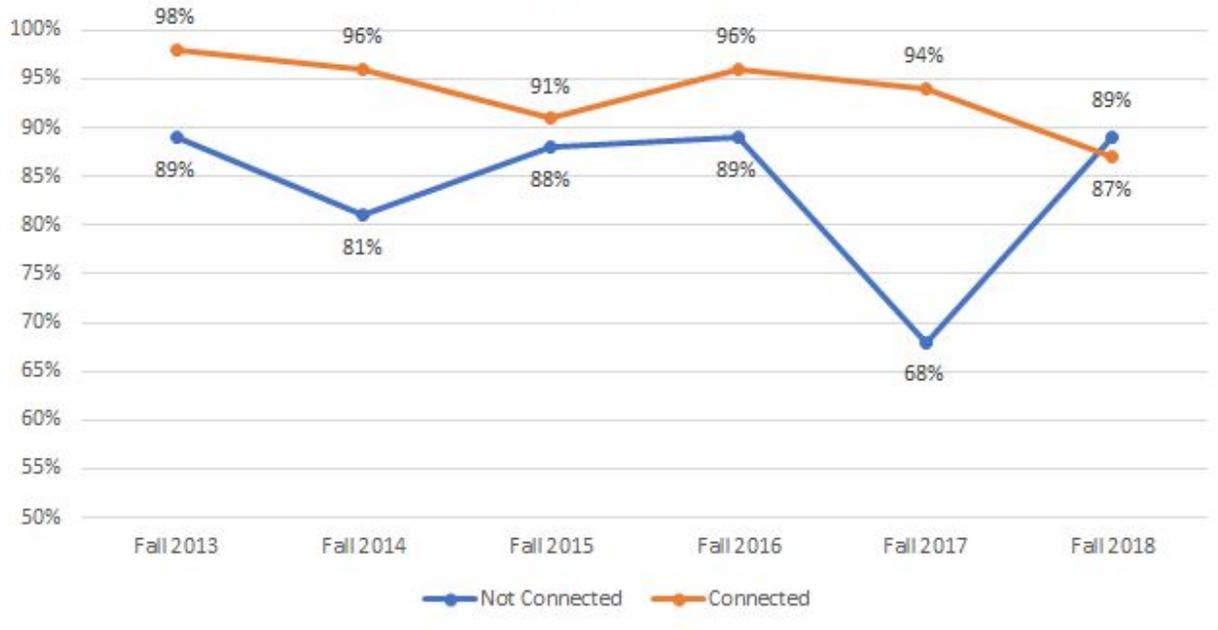


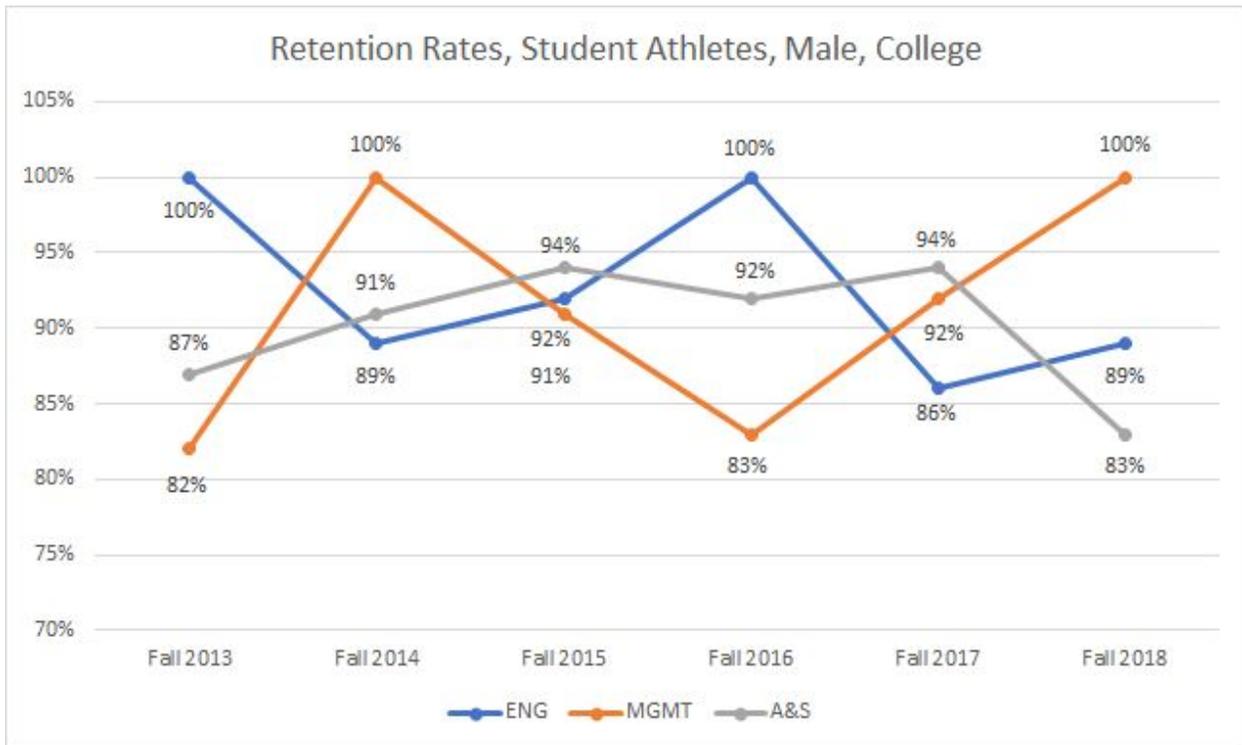
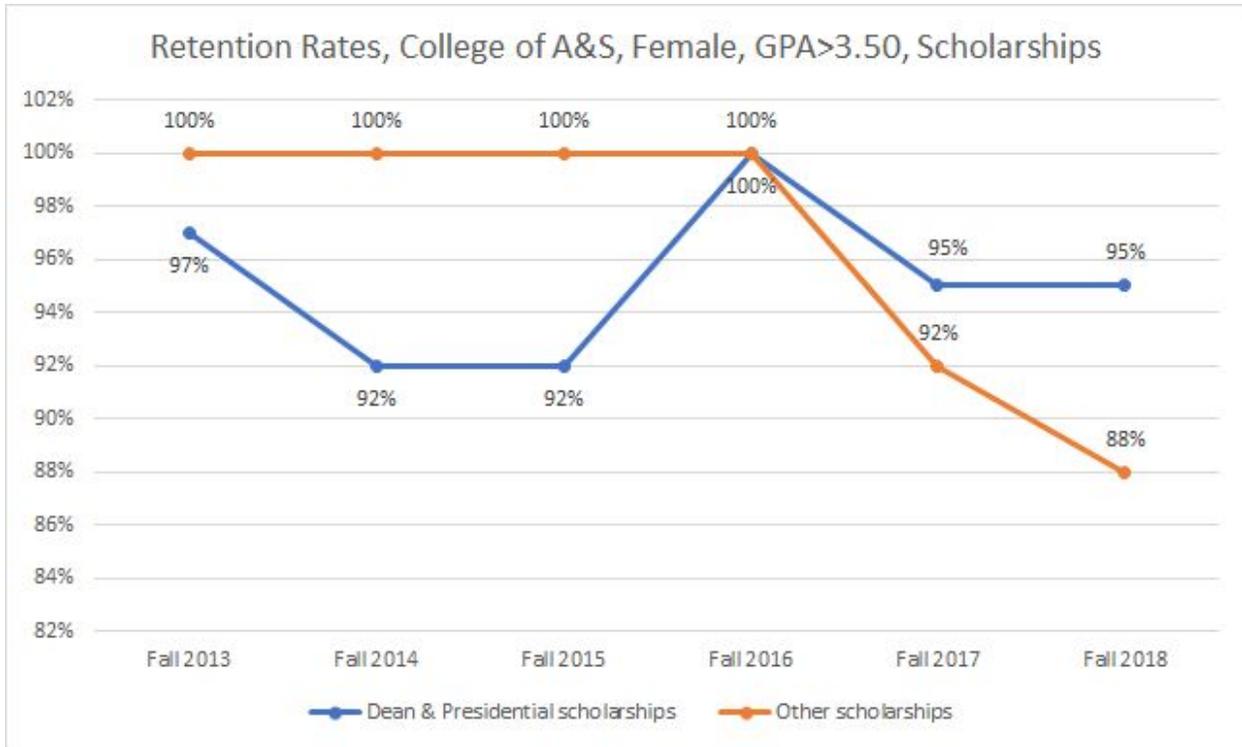
Appendix 5 - Retention Rates of At-risk Students in the College of Arts & Sciences



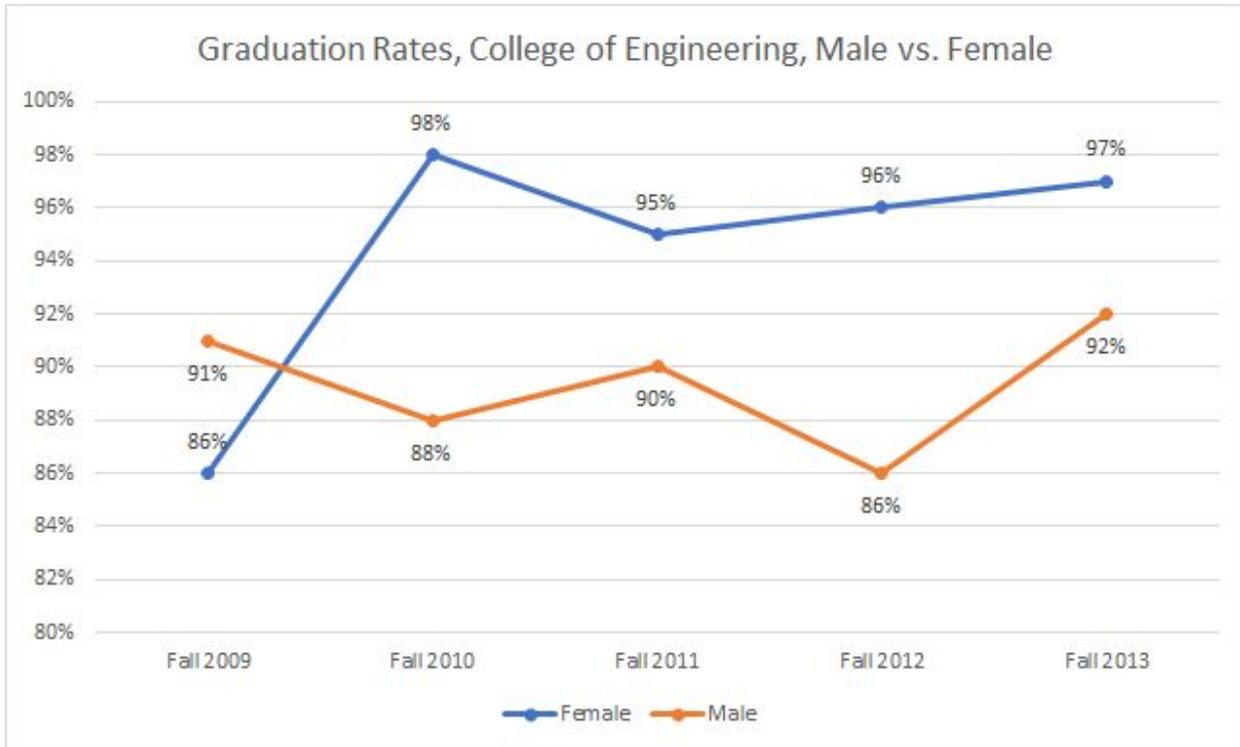


Retention Rates, College of A&S, Male, GPA>3.50, Connected vs. Not Connected

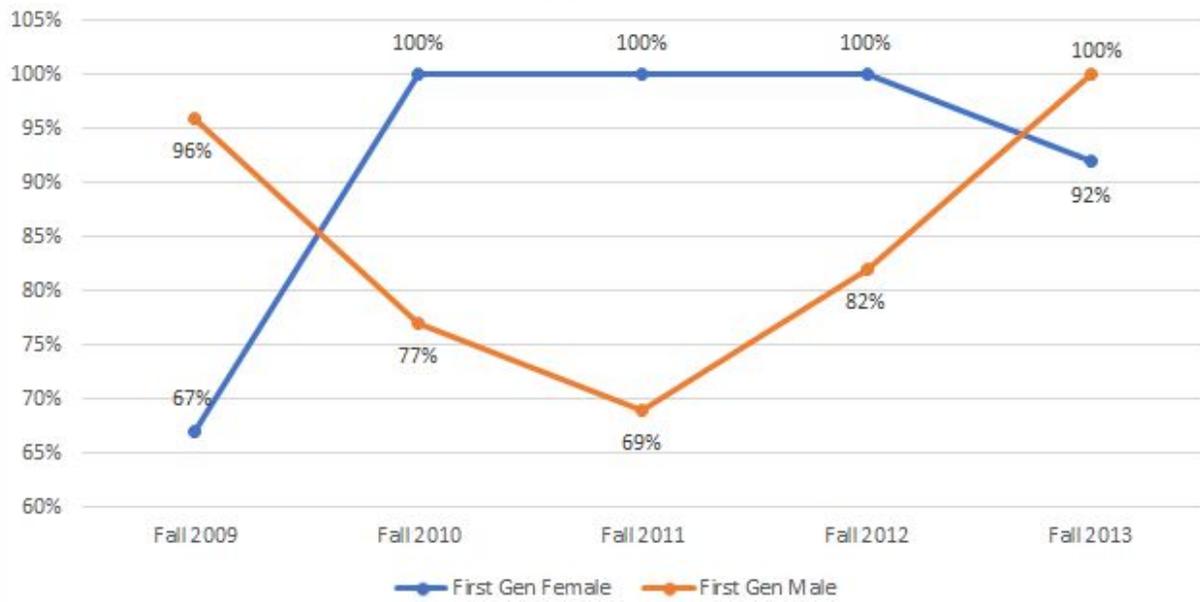




Appendix 6 - Graduation Rates of At-risk Students in the College of Engineering



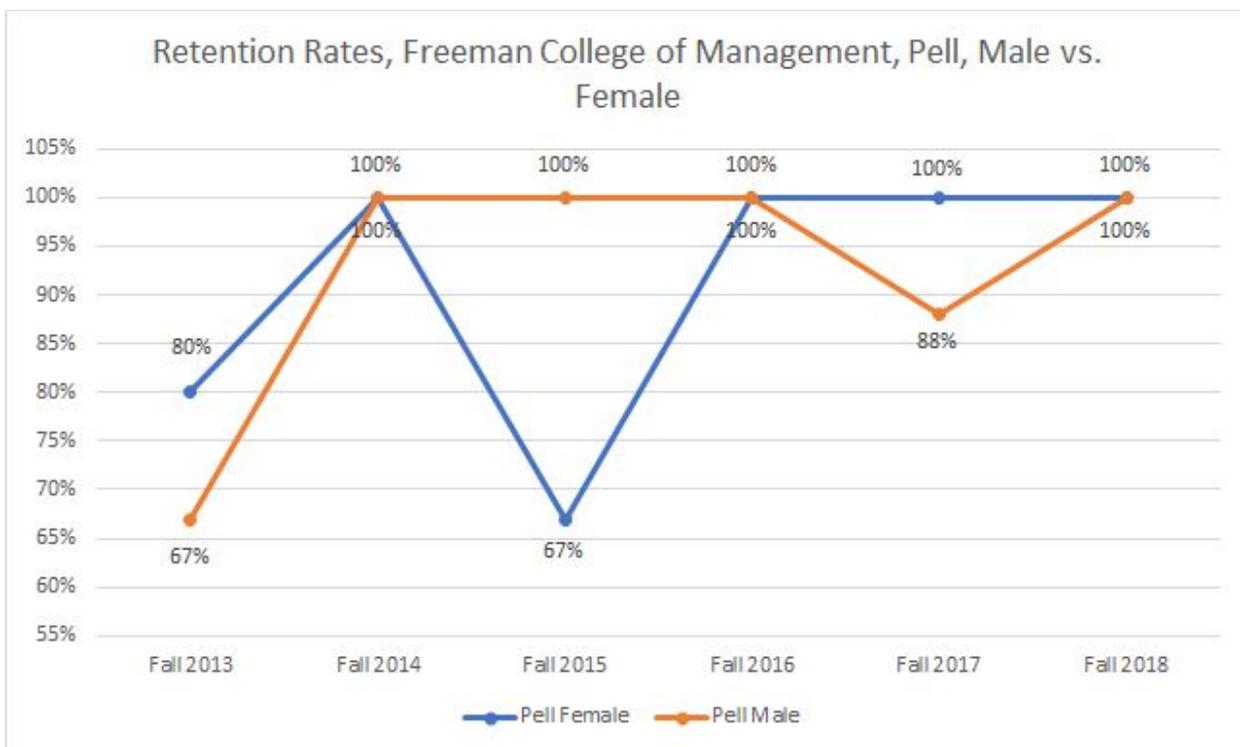
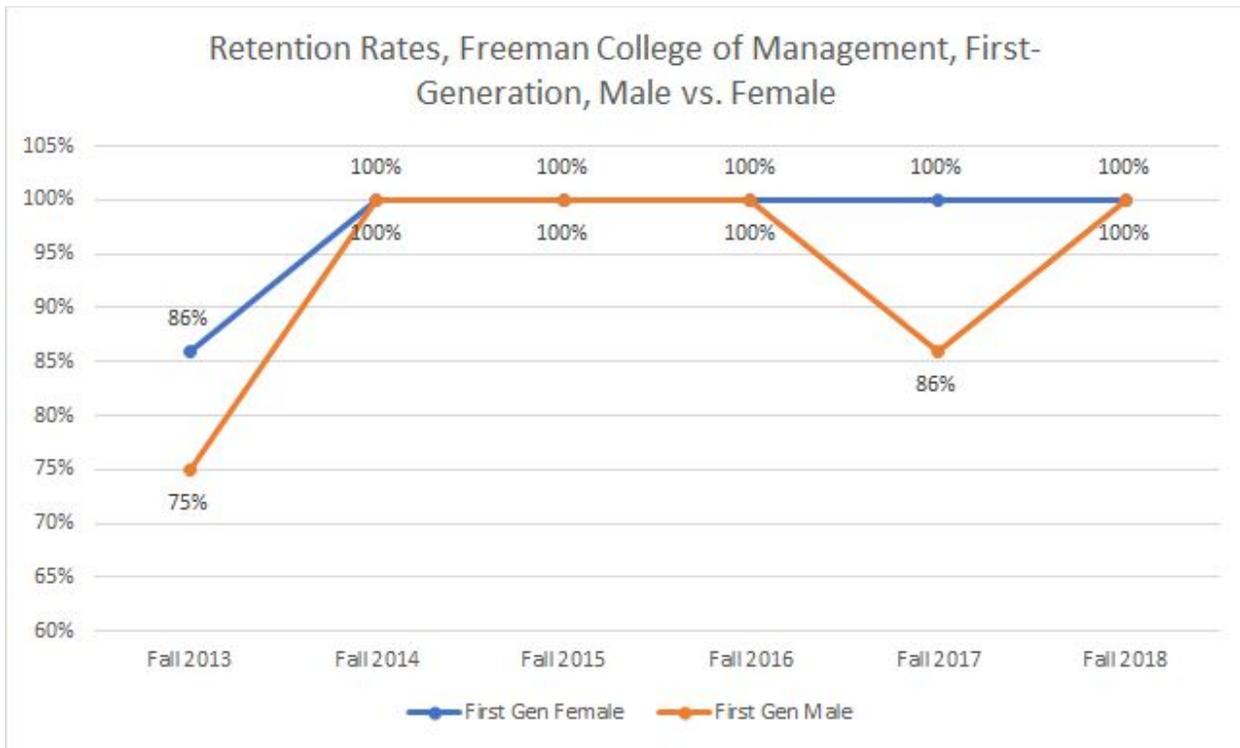
Graduation Rates, College of Engineering, First-Generation, Male vs. Female



Graduation Rates, College of Engineering, Pell, Male vs. Female



Appendix 7 - At-risk Students in the College of Management



Retention Rates, Freeman College of Management, GPA<3.50,
Male vs. Female



Appendix 8--First-Year Transition Survey Questionnaire

2019 First-Year First-Semester Transition Survey

Your first-semester experience is a critical part of your education and experience at Bucknell. We would like to understand better how your transition is going. Please respond to the questions below to provide Bucknell with information regarding your first-semester experience. Your responses are confidential, and all information from this survey will be used only to improve the overall student experiences at Bucknell.

Thank you for your participation in this survey!

Amy Badal Dean of Students

Q1 Overall, I have a positive sense of belonging to the Bucknell community.

- Strongly disagree (1)**
- Somewhat disagree (2)**
- Neutral (3)**
- Somewhat agree (4)**
- Strongly agree (5)**

Q2 I am happy with my classes.

- Strongly disagree (1)**

Somewhat disagree (2)

Neutral (3)

Somewhat agree (4)

Strongly agree (5)

Q3 I am happy with the social life on campus.

Strongly disagree (1)

Somewhat disagree (2)

Neutral (3)

Somewhat agree (4)

Strongly agree (5)

Q4 In which areas more assistance or information could be helpful in the transition to Bucknell? Please select all that apply.

Academic Advising (1)

Co-curricular opportunities – study abroad, community service, undergraduate research, internships, etc. (2)

- Extracurricular opportunities - intramural sports, student government, clubs, Greek life, etc. (3)**
- Campus safety (4)**
- Health/Counseling services (5)**
- Academic support services (6)**
- Residential Colleges (7)**
- Housing (8)**
- Food (9)**
- Transportation (10)**
- Financial information related to attending Bucknell (11)**
- Other (12) _____**

Q5 Do you expect to graduate from Bucknell?

- Yes (1)**
- Maybe (2)**

No (3)

Q6 The semester is going well because

Q7 The semester is NOT going well because

Q8 What is the one thing that would improve your Bucknell experiences?

Q9 Please provide any additional feedback regarding your transition to Bucknell.

Appendix 9 - Summary Statistics of Retention and Housing

	All mean	sd	No Change mean	sd	Changed mean	sd	Difference b	se
Retention	0.946	0.227	0.948	0.222	0.837	0.371	0.111**	0.039
Change of Housing	0.021	0.143						
First Year GPA	3.274	0.511	3.275	0.511	3.231	0.521	0.044	0.055
First Semester GPA	3.287	0.550	3.288	0.549	3.249	0.594	0.039	0.062
High School GPA	3.548	0.314	3.549	0.314	3.539	0.302	0.009	0.032
Received Scholarship	0.295	0.456	0.296	0.457	0.239	0.429	0.057	0.045
Received Financial-aid	0.508	0.500	0.509	0.500	0.478	0.502	0.031	0.053
Male	0.484	0.500	0.483	0.500	0.511	0.503	-0.027	0.053
White	0.735	0.442	0.735	0.441	0.707	0.458	0.029	0.048
Non-U.S. Citizen	0.075	0.264	0.076	0.265	0.065	0.248	0.010	0.026
International Student	0.067	0.250	0.067	0.250	0.065	0.248	0.002	0.026
Pennsylvanian	0.191	0.393	0.191	0.393	0.217	0.415	-0.027	0.044
Religious	0.707	0.455	0.707	0.455	0.696	0.463	0.012	0.049
First Generation	0.107	0.309	0.107	0.309	0.098	0.299	0.009	0.031
Posse Foundation	0.032	0.177	0.032	0.176	0.043	0.205	-0.011	0.022
Pell Grant	0.096	0.295	0.096	0.294	0.141	0.350	-0.046	0.037
Enrolled Major	0.356	0.479	0.356	0.479	0.380	0.488	-0.025	0.051
Residential College	0.378	0.485	0.374	0.484	0.587	0.495	-0.213***	0.052
Student Athlete	0.180	0.384	0.182	0.386	0.076	0.267	0.106***	0.028
BuckWild Program	0.121	0.326	0.120	0.325	0.141	0.350	-0.021	0.037
Redesigned SAT	1208.206	208.375	1208.184	208.249	1209.239	215.403	-1.055	22.679
Connectedness	0.675	0.469	0.675	0.469	0.674	0.471	0.001	0.050
Joined Organizations	0.359	0.480	0.358	0.479	0.446	0.500	-0.088	0.053
Observations	4426		4334		92		4426	

* p<0.05, ** p<0.01, *** p<0.001

Appendix 10 - Estimated Effects of Change of Housing on the Likelihood for Leaving Bucknell

	(1) Logit	(2) Probit
Change of Housing	0.066*** (0.015)	0.069*** (0.017)

Standard errors in parentheses

* p<0.05, ** p<0.01, *** p<0.001

Note: The dependent variable is not retained =1 and retained = 0.

Estimates in the table are calculated as marginal effects.

Appendix 11 - Details for Analysis Under "Differences by Race/Gender/Home Region"

For this analysis, we sequentially controlled for student cohort, gender, whether students were recipients of Pell grants, race/ethnicity (classified as Asian, Black/African American, Hispanic/Latino, non-resident alien, other/no data, and

white), and students' home region (classified as Mid-Atlantic, Midwest, New England, other countries, South, Southwest, unknown, and West).

An initial matching was conducted based on student cohort (year), and a conditional logistic regression model was fit with Retention as the response (1 for being retained and 0 for not being retained). For these data, students that were connected had approximately two times the odds of being retained than students that were not connected ($p < 0.001$). When additionally matching on gender, the effect barely changes (odds ratio (OR) = 1.98, $p < 0.001$). However, additionally controlling for Pell grants, the effect of connectedness on retention increased (connected students had 2.13 times the odds of being retained than not connected students, while controlling for cohort, gender, and Pell grants). On the other hand, controlling for race/ethnicity instead of Pell grants lowered the effect somewhat, while still maintaining statistical significance (OR = 1.45, $p < 0.05$). When controlling for both race/ethnicity and Pell grants at the same time, connectedness no longer predicts retention (OR = 1.35, $p = 0.07$). Looking at the relationship between race/ethnicity and Pell grants separately, a strong association was observed. A greater proportion of American students of color receive Pell grants than white students (Black/African American students - 43%; Hispanic/Latino - 30%; Asian - 28%; white - 6%). This suggests that controlling for both Pell grants and race/ethnicity is redundant and leads to over-matching. Therefore, only one should be included in the model.

Keeping race/ethnicity in the model, we further controlled for students' home region; while the relationship between connectedness and retention is slightly mitigated, we still observe a significant relationship: connected students have 39% higher odds of being retained than not connected students, while controlling for cohort, gender, race/ethnicity, and home region.

We repeated the same analysis as above using "number of connections" as the variable of interest instead of the binary indicator of being connected or not. The results were similar as above, except that all odds ratios were slightly attenuated (see Table xxx).

Table xx: Odds Ratios for retention (and p-values) for the various models for (a) connected vs. not connected, and (b) number of connections. An 'x' in the cell under variables listed for "Control Variables in Model" represents the presence of that variable in the model. The final model is given in **blue**.

Control Variables in Model	Connected	# of Connections
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Cohort	Gender	Pell Grant	Race	Home Region	OR	p-val	OR	p-val
x					2.04	<0.001	1.67	<0.001
x	x				1.98	<0.001	1.60	<0.001
x	x	x			2.13	<0.001	1.60	<0.001
x	x		x		1.45	0.024	1.24	0.031
x	x	x	x		1.35	0.070	1.20	0.108
x	x	x		x	1.32	0.076	1.19	0.052
x	x		x	x	1.39	0.046	1.20	0.046
x	x	x	x	x	1.28	0.119	1.18	0.084

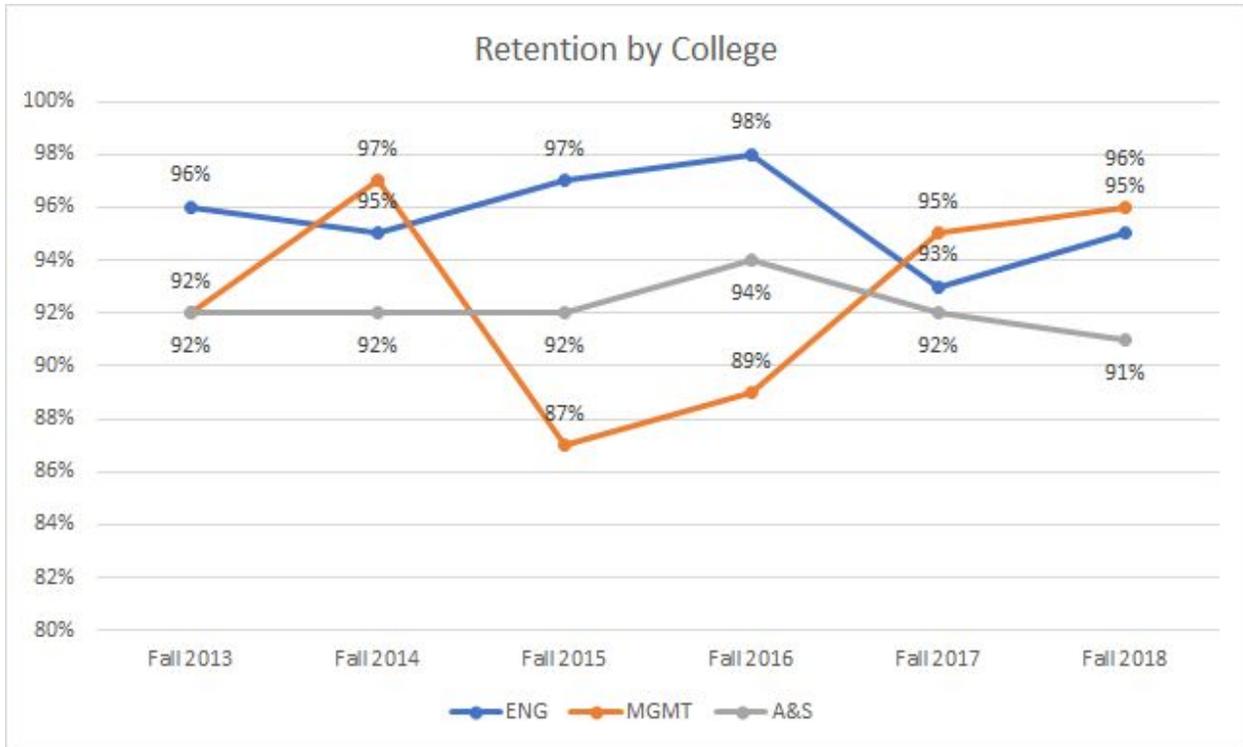
Appendix 12

A future analysis might want to explore the form of the relationship between odds of retention and number of connections (e.g. linear vs. curved). Another important question to address is whether this sense of connectedness is an important factor in retention for high achieving women (a sub-group earlier identified as more likely to leave Bucknell). Unfortunately, due to the limited number of cases, matching based on first-year GPA failed, and we were unable to replicate the analysis above.

Appendix 13 - Materials Developed to Conduct One-on-One Interviews of Students who Choose to Remain at Bucknell

[One-on-one conversations](#)

Appendix 14 - Retention by College



Appendix 15 - Mentor Collective Proposal

[Mentor Collective Proposal](#)

Appendix 16 - MyVoice Feedback on Social Experience and Orientation

QUESTION A1.7b How can Bucknell improve the first-semester experience for students?

For first-year students

	2019 Count (n = 415)	2019 Percent (n = 415)	2016 Count (n = 475)	2016 Percent (n = 475)
More socializing opportunities to connect with other first-year students and older students	138	33%	227	48%
More support to help ease transition	133	32%	139	29%
Academics	95	23%	10	2%
Satisfied with first semester experience	47	11%	76	16%
More freedom/unscheduled time during orientation	25	6%	74	16%
Better promotion of resources and services on campus	21	5%	27	6%
Better food/more affordable food options	14	3%	22	5%
More orientation-like events spread out throughout the semester	12	3%	45	10%
First-year rush	4	1%	8	2%
Fewer mandatory events during orientation	3	0.7%	44	9%

No/Less FYIs during orientation	0	0	47	10%
Other	59	14%	NA	NA

QUESTION A1.8b Reflecting on your transition to college, what can Bucknell do to improve the first-year experience for future students?

For sophomore, junior, senior, fifth-year in five-year program

	2019 Count (n=1,356)	2019 Percent (n=1,356)	2016 Count (n=1,449)	2016 Percent (n=1,449)
More bonding opportunities to build a sense of community	247	18%	271	19%
Academics	224	17%	219	15%
More support to help ease transition	164	12%	129	9%
Good transition	129	10%	207	14%
More activities/clubs/events	97	7%	225	16%
Shorter orientation	85	6%	52	4%
Better communication on support services	63	5%	40	3%
Better housing	63	5%	NA	NA
First-year rush	45	3%	95	7%

More inclusiveness/more diversity	33	2%	39	3%
Orientation more spread out through the semester	27	2%	26	1.8%
Better food	21	2%	NA	NA
More pre-orientation experience	21	2%	22	2%
More students in Residential College	12	0.9%	63	4%
Car and transportation	10	0.7%	10	0.7%
Less Greek life/reduce presence of Greek life	6	0.4%	11	0.8%
Improve transfer experience	5	0.4%	21	1%
Get rid of FYIS program/requirement	1	0.1%	54	4%
Alcohol education	0	0	19	1%
Other	202	15%	NA	NA

Appendix 17 - MyVoice Feedback on Academic Advising

Students would like to see better advising (i.e., picking classes, course selection process, major/minor options, CCC requirements), stronger advisor/faculty involvement even before classes begin, and regular meetings with advisor/faculty to check up with progress and build connections. Many students complained about the unexpected workload, academic expectations, and rigor. Some students stated it would be helpful to provide them with the syllabus even before coming to campus so they have a better sense of the expected workload and academic rigor. Students in STEM majors in particular complained about their workload, which they believed was much heavier than the workloads for students in other majors. They were especially frustrated with “weed-out” classes, which they perceive as pushing students away from pursuing their desired major. Students also wanted to see a gradual increase of workload, using foundation seminars to help them transition. If possible, they wished to see a pass/fail grading system in the first semester to help them have a smooth transition. Undeclared students and first-generation students in particular expressed their needs for more counseling help on academics.

The 2019 data revealed a large variety of student suggestions regarding improvements in academics. Specifically, these suggestions ranged from regular meetings with advisors, better understanding of the course selection process, improving learning skills/strategies, better preparation for academic rigor, more choices in course selection, pass/fail grading, less workload/stressful schedule, to logistics such as easier registration and better communication of resources available on campus. The most common suggestions were regular meetings with advisors, a gradual increase of the academic work, and using a pass/fail grading system in the first semester to help them have a smooth transition.

Appendix 18 - MyVoice Feedback on Transition to College

Students would like more support in areas such as time management, learning strategies/skills, adjusting to academic rigor, how to manage school work, study groups, more TAs in class, tutoring, mentor programs with older students or faculty, information about different majors/tracks, opportunities for internships, and future career trajectories. Additionally, they wanted more support for social (i.e., clubs/organizations) and health issues. Some students suggested Bucknell should prioritize mental health by providing more workshops and better counseling services.

Students would like to see better communication of resources available on campus. This includes better and more promotion of resources such as CSDC, Cap Center, TLC Center, CCA Center, Counseling, clubs and extracurricular activities, events such as CAP and ACE, SpeakUp, etc. Many students complained they didn't know anything about these resources until the second year. For instance, some students really enjoyed their residential college experience and they recommended better promotion of residential college for more students to join.

Appendix 19 - ESL-EFL 2019 Survey

This survey aims to evaluate your academic challenges (if any) that may be a result of difficulties in expressing yourself fully in English in your classes and around campus. Your participation will help assess the best way to assist you in succeeding in your courses at Bucknell University. Your responses will be treated as confidential. This survey will take about five minutes to complete.

What year are you at Bucknell?

- First-year (class of 2023)
- Sophomore (class of 2022)
- Junior (class of 2021)
- Senior (class of 2020)

Have you declared a major?

- Yes
- No

IF participant responds yes: What is your major?

Which of the following skills do you think are most challenging for college-level assignments? You may select more than one answer.

- Writing
- Reading
- Speaking
- Listening
- None of the above

What kinds of challenges, if any, have you faced when dealing with English as a foreign language at Bucknell?

Taking into consideration your challenges in English (if any), how many additional hours do you typically need to write a research paper or read course material?

- No extra time
- Less than one extra hour
- 1-2 extra hours
- 2-3 extra hours
- 3-4 extra hours
- 4-5 extra hours
- More than 5 extra hours

How would you rate your English proficiency overall?

- Far below average
- Below average
- Average
- Above average
- Far above average

How would you rate your English proficiency in everyday conversation with your friends?

- Far below average
- Below average
- Average
- Above average
- Far above average

How would you rate your English proficiency when writing academic assignments?

- Far below average
- Below average
- Average
- Above average
- Far above average

How would you rate your English proficiency when speaking in the classroom?

- Far below average
- Below average
- Average
- Above average
- Far above average

How would you rate your English proficiency when reading the textbook or other materials for your classes?

- Far below average
- Below average
- Average
- Above average
- Far above average

What specific part of your English skill(s) would you like to improve? Please elaborate!

Is there anything else we should know, or any additional comments you would like to point out?

Appendix 20 - 2019 MyVoice Feedback on Housing

QUESTION A2.5. How can Bucknell improve the student housing selection process?

	2019 Count (n = 1,795)	2019 Percent (n = 1,795)	2016 Count (n = 1898)	2016 Percent (n = 1898)
Improving the lottery system	466	26%	186	10%
More housing	426	24%	338	18%
Allowing students to live off campus	178	10%	557	29%
Upgrading the housing features	153	9%	166	9%
Better communication of the housing selection process	138	8%	32	2%
Satisfied with housing situation	110	6%	160	8%
Don't know	100	6%	69	4%
Improving the freshmen housing/roommate survey	94	5%	46	2%
Making sure all students have housing before they leave for the summer	83	5%	34	2%
Student ghosting or pulling up underclassmen	78	4%	NA	NA
More apartment-style living	46	3%	134	7%
Allowing first-year students to pick their roommates	28	2%	45	2%

Putting similar people in halls together	15	0.8%	15	0.8%
Prioritizing athletes in the housing process	12	0.7%	22	1%
Less costly options available to students	11	0.6%	18	0.9%
Parking/transportation	8	0.4%	3	0.2%
Not limiting where students can live by class year	7	0.4%	140	7%
House for sororities	3	0.2%	31	2%
No meal plans should be required	1	0.1%	5	0.3%
Other	162	8%	NA	NA

Appendix 21 - MyVoice Feedback on Social Opportunities

QUESTION A1.5 What can Bucknell do to improve your student experience?

	2019 Count (n = 1,918)	2019 Percent (n = 1,918)	2016 Count (n = 1,286)	2016 Percent (n = 1,286)
Academics	306	16%	147	11%
Better food and food options	248	13%	90	7%
More social events/more activities	223	12%	252	20%
More diversity	215	11%	231	18%
Better housing and housing options	200	10%	109	9%

Addressing high cost of attendance	180	9%	44	3%
Fostering an inclusive environment	151	8%	174	14%
More support services (academic and social)	104	5%	133	10%
Eliminating/reducing Greek life	97	5%	197	15%
Better/more transportation options	92	5%	51	4%
Support Greek life	62	3%	NA	NA
Addressing the drinking culture; offering more sober events	62	3%	64	5%
More support on health and mental health	54	3%	12	1%
Holding people accountable for their actions; stricter punishments	39	2%	26	2%
Safety	39	2%	20	2%
Other	279	15%	43	3%
Nothing	176	9%	100	8%

QUESTION A2.3 What can Bucknell do to strengthen the sense of community on campus?

	2019 Count	2019 Percent	2016 Count	2016 Percent
	(n = 1,513)	(n = 1,513)	(n = 1,868)	(n = 1,868)

More clubs, events, and opportunities for connection	432	28%	244	13%
Reducing the dominance of Greek life	186	12%	245	13%
No need/There is already a very strong sense of community	176	12%	152	8%
Promoting more diversity	102	7%	184	12%
More support to Greek life	95	6%	NA	NA
Encouraging more inclusion	83	5%	124	7%
More campus-wide events	80	5%	161	11%
Encouraging attendance at athletic events	76	5%	150	8%
More housing options	64	4%	114	6%
Promoting greater involvement (clubs, organizations)	47	3%	95	5%
Better promotion of activities and events	43	3%	424	23%
Promote school spirit	34	2%	96	5%
More support services	28	2%	NA	NA
Allow first-year students to rush	26	2%	NA	NA
More spaces for people to get gather	23	2%	50	3%

Other	144	10%	15	0.8%
Unsure/don't know	89	6%	147	8%